

1/27/10

OVERVIEW:

DEED

VIRTUAL

SCHOOL

WORKING

GROUP

Virtual School Working Group

January 25-27, 2010 Meeting

At the request of Commissioner LeDoux, the Virtual School Working Group reconvened with the purpose of providing recommendations on: 1) standards for the Virtual School Program, and 2) ideas for the design of an Alaska Virtual School program. The working group consists of Alaska distance education teachers and practitioners, district distance education and technology coordinators, superintendents, and representatives from post-secondary education institutions.

During the January meeting, the following work was completed:

- The Virtual School Working Group (VSWG) updated the Overview of Existing Alaska Distance Education Models provided to the House Education Committee. Updates provided to the Alaska State Board of Education and the House Education Committee was shared with the VSWG. Members reviewed the work drafted during the December meeting and recommended changes to the national facilitators' summaries. New members provided valuable insight on work completed at the December meeting.
- The VSWG reviewed the drafted recommendations from the December meeting for the Institutional Standards, which address mission, governance, planning, staffing, and organizational commitment of a virtual school program. During the next meeting, the VSWG plan to finalize framework recommendations for the Institutional Standards.
- The VSWG continued to develop the framework focusing on Teaching and Learning Standards, Support Standards, and Evaluation Standards. The Teaching and Learning Standards include curriculum and course design, instruction, and assessment of student performance. The Support Standards address academic, administrative, guidance and technical services. The Evaluation Standards consider virtual school program evaluation and improvement. The VSWG will review drafted work during the February meeting.

The working group continues to use an EED e-learning site for discussion, to access resources and to provide additional information. Specifically, members are reviewing House Education Committee meeting information and drafted documents. Also, the VSWG members are suggesting other state or program funding models and making recommendations regarding online teaching issues, which will be considered by the Teacher Quality Working Group.

The VSWG will meet again Wednesday, February 24, and Thursday, February 25; after the Alaska Society for Technology in Education (ASTE) conference at the Hotel Captain Cook in Anchorage. Many VSWG members already planned to attend ASTE, the state educational technology conference, allowing the travel costs to be minimal. Although the VSWG had planned to meet virtually, due to the high level of interest in this topic, it was determined that one more face-to-face meeting would be appropriate because new participants are expected.



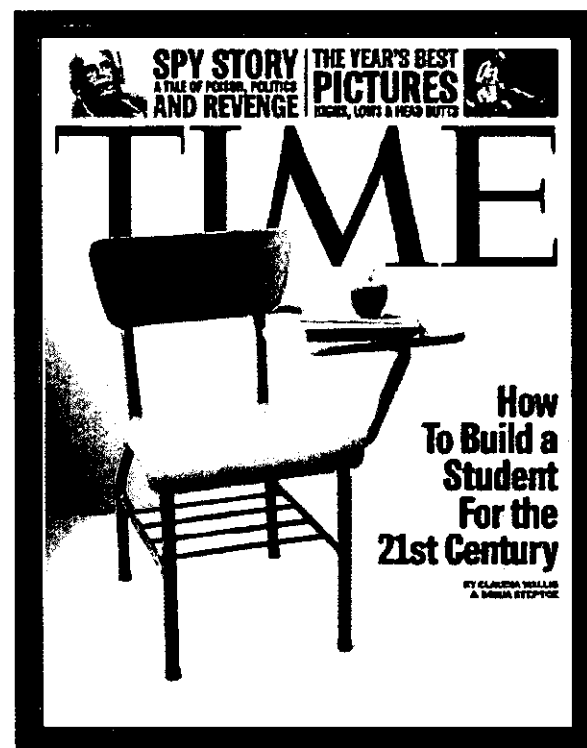
What Students Need to Know: 21st Century Skills and ICT Literacy

The future will demand people who can express themselves effectively with images, animation, sound, and video, solve real world problems that require processing and analysis of thousands of numbers, evaluate information for accuracy, reliability, and validity; and organize information into valuable knowledge, yet students are not learning these skills in school.

“There is remarkable consensus among educators and business and policy leaders on one key conclusion: we need to bring what we teach and how we teach into the 21st century.”

TIME Magazine,

12/18/06



Exploring the Gaps in K-12 Education: National Overview

- Spending on K-12 education
 - Average: \$9,969/per pupil in 2007-08 (more than any country in the world, except Switzerland)
- International Rankings in Science and Math (PISA 2006):
 - Science: US ranked #25 out of 30 countries
 - Math: US ranked #21 out of 30 countries
- U.S. Math curriculum: full 2 grade levels behind international counterparts by 8th grade
- High School Graduation Rates
 - Average: 70% in 4 years
 - Latino/Hispanic students: 58%
 - African-American students: 55%
- 15% of high schools produce 50% of drop outs in country

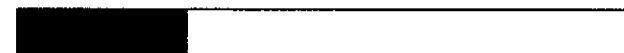
A History of U.S. Competitiveness: Internationally

- In 1960s, the United States was #1 internationally in the adult population with a high school diploma
 - 86% of adults had a HS diploma
- In 2008, the US is 10th internationally
 - 87% of adults in the US have a HS diploma
- Compare Korea:
 - In 1950s, 35% of adults in Korea held HS Diploma
 - Today, Korea has 97% of adults with HS Diploma
- In summary, other countries are moving faster.



Does every student in
the U.S. have access to
a world-class education
today?

ALEC | *i*NACOL
International Association for K-12 Online Learning



Mexico

- 2003: Enciclomedia program - Digitized K-12 academic content provided online, CDs, every school, library and community technology center
- 2004: Every teacher in pre-service trained to use digital content to teach more effectively
- 2005: Every new teacher provided a laptop

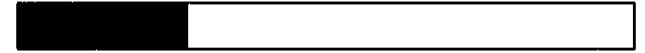


European Union

- International Baccalaureate (IB) Diploma Programme Online
- EU E-Learning Strategy across countries

Turkey

- 5 years ago: no students taking online courses
- 2008: 15 million students taking online courses
- Public-Private partnerships
 - Created “gold standards online courses”
 - Train teachers to teach online
 - Delivery system to provide online courses



Middle East

- Lack “legacy” education system
- Middle East
 - Start from scratch and rebuild K-12 Education systems
- Public – Private education system

India

- Universal Access for K-12 Education in 10 years
 - Need 200,000 more schools
 - Shortage of good teachers
 - “Leverage teachers using technology to bring to scale”
 - Educomp Program digitizing learning resources (online content) in K-12 education
 - Benchmarked to international academic standards
 - View as export opportunity
 - \$10 laptop being developed

Singapore

- Today
 - All teachers know how to teach online
 - 100% of secondary schools using online learning
 - Singapore holds E-Learning week each year
 - They close physical schools down and ensure e-learning is used for continuity of learning & disaster preparedness
- Next step?
 - All teachers in Singapore trained to use Second Life (virtual worlds) for educating youth

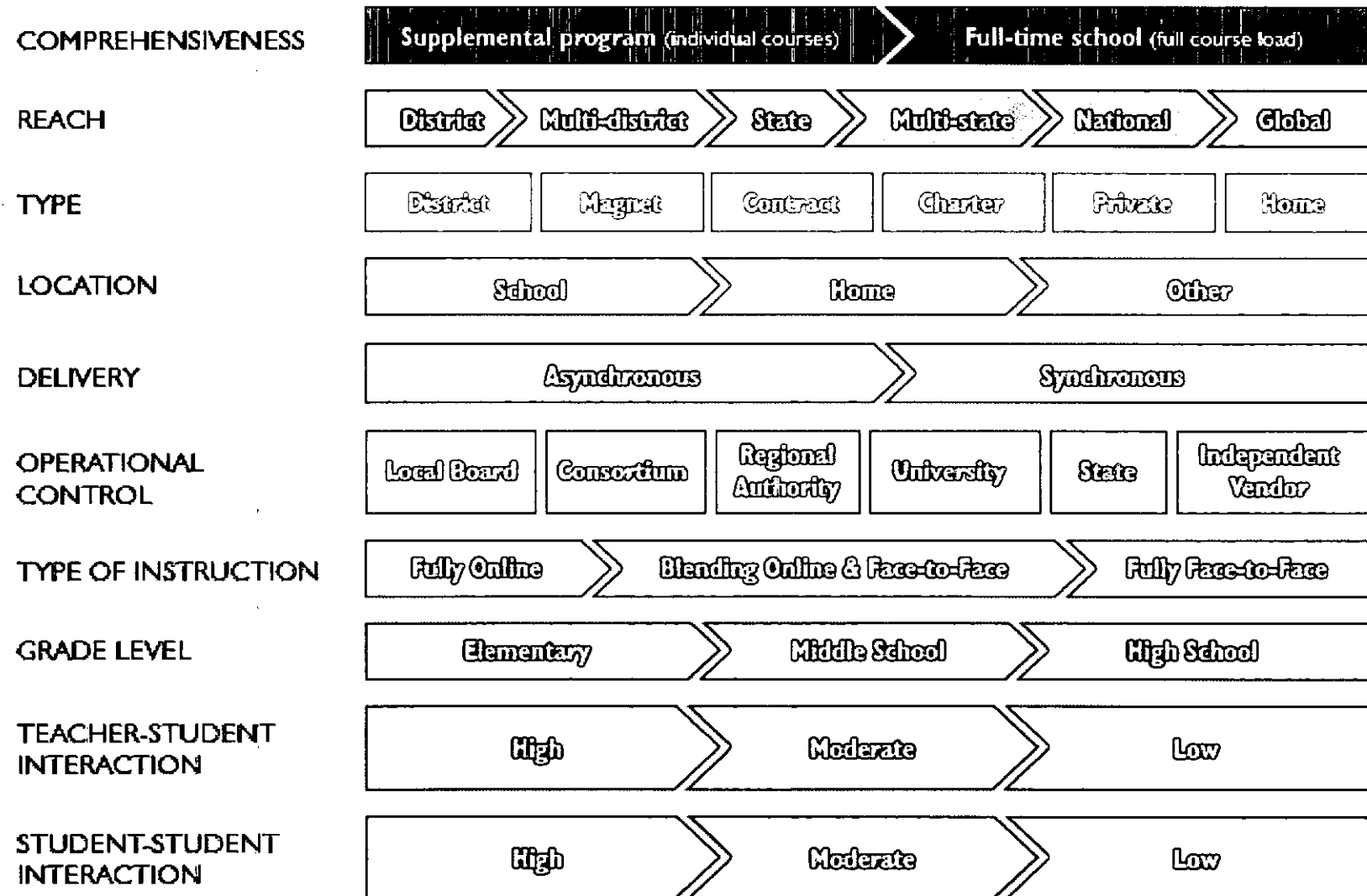
China

- China: 1.3 billion people
 - 20 million 18 year olds
 - 2.5 million college slots
- 10-year goal: Reach 100 million (new) Chinese students in underserved areas
- 2004: Digitized 100% of K-12 academic curriculum
- Current: Training Master Teachers to teach online
- How? Online courses taught by master teachers online
- Internet access
 - China: 4 million Internet connections in 1999
 - China: 137 million Internet connections in 2006
 - China: 250 million internet connections in 2008
- WiMax: 50 km radius of high-speed, wireless, broadband Internet (100 Mbs), 2009-2010

National Online Learning Facts

- More than 70% of school districts in the United States offer online courses to students (Sloan-C)
- 35 states have state virtual schools (Keeping Pace 2009)
- 45 states have significant state policies (KP 2008)
- 25 states allow full-time virtual charter schools (CER 2009)
- 1 in 5 undergraduate and graduate student enrolls in an online course in higher education
- More universities are offering K-12 courses online
 - for K-12 students: Indiana U., Stanford, Johns Hopkins. Northwestern U.
- K-12 Online Learning enrollments growing 30% annually nationwide
 - 2000: 50,000 enrollments in K-12 online courses
 - 2003: 328,000 enrollments in K-12 online courses
 - 2005: 500,000 enrollments in K-12 online courses
 - 2008: 1,000,000 enrollments in K-12 online courses

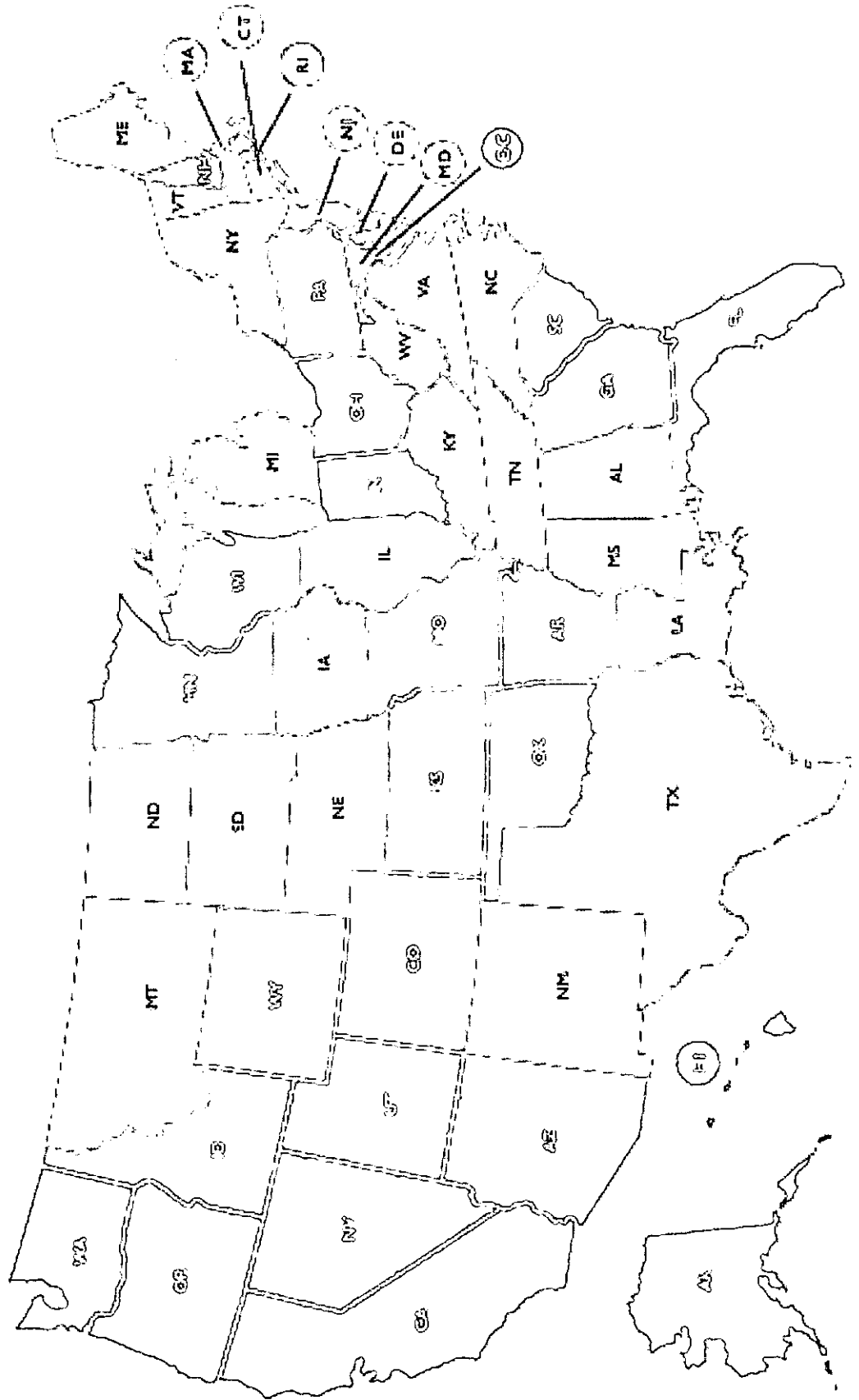
THE DEFINING DIMENSIONS OF ONLINE PROGRAMS



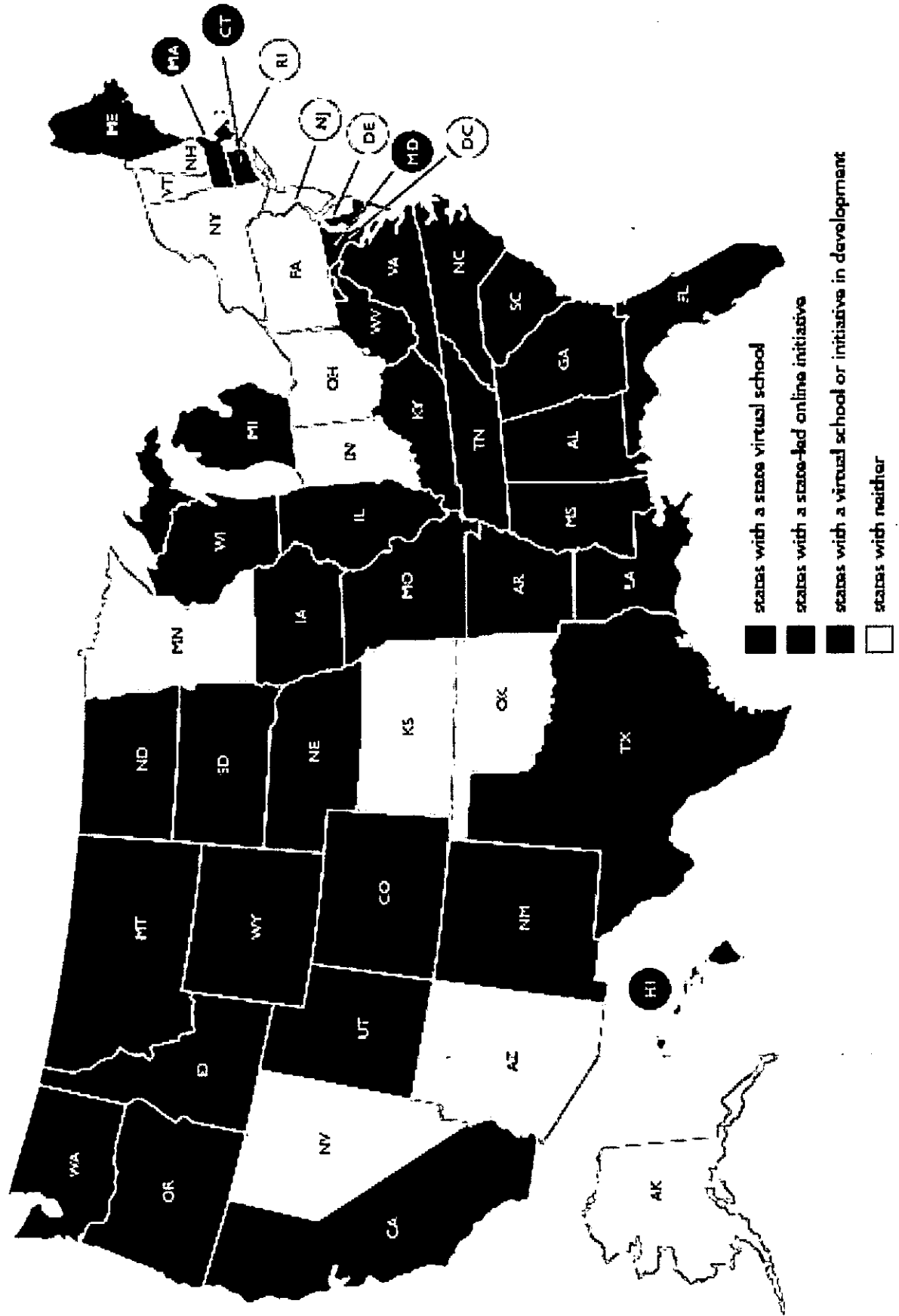
Main categories of online programs

Category	Org type/governance	Full-time/Supplemental	Funding source	Geographic reach	Examples
State virtual school	State education agency	Supplemental	State appropriation, course fees	Statewide	FL Virtual School; MI Virtual School; ID Digital Learning Academy
Multi-district	Charter	Full-time	Public education formula	Statewide	Schools operated by K12 Inc; Insight; Connections
Single-district	District	Either or both	District funds	Single district	Los Angeles; Plano (TX); Fairfax (VA); Cobb (GA)
Consortium	Variable	Supplemental	Course fees, consortium member fees	Statewide or national	Virtual High School; Wisconsin eSchool Network
Post-secondary	College or university	Either or both	Course fees	National	U. Nebraska Independent Study HS; Brigham Young University Independent Study

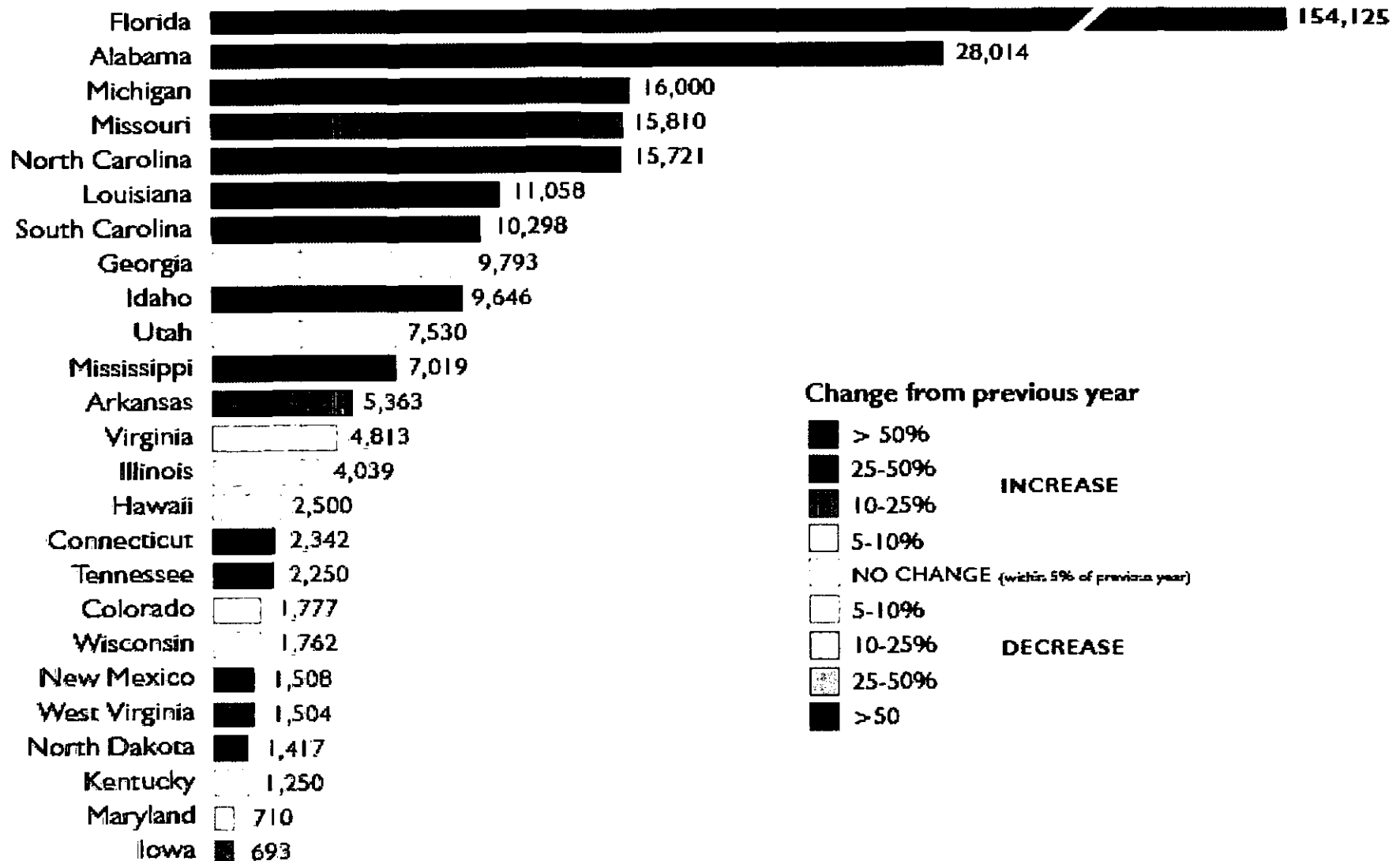
States with statewide full-time online schools



States with state virtual schools



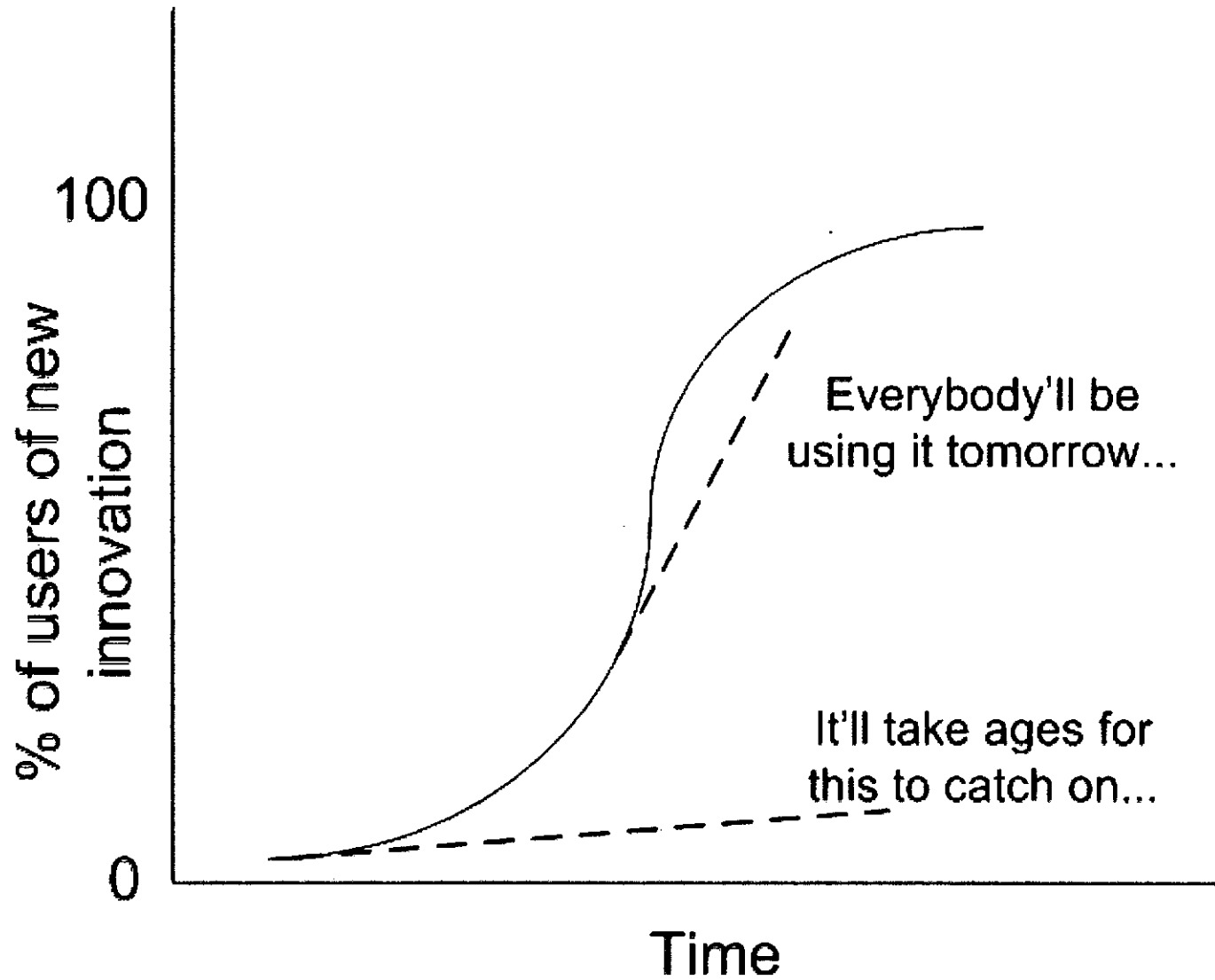
State Virtual Schools: Size and Growth 08-09

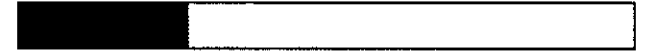


Online learning is growing rapidly

State/ org	Type	Full- time/Supplement al	2008-09 enrollment	Annual growth rate
Florida Virtual School	SVS	Supplemental	154,215	25%
Idaho Digital Learning Academy	SVS	Supplemental	9,646	46%
Alabama ACCESS	SVS	Supplemental	28,014	48%
Michigan Virtual School	SVS	Supplemental	16,000	45%
Colorado	State	Full-time	11,641	26%
Ohio	State	Full-time	23,037	13%
Arizona	State	Both	23,000	24%
Connections Academy	EMO	Full-time	20,000	54%
K12 Inc.	EMO	Full-time	56,000	42%

Pace of adoption



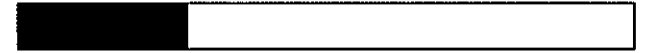


Trends: 2010 And Beyond

- Continued growth overall
- Shift to districts
- Increase in blended

Continued Growth

- **Online charter schools:** Moving into new states; increasing in numbers in existing states
- **State virtual schools:** New states adding, but existing state schools threatened by budgets
- **Districts:** Focal point of most growth



Shift To Districts

- **Varied program types:** Both full-time and supplemental
- **Not equal within and among states:**
 - Within states: more activity in affluent districts
 - Among state: more activity in states with online charters or state virtual schools
- **Blended:** Focal point of most growth



Increase In Blended

- **Blended:**
 - Schools
 - Courses
 - Student experience



Policy Considerations

- Enrollment
 - Increasing access
 - Student choice
- Quality & Accountability
 - Usual QC and standards inadequate
 - Reporting and transparency
 - Allowing innovation to continue



Policies to Avoid

- Requiring onsite or face-to-face instruction
- Enrollment caps or other limits
- Funding level
- Inhibiting innovation with overly prescriptive requirements

Next Generation Legislation

- Include accurate definitions
- Ensure adequate and sustainable funding
- Provide standards and monitoring expectations
- Create reporting and transparency requirements
- Focus on outcomes

Funding Online Learning

- **Key Considerations:**
 - What are the **COSTS** of quality online learning?
 - How do taxpayer dollars **FLOW** to K-12 online learning?
 - How can funding be made **SUSTAINABLE** so every student who needs online can have it?

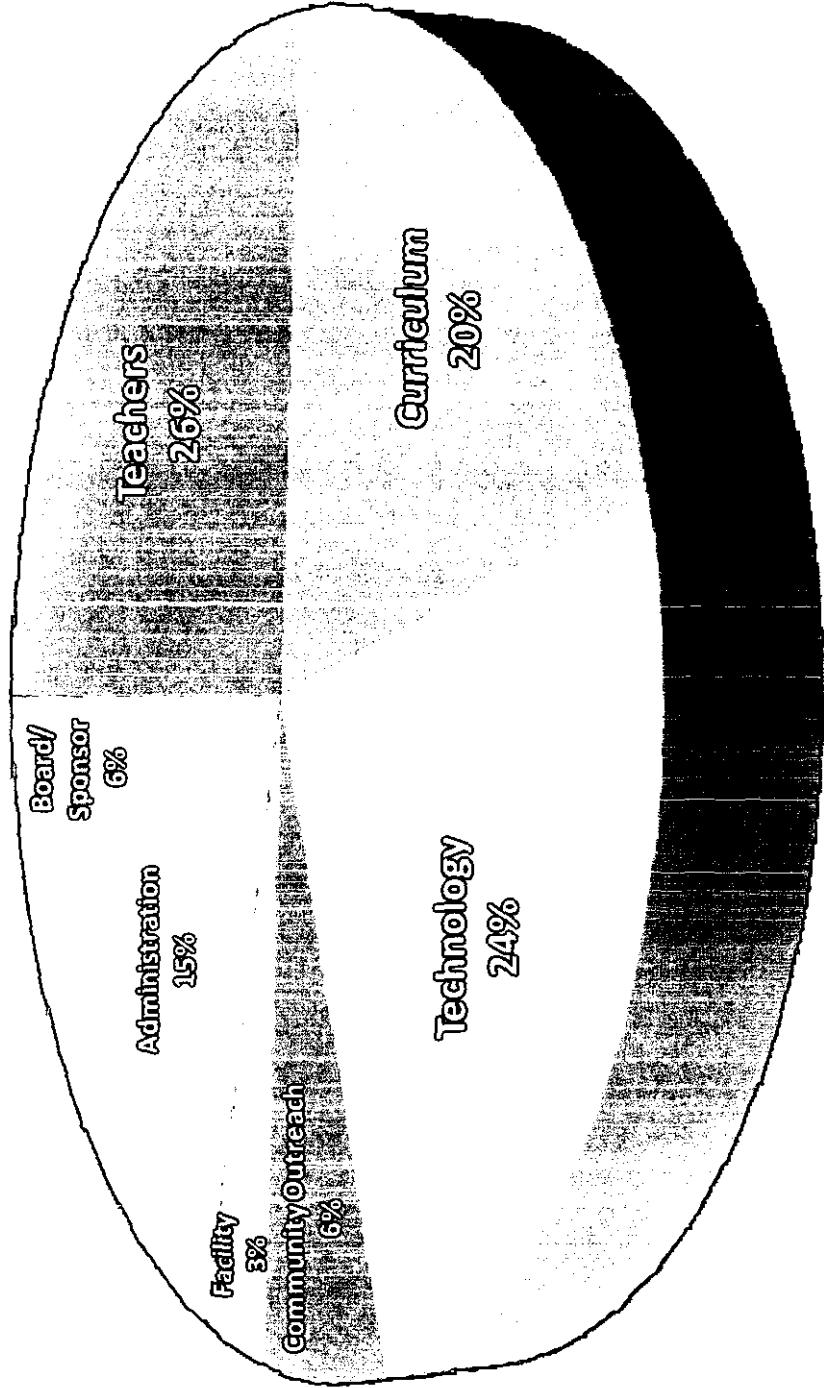
What are the COSTS?

- **Myth:** Online learning is cheap.
 - It's just a kid, a computer, and stuff on the screen – how much could that cost?
- **Reality:** Quality online learning is cost-effective.
 - Real costs include expert teachers, curriculum development/licensing, computers, course delivery and data systems PLUS special services and often physical materials



Costs of Typical Online School

Total per-pupil expenditure = \$6,500



Wisconsin Example

Cost of serving a "virtual" student locally

Note: Average expenditure per K-12 student (08-09) \$9,760.
 Open enrollment tuition estimate \$6,322 (FY09) per student.

	Scenario 1 (one full-time virtual student)		Cost/Year
	Semester 1	Semester 2	
Course Cost (6 per semester @ \$325 per 1/2 credit course)	\$1,950	\$1,950	
LEG Support approx. 1 hr per week for 36 weeks (Average teacher salary with benefits \$50,000/185 days = \$270/day, \$270/7 periods = \$39/hr.)	\$702	\$702	
Computer Purchase	\$800	\$0	Note: Computer may be provided if the student is full time virtual student at "home."
IT Support (30 min/month @\$39/hr for 9 months)	\$88	\$88	
Internet Stipend (\$20 per month for 9 months)	\$90	\$90	Note: Internet access may be provided if the student is full time virtual student at "home."
Cost per semester	\$3,630	\$2,830	Note: \$5,660 (year two - no computer purchase)
			\$6,460

What are the COSTS?

“The operating costs of online programs are about the same as the operating costs of a regular brick-and-mortar school.” – *iNACOL Promising Practices: Funding and Policy Frameworks for K-12 Online Learning*

Cost-effectiveness derives from:

- Ability to deliver courses that the local school could not afford to staff up for
- Ability to satisfy parent choice and serve students with unique learning needs without building a new school

How do taxpayer dollars **FLOW**?

- **Full-time online** (e.g., cyber charter schools and contract schools) typically funded through state's per-pupil funding formula: Funding (some or all) follows the student
- **Supplemental online** (e.g., by the course) typically funded through state appropriation and/or course fees paid by districts and/or students: Fee for service

How do taxpayer dollars FLOW?

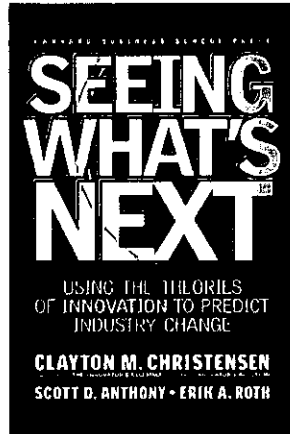
- Accounting Considerations
 - **“Seat time” vs. mastery:** Online learning can make traditional methods of student accounting irrelevant
 - **Scale vs. control:** Open enrollment/growth across boundaries (district and state) begets efficiencies – but creates funding competition
 - **Supplement vs. supplant:** How much of online learning must be additive to traditional school program, and when can it be a substitute?

Toward SUSTAINABLE Funding

- **Near-term necessities**
 - Drive toward offering BOTH full-time and supplemental opportunities in EVERY state
 - Address barriers such as seat time, enrollment restrictions, lack of information
 - Consider flexible uses of existing funds (e.g. textbook dollars)

Toward SUSTAINABLE Funding

- **Longer term imperatives:**
 - Integration of online learning into essential K-12 education funding process:
“Part of how we educate kids in this state”
 - Public-private partnerships to achieve efficiencies, avoid re-invented wheels
 - Fractional backpacking: Funding following students down to the course level



“Using the Internet to deliver courses seems to contain great disruptive potential. It could allow a radical transformation to happen in an incremental, rational way.”

- Clayton Christensen, Harvard Business School



Contact Information

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john@evergreenedgroup.com

Louie Flora

From: bwhicker.fasttrack@gmail.com on behalf of Bill Whicker, Principal - Fast Track Virtual School [bill.whicker@kgbsd.org]
Sent: Monday, January 25, 2010 6:54 PM
To: Louie Flora
Cc: Robert Boyle
Subject: Ketchikan Online Course Information

Mr. Flora,

The Ketchikan Gateway Borough School District launched the Fast Track Virtual School in the fall of 2009. The vision of this school is to provide the additional option of quality courses that meet the needs of all students. The majority of these courses will be delivered in a virtual environment unless circumstances prevent connectivity.

We are in the beginning stages of this process, but have made good strides in delivering online courses that are meeting student need.

Current

We are using third party courses as well as the standards-based curriculum from E2020 and Compass Learning, delivered from our servers. Our next step is to fill the gap for highly qualified teachers in these classes.

Vision for the Future

Ideally, we will be developing courses that will *be integrated with our regular student's schedules in a blended environment (online learning facilitated by face-to-face teachers)* and taught by talented, content area teachers on our course management system. This vision will transform our brick and mortar schools into a 21st century learning environment that individualizes instruction for each student.

To date, the online courses that we are supporting and delivering to students include:

These courses cost around \$120-\$130 per semester plus district staff time to proctor tests and provide record-keeping.

Examples of these classes are:

- BYU > Biology 1B
- BYU > Art > Drawing
- BYU > Computer Technology
- BYU > Health Education
- BYU > Automotive Basics
- BYU > Critical Workplace Skills
- BYU > Tenth Grade English
- BYU > 11th Grade English

Classes offered through Compass Learning (\$3000 per year for a 2 semester class) are spread over a 400 seat license. Teacher fees to supervise will be \$75 – 125 per semester. This method of instruction give us more control over the customization of student learning. Examples include:

- Odyssey > English I

Odyssey > English II
Odyssey > Biology
Odyssey > Algebra
Odyssey > US Government
Odyssey > US History II

Currently, our classes are about a 50-50 split.

I hope this answers your questions adequately. Please don't hesitate to contact me should you have any additional questions.

Respectfully,

--

Bill Whicker, Principal
Fast Track Virtual School
Fast Track Correspondence
Ketchikan Gateway Borough School District
Ketchikan, Alaska 99901
Voice: (907) 225-2128
Fax: (907) 225-2126
bill.whicker@kgbsd.org
Website: <http://fasttrack.kgbsd.org>
FT001

Louie Flora

Subject: FW: House Education Committee Schedule for Next Week
Attachments: HS.Catalog_09-10 2.pdf

From: Woody Wilson [mailto:wwilson@wrangellschools.org]
Sent: Monday, January 25, 2010 2:55 PM
To: Louie Flora
Subject: Re: House Education Committee Schedule for Next Week

Louie,

One of the companies I am working with is K12. I have attached their course offerings. The other group I am considering is Virtual High School. Haven't worked with them yet but will in the next couple of weeks.

The estimated cost per course is \$300 per semester.

One problem is the requirement for Highly Qualified teachers in some areas. For example: Chinese

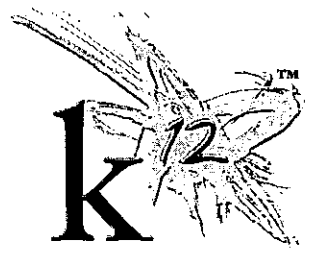
How many AK certified, highly qualified teachers are there? Probably none. That rule needs to be relaxed for those critical areas that are important like foreign languages.

Thanks

Woody Wilson, Superintendent
Wrangellschools.org
907-874-2347



i want to be
an aerospace
engineer



High School Course Catalog 2009-2010 School Year

Multiple Levels for Diverse Learners

K¹² provides **more than 105 high school courses** designed to help you earn your high school diploma, find your own path, and follow it to post-high school success—whether that's in college or in the workforce. With the K¹² curriculum it's your education and your choice.

K¹² offers Math, English, Science, and History courses in **multiple levels—Core, Comprehensive, Honors, and Advanced Placement® (AP®)**—to meet the needs of diverse learners. You can also take up to four years of a world language (depending on the language), and choose from a variety of electives, including anthropology, Web design, and digital photography.

Unlike other programs, where a student must be in a particular “academic path”, the K¹² program allows students to chart their own course, choosing from among the four levels of courses to match their aptitude and goals. So, if a student excels in Math and Science, they may take all Honors/AP® courses in those subjects, while choosing from among the Core and Comprehensive English and History courses. These multiple course levels prevent you from being “locked in” to one level of a particular subject, and account for natural progress and growth.

Online Courses Designed for Online Delivery

K¹² serves more online courses to the K–12 market than any other online curriculum provider—and it's in large part because K¹² sets the highest standard of course quality.

K¹² never just scans a textbook and calls it an online course. K¹² courses are designed and developed for online delivery from the outset. The K¹² team of curriculum experts and course designers start from scratch, thoroughly scoping out the learning objectives for each course. They map out a strategy for how best to accomplish those objectives using online text, graphics, charts, illustrations, interactive demonstrations, offline reading materials or activities, and interactive online discussions. Then, usability testing is conducted with the intended audience to make sure students can easily navigate through the lessons and master the intended learning objectives.

K¹² knows that the combination of rich, engaging content with interesting, interactive demonstrations and activities helps students absorb and retain information. The use of graded assignments and assessments further allows students to demonstrate progress toward learning objectives.

Four Levels of Core Subjects

With the K¹² high school curriculum, students can harness the power of individualized learning by choosing from the following four levels of Math, English, Science, and History courses:

The K¹² Core courses are similar to the standard courses offered by many other programs. They meet all academic requirements for each course area, both for graduation and for potential admission into a wide range of colleges. In K¹² Core courses, topics are broken into discrete modules that are taught in tandem with the framework students need to develop strong study skills. Rich, engaging content with interesting, interactive demonstrations and activities help students in our Core courses to absorb and retain the information presented. Optional content and activities are also available to students wishing to study a particular topic in more depth.

K¹² Comprehensive courses are designed for students with a strong foundational knowledge and aptitude in the subject area being covered, as well as solid study skills. As a result, students in our Comprehensive courses do more extensive writing and research projects, and tackle problems that require more analytical thinking. Course projects and activities also demand more independent thinking and self-discipline than projects in Core courses. As with Core courses, additional content and activities are provided to students wishing to delve more deeply into a topic.

K¹² Honors courses hold students to a greater degree of accountability, and demand even greater independence and self-discipline than their Comprehensive counterparts. Students synthesize and evaluate information and concepts from multiple sources and read texts typically assigned in college-level courses. Students also demonstrate college-level writing in essays that require analysis of primary and secondary sources, responsible use of evidence, and comprehensive citation of sources. Successful completion of prerequisites, teacher/school counselor recommendation, and a strong interest in the subject are recommended for enrollment in a K¹² Honors course.

K¹² Advanced Placement® (AP®) courses are college-level courses that follow curriculum specified by the College Board. Like K¹² Honors courses, AP® courses require a greater degree of self-discipline for in-depth study of the subject. These courses are designed to prepare students for success on AP® exams, providing students the opportunity to earn credit at most of the nation's colleges and universities. Successful completion of prerequisites, teacher/school counselor recommendation, and a strong interest in the subject are recommended for enrollment in an AP® course.

K¹² 2009-2010 High School Course List

English

Core

ENG102: Literary Analysis and Composition I
 ENG202: Literary Analysis and Composition II
 ENG302: American Literature
 ENG402: British and World Literature

Comprehensive

ENG103: Literary Analysis and Composition I
 ENG203: Literary Analysis and Composition II
 ENG303: American Literature
 ENG403: British and World Literature

Honors/AP*

ENG104: Honors Literary Analysis and Composition I
 ENG204: Honors Literary Analysis and Composition II
 ENG304: Honors American Literature
 ENG404: Honors British and World Literature
 ENG500: AP* English Language and Composition
 ENG510: AP* English Literature and Composition

Electives

ENG010: Journalism

History and Social Sciences

Core

HST102: World History
 HST202: Modern World Studies
 HST212: Geography and World Cultures*
 HST302: U.S. History
 HST312: Modern U.S. History
 HST402: U.S. Government and Politics*
 HST412: U.S. and Global Economics*

Comprehensive

HST103: World History
 HST203: Modern World Studies
 HST213: Geography and World Cultures*
 HST303: U.S. History
 HST313: Modern U.S. History
 HST403: U.S. Government and Politics*
 HST413: U.S. and Global Economics*

Honors/AP*

HST204: Honors Modern World Studies
 HST304: Honors U.S. History
 HST314: Honors Modern U.S. History
 HST500: AP* U.S. History
 HST510: AP* U.S. Government and Politics*
 HST520: AP* Macroeconomics*
 HST530: AP* Microeconomics*
 HST540: AP* Psychology*

Electives

HST010: Anthropology*
 HST020: Psychology*
 HST030: Macroeconomics*

Mathematics

Core

MTH102: Math Foundations
 MTH112: Pre-Algebra
 MTH122: Algebra I
 MTH202: Geometry
 MTH302: Algebra II
 MTH312: Business and Consumer Math*

Comprehensive

MTH113: Pre-Algebra
 MTH123: Algebra I
 MTH203: Geometry
 MTH303: Algebra II
 MTH403: Pre-Calculus/Trigonometry

Honors/AP*

MTH124: Honors Algebra I
 MTH204: Honors Geometry
 MTH304: Honors Algebra II
 MTH500: AP* Calculus A3
 MTH510: AP* Statistics

Electives

BUS030: Personal Finance*

Science

Core

SCI102: Physical Science
 SCI112: Earth Science
 SCI202: Biology
 SCI302: Chemistry

Comprehensive

SCI113: Earth Science
 SCI203: Biology
 SCI303: Chemistry
 SCI403: Physics

Honors/AP*

SCI114: Honors Earth Science
 SCI204: Honors Biology
 SCI304: Honors Chemistry
 SCI404: Honors Physics
 SCI500: AP* Biology
 SCI510: AP* Chemistry
 SCI520: AP* Physics B

Electives

SCI010: Environmental Science
 SCI020: Life Science: Oceanography*

World Languages

Comprehensive

WLG100: Spanish I
 WLG200: Spanish II
 WLG300: Spanish III
 WLG110: French I
 WLG210: French II
 WLG310: French III
 WLG120: German I
 WLG220: German II
 WLG130: Latin I
 WLG230: Latin II
 WLG140: Chinese I
 WLG240: Chinese II

Honors/AP*

WLG500: AP* Spanish Language
 WLG510: AP* French Language

Electives and Additional Courses

ART010: Fine Art
 ART020: Music Appreciation
 BUS010: Business Communication and Career Exploration*
 BUS020: Business and Personal Relationships*
 BUS030: Personal Finance*
 BUS040: Introduction to Entrepreneurship*
 (Available Winter 2010)
 ENG010: Journalism
 HST010: Anthropology*
 HST020: Psychology*
 HST030: Macroeconomics*
 SCI010: Environmental Science
 SCI020: Life Science: Oceanography*
 OTH010: Skills for Health*
 OTH020: Physical Education*
 OTH030: Career Planning*
 OTH040: Study Skills and Learning Strategies*

Technology and Computer Science

TCH010: Computer Literacy I*
 TCH020: Computer Literacy II*
 TCH030: Digital Photography and Graphics*
 TCH040: Web Design*
 TCH050: Digital Video Production*
 TCH060: C++ Programming*
 TCH070: Game Design I*
 TCH080: Game Design II*
 TCH090: Online Game Design*
 TCH016: Flash Animation*
 TCH017: 3D Art I—Modeling*
 TCH018: 3D Art II—Animation*
 (Available Winter 2010)
 TCH019: Computer-Aided Design (CAD)*
 (Available Winter 2010)

Orientation

ORN010: Online Learning 09-10
 ORN020: Finding Your Path—Planning for Career and College

*This is a one-semester course.

English

ENG102: Literary Analysis and Composition I

In this course, students work on their written and oral communication skills, while strengthening their ability to understand and analyze works of literature, both classic and modern.

Literature: Students read short stories, poetry, drama, novels, essays, and informative articles. The course sharpens reading comprehension skills and engages readers in literary analysis as they consider important human issues and challenging ideas. Students also learn to read for information in nonfiction texts.

Language Skills: Students learn to express their ideas effectively. They sharpen their composition skills through focus on writing good paragraphs and essays in a variety of genres, such as persuasive and research essays. Students plan, organize, and revise written works in response to feedback on drafts. In grammar, usage, and mechanics lessons, students expand their understanding of parts of speech, phrases and clauses, sentence analysis and structure, agreement, punctuation, and other conventions. Vocabulary lessons build knowledge of Greek and Latin words that form the roots of many English words. Students use word origins and derivations to determine the meaning of new words as they increase their vocabularies.

Course length: Two semesters

Materials: *Explorations: An Anthology of Literature, Volume A; English Language Handbook; Vocabulary from Classical Roots, Book B; Julius Caesar for Young People*

Prerequisites: Middle school English/language arts

Note: This course is only for students who are new to the K¹² curriculum. Students who have taken K¹² Intermediate English A or B, or K¹² middle school Literary Analysis and Composition courses, should not enroll in this course.

ENG103: Literary Analysis and Composition I

This course challenges students to improve their written and oral communication skills, while strengthening their ability to understand and analyze literature in a variety of genres.

Literature: Students read a broad array of short stories, poetry, drama, novels, autobiographies, essays, and famous speeches. The course guides students in the close reading and critical analysis of classic works of literature, and helps them appreciate the texts and the contexts in which the

works were written. Literary selections range from classic works such as Shakespeare's *Romeo and Juliet* to contemporary pieces by authors such as Maya Angelou

Language Skills: Students broaden their composition skills by examining model essays in various genres by student and published writers. Through in-depth planning, organizing, drafting, revising, proofreading, and feedback, they hone their writing skills. Students build on their grammar, usage, and mechanics skills with in-depth study of sentence analysis and structure, agreement, and punctuation, reinforced by online activities (Skills Updates). Student vocabularies are enhanced through the study of Greek and Latin root words, improving students' ability to decipher the meanings of new words.

Course length: Two semesters

Materials: *Classics for Young Readers, Volume 8; Classics for Young Readers, Volume 8: An Audio Companion; BK English Language Handbook, Level 1; Vocabulary from Classical Roots, Book C; The Narrative of the Life of Frederick Douglass, An American Slave, by Frederick Douglass; Anne Frank: Diary of a Young Girl, by Anne Frank; Romeo and Juliet, by William Shakespeare*

Prerequisites: K¹² Intermediate English A and B, or equivalent

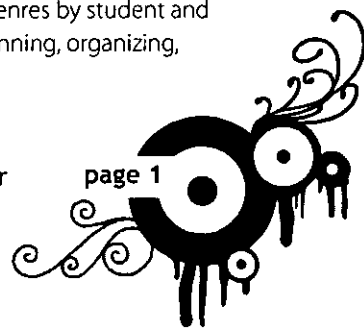
Note: Students who have already succeeded in K¹² middle school Literary Analysis and Composition should not enroll in this course.

ENG104: Honors Literary Analysis and Composition I

This course challenges students to improve their written and oral communication skills, while strengthening their ability to understand and analyze literature in a variety of genres. Students enrolled in this course work on independent projects that enhance their skills and challenge them to consider complex ideas and apply the knowledge they have learned.

Literature: Students read a broad array of short stories, poetry, drama, novels, autobiographies, essays, and famous speeches. The course guides students in the close reading and critical analysis of classic works of literature, and helps them appreciate the texts and the contexts in which the works were written. Literary selections range from the Greek tragedy *Antigone* to Shakespeare's *Romeo and Juliet* to contemporary pieces by authors such as Annie Dillard and Maya Angelou.

Language Skills: Students broaden their composition skills by examining model essays in various genres by student and published writers. Through in-depth planning, organizing,



drafting, revising, proofreading, and feedback, they hone their writing skills. Students build on their grammar, usage, and mechanics skills with in-depth study of sentence analysis and structure, agreement, and punctuation, reinforced by online activities. Student vocabularies are enhanced through the study of Greek and Latin root words, improving students' ability to decipher the meanings of new words.

Course length: Two semesters

Materials: *Classics for Young Readers, Volume 8; Classics for Young Readers, Volume 8: An Audio Companion; BK English Language Handbook, Level 1; Vocabulary from Classical Roots, Book C; The Narrative of the Life of Frederick Douglass, An American Slave*, by Frederick Douglass; *Anne Frank: Diary of a Young Girl*, by Anne Frank; *Romeo and Juliet*, by William Shakespeare

Prerequisites: Success in K¹² Intermediate English A and B, or equivalent, and teacher/school counselor recommendation

Note: Students who have already succeeded in K¹² middle school Literary Analysis and Composition should not enroll in this course.

ENG202: Literary Analysis and Composition II

In this course, students build on their language skills while reading classic and modern works of literature and improving their writing skills.

Literature: Students read short stories, poetry, drama, and novels, sharpening their reading comprehension skills and analyzing important human issues.

Language Skills: Students continue to work on their oral and written expression skills, writing a variety of essays, including persuasive and research essays. Students plan, organize, and revise their essays in response to feedback. They build on their skills in grammar, usage, and mechanics by studying parts of speech, phrases and clauses, sentence analysis and structure, agreement, punctuation, and other conventions. Thematic units focus on word roots, suffixes and prefixes, context clues, and other strategies help students strengthen their vocabularies.

Course length: Two semesters

Materials: *Explorations: An Anthology of Literature, Volume B; The Miracle Worker*, by William Gibson

Prerequisites: ENG102: Literary Analysis and Composition I, or equivalent

Note: Students who have taken K¹² Intermediate English A or B or K¹² middle school Literary Analysis and Composition courses should not enroll in this course.

ENG203: Literary Analysis and Composition II

In this course, students build on existing literature and composition skills and move to higher levels of sophistication.

Literature: Students hone their skills of literary analysis by reading short stories, poetry, drama, novels, and works of nonfiction, both classic and modern. Authors include W. B. Yeats, Sara Teasdale, Langston Hughes, Robert Frost, Edgar Allan Poe, Nathaniel Hawthorne, Kate Chopin, Amy Tan, and Richard Rodriguez. Students read Shakespeare's *Macbeth*. They are offered a choice of novels and longer works to study, including works by Jane Austen, Charles Dickens, Elie Wiesel, and many others.

Language Skills: In this course, students become more proficient writers and readers. In composition lessons, students analyze model essays from readers' and writers' perspectives, focusing on ideas and content, structure and organization, style, word choice, and tone. Students receive feedback during the writing process to help them work toward a polished final draft. In addition to writing formal essays, résumés, and business letters, students write and deliver a persuasive speech. Students expand their knowledge of grammar, usage, and mechanics through sentence analysis and structure, syntax, agreement, and conventions. Unit pretests identify skills to address more fully. Students strengthen their vocabularies through thematic units focused on word roots, suffixes and prefixes, context clues, and other important vocabulary-building strategies.

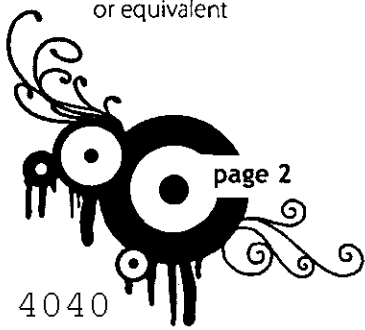
Course length: Two semesters

Materials: *Journeys in Literature: Classic and Modern, Volume B; Journeys in Literature: Classic and Modern, Volume B: An Audio Companion; Vocabulary for Achievement, Fourth Course; Macbeth*, by William Shakespeare

Prerequisites: ENG103: Literary Analysis and Composition I, or equivalent

ENG204: Honors Literary Analysis and Composition II

In this course, students build on existing literature and composition skills and move on to higher levels of sophistication. Students work on independent projects that enhance their skills and challenge them to consider complex ideas and apply the knowledge they have learned.



Literature: Students hone their skills of literary analysis by reading short stories, poetry, drama, novels, and works of nonfiction, both classic and modern. Authors include W. B. Yeats, Sara Teasdale, Langston Hughes, Robert Frost, Edgar Allan Poe, Nathaniel Hawthorne, Kate Chopin, Amy Tan, Richard Rodriguez, and William Shakespeare. Students have a choice of novels and longer works to study, including works by Jane Austen, Charles Dickens, and Elie Wiesel.

Language Skills: In this course, students become more proficient writers and readers. In composition lessons, students analyze model essays from readers' and writers' perspectives, focusing on ideas and content, structure and organization, style, word choice, and tone. Students receive feedback during the writing process to help them work toward a polished final draft. In addition to writing formal essays, résumés, and business letters, students write and deliver a persuasive speech. Students expand their knowledge of grammar, usage, and mechanics through sentence analysis and structure, syntax, agreement, and conventions. Unit pretests identify skills to address more fully. Students strengthen their vocabularies through thematic units focused on word roots, suffixes and prefixes, context clues, and other important vocabulary-building strategies.

Course length: Two semesters

Materials: *Journeys in Literature: Classic and Modern, Volume B; Journeys in Literature: Classic and Modern, Volume B: An Audio Companion; Vocabulary for Achievement, Fourth Course*

Prerequisites: Success in ENG104: Honors Literary Analysis and Composition I, or equivalent, and teacher/school counselor recommendation

ENG302: American Literature

In this genre-based course, students sharpen their reading comprehension skills and analyze important themes in classic and modern works of American literature, including short stories, poetry, drama, and novels. Students refine their skills of written expression by writing memoirs, persuasive essays, research essays, workplace documentation, and more. They develop vocabulary skills and refresh their knowledge of grammar, usage, and mechanics in preparation for standardized tests.

Literature: Students read short stories, poetry, drama, and novels, sharpening their reading comprehension skills and analyzing important themes in American literature.

Language Skills: Students continue to work on their oral and written expression skills, writing a variety of essays including memoirs, persuasive and research essays, and workplace documentation. Students plan, organize, and revise their essays in response to feedback.

Course length: Two semesters

Materials: *Explorations: An Anthology of American Literature, Volume C; Our Town*, by Thornton Wilder; *To Kill a Mockingbird*, by Harper Lee

Prerequisites: ENG202: Literary Analysis and Composition II, or equivalent

ENG303: American Literature

In this course, students read and analyze works of American literature from Colonial to contemporary times, including poetry, short stories, novels, drama, and nonfiction. The literary works provide opportunities for critical writing, creative projects, and online discussions. Students develop vocabulary skills and refresh their knowledge of grammar, usage, and mechanics in preparation for standardized tests.

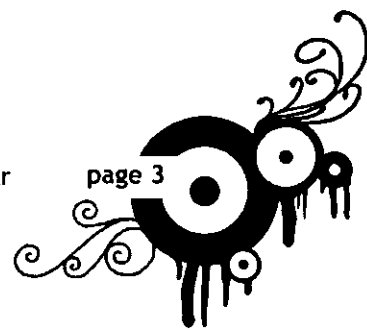
Course length: Two semesters

Materials: *Journeys in Literature: American Traditions, Volume C; The Great Gatsby*, by F. Scott Fitzgerald; *The Glass Menagerie* by Tennessee Williams. Students will also read one selection of their choice from the following: *The Old Man and the Sea*, by Ernest Hemingway; *The House on Mango Street*, by Sandra Cisneros; *A Lesson Before Dying*, by Ernest Gaines; *The Red Badge of Courage*, by Stephen Crane

Prerequisites: ENG203: Literary Analysis and Composition II, or equivalent

ENG304: Honors American Literature

In this course, students read and analyze works of American literature from Colonial to contemporary times, including poetry, short stories, novels, drama, and nonfiction. The literary works provide opportunities for critical writing, creative projects, and online discussions. Students develop vocabulary skills and refresh their knowledge of grammar, usage, and mechanics in preparation for standardized tests. Students enrolled in this challenging course will also complete independent projects that deepen their understanding of the themes and ideas presented in the curriculum.



Course length: Two semesters

Materials: *Journeys in Literature: American Traditions, Volume C*; *The Great Gatsby*, by F. Scott Fitzgerald; *The Glass Menagerie*, by Tennessee Williams. Students will also read one selection of their choice from the following: *The Old Man and the Sea*, by Ernest Hemingway; *The House on Mango Street* by Sandra Cisneros; *A Lesson Before Dying*, by Ernest Gaines; *The Red Badge of Courage*, by Stephen Crane; and two selections of their choice from the following: *Billy Budd*, by Herman Melville; *A Connecticut Yankee in King Arthur's Court*, by Mark Twain; *Catcher in the Rye*, by J.D. Salinger; *Song of Solomon*, by Toni Morrison

Prerequisites: Success in ENG204: Honors Literary Analysis and Composition II, or equivalent, and teacher/school counselor recommendation

ENG402: British and World Literature

This course engages students in selections from British and World literature from the ancient world through modern times. They practice analytical writing and have opportunities for creative expression. Students also practice test-taking skills for standardized assessments in critical reading and writing.

Course length: Two semesters

Materials: TBD

Prerequisites: ENG302: American Literature

ENG403: British and World Literature

Students read selections from British and World literature in a loosely organized chronological framework. They analyze the themes, styles, and structures of these texts and make thematic connections among diverse authors, periods, and settings. Students complete guided and independent writing assignments that refine their analytical skills. They have opportunities for creative expression in projects of their choosing. Students also practice test-taking skills for standardized assessments in critical reading and writing.

Course length: Two semesters

Materials: TBD

Prerequisites: ENG303: American Literature, or equivalent

ENG404: Honors British and World Literature

Students read selections from British and World literature in a loosely organized chronological framework. They analyze the themes, styles, and structures of these texts and make thematic connections among diverse authors, periods, and settings. Students work independently on many of their analyses and engage in creative collaboration with their peers. Students also practice test-taking skills for standardized assessments in critical reading and writing.

Course length: Two semesters

Materials: TBD

Prerequisites: ENG304: American Literature, or equivalent, and teacher/school counselor recommendation

ENG500: AP® English Language and Composition

Students learn to understand and analyze complex works by a variety of authors. They explore the richness of language, including syntax, imitation, word choice, and tone. They also learn composition style and process, starting with exploration, planning, and writing. This continues with editing, peer review, rewriting, polishing, and applying what they learn to academic, personal, and professional contexts. In this equivalent of an introductory college-level survey class, students prepare for the AP® exam and for further study in communications, creative writing, journalism, literature, and composition.

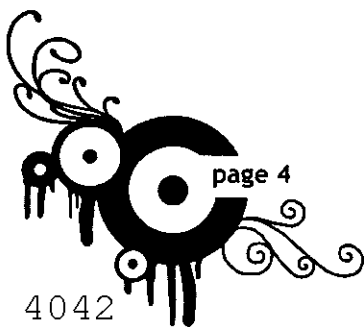
Course Length: Two semesters

Materials: *The Norton Reader: An Anthology of Nonfiction*, 11th ed.; *Writing: A College Handbook*, 5th ed.

Prerequisites: Success in ENG303: American Literature (or equivalent) and teacher/school counselor recommendation

ENG510: AP® English Literature and Composition

In this course, the equivalent of an introductory college-level survey class, students are immersed in novels, plays, poems, and short stories from various periods. Students read and write daily, using a variety of multimedia and interactive activities, interpretive writing assignments, and discussions. The course places special emphasis on reading comprehension, structural and critical analyses of written works, literary vocabulary, and recognizing and understanding literary devices. Students prepare for the AP® Exam and for further study in creative writing, communications, journalism, literature, and composition.



Course Length: Two semesters

Materials: Required (both semesters): *The Norton Anthology of Poetry*, 5th ed.; *The Story and Its Writer: An Introduction to Short Fiction*, compact 7th ed.

Required (first semester): *Their Eyes Were Watching God*, by Zora Neale Hurston; *Hedda Gabler*, by Henrik Ibsen; *A Streetcar Named Desire*, by Tennessee Williams; *Twelfth Night*, by William Shakespeare

Required (second semester): *The Great Gatsby*, by F. Scott Fitzgerald; *Annie John*, by Jamaica Kincaid; *Jane Eyre*, by Charlotte Brontë

Prerequisites: Success in ENG303: American Literature (or equivalent) and a teacher/school counselor recommendation

ENG010: Journalism (Elective)

Students examine the development of journalism, from print to the multimedia environment, while learning how to publish an online newspaper. Students write newspaper-style articles and opinion pieces, and examine careers in multimedia communication. They also consider the historical effects of "yellow" journalism, freedom of the press, and journalism's contributions to today's world, with an emphasis on the mutual influence of media and policy.

Course length: Two semesters

Materials: *Associated Press Stylebook*

Prerequisites: Success in previous English/language arts course and a teacher/school counselor recommendation

Mathematics

MTH102: Math Foundations

Students assess their mastery and focus on skills that need reinforcement. They practice skills of mathematical reading, writing, and reasoning. Topics include number sense; statistics, data analysis, and probability; functions; measurement and geometry; and algebraic concepts. Throughout the course, students use Real-World Connection and Geometry Infusion problems to apply mathematical skills to real-life situations.

Course length: Two semesters

Materials: None

Prerequisites: Middle school math, or equivalent (minimum)

MTH112: Pre-Algebra

In this course, students learn computational and problem-solving skills and the language of algebra. Students translate word phrases and sentences into mathematical expressions; analyze geometric figures; solve problems involving percentages, ratios, and proportions; graph different kinds of equations and inequalities; calculate statistical measures and probabilities; apply the Pythagorean theorem; and explain strategies for solving real-world problems. The textbook provides students with a ready reference and explanations that supplement the online material. Online lessons provide demonstrations of concepts, as well as interactive problems with contextual feedback.

Course length: Two semesters

Materials: *Pre-Algebra: Reference Guide and Problem Sets*

Prerequisite: MTH102: Math Foundations

MTH113: Pre-Algebra

In this course, students take a broader look at computational and problem-solving skills while learning the language of algebra. Students translate word phrases and sentences into mathematical expressions; analyze geometric figures; solve problems involving percentages, ratios, and proportions; graph different kinds of equations and inequalities; calculate statistical measures and probabilities; apply the Pythagorean theorem; and explain strategies for solving real-world problems. Online lessons provide demonstrations of key concepts, as well as interactive problems with contextual feedback. A textbook supplements the online material.

Course length: Two semesters

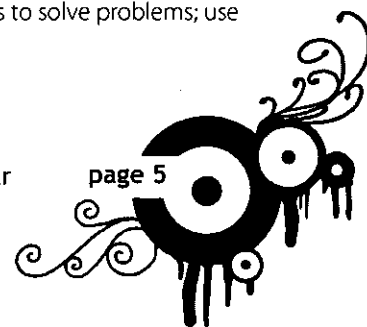
Materials: *Pre-Algebra: Reference Guide and Problem Sets*

Prerequisites: K¹² Pre-Algebra A, MTH102: Math Foundations, or equivalent

Note: Students who have already succeeded in K¹² middle school Pre-Algebra B should not enroll in this course.

MTH122: Algebra I

In this course, students explore the tools of algebra. Students learn to identify the structure and properties of the real number system; complete operations with integers and other rational numbers; work with square roots and irrational numbers; graph linear equations; solve linear equations and inequalities in one variable; solve systems of linear equations; use ratios, proportions, and percentages to solve problems; use



algebraic applications in geometry including the Pythagorean theorem and formulas for measuring area and volume; complete an introduction to polynomials; and understand logic and reasoning.

Course length: Two semesters

Materials: *Algebra I: Reference Guide and Problem Sets*

Prerequisites: MTH112: Pre-Algebra

MTH123: Algebra I

Students develop algebraic fluency by learning the skills needed to solve equations and perform manipulations with numbers, variables, equations, and inequalities. They also learn concepts central to the abstraction and generalization that algebra makes possible. Students learn to use number properties to simplify expressions or justify statements; describe sets with set notation and find the union and intersection of sets; simplify and evaluate expressions involving variables, fractions, exponents, and radicals; work with integers, rational numbers, and irrational numbers; and graph and solve equations, inequalities, and systems of equations. They learn to determine whether a relation is a function and how to describe its domain and range; use factoring, formulas, and other techniques to solve quadratic and other polynomial equations; formulate and evaluate valid mathematical arguments using various types of reasoning; and translate word problems into mathematical equations and then use the equations to solve the original problems.

Course length: Two semesters

Materials: *Algebra I: Reference Guide and Problem Sets*

Prerequisites: K¹² Pre-Algebra B, MTH113: Pre-Algebra, or equivalent

Note: Students who have already succeeded in K¹² middle school Algebra 1 should not enroll in this course.

MTH124: Honors Algebra I

This course prepares students for more advanced courses while they develop algebraic fluency, learn the skills needed to solve equations, and perform manipulations with numbers, variables, equations, and inequalities. They also learn concepts central to the abstraction and generalization that algebra makes possible. Students learn to use number properties to simplify expressions or justify statements; describe sets with set notation and find the union and intersection of sets; simplify and evaluate expressions involving variables, fractions,

exponents, and radicals; work with integers, rational numbers, and irrational numbers; and graph and solve equations, inequalities, and systems of equations.

They learn to determine whether a relation is a function and how to describe its domain and range; use factoring, formulas, and other techniques to solve quadratic and other polynomial equations; formulate and evaluate valid mathematical arguments using various types of reasoning; translate word problems into mathematical equations and then use the equations to solve the original problems. The course is expanded with more challenging assessments, optional exercises, and threaded discussions that allow students to explore and connect algebraic concepts. There is also an independent honors project each semester.

Course length: Two semesters

Materials: *Algebra I: Reference Guide and Problem Sets*

Prerequisites: Success in previous math course and teacher/school counselor recommendation

MTH202: Geometry

Students learn to recognize and work with core geometric concepts in various contexts. They develop sound ideas of inductive and deductive reasoning, logic, concepts, and techniques of Euclidean plane and solid geometry, as well as a solid, basic understanding of mathematical structure, method, and applications of Euclidean plane and solid geometry. Students use visualizations, spatial reasoning, and geometric modeling to solve problems. Topics of study include points, lines, and angles; triangles; right triangles; quadrilaterals and other polygons; circles; coordinate geometry; three-dimensional solids; geometric constructions; symmetry; and the use of transformations.

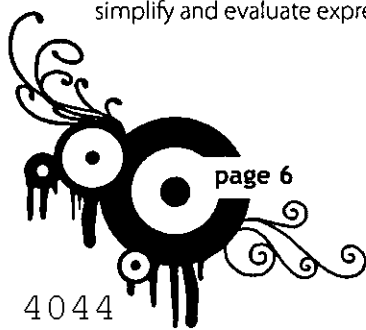
Course length: Two semesters

Materials: *Geometry: A Reference Guide*; a drawing compass, protractor, and ruler

Prerequisites: MTH122: Algebra I, or equivalent

MTH203: Geometry

In this comprehensive course, students are challenged to recognize and work with geometric concepts in various contexts. They build on ideas of inductive and deductive reasoning, logic, concepts, and techniques of Euclidean plane and solid geometry. They develop deeper understandings of mathematical structure, method, and applications of Euclidean plane and solid geometry. Students use visualizations, spatial



reasoning, and geometric modeling to solve problems. Topics of study include points, lines, and angles; triangles; right triangles; quadrilaterals and other polygons; circles; coordinate geometry; three-dimensional solids; geometric constructions; symmetry; the use of transformations; and non-Euclidean geometries.

Course length: Two semesters

Materials: *Geometry: A Reference Guide*; a drawing compass, protractor, and ruler

Prerequisites: MTH123: Algebra I, or equivalent

MTH204: Honors Geometry

Students work with advanced geometric concepts in various contexts. They build in-depth ideas of inductive and deductive reasoning, logic, concepts, and techniques of Euclidean plane and solid geometry. They also develop a sophisticated understanding of mathematical structure, method, and applications of Euclidean plane and solid geometry. Students use visualizations, spatial reasoning, and geometric modeling to solve problems. Topics of study include points, lines, and angles; triangles; right triangles; quadrilaterals and other polygons; circles; coordinate geometry; three-dimensional solids; geometric constructions; symmetry; the use of transformations; and non-Euclidean geometries. Students work on additional challenging assignments, assessments, and research projects.

Course length: Two semesters

Materials: *Geometry: A Reference Guide*; a drawing compass, protractor, and ruler

Prerequisites: MTH123: Algebra I or MTH124: Honors Algebra I, or equivalent, and teacher/school counselor recommendation

MTH302: Algebra II

This course builds upon algebraic concepts covered in Algebra I. Students solve open-ended problems and learn to think critically. Topics include conic sections; functions and their graphs; quadratic functions; inverse functions; and advanced polynomial functions. Students are introduced to rational, radical, exponential, and logarithmic functions; sequences and series; and data analysis.

Course length: Two semesters

Materials: None

Prerequisites: MTH122: Algebra I

MTH303: Algebra II

This course builds upon algebraic concepts covered in Algebra I and prepares students for advanced-level courses. Students extend their knowledge and understanding by solving open-ended problems and thinking critically. Topics include conic sections; functions and their graphs; quadratic functions; inverse functions; and advanced polynomial functions. Students are introduced to rational, radical, exponential, and logarithmic functions; sequences and series; and data analysis.

Course Length: Two semesters

Materials: None

Prerequisites: MTH123: Algebra I and MTH203: Geometry

MTH304: Honors Algebra II

This course builds upon advanced algebraic concepts covered in Algebra I and prepares students for advanced-level courses. Students extend their knowledge and understanding by solving open-ended problems and thinking critically. Topics include functions and their graphs; quadratic functions; complex numbers, and advanced polynomial functions. Students are introduced to rational, radical, exponential, and logarithmic functions; sequences and series; probability; statistics; and conic sections. Students work on additional challenging assignments, assessments, and research projects.

Course Length: Two semesters

Materials: None

Prerequisites: MTH123: Algebra I or MTH124: Honors Algebra I and MTH203: Geometry or MTH204: Honors Geometry, or equivalents, and teacher/school counselor recommendation

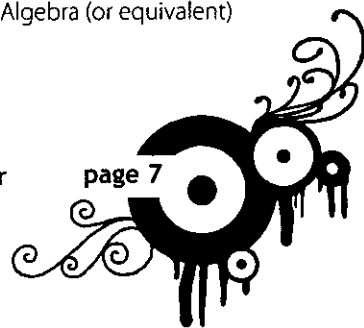
MTH312: Business and Consumer Math

Students learn mathematical skills relevant to everyday life, such as balancing a checkbook, calculating net pay, budgeting expenses, making cost comparisons, buying and renting a home, and finding the cost of operating a motor vehicle. Students also explore business topics, including borrowing money, investing, and calculating business profits and losses. The course guides students toward logical thinking and problem solving, to help them make good decisions about money and finances. Through projects and activities, students apply their skills and knowledge to real-life situations.

Course length: One semester

Materials: None

Prerequisites: MTH112 or MTH113: Pre-Algebra (or equivalent) recommended, but not required



MTH403: Pre-Calculus/Trigonometry

Pre-calculus weaves together previous study of algebra, geometry, and functions into a preparatory course for calculus. The course focuses on the mastery of critical skills and exposure to new skills necessary for success in subsequent math courses. Topics include linear, quadratic, exponential, logarithmic, radical, polynomial, and rational functions; systems of equations; and conic sections in the first semester. The second semester covers trigonometric ratios and functions; inverse trigonometric functions; applications of trigonometry, including vectors and laws of cosine and sine; polar functions and notation; and arithmetic of complex numbers. Cross-curricular connections are made throughout the course to calculus, art, history, and a variety of other fields related to mathematics.

Course length: Two semesters

Materials: Texas Instruments T1-84 Plus graphing calculator

Prerequisites: Success in MTH203: Geometry and MTH303: Algebra II

MTH500: AP® Calculus AB

This course is the equivalent of an introductory college-level calculus course. Calculus helps scientists, engineers, and financial analysts understand the complex relationships behind real-world phenomena. Students learn to evaluate the soundness of proposed solutions and apply mathematical reasoning to real-world models. Students also learn to understand change geometrically and visually (by studying graphs of curves), analytically (by studying and working with mathematical formulas), numerically (by seeing patterns in sets of numbers), and verbally. Students prepare for the AP® exam and further studies in science, engineering, and mathematics.

Course length: Two semesters

Materials: Texas Instruments T1-84 Plus graphing calculator

Prerequisites: Success in MTH203: Geometry, MTH303: Algebra II, MTH403: Pre-Calculus/Trigonometry, and a teacher/school counselor recommendation

MTH510: AP® Statistics

This course is the equivalent of an introductory college-level course. Statistics—the art of drawing conclusions from imperfect data and the science of real-world uncertainties—plays an important role in many fields. Students collect, analyze,

graph, and interpret real-world data. They learn to design and analyze research studies by reviewing and evaluating examples from real research. Students prepare for the AP® exam and for further study in science, sociology, medicine, engineering, political science, geography, and business.

Course length: Two semesters

Materials: Texas Instruments T1-84 Plus graphing calculator

Prerequisites: Success in MTH303: Algebra II and a teacher/school counselor recommendation

BUS030: Personal Finance (Elective)

Students learn about different aspects of personal economics and finance in a virtual neighborhood setting. Topics include spending plans and borrowing decisions; career planning; and investing, insurance, and other financial services. Students complete activities and projects to apply the knowledge they gain to their own lives. This course may meet the needs of most students requiring financial skills or economics credit.

Course length: One semester

Materials: None

Prerequisites: MTH112 or MTH113: Pre-Algebra (or equivalent) recommended, but not required

Science

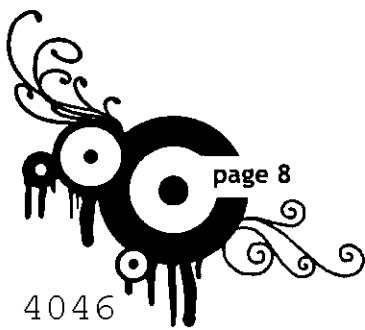
SCI102: Physical Science

Students explore the relationship between matter and energy by investigating force and motion, the structure of atoms, the structure and properties of matter, chemical reactions, and the interactions of energy and matter. Students develop skill in measuring, solving problems, using laboratory apparatuses, following safety procedures, and adhering to experimental procedures. Students focus on inquiry-based learning, with hands-on laboratory investigations making up half of the learning experience. K¹² provides all lab materials that cannot easily be found in the home.

Course length: Two semesters

Materials: *Physical Science: A Laboratory Guide*; materials for laboratory experiments

Prerequisites: K¹² middle school Physical Science, or equivalent



SCI112: Earth Science

This course provides students with a solid earth science curriculum, focusing on geology, oceanography, astronomy, weather, and climate. The program consists of online lessons, an associated reference book, collaborative activities, and hands-on laboratories students can conduct at home. The course provides a base for further studies in geology, meteorology, oceanography, and astronomy, and gives practical experience in implementing scientific methods. K¹² provides all lab materials that cannot easily be found in the home.

Course length: Two semesters

Materials: *Earth Science: A Reference Guide*; materials for laboratory experiments

Prerequisites: K¹² middle school Earth Science, or equivalent

SCI113: Earth Science

This course provides students with a comprehensive earth science curriculum, focusing on geology, oceanography, astronomy, weather, and climate. The program consists of in-depth online lessons, an associated reference book, collaborative activities, and hands-on laboratories students can conduct at home. The course prepares students for further studies in geology, meteorology, oceanography, and astronomy courses, and gives them practical experience in implementing scientific methods. K¹² provides all lab materials that cannot easily be found in the home.

Course length: Two semesters

Materials: *Earth Science: A Reference Guide*; materials for laboratory experiments

Prerequisites: K¹² middle school Life Science, or equivalent

SCI114: Honors Earth Science

This challenging course provides students with an honors-level earth science curriculum, focusing on geology, oceanography, astronomy, weather, and climate. The program consists of online lessons, an associated reference book, collaborative activities, and hands-on laboratories students can conduct at home. The course prepares students for advanced studies in geology, meteorology, oceanography, and astronomy courses, and gives them more sophisticated experience in implementing scientific methods. Additional honors assignments include debates, research papers, extended collaborative laboratories, and virtual laboratories. K¹² provides all lab materials that cannot easily be found in the home.

Course length: Two semesters

Materials: *Earth Science: A Reference Guide*; materials for laboratory experiments

Prerequisites: K¹² middle school Life Science, or equivalent, success in previous science course, and teacher/school counselor recommendation

SCI202: Biology

In this course, students focus on the chemistry of living things: the cell, genetics, evolution, the structure and function of living things, and ecology. The program consists of online lessons including extensive animations, an associated reference book, collaborative activities, and hands-on laboratory experiments students can conduct at home. K¹² provides all lab materials that cannot easily be found in the home.

Course length: Two semesters

Materials: *Biology: A Reference Guide*; materials for laboratory experiments, including a compound microscope

Prerequisites: K¹² middle school Life Science, or equivalent

SCI203: Biology

In this comprehensive course, students investigate the chemistry of living things: the cell, genetics, evolution, the structure and function of living things, and ecology. The program consists of in-depth online lessons including extensive animations, an associated reference book, collaborative explorations, and hands-on laboratory experiments students can conduct at home. K¹² provides all lab materials that cannot easily be found in the home.

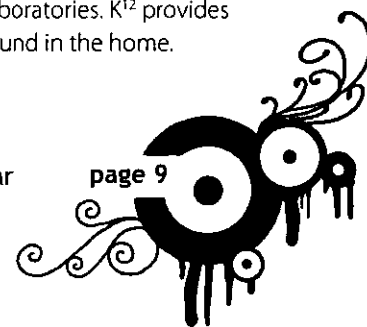
Course length: Two semesters

Materials: *Biology: A Reference Guide*; materials for laboratory experiments, including a compound microscope

Prerequisites: K¹² middle school Life Science, or equivalent

SCI204: Honors Biology

This course provides students with a challenging honors-level biology curriculum, focusing on the chemistry of living things: the cell, genetics, evolution, the structure and function of living things, and ecology. The program consists of advanced online lessons including extensive animations, an associated reference book, collaborative explorations, and hands-on laboratory experiments students can conduct at home. Honors activities include debates, research papers, extended collaborative laboratories, and virtual laboratories. K¹² provides all lab materials that cannot easily be found in the home.



Course length: Two semesters

Materials: *Biology: A Reference Guide*; materials for laboratory experiments, including a compound microscope

Prerequisites: K¹² middle school Life Science, or equivalent, success in previous science course, and teacher/school counselor recommendation

SCI302: Chemistry

This course surveys all key areas of chemistry, including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry. The course includes direct online instruction and related assessments, used with a problem-solving book. Instructions for hands-on labs are included, for which K¹² provides all lab materials that cannot easily be found in the home.

Course length: Two semesters

Materials: *Chemistry: Problems and Solutions; Chemistry: A Laboratory Guide*; K¹²-provided laboratory materials; common household materials for labs

Prerequisites: K¹² middle school Physical Science or SCI102: Physical Science and satisfactory grasp of Algebra basics, evidenced by success in MTH122: Algebra I, or equivalent

SCI303: Chemistry

This comprehensive course gives students a solid basis to move on to future studies. The course provides an in-depth survey of all key areas, including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry. The course includes direct online instruction and related assessments, used with a problem-solving book. Instructions for hands-on labs are included, for which K¹² provides all lab materials that cannot easily be found in the home.

Course length: Two semesters

Materials: *Chemistry: Problems and Solutions; Chemistry: A Laboratory Guide*; K¹²-provided laboratory materials; common household materials for labs

Prerequisites: Satisfactory completion of either K¹² middle school Physical Science or SCI102: Physical Science and solid grasp of Algebra basics, evidenced by success in MTH122: Algebra I, or equivalent

SCI304: Honors Chemistry

This advanced course gives students a solid basis to move on to more advanced courses. The challenging course surveys all key areas, including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry, enhanced with challenging model problems and assessments. Students complete community-based written research projects, treat aspects of chemistry that require individual research and reporting, and participate in online threaded discussions. Instructions for hands-on labs are included, for which K¹² provides all lab materials that cannot easily be found in the home.

Course length: Two semesters

Materials: *Chemistry: Problems and Solutions; Chemistry: A Laboratory Guide*; common household materials for labs

Prerequisites: Success in previous science course, success in Algebra I, or equivalent, and teacher/school counselor recommendation

SCI403: Physics

This course provides a comprehensive survey of all key areas: physical systems, measurement, kinematics, dynamics, momentum, energy, thermodynamics, waves, electricity, and magnetism, and introduces students to modern physics topics such as quantum theory and the atomic nucleus. The course gives students a solid basis to move on to more advanced courses later in their academic careers. The program consists of online instruction and related assessments, plus an associated problem-solving book and instructions for conducting hands-on laboratory experiments at home. K¹² provides all lab materials that cannot be found easily in a typical home.

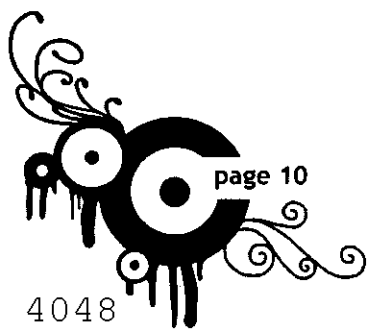
Course length: Two semesters

Materials: *Physics: Problems and Solutions*; Materials for laboratory experiments

Prerequisites: MTH303: Algebra II and MTH403: Pre-Calculus/Trigonometry

SCI404: Honors Physics

This advanced course surveys all key areas: physical systems, measurement, kinematics, dynamics, momentum, energy, thermodynamics, waves, electricity, and magnetism, and introduces students to modern physics topics such as quantum theory and the atomic nucleus. Additional honors assignments include debates, research papers, extended collaborative laboratories, and virtual laboratories. The course gives a solid basis for moving on to more advanced college physics



courses. The program consists of online instruction and related assessments, plus an associated problem-solving book and instructions for conducting hands-on laboratory experiments at home. K¹² provides all lab materials that cannot be found easily in a typical home.

Course length: Two semesters

Materials: *Physics: Problems and Solutions*; Materials for laboratory experiments

Prerequisites: MTH303: Algebra II or MTH303: Honors Algebra II and MTH403: Pre-Calculus/Trigonometry, and teacher/school counselor recommendation

SCI500: AP® Biology

This course is designed in three modules with correlating laboratory exercises: molecules and cells, heredity and the theory of evolution, and organisms and populations. Within these modules students learn about energy transfer, continuity and change in the biological world, and relations between the structure and function of living things. They also analyze the interdependence of the elements of nature and the ways in which science must seek to preserve a balance between technology and nature. Students prepare for the AP® exam by modeling the thought processes and critical-thinking skills required to answer questions on the exam. The content aligns to the sequence of topics recommended by the College Board.

Course length: Two semesters

Materials: Materials for laboratory experiments

Prerequisites: Success in SCI203: Biology and SCI303: Chemistry, and teacher/school counselor recommendation

SCI510: AP® Chemistry

Students solve chemical problems by using mathematical formulation principles and chemical calculations in addition to laboratory experiments. They build on their general understanding of chemical principles and engage in a more in-depth study of the nature and reactivity of matter. Students first focus on the structure of atoms, molecules, and ions, and then go on to analyze the relationship between molecular structure and chemical and physical properties. To investigate this relationship, students examine the molecular composition of common substances and learn to transform them through chemical reactions with increasingly predictable outcomes. Students prepare for the AP® exam. The course content aligns to the sequence of topics recommended by the College Board and to widely used textbooks.

Course length: Two semesters

Materials: *Inquiries into Chemistry*, by Abraham and Pavelich, 3rd ed.; materials for laboratory experiments; not provided, but a Texas Instruments T1-84 Plus graphing calculator or one of similar capabilities is required

Prerequisites: Success in SCI303: Chemistry or SCI304: Honors Chemistry and MTH303: Algebra II, and a teacher/school counselor recommendation

SCI520: AP® Physics B

This course is the equivalent of an introductory college-level survey course, but does not require proficiency in calculus. Students focus on five general areas: Newtonian mechanics, thermal physics, electricity and magnetism, waves and optics, and atomic and nuclear physics. Students gain an understanding of the core principles of physics and then apply them to problem-solving exercises. They learn how to measure the mass of a planet without weighing it, find out how electricity makes a motor turn, and learn how opticians know how to shape lenses for glasses. Students prepare for the AP® exam and for further study in science and engineering.

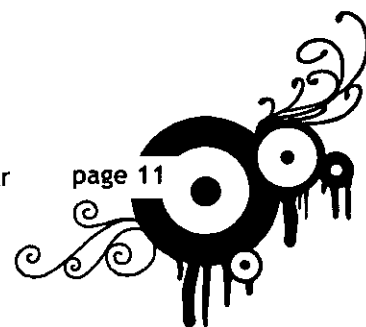
Course length: Two semesters

Materials: *Schaum's Outline of College Physics*, by Bueche and Hecht, 10th ed.; materials for laboratory experiments; not provided, but a Texas Instruments T1-84 Plus graphing calculator or one of similar capabilities is required

Prerequisites: Success in MTH303: Algebra II, MTH403: Pre-Calculus/Trigonometry, and teacher/school counselor recommendation

SCI010: Environmental Science (Elective)

This course provides an overview of the nature of ecosystems, energy flow, and the inter-relationships of biology, geology, and chemical cycles. Students explore issues in population studies, environmental pollution, and the organization and dynamics of ecological communities. Specific topics include scientific habits of the mind; the application of scientific knowledge, methodology, and historical context to solve problems; the use of laboratory technologies; earth dynamics; the influence of technology on environmental quality; conservation practices; biodiversity; environmental planning and waste management; environmental monitoring and policy; sustainable use of public land; characteristics of populations; biotic and abiotic environmental factors; and energy production technologies.



Course length: Two semesters

Materials: Common household materials for labs

Prerequisites: Success in previous high school science course and a teacher/school counselor recommendation

SCI020: Life Science: Oceanography (Elective)

In this introductory course, students construct an applied knowledge of the characteristics of aquatic systems. Students study ocean structure and marine ecology through hands-on exploration of coastal waters, open ocean waters, deep ocean waters, coral reefs, kelp forests, deep ocean vents, and tide pools. Through guided practice of the scientific model, using common household materials, students conduct field studies of local aquatic structures.

Course length: One semester

Materials: Common household materials for labs

Prerequisites: SCI202 or SCI203: Biology and SCI102: Physical Science, or equivalents

History and Social Sciences

HST102: World History

This course traces the development of civilizations around the world from prehistory to the present, with a special emphasis on key periods and primary sources. The course covers major events in world history, including the development and influence of human-geographic relationships, political and social structures, economics, science and technology, and the arts. Students investigate the major religions and belief systems throughout history and learn about the importance of trade and cultural exchange. Other topics include the development of agriculture, the spread of democracy, the rise of nation-states, the industrial era, the spread of imperialism, and the issues and conflicts of the twentieth century.

Course length: Two semesters

Materials: None

Prerequisites: K¹² middle school American History Since 1865, World History A or World History B, or equivalent

HST103: World History

In this course, students examine the development of civilizations around the world from prehistory to the present, analyzing human-geographic relationships, political and

social structures, economics, science and technology, and the arts. Students investigate major religions and belief systems and explore trade and cultural exchange in relation to the development of civilizations. Studies emphasize major changes in world history, such as the development of agriculture, spread of democracy, rise of nation-states, the Industrial Revolution, the spread of imperialism, and critical issues and conflicts of the twentieth century.

Course length: Two semesters

Materials: None

Prerequisites: K¹² middle school American History Since 1865, World History A or World History B, or equivalent

HST202: Modern World Studies

Students trace the history of the world from approximately 1870 to the present. They begin with a look back at events leading up to 1914, including the Second Industrial Revolution and the imperialism that accompanied it. Their focus then shifts to the contemporary era, including two world wars, the Great Depression, and global Cold War tensions. Students examine both the staggering problems and astounding accomplishments of the twentieth century, with a focus on political and social history. Students also explore topics in physical and human geography, and investigate issues of concern in the contemporary world. Online lessons help students organize study, explore topics, review in preparation for assessments, and practice skills of historical thinking and analysis. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research.

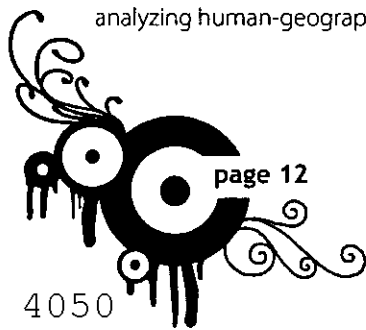
Course length: Two semesters

Materials: *The Human Odyssey, Volume 3*

Prerequisites: HST102: World History, K¹² middle school Intermediate World History A and B, or equivalent

HST203: Modern World Studies

In this comprehensive course, students follow the history of the world from approximately 1870 to the present. They begin with a study of events leading up to 1914, including the Second Industrial Revolution and the imperialism that accompanied it. Their focus then shifts to the contemporary era, including two world wars, the Great Depression, and global Cold War tensions. Students examine both the staggering problems and astounding accomplishments of the twentieth century, with a focus on political and social history. Students also explore



topics in physical and human geography, and investigate issues of concern in the contemporary world. Online lessons help students organize study, explore topics, review in preparation for assessments, and practice sophisticated skills of historical thinking and analysis. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research.

Course length: Two semesters

Materials: *The Human Odyssey, Volume 3*

Prerequisites: HST103: World History, K¹² middle school Intermediate World History A and B, or equivalent

HST204: Honors Modern World Studies

In this advanced course, students investigate the history of the world from approximately 1870 to the present. They begin with an analysis of events leading up to 1914, including the Second Industrial Revolution and the imperialism that accompanied it. Their focus then shifts to the contemporary era, including two world wars, the Great Depression, and global Cold War tensions. Students undertake an in-depth examination of both the staggering problems and astounding accomplishments of the twentieth century, with a focus on political and social history. Students also explore advanced topics in physical and human geography, and investigate issues of concern in the contemporary world. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting research. Students complete independent projects each semester.

Course length: Two semesters

Materials: *The Human Odyssey, Volume 3*

Prerequisites: HST103: World History, K¹² middle school Intermediate World History A and B, or equivalent, success in previous social studies course, and a teacher/school counselor recommendation

HST212: Geography and World Cultures

This one-semester course introduces students to the countless ways in which geography influences human relationships, politics, society, economics, science, technology, and the arts. Special emphasis is placed on the way geographically derived information is expressed in maps, charts, and graphs in order to teach students how to analyze and create such documents.

Course length: One semester

Materials: None

Prerequisites: HST102: World History is recommended, but not required

HST213: Geography and World Cultures

This one-semester course uses geographic features to explore how human relationships, political and social structures, economics, science, technology, and the arts have developed and influenced life in countries around the world. Throughout the course, students learn how to read maps, charts, and graphs rigorously and critically—and how to create them. Examining the intersection of culture and geography, students discover how a mountain in the distance can inspire national policymakers, civil engineers, or poets; how a river triggers the activity of bridge builders, shipbuilders, and merchants alike; and how the sound of a busy Cairo street can inspire sociologists and musicians. Students come to understand how the drama of human history and cultural encounters—affecting land, natural resources, religious dominance, and more—is played out on the geographical stage

Course length: One semester

Materials: None

Prerequisites: HST103: World History is recommended, but not required

HST302: U.S. History

This course is a full-year survey that provides students with a view of American history from the first migrations of nomadic people to North America to recent events. Readings are drawn from K¹²'s *The American Odyssey: A History of the United States*. Online lessons help students organize their study, explore topics, review in preparation for assessments, and practice skills of historical thinking and analysis. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research.

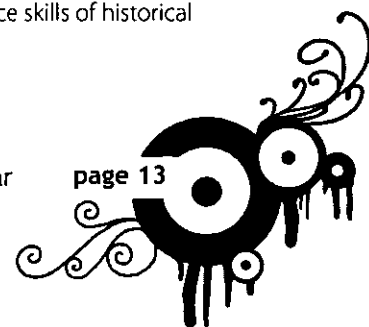
Course length: Two semesters

Materials: *The American Odyssey: A History of the United States*

Prerequisites: K¹² middle school Intermediate World History B or HST102: World History

HST303: U.S. History

This course is a full-year survey that provides students with a comprehensive view of American history from the first migrations of nomadic people to North America to recent events. Readings are drawn from K¹²'s *The American Odyssey: A History of the United States*. Online lessons help students organize their study, explore topics in depth, review in preparation for assessments, and practice skills of historical



thinking and analysis. Activities include analyzing primary sources and maps, creating time lines, completing projects and written assignments, and conducting independent research.

Course length: Two semesters

Materials: *The American Odyssey: A History of the United States*

Prerequisites: HST103: World History or HST203: Modern World Studies

HST304: Honors U.S. History

This course is a challenging full-year survey that provides students with a comprehensive view of American history from the first migrations of nomadic people to North America to recent events. Readings are drawn from K¹²'s *The American Odyssey: A History of the United States*. Online lessons help students organize their study, explore topics in depth, review in preparation for assessments, and practice advanced skills of historical thinking and analysis. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research. Students complete independent projects each semester.

Course length: Two semesters

Materials: *The American Odyssey: A History of the United States*

Prerequisites: HST103: World History or HST203: Modern World Studies, success in previous history course, and a teacher/school counselor recommendation

HST312: Modern U.S. History

This course is a full-year survey that provides students with a view of American history from the industrial revolution of the late nineteenth century to recent events. Readings are drawn from K¹²'s *The American Odyssey: A History of the United States*. Online lessons help students organize study, explore topics, review in preparation for assessments, and practice skills of historical thinking and analysis. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research.

Course length: Two semesters

Materials: *The American Odyssey: A History of the United States*

Prerequisites: K¹² middle school American History Before 1865 and American History Since 1865, or equivalent

HST313: Modern U.S. History

This course is a full-year survey that provides students with a comprehensive view of American history from the industrial revolution of the late nineteenth century to recent events. Readings are drawn from K¹²'s *The American Odyssey: A History of the United States*. Online lessons help students organize study, explore topics in depth, review in preparation for assessments, and practice skills of historical thinking and analysis. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research.

Course length: Two semesters

Materials: *The American Odyssey: A History of the United States*

Prerequisites: K¹² middle school American History Before 1865 and American History Since 1865, or equivalent

HST314: Honors Modern U.S. History

This course is a challenging full-year survey that provides students with a comprehensive view of American history from the industrial revolution of the late nineteenth century to recent events. Readings are drawn from K¹²'s *The American Odyssey: A History of the United States*. Online lessons help students organize study, explore topics in depth, review in preparation for assessments, and practice advanced skills of historical thinking and analysis. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research. Students complete independent projects each semester.

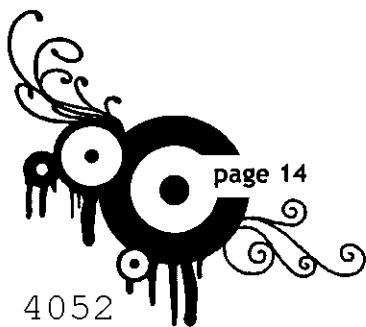
Course length: Two semesters

Materials: *The American Odyssey: A History of the United States*

Prerequisites: K¹² middle school American History Before 1865 and American History Since 1865, or equivalent, and teacher/school counselor recommendation

HST402: U.S. Government and Politics

This course uses the perspective of political institutions to explore government history, organization, and functions. Students encounter the political culture of our country from the Declaration of Independence to the present day, gaining insight into the challenges faced by presidents, members of Congress, and other political participants. The course also covers the roles of political parties, interest groups, the media, and the Supreme Court. Students learn to use primary historical documents as evidence in evaluating past events and government functions.



Course length: One semester

Materials: None

Prerequisites: HST302: U.S. History is recommended, but not required

HST403: U.S. Government and Politics

This course studies the history, organization, and functions of the United States government. Beginning with the Declaration of Independence and continuing through to the present day, students explore the relationship between individual Americans and our governing bodies. Students take a close look at the political culture of our country and gain insight into the challenges faced by citizens, elected government officials, political activists, and others. Students also learn about the roles of political parties, interest groups, the media, and the Supreme Court, and discuss their own views on current political issues.

Course length: One semester

Materials: None

Prerequisites: HST303: U.S. History is recommended, but not required

HST412: U.S. and Global Economics

This course in economic principles uses real-world simulations to teach the issues faced by producers, consumers, investors, and taxpayers in the U.S. and around the world. Topics include markets; supply and demand; theories of early economic thinkers; theories of value; money; the role of banks, investment houses, and the Federal Reserve; and other fundamental features of capitalism. A survey of current issues in American and global markets rounds out the course.

Course length: One semester

Materials: None

Prerequisites: HST402: U.S. Government and Politics is recommended, but not required

HST413: U.S. and Global Economics

In this course on economic principles, students explore choices they face as producers, consumers, investors, and taxpayers. Students apply what they learn to real-world simulation problems. Topics of study include markets from historic and contemporary perspectives; supply and demand; theories of early economic philosophers such as Adam Smith and David Ricardo; theories of value; money (what it is, how it

evolved, the role of banks, investment houses, and the Federal Reserve); Keynesian economics; how capitalism functions, focusing on productivity, wages, investment, and growth; issues of capitalism, such as unemployment, inflation, and the national debt; and a survey of markets in such areas as China, Europe, and the Middle East.

Course length: One semester

Materials: None

Prerequisites: HST403: U.S. Government and Politics is recommended, but not required

HST500: AP® U.S. History

Students explore and analyze the economic, political, and social transformation of the United States since the time of the first European encounters. Students are asked to master not only the wide array of factual information necessary to do well on the AP® exam, but also to practice skills of critical analysis of historical information and documents. Students read primary and secondary source materials and analyze problems presented by historians to gain insight into challenges of interpretation and the ways in which historical events have shaped American society and culture. The content aligns to the sequence of topics recommended by the College Board and to widely used textbooks. Students prepare for the AP® exam.

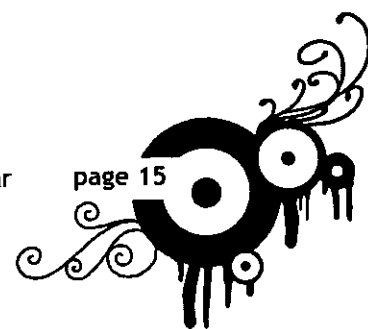
Course length: Two semesters

Materials: *America: A Narrative History*, by Tindall et al., 7th ed.

Prerequisites: Success in previous history course and a teacher/school counselor recommendation

HST510: AP® U.S. Government and Politics

This course is the equivalent of an introductory college-level course. Students explore the operations and structure of the U.S. government and the behavior of the electorate and politicians. Students gain the analytical perspective necessary to evaluate political data, hypotheses, concepts, opinions, and processes and learn how to gather data about political behavior and develop their own theoretical analysis of American politics. Students also build the skills they need to examine general propositions about government and politics, and to analyze specific relationships between political, social, and economic institutions. Students prepare for the AP® exam and for further study in political science, law, education, business, and history.



Course length: One semester

Materials: *The Lanahan Readings in the American Polity*, 4th ed.; *American Government*, by Lowi et al., 9th ed.

Prerequisites: Success in HST303: U.S. History (or equivalent) and a teacher/school counselor recommendation

HST520: AP® Macroeconomics

This course is the equivalent of an introductory college-level course. Students learn why and how the world economy can change from month to month, how to identify trends in our economy, and how to use those trends to develop performance measures and predictors of economic growth or decline. Students also examine how individuals and institutions are influenced by employment rates, government spending, inflation, taxes, and production. Students prepare for the AP® exam and for further study in business, political science, and history.

Course length: One semester

Materials: *Macroeconomics for Today*, 4th Ed., ISBN: 0-324-30197-9

Prerequisites: Success in MTH303: Algebra II (or equivalent) and a teacher/school counselor recommendation

HST530: AP® Microeconomics

This course is the equivalent of an introductory college-level course. Students explore the behavior of individuals and businesses as they exchange goods and services in the marketplace. Students learn why the same product can cost different amounts at different stores, in different cities, and at different times. Students also learn to spot patterns in economic behavior and learn how to use those patterns to explain buyer and seller behavior under various conditions. Lessons promote an understanding of the nature and function of markets, the role of scarcity and competition, the influence of factors such as interest rates on business decisions, and the role of government in the economy. Students prepare for the AP® exam and for further study in business, history, and political science.

Course length: One semester

Materials: *Microeconomics for Today*, 4th Ed., ISBN: 0-324-30192-8

Prerequisites: Success in MTH303: Algebra II (or equivalent) and a teacher/school counselor recommendation

HST540: AP® Psychology

This course is the equivalent of an introductory college-level course. Students receive an overview of current psychological research methods and theories. They explore the therapies used by professional counselors and clinical psychologists, and examine the reasons for normal human reactions: how people learn and think, the process of human development and human aggression, altruism, intimacy, and self-reflection. They study core psychological concepts, such as the brain and sensory functions, and learn to gauge human reactions, gather information, and form meaningful syntheses. Students prepare for the AP® Exam and for further studies in psychology and life sciences.

Course length: One semester

Materials: *Psychology*, by David G. Myers, 8th ed.

Prerequisites: Success in SCI203: Biology and a teacher/school counselor recommendation

HST010: Anthropology (Elective)

Anthropology is the study of human beings and their social, environmental, and cultural relationships over time. In this course, students familiarize themselves with their own culture as they explore cultures from around the world and from different periods in history. Students examine each culture through the lens of family, land, death, identity, and power, to explore the similarities and differences of cultural roles in various times and places.

Course length: One semester

Materials: None

Prerequisites: HST102 or HST103: World History (or equivalent) recommended as a prerequisite or co-requisite, but not required

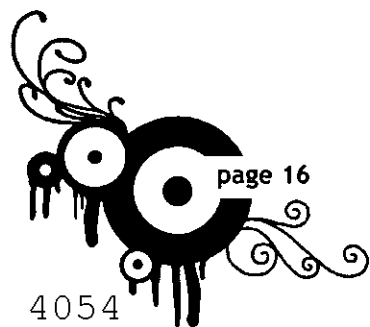
HST020: Psychology (Elective)

Students explore scientific methods of research as well as the major schools of psychology as they relate to issues of aggression, addictive behavior, memory, interpersonal relations, and self-care. Topics include the importance of ethics in scientific study, psychology's application to daily life, the influence of cultural background on perception, and more.

Course length: One semester

Materials: None

Prerequisites: SCI202 or SCI203: Biology or equivalent



HST030: Macroeconomics (Elective)

Students analyze economic data through a variety of learning activities. They learn how macroeconomics differs from microeconomics. They study the measurement of aggregate economic activity and how it relates to employment and inflation. They explore fiscal and monetary policies designed to promote economic stability. Throughout the course, students use Internet resources to access and analyze current economic data.

Course length: One semester

Materials: None

Prerequisites: Success in previous math/social studies course and a teacher/school counselor recommendation

World Languages

WLG100: Spanish I

Students begin their introduction to Spanish with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Students are initially trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. Vocabulary and grammar topics are introduced in an ongoing adventure story that prompts students to use skills from all four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. Cultural information covers major Spanish-speaking areas in Europe and the Americas. All-new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Vox Everyday Spanish and English Dictionary*

Prerequisites: None

Note: Students who have already succeeded in middle school Spanish 2 should enroll in Spanish II rather than in Spanish I.

WLG200: Spanish II

In this continuing introduction to Spanish, students deepen their focus on four key skills in foreign language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context, and then to reproduce new vocabulary in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in Spanish I, students learn grammar through

supplemental texts that supply traditional charts, tables, and explanations. Cultural information addresses Spanish as it is used around the globe. All-new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Vox Everyday Spanish and English Dictionary*

Prerequisites: WLG100: Spanish I, middle school Spanish 1 and 2, or equivalent

WLG300: Spanish III

Intermediate Spanish students who have a strong base of vocabulary, speaking, and listening skills reach a new level of mastery and fluency in this course. Through games and compelling stories, students learn advanced grammar and vocabulary, with an emphasis on correct accents and comprehension of real-world native speech. Error-recognition technology helps students eliminate common mistakes from their speaking and writing. All-new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Vox Everyday Spanish and English Dictionary*

Prerequisites: WLG200: Spanish II, or equivalent

WLG500: AP® Spanish Language

In AP® Spanish Language, students perfect their Spanish speaking, listening, reading, and writing skills. They study vocabulary, grammar, and cultural aspects of the language, and apply what they've learned in extensive written and spoken exercises. By the end of the course, students will have an expansive vocabulary and a solid working knowledge of all Spanish verb forms and tenses. The equivalent of a college-level language course, AP® Spanish Language prepares students for the AP® exam and for further study of Spanish language, culture, and literature.

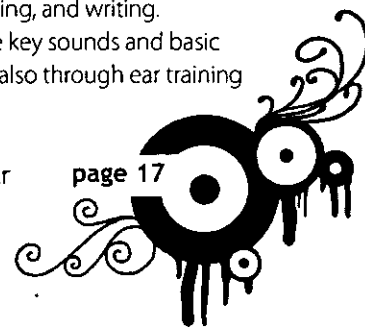
Course length: Two semesters

Materials: *Vox Everyday Spanish and English Dictionary*

Prerequisites: WLG300: Spanish III (or equivalent) and a teacher/school counselor recommendation

WLG110: French I

Students begin their introduction to French with fundamental building blocks in four key areas of foreign-language study: listening comprehension, speaking, reading, and writing. Students are initially trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training



that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, and prompts students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All- new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Larousse Student French-English/English-French Dictionary*

Prerequisites: None

Note: Students who have already succeeded in middle school French 2 should enroll in French II rather than in French I.

WLG210: French II

In this continuing introduction to French, students deepen their focus on four key skills in foreign language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context, and then to reproduce new vocabulary items in functional real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in French I, students learn grammar through supplemental texts that supply traditional charts, tables, and explanations. All-new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Larousse Student French-English/English-French Dictionary*

Prerequisites: WLG110: French I, middle school French 1 and 2, or equivalent

WLG310: French III

Intermediate French students who have a strong base of vocabulary, speaking, and listening skills reach a new level of mastery and fluency in this course. Through games and compelling stories, students learn advanced grammar and vocabulary, with an emphasis on correct accents and comprehension of real-world native speech. Error-recognition technology helps students eliminate common mistakes from their speaking and writing. All-new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Larousse Student French-English/English-French Dictionary*

Prerequisites: WLG210: French II, or equivalent

WLG510: AP® French Language

In AP® French Language, students apply their French grammar and vocabulary knowledge and their listening, reading, speaking, and writing skills to a wide variety of real-world contexts. Students learn to speak fluently and accurately, write sophisticated compositions, and comprehend native speakers. The equivalent of a college-level language course, AP® French Language prepares students for the AP® exam and for further study of French language, culture, and literature.

Course length: Two semesters

Materials: *Larousse Student French-English/English-French Dictionary*

Prerequisites: WLG310: French III (or equivalent) and teacher/school counselor recommendation

WLG120: German I

Students begin their introduction to German with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Students are initially trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, and prompts students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All-new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

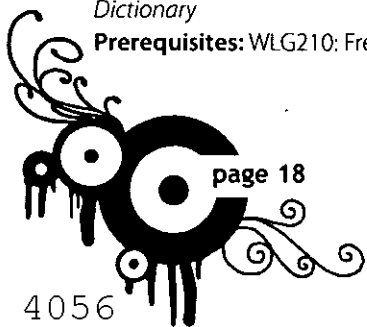
Materials: *Langenscheidt's Standard German Dictionary*

Prerequisites: None

Note: Students who have already succeeded in middle school German 2 should enroll in German II rather than in German I.

WLG220: German II

In this continuing introduction to German, students deepen their focus on four key skills in foreign language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context, and then to reproduce new vocabulary items in functional real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in German I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. All-new graphics, videos, and games keep students engaged, and make learning languages exciting.



Course length: Two semesters

Materials: *Langenscheidt's Standard German Dictionary*

Prerequisites: WLG120: German I, middle school German 1 and 2, or equivalent

WLG130: Latin I

This introduction to Latin clarifies the traditionally difficult aspects of the language through vocabulary that follows all standard Latin rules but allows students to tell modern stories connected to a contemporary adventure. Students study familiar vocabulary so they can bring into focus the special characteristics of Latin, notably noun cases and declensions. They receive ongoing practice in vocabulary and grammar, which leads to the study of post-Classical Latin, both ecclesiastical and secular, as embodied in the Vulgate Bible and medieval Latin texts. All- new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Bantam New College Latin & English Dictionary*

Prerequisites: None

WLG230: Latin II

Students with a foundation in Latin refine their skills through compelling language lessons, as well as historical and cultural studies. They go from the basics of Latin to a higher level of sophistication through a learning methodology that uses games and stories. Students concentrate on fostering their ability to read and understand (without using a dictionary) classical Latin from a variety of authentic sources. All- new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Bantam New College Latin & English Dictionary*

Prerequisites: WLG130: Latin I or equivalent

WLG140: Chinese I

Students use compelling stories, games, videos, and multimedia experiences in this introduction to Mandarin Chinese. They learn the elegant simplicity of Chinese grammar and the subtleties of Chinese pronunciation through entertaining lessons that give a base of conversational ability and listening comprehension. Students build a foundation for reading and writing in the Chinese language through an adaptive technology that lets them choose an approach that works best for them. All- new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Oxford Beginner's Chinese Dictionary*

Prerequisites: None

Note: Students who have already succeeded in middle school Chinese 2 should enroll in Chinese II rather than in Chinese I.

WLG240: Chinese II

Students continue with engaging stories, games, videos, and multimedia experiences in this second level of Mandarin Chinese. Students further their understanding of Chinese grammar and pronunciation through lessons refining previous practice of conversational ability and listening comprehension. Innovative cultural videos and lessons build awareness of the rich legacy of Chinese culture. Students expand their foundation for reading and writing in Chinese through adaptive technology, providing opportunities to generate fun narratives, a range of well-formed sentences reflecting a solid grasp of grammar structures, and a wide vocabulary. All- new graphics, videos, and games keep students engaged, and make learning languages exciting.

Course length: Two semesters

Materials: *Oxford Beginner's Chinese Dictionary*

Prerequisites: WLG140: Chinese I, middle school Chinese 1 and 2, or equivalent

Electives and Additional Courses

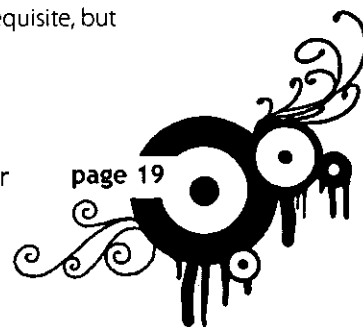
ART010: Fine Art (Elective)

This course combines art history, appreciation, and analysis, while engaging students in hands-on creative projects. Lessons introduce major periods and movements in art history while focusing on masterworks and the intellectual, technical, and creative processes behind those works. Studio lessons provide opportunities for drawing, painting, sculpting, and other creative endeavors.

Course length: Two semesters

Materials: One package of white clay; one set of acrylic paint; one set of round paintbrushes ; no other materials provided. It is recommended, but not required, that students have some means of capturing an image of their studio art projects with a digital camera, webcam, or other imaging device.

Prerequisites: A survey course in World History is recommended as a prerequisite or co-requisite, but not required



ART020: Music Appreciation (Elective)

This course introduces students to the history, theory, and genres of music. The course explores the history of music, from the surviving examples of rudimentary musical forms through to contemporary pieces from around the world. The first semester covers early musical forms, classical music, and American jazz. The second semester presents modern traditions, including gospel, folk, soul, blues, Latin rhythms, rock and roll, and hip hop. The course explores the relationship between music and social movements and reveals how the emergent global society and the prominence of the Internet are making musical forms more accessible worldwide.

To comply with certain state standards for the arts, a student "performance practicum" is required for full credit each semester. The performance practicum requirement can be met through participation in supervised instrumental or vocal lessons, church or community choirs, community musical performances, or any other structured program that meets at regular intervals and provides opportunities for students to build vocal and/or instrumental skills. Parents or guardians will be required to present their proposed practicum to the students' teachers for approval, and validate their children's regular participation in the chosen performance practicum.

Course length: Two semesters

Materials: Finale Notepad music notation software

Prerequisites: None

BUS010: Business Communication and Career Exploration (Elective)

In this course, students explore the ways people communicate in today's business environment. They examine technological advances of the contemporary office and consider future developments. Topics include: reviewing communication fundamentals; developing business letters; researching and reporting; and getting a job. Students perfect their written and oral communication skills, evaluate career interests and aptitudes, and learn how to apply for jobs and conduct interviews.

Course length: One semester

Materials: None

Prerequisites: None

BUS020: Business and Personal Relationships (Elective)

Students receive valuable information and guidelines necessary to navigate business and personal relationships in today's global and multiethnic environment. Through a focus on cultural awareness, positive self-concept, leadership, and communication, students examine how public, business, and personal behaviors intersect.

Course length: One semester

Materials: None

Prerequisites: None

BUS030: Personal Finance (Elective)

Students learn about different aspects of personal economics and finance in a virtual neighborhood setting. Topics include spending plans and borrowing decisions; career planning; and investing, insurance, and other financial services. Students complete activities and projects that apply the knowledge they gain to their own lives. This course may meet the needs of most students requiring financial skills or economics credit.

Course length: One semester

Materials: None

Prerequisites: MTH112 or MTH113: Pre-Algebra (or equivalent) recommended, but not required

BUS040: Introduction to Entrepreneurship (Elective)

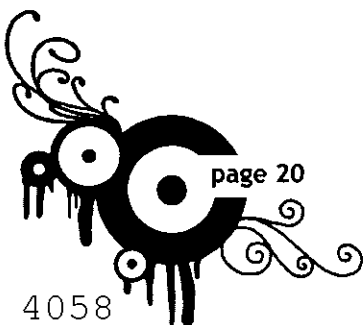
In this introductory business course, students will learn the basics of planning and launching their own successful business. Whether they want to start their own money-making business or create a non-profit to help others, this course will help students develop the core skills they will need to be successful. They will learn how to come up with new business ideas, attract investors, market their business, and manage expenses. Students will get inspired by stories of teen entrepreneurs who have turned their ideas into reality, and then they will plan and execute their own business.

Course length: One semester

Materials: TBD

Prerequisites: None

Available Winter 2010



ENG010: Journalism (Elective)

Students examine the development of journalism, from print to the multimedia environment, while learning how to publish an online newspaper. Students write newspaper-style articles and opinion pieces, and examine careers in multimedia communication. They also consider the historical effects of "yellow" journalism, freedom of the press, and journalism's contributions to today's world, with an emphasis on the mutual influence of media and policy.

Course length: Two semesters

Materials: *Associated Press Stylebook*

Prerequisites: Success in previous English/language arts course and a teacher/school counselor recommendation

HST010: Anthropology (Elective)

Anthropology is the study of human beings and their social, environmental, and cultural relations over time. In this course, students familiarize themselves with their own culture as they explore cultures from around the world and from different periods in history. Students examine each culture through the lenses of family, land, death, identity, and power, allowing them to explore the similarities and differences in cultural roles in various times and places.

Course length: One semester

Materials: None

Prerequisites: HST102 or HST103: World History (or equivalent) recommended as a prerequisite or co-requisite, but not required

HST020: Psychology (Elective)

Students explore scientific methods of research as well as the major schools of psychology as they relate to issues of aggression, addictive behavior, memory, interpersonal relations, and self-care. Topics include the importance of ethics in scientific study, psychology's application to daily life, the influence of cultural background on perception, and more.

Course length: One semester

Materials: None

Prerequisites: SCI202: Biology or equivalent

HST030: Macroeconomics (Elective)

Students analyze economic data through a variety of learning activities. They learn how macroeconomics differs from microeconomics. They study the measurement of

aggregate economic activity and how it relates to employment and inflation. They explore fiscal and monetary policies designed to promote economic stability. Throughout the course, students use Internet resources to access and analyze current economic data.

Course length: One semester

Materials: None

Prerequisites: Success in previous math/social studies course and a teacher/school counselor recommendation

SCI010: Environmental Science (Elective)

This course provides an overview of the nature of ecosystems, energy flow, and the inter-relationships of biology, geology, and chemical cycles. Students explore issues in population studies, environmental pollution, and the organization and dynamics of ecological communities. Specific topics include: scientific habits of the mind; the application of scientific knowledge, methodology, and historical context to solve problems; the use of laboratory technologies; earth dynamics; the influence of technology on environmental quality; conservation practices; biodiversity; environmental planning and waste management; environmental monitoring and policy; sustainable use of public land; characteristics of populations; biotic and abiotic environmental factors; and energy production technologies.

Course length: Two semesters

Materials: Common household materials for labs

Prerequisites: Success in previous high school science course and a teacher/school counselor recommendation

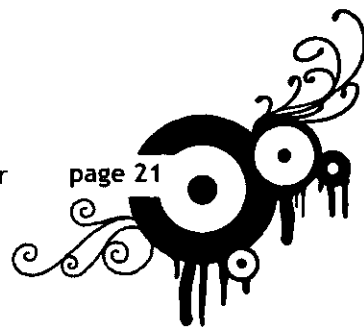
SCI020: Life Science: Oceanography (Elective)

In this introductory course, students construct an applied knowledge of the characteristics of aquatic systems. Students study ocean structure and marine ecology through hands-on exploration of coastal waters, open ocean waters, deep ocean waters, coral reefs, kelp forests, deep ocean vents, and tide pools. Through guided practice of the scientific model, using common household materials, students conduct field studies of local aquatic structures for the final project.

Course length: One semester

Materials: Common household materials for labs

Prerequisites: SCI202: Biology and SCI102: Physical Science, or equivalents



OTH010: Skills for Health

This course focuses on important skills and knowledge in nutrition; physical activity; the dangers of substance use and abuse; injury prevention and safety; growth and development; and personal health, environmental conservation, and community health resources. The curriculum is designed around topics and situations that engage student discussion and motivate students to analyze internal and external influences on their health-related decisions. The course helps students build the skills they need to protect, enhance, and promote their own health and the health of others.

Course length: One semester

Materials: None

Prerequisites: None

OTH020: Physical Education

This pass/fail course combines online instructional guidance with student participation in weekly cardiovascular, aerobic, muscle-toning, and other activities. Students fulfill course requirements by keeping weekly logs of their physical activity. The course promotes the value of lifetime physical activity and includes instruction in injury prevention, nutrition and diet, and stress management. Students may enroll in the course for either one or two semesters, and repeat for further semesters as needed to fulfill state requirements.

Course length: One semester (or more)

Materials: None

Prerequisites: None

OTH030: Career Planning (Elective)

Students plan for a successful career by analyzing their own goals and decision-making processes. Students use various resources to investigate career options, master job-seeking techniques, and learn how to make the transition from school to work.

Course length: One semester

Materials: *Career Assessment; You and Your Career; Occupation Finder* guides

Prerequisites: None

OTH040: Study Skills and Learning Strategies

(Elective)

Students discover their learning style—the way they process information and apply it—and develop study skills to improve academic and work performance. Topics include time management, oral communications, critical thinking, note-taking, test-taking, and researching.

Course length: One semester

Materials: *Flying Your True Colors for True Success*

Prerequisites: None

Technology and Computer Science

TCH010: Computer Literacy I (Elective)

Today's students must be able to effectively use technology to research, organize, create, and evaluate information. This course provides a foundation in the skills and concepts that define computer literacy in the twenty-first century. From the basics of keyboarding to Internet research techniques, document creation, and digital citizenship, students practice essential skills through individual and team projects.

Course length: One semester

Materials: Microsoft Office 2003 and GIMP (free download)

Prerequisites: None

TCH020: Computer Literacy II (Elective)

This course builds on Computer Literacy I to develop the skills and concepts essential for computer literacy in the 21st century. From the basics of keyboarding to Internet research techniques, document creation, and digital citizenship, students practice essential skills through individual and team projects. When taken with Computer Literacy I, this course maps to the National Educational Technology Standards (NETS).

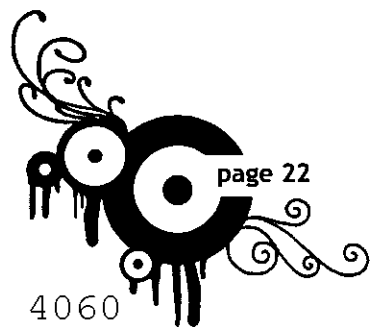
Course length: One semester

Materials: Microsoft Office 2003 and GIMP (free download)

Prerequisites: TCH010: Computer Literacy I

TCH030: Digital Photography and Graphics (Elective)

This course is for anyone who wants to create compelling, professional-looking graphic designs and photos. Students will learn the basics of composition, color, and layout before moving on to technical topics such as working with layers and masks, adding special effects, and effectively using typefaces



to create visual impact. At the end of this course, students will have created a variety of original projects for their graphic design portfolios.

Course length: One semester
Materials: GIMP (free download)
Prerequisites: None

TCH040: Web Design (Elective)

This course provides a comprehensive introduction to the essentials of Web design, from planning page layouts to publishing a complete site to the Web. Through real-world design scenarios and hands-on projects, students create compelling, usable websites using the latest suite of free tools from Microsoft.

Course length: One semester
Materials: : KompoZer (free download) and GIMP (free download)
Prerequisites: None

TCH050: Digital Video Production (Elective)

This course introduces students to all aspects of digital video, from story-boarding scenes and creating shot lists to editing a finished, professional-quality product. Throughout this project-based course, students demonstrate mastery of the key learning objectives by recording, capturing, and editing their own videos. This is a hands-on course that provides a solid foundation for further study in this exciting field, and progresses from the importing of raw footage through editing basics to transitions, text use, and special effects.

Course length: One semester
Materials: Microsoft Windows Movie Maker; student must supply a video camcorder capable of connecting to a computer, either through USB or FireWire
Prerequisites: None

TCH060: C++ Programming (Elective)

In this introductory course, students learn basic programming concepts through a series of hands-on projects. They also learn about software development careers, the software development process, and industry best practices. Using Microsoft Visual C++ 2008, students master the building blocks of programming: functions, variables, loops, arrays, and classes.

Course length: One semester
Materials: Microsoft Visual C++ 2008 Express (free download)
Prerequisites: None

TCH070: Game Design I (Elective)

This course is for anyone who loves gaming and wants to design and build original games from scratch. Students learn how to use popular game-development software to create engaging, interactive games in a variety of styles. After learning about game genres, students learn about all aspects of the game-design process. From there, it's on to a series of increasingly challenging hands-on projects that teach all the elements of successful game development. This course provides a solid foundation in the essentials of game design.

Course length: One semester
Materials: Multimedia Fusion 2.0
Prerequisites: None

TCH080: Game Design II (Elective)

Students expand their knowledge of the game design industry while mastering event-driven game development through a series of interactive projects. By the end of this course, students will have a variety of polished games for their game-development portfolios.

Course length: One semester
Materials: Multimedia Fusion 2.0
Prerequisites: TCH070: Game Design I

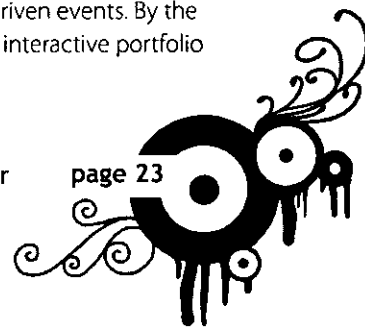
TCH090: Online Game Design (Elective)

This course introduces students to the design of online Flash games. They will learn how to develop a variety of games for the Web, using some basic programming concepts and ActionScript—the native scripting language of Flash—to develop games and publish them online. Professional-quality art is included in each project for students' use, or they can make their own. By the end of this course, students will have a fully-functioning multi-level online game.

Course length: One semester
Materials: Flash CS4
Prerequisites: None

TCH016: Flash Animation (Elective)

This course teaches students how to create interactive movies and engaging games with Flash CS4 animation software. Students master the basics of drawing and animating short movies before moving on to more complex challenges such as adding interactivity and script-driven events. By the end of the course, students will have an interactive portfolio to showcase their finished projects.



Course length: One semester

Materials: Flash CS4

Prerequisites: Permission of a teacher/school counselor

TCH017: 3D Art I—Modeling (Elective)

This course introduces students to 3D modeling tools and concepts. Using Blender, the popular open-source 3D modeling package, students will learn the basics of creating shapes, adding textures and lighting, and rendering. By the end of the course, students will have produced a series of increasingly sophisticated projects for their 3D portfolios. This course is suitable for students with no prior experience with 3D game design or digital media authoring tools.

Course length: One semester

Materials: Blender (free download)

Prerequisites: None

TCH018: 3D Art II—Animation (Elective)

In this advanced course, students will build on the skills they developed in 3D Art I to learn 3D animation techniques. Using Blender, a powerful open-source modeling tool, they will master the basics of animation—rigging, bones, and movement—while learning how to apply traditional animation techniques to their 3D models. They will also learn about jobs in the industry.

Course length: One semester

Materials: TBD

Prerequisites: TCH017: 3D Art I—Modeling
Available winter 2010

TCH019: Computer-Aided Design (CAD) (Elective)

Computer-aided design systems are used by designers and manufacturers in virtually every industry. In this course, students will master the basics of CAD software—creating points, lines, and other geometric forms, isometric drawings, and 3D models. They will learn how to translate initial concepts into functional designs and 3D walkthroughs. They will also explore career options for CAD designers in this hands-on introductory level course.

Course length: One semester

Materials: TBD

Prerequisites: None
Available winter 2010

Orientation

ORN010: Online Learning 09-10

The Online Learning course (required for all new and returning K¹² students) explains to students how the program works, and provides tips on successful online learning. Students are introduced to the online tools they will use during their high school experience, including the Learning Management System that delivers course assignments. Students take part in online discussions and practice submitting computer-scored assessments and other assignments to teachers. Lifelong learning skills such as time management and study habits are also covered. By the end of the course, students will be fully prepared to begin their K¹² high school courses.

Course length: 6-8 hours

Materials: None

Prerequisites: None

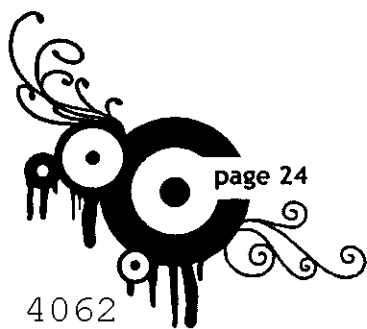
ORN020: Finding Your Path – Planning for Career and College

This course is unique for each student. K¹² school counselors, advisors, and other staff guide students through an in-depth exploration of their interests, abilities, and skills. Students explore their education and career interests, define goals, and create a path through high school that will get them there. In addition, this course serves as a “home base” where students and school counselors can address topics that are critical in their success in high school and beyond. Use of the K¹² online career and college counseling tools are featured in this course. (Students may re-enroll in this course yearly. Many course activities are related to specific grade levels and proximity to graduation.)

Course length: 30-40 hours

Materials: None

Prerequisites: None





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Louie Flora

Subject: FW: AK school district online course offering information and discussion request

From: Kathy Hughes [mailto:khughes@northstar.k12.ak.us]
Sent: Friday, January 08, 2010 3:36 PM
To: Louie Flora
Cc: Nancy Wagner
Subject: AK school district online course offering information and discussion request

Hi,
Dr. Wagner (FNSBSD Superintendent) asked me to respond to your query.

The Fairbanks district's correspondence school (B.E.S.T. - Building Educational Success Together) contracts with an outside vendor (Advanced Academics) to purchase online courses for students. We use the courses already developed by Advanced Academics (we do not develop our own). These courses are only available to students enrolled in B.E.S.T. (we have one exception this semester, we are piloting the online AP Government class with students from one of our smaller high schools b/c their school does not offer the AP course. We are hopeful that this will work well and will use the information to determine if there are other online courses we can offer to students at schools where they don't have that opportunity). The online portion of the B.E.S.T. program is open only to secondary students (our elementary students are homeschooled). We negotiate a contract with Advanced Academics annually. Any unused courses can be carried over to the following year.

Another possible online option offered by our district is Outside Credit. Students across the district can apply for outside credit if they wish to take a course from an online vendor (or any other educational institution) for high school credit. They choose the vendor, course, etc . . . and are responsible for any costs. These vary a great deal and are approved on an individual basis.

After reading the Arizona article, I'm not sure that B.E.S.T. or our outside credit process are the types of programs that you are asking about -- but wanted to provide the information in case it is helpful. Please let me know if you have any questions.

Respectfully,
Kathy

Kathy Hughes, Executive Director of Alternative Instruction & Accountability
Fairbanks North Star Borough School District
(907) 452-2000 x356
email: khughes@northstar.k12.ak.us

Louie Flora

Subject: FW: AK school district online course offering information and discussion request

From: Kathy Hughes [mailto:khughes@northstar.k12.ak.us]

Sent: Friday, January 08, 2010 3:47 PM

To: Louie Flora

Cc: Nancy Wagner

Subject: Re: AK school district online course offering information and discussion request

Hi Louie,

The online courses we can use are from Advanced Academics and can be found in their catalog at the following website:

<https://home.advancedacademics.com/uploads/september%20aai%20master%20course%20catalog.pdf>

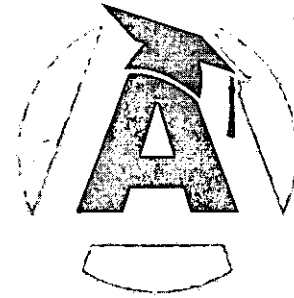
Our cost is \$300/class (no charge to students b/c they are full-time students in our program) and that cost is negotiated b/c of the number of courses we contract to purchase each year (someone purchasing fewer, may have a higher per course charge).

Have a good weekend,
Kathy

Louie Flora wrote:

Thank you for the information. Can you provide a list of the courses that are available and the cost?

Louie



Advanced Academics | *Online learning simplified™*

2009/2010 Online Course Catalog

AP® Biology – Semester 1

AP Biology A is a one-semester, introductory college-level course. The topics for this course match the rigors of a college biology classroom. The course emphasizes understanding concepts rather than memorizing facts; with this in mind, students will practice scientific inquiry, recognize common themes across several topics of biology, and apply critical thinking to environmental and social concerns.

This semester covers topics relating to molecules and cells, heredity and evolution, and organisms and populations. While studying these topics, students will understand the basic themes of biology; these include science as a process, evolution, energy transfer, continuity and change, relationship of structure to function, regulation, interdependence on nature, and the impacts of science and technology on society. Chapter assignments allow students to practice what they have learned through lab activities and to write question responses in the style of the AP College Board Exam.

Prior to taking this course, students should have successfully completed a first-year high school biology course and one high school chemistry course.

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AP® Biology – Semester 2

AP Biology B is a one-semester, introductory college-level course. The topics for this course match the rigors of a college biology classroom. Upon successful completion of this course, students should be prepared to pass the AP Biology B Exam. The course emphasizes understanding concepts rather than memorizing facts; with this in mind, students will practice scientific inquiry, recognize common themes across several topics of biology, and apply critical thinking to environmental and social concerns.

This semester covers topics relating to molecules and cells, heredity and evolution, and organisms and populations. While studying these topics, students will understand the basic themes of biology; these include science as a process, evolution, energy transfer, continuity and change, relationship of structure to function, regulation, interdependence on nature, and the impacts of science and technology on society. Chapter assignments allow students to practice what they have learned through lab activities and to write question responses in the style of the AP College Board Exam.

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AP® Calculus BC - Semester 1

This course offers one semester of study that aims to develop students' understanding of calculus concepts and to provide experience with methods and applications of calculus. Students work with functions in a variety of ways, including graphical, numerical, and analytical. Students use derivatives to solve a variety of problems. Students use technology to help solve problems and interpret results, and also learn to rely on paper-and-pencil techniques of calculus. Students also learn to determine how reasonable their solutions are.

Before studying calculus, students should have completed four years of college-preparatory math classes, including algebra, geometry, trigonometry, analytic geometry, and elementary functions.

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AP® Calculus BC – Semester 2

This course offers one semester of study that aims to develop students' understanding of calculus concepts and to provide experience with methods and applications of calculus. The topics will extend from the first semester course to include functions, graphs, and limits; derivatives; integrals; and polynomial approximation and series.

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2

AP® ENGLISH LITERATURE A

In AP® ENGLISH LITERATURE students develop research skills as well as reading and critical thinking skills necessary for understanding challenging new material, analyzing that material to deduce meaning, and applying what they have learned to their world. They receive practice in composition skills needed to communicate their understanding effectively to a variety of audiences. Students will read and analyze classic works of literature as well as modern and contemporary works. They examine all genres: plays, short stories, poetry, essays, and novels. The academic objectives of this course adhere to those outlined by the College Board in preparation for the Advanced Placement Exam in English Literature.

Prerequisite: English III

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AP® ENGLISH LITERATURE B

In AP® ENGLISH LITERATURE students develop research skills as well as reading and critical thinking skills necessary for understanding challenging new material, analyzing that material to deduce meaning, and applying what they have learned to their world. They receive practice in composition skills needed to communicate their understanding effectively to a variety of audiences. Students will read and analyze classic works of literature as well as modern and contemporary works. They examine all genres: plays, short stories, poetry, essays, and novels. The academic objectives of this course adhere to those outlined by the College Board in preparation for the Advanced Placement Exam in English Literature.

Prerequisite: English III

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AP® Environmental Science

The unifying themes in this course include understanding science as a process, energy conversions as the basis for all ecological processes, the earth as an interconnected system made up of natural systems which humans change, and environmental problems and how human survival depends on sustainable systems. This course involves a strong laboratory and field investigation component to reinforce fundamental concepts and principles. Students will have opportunities to develop skills such as critical observation, interpretation and analysis of data, applying solutions to problems, and evaluating the quality and validity of conclusions.



Before taking this course, students should have completed one year of physical science, one year of life science, and a year of algebra. A course in earth science is advantageous but not necessary.

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AP® French Language

In AP® French Language, students apply their French grammar and vocabulary knowledge as well as their listening, reading, speaking, and writing skills to a wide variety of real-world contexts. Students learn to speak fluently and accurately, write sophisticated compositions, and comprehend native speakers. The equivalent of a college-level language course, AP® French Language prepares students for the AP® exam and for further study of French language, culture, and literature. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12

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AP® Government and Politics

This course teaches students to analyze U.S. government and politics by providing a background of general concepts along with specific examples to study in depth. Students will explore several theoretical perspectives and explanations for outcomes in the U.S. government. Topics include constitutional underpinnings of the U.S. government, political beliefs and behaviors, political parties, interest groups and mass media, institutions of national government, public policy, and civil rights and civil liberties.

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AP® LANGUAGE AND COMPOSITION A

AP® LANGUAGE AND COMPOSITION explores the relationship between an author's ideas and how those ideas are expressed. The literary component of the course provides a range of genres, including nonfiction, fiction, drama, and poetry. Students will analyze style, specifically focusing on how elements of language—such as tone, diction, and syntax—influence an author's meaning. Students will also analyze the use of rhetoric in writing, examining various appeals, aspects of writer's credibility, irony, and the overall use of logic to explore how effectively an author presents his or her position. In written assignments, students will evaluate the expository and argumentative aspects of writing. In addition to the exploration of American and global themes of literature, students will discern how composition and rhetoric has developed over the last several centuries. The academic objectives of this course adhere to those outlined by the College Board in preparation for the Advanced Placement Exam in Language and Composition.

Prerequisite: English II

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AP® LANGUAGE AND COMPOSITION B

AP® LANGUAGE AND COMPOSITION explores the relationship between an author's ideas and how those ideas are expressed. The literary component of the course provides a range of genres, including nonfiction, fiction, drama, and poetry. Students will analyze style, specifically focusing on how elements of language—such as tone, diction, and syntax—influence an author's meaning. Students will also analyze the use of rhetoric in writing, examining various appeals, aspects of writer's credibility, irony, and the overall use of logic to explore how effectively an author presents his or her position. In written assignments, students will evaluate the expository and argumentative aspects of writing. In addition to the exploration of American and global themes of literature, students will discern how composition and rhetoric has developed over the last several centuries. The academic objectives of this course adhere to those outlined by the College Board in preparation for the Advanced Placement Exam in Language and Composition.

Prerequisite: English II

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AP® Physics B – Semester 1

This one-semester course focuses on the basic principles of physics and their applications with an emphasis on problem solving and a deep understanding of physics concepts. Category B physics builds on conceptual understanding learned in a first physics course. Before taking this course, students should be familiar with algebra, trigonometry, and basic concepts of calculus. Laboratory experience will provide students with opportunities to design, observe, measure, critically analyze, draw inferences, and communicate results. This experience is central to students' understanding of topics, which include Newtonian mechanics, fluid mechanics and thermal physics, electricity and magnetism, waves and optics, and atomic and nuclear physics.

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AP® Physics B – Semester 2

This one-semester course extends the topics, basic principles of physics and their applications, problem solving, and in-depth discussion of physics concepts which students started learning in AP Physics B – Semester 1.

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AP® Spanish Language

In AP® Spanish Language, students perfect their Spanish speaking, listening, reading, and writing skills. Students study vocabulary, grammar, and cultural aspects of the language, and apply what they've learned in extensive written and spoken exercises. By the end of the course, students will have an expansive vocabulary and a solid working knowledge of all Spanish verb forms and tenses. The equivalent of a college-level language course, AP® Spanish Language prepares students for the AP® exam and for further study of Spanish language, culture, and literature. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Prerequisite: Spanish III (or equivalent) and a teacher/counselor recommendation.

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AP® United States History - Semester 1

This one-semester course provides students with a pool of factual knowledge and the skills to interpret, analyze, and critically treat the problems of U.S. history. Students will learn to assess the relevance, reliability, and importance of historical material. The course emphasizes the ability to effectively use reasoned judgment and detailed evidence to construct a persuasive essay. Themes include American diversity and identity, economic transformation, globalization, religion, war, and diplomacy. Students explore several topics within these themes, including pre-Columbian societies, transatlantic encounters, colonial beginnings, colonial North America, the early Republic, antebellum America, the Civil War, and Reconstruction.

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AP® United States History - Semester 2

This one-semester course provides students with a pool of factual knowledge and the skills to interpret, analyze, and critically treat the problems of U.S. history. Students will learn to assess the relevance, reliability, and importance of historical material. The course emphasizes the ability to effectively use reasoned judgment and detailed evidence to construct a persuasive essay. Themes build from the first semester to include culture, demographic changes, environment, politics, and citizenship. The course explores several topics within these themes, including development of the West in the late 19th century, populism and progressivism, the Great Depression, the Second World War, the cold war, politics, and economics at the end of the 20th century.

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Electives

Career and Technology Skills A (HS)

Career and Technology A is the first part of a two-semester course that covers skills to prepare students for workplace success. Students will explore their interests, aptitudes, and skills plus their individual learning styles in order to find possible career matches. Students will also consider their values and expectations as they learn and practice the skill of goal setting. Students will apply their knowledge of learning styles and memory techniques to enhance their study skills. The course also presents an overview of basic technology skills, including the use of word processing, spreadsheet, presentation, and database software, that are so vital to success in the workplace. Practice opportunities help students master the use of such software. The course provides open source software programs to the students. Students will explore a variety of career options plus use the steps in the decision-making process to develop their own career plan. To help achieve career goals, students research a variety of post-high school opportunities. Students will create and evaluate job application materials, learn to search for job opportunities, and conduct a successful job interview. Finally, the course presents the role of government in business; global, national, and local economic trends; and how these factors affect working people.

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Career and Technology Skills B (HS)

Career and Technology B is the second part of a two-semester course that covers problem-solving, decision-making, and communication skills necessary to succeed in the workplace. Students will learn about workplace policies and procedures, growth and promotion opportunities, and the social and technological systems of any business. They will also understand legal and ethical issues related to their personal rights as workers. Students will prepare presentations and communications scenarios for different purposes and audiences, employing a variety of technology skills. The course explains effective leadership skills and provides examples of critical assessment, evaluation, and negotiation. Students will learn the steps of the problem-solving process to identify causes and seek effective resolutions. Students will also learn to plan a project and respond to problems and risks. Finally, students will learn skills for time management, financial responsibility, and methods to deal with stress.

Computer Literacy A (HS/MS)

This one-semester course develops students' overall understanding of computers and enhances technical skills in both basic computer functions and in the use of various types of software. By providing technical instruction and several practice opportunities, this course offers a strong foundation in basic computer literacy. After completing this course, students will be able to recognize computer hardware and use Windows XP and Mac OS operating systems. Students also will learn to use various software applications (word processing, spreadsheet, and presentation software), which are based on OpenOffice.org unless otherwise noted.

Computer Literacy B (HS)

This one-semester course builds on basic computer skills to teach students real-world problem solving methods. The course content includes a review unit from the introductory course before covering advanced features of spreadsheets and databases. The course further develops students' understanding of key issues in computing technology, including additional information about the use of spreadsheets and databases as well as an introduction to HTML. It ends with a unit covering careers in technology.

Current Events (HS)

Current Events is a one-semester, elective course structured to increase students' understanding of current issues in areas of politics, society, and economics. The course emphasizes student research; the topics chosen are broad in nature to allow for fluctuation in media coverage on common topics. Upon completing this course, students will have a greater understanding of some of the political, social, and economic issues that have dominated the news in recent years. Students will be able to find Web sites and other sources that cover these issues, and students will learn to make educated decisions as to whether the Web sites or sources present biased or unbiased coverage. For each content unit, students will write essays that demonstrate their research efforts. Students will complete a research-based essay at the end of the course.

Fundamentals of Art Appreciation (HS)

Fundamentals of Art Appreciation is a one-semester course that explores various aspects of art in an effort to intrigue students and encourage them to develop an understanding of fine art. As students begin to examine the elements and principles of art, they will study important works selected from various types of media, including painting, sculpture, architecture, and photography. Students will explore various types of art media and techniques as they investigate the question of what compels artists to create works of art. This course will provide students with a working knowledge of concepts and an enriched vocabulary so that they can become more critical observers of art.

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Fundamentals of Art History (HS)

This one-semester course is designed to develop students' understanding and appreciation for the visual arts. This course explores the arts, artists, and their cultures from prehistoric times through the present. Students will begin to explore important works of art, selected from various types of media, including painting, sculpture, architecture, and photography. As the course presents works of different periods, students will receive the historical and geographic context necessary for gaining a deeper appreciation of the pieces. This course will provide students with a working knowledge of concepts and an enriched vocabulary so that they can become more critical observers of art.

Fundamentals of English Composition (HS)

Fundamentals of English Composition is a one-semester course designed to give beginning writers the tools to write effectively for school and life. Course lessons and activities will engage students in practical and accessible discussions of how to write and why. Throughout the course, emphasis is placed on the principle that effective writing achieves its purpose. Students will identify characteristics of effective writing. Students will identify different purposes for writing and learn strategies to achieve those purposes. The course further addresses the writing process through in-depth instruction on prewriting and revision. Along with this, the course explains writing context and issues of audience and intended audience. Students will learn how to achieve purpose through style, form, and rhetorical mode. In the last part of the course, students will evaluate their own work through the lenses of reader expectations and constructive criticism. Upon completion of this course,

students will have demonstrated success at various prewriting activities, outlined their work extensively, and written an analytical essay, a persuasive cover letter, and a personal narrative. Students will also have been exposed to peer review practices as well as guidelines for accepting and offering constructive criticism.

Fundamentals of Web Development (HS)

There's more to creating a Web site than writing HTML code and uploading files. A good Web site must be designed before it's created. This one-semester course introduces students to both Web site design and development. The course introduces students to the basic Web site design principles, which can be used to both design and evaluate their own sites and to evaluate other sites. Students will learn development languages such as HTML and CSS. In addition, students will be introduced to two software programs: GIMP, an image-editing program, and Nvu, a Web development program.

Recommended Prerequisites: Computer Literacy A, Computer Literacy B

Introduction to Anthropology (HS)

Anthropology aims to use a broad approach to gain an understanding of our past, present, and future to address the problems humans face in biological, social, and cultural life. This course will explore the evolution, similarities, and diversity of humankind through time. The course will look at how we have evolved from a biologically and culturally weak species to one that has the ability to cause catastrophic change. Exciting, online videos lead students through journeys to different areas of the world throughout the course.

Introduction to Graphic Design (HS)

This one-semester course is designed to develop students' understanding and appreciation for design. By raising students' awareness of design, this course will serve as a strong foundation in the basic principles of graphic design. Students will learn to communicate visually; they will present their own ideas and information graphically by applying graphic design principles in their own work as well as interpret visual representations presented to them. The course will introduce students to problem-solving scenarios that can be solved graphically. Students will apply creativity techniques to create innovative and effective design solutions. Students will also learn about the history of design, how various design movements have contributed to the field of design today, what role design plays in society, and how the field of design relates to other facets of society. Though the course is structured around computer-assisted graphic design, other types of design are discussed as well. Students will learn to use Inkscape, an image-editing program that will be provided for them and will be required to create several design compositions using this program.

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Introduction to Online Learning (HS/MS)

Becoming familiar with an online learning environment is essential to your success as a student who takes classes online. Introduction to Online Learning provides information that will ensure your success for navigating the Advanced Academics platform, including how to access your classes, take assessments, submit written assignments, and view your grades. This course will also cover the various ways to communicate with your teachers and the guidelines for effective communication. You will learn how to set up the technical requirements so that you can get the most out of your Advanced Academics learning experience. The course concludes with an overview of test and homework retake policies, ways to cite sources, and avoiding plagiarism. This orientation course introduces students to the online environment, and is not intended to be a full semester course.

Introduction to Sociology (HS)

The world is becoming more complex. How do your beliefs, values, and behavior affect the people around you and the world we live in? In this increasingly connected world, students will examine problems in our society and learn how human relationships can influence the life of the student. This course presents exciting, online video journeys to different areas of the world.

Journalism A (HS)

Journalism A is the first of a two-part series that introduces secondary school students to the world of journalism. They will see how their strengths and interests compare with those associated with careers in journalism.

In this course, students will gain a basic knowledge of journalism, its early history, and its importance in our culture. Students will be introduced to different types of news stories and learn about the reporting and writing skills involved with each.

Journalism B (HS)

Journalism B is the second of a two-part series that introduces secondary school students to the world of journalism. Students will explore the changing role of journalism in today's society. They will gain a basic knowledge of radio, television, newspaper, and Internet journalism. This knowledge will include how each medium is relevant today, how it may adapt to economic changes and audience preferences, and how writing for each medium has its own characteristics.

Life Skills (HS/MS)

Life Skills, a one-semester course, presents high school students with helpful information in the form of entertaining and interactive games, activities, and quizzes in order to assist them in preparation to exit high school. Whether their choice is college, technical school, the military, or a full-time career, this course teaches basic skills needed in every avenue. In addition to providing strategies for taking the ACT and SAT tests, this course provides an informative timeline to help students stay on schedule with required tasks for graduating from high school and entering the outside world. Consumer protection, establishing credit, managing money, buying a car, and renting an apartment for the first time are a few of the topics covered throughout this course.

Music Theory A (HS) – coming soon

Music provides a way for students to express themselves artistically, but music also enhances intelligence and creativity. Music Theory A is a semester-long, elective course designed to develop students' visual and aural understanding of the structure of music. In this course, students will study the language and symbols of music. Not only will students learn to read various musical elements, such as scales, chords, pitch notations, and time signatures, they will also learn to construct these elements themselves. The course also teaches students to understand basic forms in music compositions, including the skill of notation. As students learn these various aspects of music theory, they will undergo ear training to teach them to recognize these elements aurally as well.



Personal Psychology (HS)

Psychology is the study of human and animal behavior. More than 800,000 high school students take psychology classes each year. Self-discovery is frequently cited among the different reasons for studying psychology. Learning about psychology helps you gain a better understanding of your own behavior. Enrich the quality of your life by learning to understand the actions of others. This course presents interactive personal psychology experiments.

Health Education

Fitness Fundamentals I A (MS/HS)

This one-semester course will teach students how to assess their fitness levels and establish goals for improvement in the five fitness areas: muscular strength, endurance, cardiovascular fitness, flexibility, and body composition. The course provides information so that students establish and maintain good fitness practices well after finishing the course. Students will also learn proper posture and technique, the benefits of fitness, and the prevention of injury. This course covers a minimum of 120 days worth of activities.

Fitness Fundamentals I B (MS/HS) – coming soon

This one-semester course will teach students what makes a person fit plus the basics of figuring heart rate and intensity. Students will also learn ways to use nutrition to manage weight along with information about

drug use and its impact on fitness. Coupled with a minimum requirement of physical activity, which includes cardio, strength training, and flexibility, the course provides opportunities for students to complete written assignments, journal entries, and discussions. This course covers a minimum of 120 days worth of activities.

Personal Health and Safety (MS/HS)

Personal Health and Safety is a one-semester course which examines the mental, physical, and social aspects of health for living a healthy, informed, and balanced life. Mental health topics including enhancing self esteem, practicing stress reduction, and identifying depression will be examined. The course covers effective conflict management and communication skills. Students will learn the basics of first aid and how to manage minor medical emergencies. Topics of wellness, exercise, and healthy habits will be introduced. Students will also learn ways to resist peer pressure to engage in unhealthy and destructive behaviors including smoking, drinking alcohol, and drug abuse.

Personal Health and Safety with Sex Education (MS/HS)

Personal Health and Safety is a one-semester course which examines the mental, physical, and social aspects of health for living a healthy, informed, and balanced life. Mental health topics including enhancing self esteem, practicing stress reduction, and identifying depression will be examined. The course covers effective conflict management and communication skills. Students will learn the basics of first aid and how to manage minor medical emergencies. Topics of wellness, exercise, and healthy habits will be introduced. Students will also learn ways to resist peer pressure to engage in unhealthy and destructive behaviors including smoking, drinking alcohol, and drug abuse. In addition, this course conveys the risks of sexual activity, such as unplanned pregnancy and sexually transmitted diseases, and options for eliminating these risks will be presented. Students will also be presented with an overview of infectious and non-infectious diseases, how they affect the body, and how they can be prevented.

Running (MS/HS)

This one-semester course is suitable for beginning, intermediate, and advanced runners and offers a variety of training schedules for each. In addition to reviewing the fundamental principles of fitness, students will learn about goals and motivation, levels of training, running mechanics, safety and injury prevention, appropriate attire, running in the elements, good nutrition and hydration, and effective cross-training. While this course focuses mainly on running for fun and fitness, it also briefly explores the realm of competitive racing. Throughout this course, students will participate in a weekly fitness program involving running. Students will also be expected to record their weekly activities and heart rate. Coupled with a minimum requirement of physical activity which includes cardio, strength training, and flexibility, the course provides opportunities for students to complete written assignments, journal entries, and discussions. This course provides activities to cover a minimum of 120 days.

MS Language Arts

MS Language Arts 6 A

MS Language Arts 6 A is the first in a two-course series. In this course, students will become active participants in analyzing different forms of text. They will gain an understanding of the different types of literature. This course focuses on the narrative and expository forms of writing. Students will gain a better understanding of appropriate grammar, spelling, and vocabulary through instruction in the writing process, responses to literature, and direct instruction. Students will be required to read the novel *Hatchet*, by Gary Paulson, in addition to several short stories.

MS Language Arts 6 B

MS Language Arts 6 B, the second in a two-course series, emphasizes reading persuasive texts, expository texts, narratives, and poetry. Students will explain the effects of common literary devices in fictional and non-fictional texts. Students will identify and utilize organizational patterns when writing. Students will also improve

their abilities to identify main ideas in writing and to achieve consistency of ideas between paragraphs when creating multi-paragraph expository and persuasive compositions. Students will gain a better understanding of appropriate grammar, spelling, and vocabulary through instruction in the writing process, responses to literature, and direct instruction.

MS Language Arts 7 A

MS Language Arts 7 A is the first of a two-course series. In this course, students continue to build on prior knowledge and skills to strengthen reading, writing, speaking, and listening. The student will read literary and informational texts. Students are active participants in comprehending, analyzing, and evaluating different forms of text. For writing, the student will utilize the writing process to compose essays, reports, summaries, a speech, a drama, and responses to literature. Students will practice listening and speaking skills. Students are required to independently read two novels, two magazine articles, and two newspaper articles and complete related assignments.

MS Language Arts 7 B

MS Language Arts 7 B is the second of a two-course series. In this course, students continue to build on prior knowledge and skills to strengthen reading, writing, speaking, and listening. Students are active participants in comprehending, analyzing, and evaluating different forms of text. For writing, the student will utilize the writing process to compose essays, reports, summaries, poetry, and responses to literature. Students conduct research to organize, synthesize, and present information. They will read the novel *The Outsiders* by S.E. Hinton. Students are required to read independently and to complete assignments related to the independent readings.

MS Language Arts 8 A

The focus in the first part of this two-part course is grammar and reading. Areas of emphasis include sentence structure, word analysis, and review and practice of the eight parts of speech. Students read short stories and myths and practice grammar in context. Students will read the novel *The Giver* by Lois Lowry. For independent reading, students are required to choose two novels, two magazine articles, and two newspaper articles to read and complete related assignments.

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MS Language Arts 8 B

The focus in the second part of this two-part course is writing and reading. Areas of emphasis include clarity of sentences, the writing process, editing, and punctuation. For independent reading, students are required to read *Anne Frank: Diary of a Young Girl* by Anne Frank and a novel of choice. In addition, students are required to independently read two magazine and two newspaper articles and complete related assignments. The final unit of this course compares and contrasts Anne Frank's diary and the play *The Diary of Anne Frank* by Frances Goodrich and Albert Hackett. The students research the Holocaust and discuss historical and cultural issues. Students demonstrate their understanding of researched information through written assignments and a slide-show presentation.

MS Mathematics

MS Fundamentals of Math 6 A

MS Fundamentals of Math 6 A, the first course of a two-course series, begins with a review of the four arithmetic operations with whole numbers and introduces students to algebraic concepts such as variables and expressions. Students will understand and apply the order of operations when simplifying expressions. Students will be able to accurately solve problems using decimals, fractions, and integers as well as be able to compare and order positive and negative numbers, fractions, decimals, and mixed numbers. Students will identify variables and begin solving one and two step equations. The course offers students illustrations, examples, and practice exercises before formative assessments.

MS Fundamentals of Math 6 B

The second course in the MS Fundamentals of Math 6 series builds upon foundational math skills. Students will develop math skills that are applicable to real life situations including how to calculate tips and discounts, find a test average, and calculate unit cost to determine which product is the better buy. Students will be expanding their geometry and measurement skills by exploring lessons that include learning to classify triangles; finding the sum of the interior angles of a polygon, perimeter, circumference, area, surface area, and volume; as well as converting both customary and metric units of measurement. Next, students will explore the best methods for collecting and displaying data and begin to recognize bias in data samples. The course ends with students solving and graphing inequalities, investigating functions, and learning how to graph functions on the coordinate plane. The course offers students illustrations, examples, and practice exercises before formative assessments.

MS Fundamentals of Math 7 A

MS Fundamentals of Math 7 A is the first course of a two-course series that prepares the student for success in higher level math classes through the study of integers, exponents and factors, operations with fractions, ratios and proportions, and expressions and equations.

MS Fundamentals of Math 7 B

MS Fundamentals of Math 7 B is the second course of a two-course series designed to prepare the student for higher level math classes. Areas of emphasis include functions and inequalities, data, statistics and probability, the basics of geometry, and two- and three-dimensional geometry. Students solve and graph inequalities, linear equations, and linear functions. Students also plot, describe, and find data using several methods to figure outcomes and probabilities. Using basic geometry techniques, students classify and find shapes and angles. Students also find area, understand the Pythagorean Theorem, and find volume and surface area for different shapes. The course offers students illustrations, examples, and practice exercises before formative assessments.

MS Pre-Algebra A

MS Pre-Algebra A is the first of two courses designed to prepare the student for more advanced work in Algebra I. Students learn the basic concepts of arithmetic and the practical applications of mathematics in order to focus on integers, equations and inequalities, factors and exponents, fractions, decimals, ratios, proportions, and percents. The course offers graphics, explanations, and practice exercises before formative assessments.

MS Pre-Algebra B

MS Pre-Algebra B is the second half of a series of two courses that are designed to prepare the student for more advanced work in Algebra I. The course emphasizes concepts in solving linear equations, graphing linear equations, angles, two- and three-dimensional geometry, integrating algebra with geometry, and data, statistics, and probabilities. The course offers graphics, explanations, and practice exercises before formative assessments.

MS Sciences

MS Earth Science A

MS Earth Science A, the first course of a two-semester series, introduces students to scientific investigation and experimentation and describes the methods and tools scientists use to study the earth. Students learn to read geologic maps, topographic maps, and various types of graphs for information. Concepts of density, heat, heat transfer, and types of energy are explored, and students examine the role of these concepts in earth processes. The course concludes by examining earth's layered structure and the transfer of heat from earth's interior through its layers.

MS Earth Science B

MS Earth Science B, the second course of a two-semester series, examines how scientists use direct and indirect evidence to learn about earth's structure and function. Students learn the evidence for plate tectonics and relate plate movement to geological events such as earthquakes, mountain building, and volcanic eruptions. The rock cycle is described, and students learn how weathering and erosion shape the earth's surface. Students explore non-renewable and renewable resources and investigate the resources in their state. The geologic time scale is used to describe earth's history. Basic ecological concepts are introduced, including interactions in ecosystems, matter and energy flow, and populations. Earth's biomes are surveyed. The course concludes with an introduction to space science. Students explore the origin and structure of the universe, characteristics of the solar system, and motions of the planets and other celestial objects.

MS Life Science A

MS Life Science A, the first course of a two-semester series, introduces students to basic biological concepts and the use of the scientific method in the study of life. Specific topics include characteristics of life; classification of living organisms; characteristics of bacteria, protists, fungi, plants, and animals; evolutionary theory; ecology; and effects of resource use and pollution on ecosystems.

MS Life Science B

MS Life Science B, the second course in a two-semester series, begins by exploring cell structure and function and organization of tissues, organs, and systems. Students then examine the following body systems: muscular, skeletal, digestive, excretory, reproductive, circulatory, respiratory, immune, nervous, and endocrine. For each body system, students explore structure, function, related diseases, and disease prevention factors. The course also includes an introduction to DNA structure, principles of inheritance, and genetic engineering.

MS Physical Science A

MS Physical Science A (Integrated Physics and Chemistry A), the first course of a two-semester series, includes topics focusing on scientific process skills, motion, forces, energy, behavior of matter, waves, machines and work, and electricity and magnetism. Students will also learn the mathematical relationships between physical measurements.

MS Physical Science B

MS Physical Science B (Integrated Physics and Chemistry B), the second of a two-semester series, includes topics focusing on properties of matter, properties of elements, chemical reactions, properties of compounds, nuclear energy, and careers in the physical sciences.



MS Social Studies/Sciences

MS Ancient Civilizations A

MS Ancient Civilizations A examines the significance of geography in the development of ancient civilizations. Students will study the archeological evidence of early human societies then move on to the development of ancient cultures. The course provides a context for the understanding of history through a survey of the geographic, political, economic, religious, and social structures of the early civilizations of Mesopotamia, Egypt and Kush, Ancient Hebrews, and Ancient Greece. Students will analyze the contributions of these early civilizations to the modern world.

MS Ancient Civilizations B

MS Ancient Civilizations B examines the significance of geography in the development of ancient civilizations. The course provides a context for the understanding of history through a survey of the geographic, political, economic, religious, and social structures of the early civilizations of India, the early civilizations of China, and through the development of Rome. Students will analyze the contributions of these early civilizations to the modern world.

MS Social Studies A

MS Social Studies A is the first part of a two-semester course. This course provides students with the knowledge and tools essential to understanding a variety of social studies topics. Students will use visual aids such as charts, graphs, pyramids, and diagrams to understand information-gathering techniques and how to predict future population trends. Students will also apply latitude and longitude concepts to a map to find locations. After reading timelines properly, students will identify causes and effects of historic events. By examining relative and absolute locations on maps, students will examine the different map uses and apply a compass rose and cardinal directions on a map. Students will conclude their work in this course by learning computer- and text-based research techniques that demonstrate evaluation of trustworthy sources; the ability to use all information from a dictionary; and the knowledge of when to use an atlas, gazetteer, index, and almanac.

MS Social Studies B

MS Social Studies B is a general survey course encompassing five different units. These units will hit highlights within the subjects, with an emphasis on holistic education rather than an in-depth examination. This course is an application of the social studies skills that students learn in Middle School Social Studies A.

MS American History A

MS American History A, the first course of a two-semester series, examines American history from its pre-Columbian beginnings to the development of the United States Constitution. This course explores the decline and fall of native cultures, the gradual decline of influence on America by European monarchies, the American rebellion against England, and the formation of a new American government.

MS American History B

MS American History B, the second course of a two-semester series, examines American history from the Federalist era to the American Civil War. This course explores the development of political parties, the Louisiana Purchase and westward expansion, and the issues that divided the country and ultimately led to the Civil War.

MS World Languages

MS French I A

Students begin their introduction to French with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are initially trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, prompting students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All new graphics, videos, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS French I B

Students continue their introduction to French with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, prompting students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All new graphics, videos, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS French II A

In this continuing introduction to French, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then reproduce new vocabulary items in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in French I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. All new graphics, videos, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS French II B

MS French II B continues the instruction of the first semester course. In this continuing introduction to French, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then reproduce new vocabulary items in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in French I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. All new graphics, video, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS German I A

Students begin their introduction to German with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are initially trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, prompting students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All new graphics, videos, and games keep students engaged and make learning German exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS German I B

Students continue their introduction to German in this second semester course with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, prompting students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All new graphics, video, and games keep students engaged and make learning German exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS German II A

In this continuing introduction to German, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then reproduce new vocabulary items in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in German I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. All new graphics, video, and games keep students engaged and make learning German exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS German II B

In this second semester continuing introduction to German, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and

then reproduce new vocabulary items in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. Students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. All new graphics, video, and games keep students engaged and make learning German exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS Mandarin I A

Students use compelling stories, games, videos, and multimedia experiences in this introduction to Chinese. Students learn the elegant simplicity of Chinese grammar and the subtleties of Chinese pronunciation through entertaining lessons that provide a base for conversational ability and listening comprehension. Students build a foundation for reading and writing in the Chinese language through an adaptive technology that lets students choose an approach that works best for them. All new graphics, video, and games keep students engaged and make learning Chinese exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS Mandarin I B

Students use compelling stories, games, videos, and multimedia experiences in this continuing introduction to Chinese. Students learn the elegant simplicity of Chinese grammar and the subtleties of Chinese pronunciation through entertaining lessons that provide a base for conversational ability and listening comprehension. Students build a foundation for reading and writing in the Chinese language through an adaptive technology that lets students choose an approach that works best for them. All new graphics, video, and games keep students engaged and make learning Chinese exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS Mandarin II A

Students continue with engaging stories, games, videos, and multimedia experiences in this second level of Chinese. Students further their understanding of Chinese grammar and pronunciation through lessons that build on previous conversational ability and listening comprehension. Innovative cultural videos and lessons build awareness of the rich legacy of Chinese culture. Students expand their foundation for reading and writing in Chinese through adaptive technology. This practice provides students with opportunities to generate fun narratives, a range of well-formed sentences that reflect a solid grasp of grammar structures, and a wide vocabulary. All new graphics, video, and games keep students engaged, making learning languages exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS Mandarin II B

Building on skills from MS Mandarin II A, students continue with engaging stories, games, videos, and multimedia experiences in this second level of Chinese. Students further their understanding of Chinese grammar and pronunciation through lessons that build on previous conversational ability and listening comprehension. Innovative cultural videos and lessons build awareness of the rich legacy of Chinese culture. Students expand their foundation for reading and writing in Chinese through adaptive technology. This practice provides students with opportunities to generate fun narratives, create well-formed sentences that reflect a solid grasp of grammar structures, and develop a wide vocabulary. All new graphics, videos, and games keep students engaged and make learning Chinese exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS Spanish I A

Students begin their introduction to Spanish with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are initially trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. Vocabulary and grammar topics are introduced in an ongoing adventure story that prompts students to use skills from all four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. Cultural information covers major Spanish-speaking areas in Europe and

the Americas. All new graphics, videos, and games keep students engaged and make learning Spanish exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS Spanish I B

Students continue their introduction to Spanish with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. Vocabulary and grammar topics are introduced in an ongoing adventure story that prompts students to use skills from all four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. Cultural information covers major Spanish-speaking areas in Europe and the Americas. All new graphics, videos, and games keep students engaged and make learning Spanish exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS Spanish II A

In this continuing introduction to Spanish, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then reproduce new vocabulary in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in Spanish I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. Cultural information addresses Spanish as it is used around the globe. All new graphics, videos, and games keep students engaged and make learning Spanish exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

MS Spanish II B

Building on abilities developed in MS Spanish II A, this continuing introduction to Spanish helps students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then reproduce new vocabulary in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in Spanish I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. Cultural information addresses Spanish as it is used around the globe. All new graphics, videos, and games keep students engaged and make learning Spanish exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

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HS English

ENGLISH I A

ENGLISH I A is the first semester of an introductory English course that combines the study of literary genre with a focus on composition skills. Students will learn effective communication skills by focusing on the first four of the 6 + 1 Traits of writing developed by the Northwest Regional Education Laboratories: Ideas, Organization, Sentence Fluency, and Conventions. Students will select from a choice of novels in the first semester.

ENGLISH I B

ENGLISH I B is the second semester of an introductory English course that combines the study of literary genre with a focus on composition skills. Students will learn effective communication skills by focusing on the final three of the 6 + 1 Traits of writing developed by the Northwest Regional Education Laboratories: Voice, Word Choice, and Presentation. Students will read *The Night Thoreau Spent in Jail*. Students will also practice oral communication and learn an introduction to research.

ENGLISH II A

ENGLISH II A, the first course of a two-semester series, is an intermediate English course that combines the study of world literature along with a continued focus on composition skills. The course begins with an overview of thinking skills and literary terms. Students will read, reflect, synthesize, and respond to several different types of world literature, including mythology, *Antigone*, and *House on Mango Street*.

ENGLISH II B

ENGLISH II B, the second course of a two-semester series, is an intermediate English course that combines the study of world literature along with a continued focus on composition skills. The course begins with a short story unit. Students will read, reflect, synthesize, and respond to several different types of world literature, including *Metamorphosis*, poetry, and *An Enemy of the People*. A research paper is a requirement of the course.

ENGLISH III A

ENGLISH III A, the first course in a two-semester series, is a course that explores American literature and the classic American themes and ideals presented in a wide range of both nonfiction and fiction selections. Students will connect their lives to the texts, analyze these texts, and write clearly about them using the writing process. In addition to poetry, short stories, speeches, sermons, and dramas, students will read and analyze John Steinbeck's *Of Mice and Men*.

ENGLISH III B

ENGLISH III B, the second course in a two-semester series, focuses on the art of communication in a number of situations. Students will practice both written and verbal workplace communication and will study the art of persuasion. Students will evaluate media and its impact on history in addition to contemporary issues in American communication. This study will include independent media projects and an independent research project requiring the use of the writing process.

ENGLISH IV A

ENGLISH IV A is the first of a two-semester course in which students will acquire the reading and critical thinking skills necessary for understanding challenging new material. Students will explore analysis of literature and tools for literary research. The course concentrates on analyzing literature with a focus on *Oedipus the King* and writing a research paper.

ENGLISH IV B

ENGLISH IV B is the second of a two-semester course with a concentration on literature from medieval, romantic, and realistic time periods. Students will read and analyze classic works of literature, including *Hamlet*, which contain literary qualities that promote study and analysis.

HS Mathematics

ALGEBRA I A

ALGEBRA I A, the first course in a two-semester series, guides students through units of study that allow them to gain practical mastery in reading, writing, and evaluating mathematical expressions. Students will study topics including numbers, expressions, and equations. In the final first semester unit, students learn to solve functions and linear equations.

ALGEBRA I B

ALGEBRA I B, the second course in a two-semester series, continues to build on students' knowledge as they learn to solve systems of linear equations and inequalities. Assessments include self-check quizzes, audio

tutorials, and interactive games. Students will study units that allow them to gain practical mastery in reading, writing, and evaluating mathematical expressions. Students will study topics including polynomials, factoring, quadratic functions, and radicals. The course concludes with a study of rational expressions.

GEOMETRY A

GEOMETRY A, the first course in a two-semester series, provides students with the logic and basic elements of geometry to solve geometry problems. The course introduces students to inductive and deductive reasoning and proofs. Students study parallel lines and the coordinate plane plus an exploration of rays, angles, and lines. Students will identify and apply the properties of triangles and study the properties of quadrilaterals and polygons.

Prerequisite: ALGEBRA I

GEOMETRY B

GEOMETRY B, the second course in a two-semester series, builds on the logic and basic elements of geometry to examine ratios and proportions. The course includes studies of circles, geometric formulas, solid geometric figures, coordinate geometry, and transformational geometry. Students will be prepared to advance to special topics like Algebra II and trigonometry.

Prerequisite: ALGEBRA I

ALGEBRA II A

ALGEBRA II A, the first in a two-semester course, begins with a review of algebraic properties. Students will study properties and applications of linear and quadratic functions, radical functions, and rational functions. Students will identify how the major topics in algebra relate to real-world applications. Students will also explore exponential and logarithmic functions and trigonometric functions.

Prerequisite: ALGEBRA I

ALGEBRA II B

ALGEBRA II B, the second in a two-semester course, includes the study of systems of equations and inequalities. Students will apply topics in geometry, conic sections, probability and statistics, and patterns of logic and reasoning to real-world applications. The course provides students the opportunity to synthesize all information learned in previous studies of algebra. After successful completion of ALGEBRA II B, students will have the necessary skills to study topics in advanced algebra and trigonometry.

Prerequisite: ALGEBRA I

Consumer Math (Mathematics of Finance) A

Consumer Math (Mathematics of Finance) A focuses on basic math skills used in everyday life with the goal of developing intelligent consumers. Students study the practical applications of math using real-world situations. The course emphasizes personal finances through the study of personal earnings, which includes the practical knowledge and application of pay rates and other elements. Students also identify and calculate benefits, taxes, and deductions from paychecks. Students manage all components of checking and savings accounts as well as explain the concepts of saving money and setting financial goals. Students have the opportunity to analyze and graph business functions and learn about credit and life insurance. Prerequisites: Algebra I, Geometry

Consumer Math (Mathematics of Finance) B

Consumer Math (Mathematics of Finance) B is an extension of Consumer Math (Mathematics of Finance) A and continues the focus on basic math skills used in everyday life with the goal of developing intelligent consumers. The practical applications of math are studied using real-world situations. The course emphasizes personal finances through the study of personal earnings and the elements of business, credit, and life insurance. Prerequisites: Algebra I, Geometry, Consumer Math (Mathematics of Finance) A

Trigonometry

Trigonometry, a one-semester course, prepares students for further studies of mathematical topics in Calculus and Physics. The course begins by teaching students to measure angles in degrees and radians, arc lengths,

and chords. Students then study the basic trigonometric functions, sine, cosine, and tangent, and their inverses as well as the relationships of these functions to chords and right triangles. In addition, students apply their study of trigonometric functions and identities to find angles of elevation and depression and solve right triangles. Prerequisites: Algebra I, Geometry, Algebra II

Pre-Calculus

Pre-Calculus, a one-semester course, covers a variety of topics to prepare students for more advanced calculus courses. The course starts with functions and graphs and moves on to polynomial and rational functions. The course also examines exponential and logarithmic functions, along with trigonometric functions and applications. Students receive introduction to analytic geometry and discrete algebra. The course ends with an introduction to calculus, including lessons on limits, derivatives and integrals. Prerequisites: Algebra I, Geometry, Algebra II, Trigonometry

Calculus A

Calculus A, the first of a two-semester course, centers on limits, differentiation, and applications of differentiation. Topics in this course apply to many problems studied in physics and engineering. Students review algebra concepts and learn fundamental calculus concepts along with working problems for limits and derivatives. Students apply rules for finding different derivatives as well as learn the applications of the derivative. After finding the area under a curve using several different methods, students will complete an essay assignment that applies this to a real-world problem. Students conclude the course by applying theorems and demonstrating knowledge of basic rules for anti-derivatives. After successful completion of this course, students will have a fundamental understanding of the principles of calculus. Prerequisites: Algebra I, Geometry, Algebra II, Trigonometry

Calculus B

Calculus B, the second of a two-semester course, focuses on how to calculate and graph anti-derivatives and integrals as well as how to apply these techniques to real-world problems. In addition, students also study topics in sequences and series. Students find the derivatives of several different functions and apply these derivatives in application problems. They also calculate volume, surface area, and arc length by working with applications of the integral. Finally, students differentiate and integrate multidimensional functions. Prerequisites: Algebra I, Geometry, Algebra II, Trigonometry, Calculus A



HS Sciences

BIOLOGY A

BIOLOGY A, the first course of a two-semester series, introduces students to general biology and the processes of scientific inquiry and thinking. Students will examine the characteristics and organization of life along with the chemical context of living things, basic atomic structure, and the properties of water. An in-depth study of the structure and function of cells and cellular processes leads to an understanding of the fundamentals of genetics, human heredity, and biotechnology.

BIOLOGY B

BIOLOGY B, the second course of a two-semester series, begins with a study of the origins of life and the classification of living things. Students explore microorganisms, including bacteria, viruses, protists, and fungi. An overview of the plant kingdom with a study of plant structure, function, and reproduction is followed by an examination of the animal kingdom. Students will study the major groups of vertebrates and invertebrates. The course concludes with a study of human biology and populations.

PHYSICAL SCIENCE A

PHYSICAL SCIENCE A is first in a series of two courses designed to introduce students to the study of the nature of things. The course introduces students to the scientific method and inquiry processes. The course

explains lab and field safety along with methods for conducting scientific experiments and communicating results of experimentation. The course leads students to an understanding of the atomic nature of matter, the elements, and the Periodic Table. Students will examine the properties of matter and explore the composition and the behavior of acids and bases. The course concludes with a description of energy and the properties of matter.

PHYSICAL SCIENCE B

PHYSICAL SCIENCE B, the second course in a two-semester series, continues with a study of energy in motion. Students will describe and calculate force, velocity, acceleration, work, and power. The course leads students to understand Newton's laws of motion and guides them in designing simple machines based on the basic principles of physics. The course continues with a study of the generation of electricity and magnetism. The course goes on to cover the forms and properties of waves and the electromagnetic spectrum. Students will study nuclear reactions and the composition and structure of the universe. The course concludes with an examination of the life cycle of a star plus past achievements and future goals for space exploration.

EARTH SCIENCE A

EARTH SCIENCE A, the first course in a two-semester series, is an intense study of geology as a problem-solving science. The course presents an overview of planet earth with an exploration of the solid as a series of interrelated systems. Students will explore minerals plus rocks and the rock cycle. Students will also examine the driving forces behind plate tectonics, the deformation of earth's crust, earthquakes, and volcanoes. The course presents opportunities to examine forces of weathering, including erosion, deposition, glaciers, and deserts. Students will study geologic time, relative age dating, and isotopic dating.

EARTH SCIENCE B

EARTH SCIENCE B, the second course in a two-semester series, begins with an examination of the major principles of hydrology and oceanography. Students will study earth's water systems, including rivers, streams, groundwater, oceans, and coastal processes. The course continues with a study of meteorology, including an examination of earth's atmosphere, weather, and climate. The course leads students to understand the earth, moon, and sun system. The course concludes with a study of the solar system, stars, galaxies, and the universe.

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Environmental Science A

Environmental Science A, the first course of a two-semester series, explores the nature of science and the natural world. Students examine environmental issues and learn to make informed decisions using scientific problem solving. Specific topics include ecological interactions, matter and energy flow in ecosystems, biodiversity, characteristics and growth of populations, evolution, succession, biogeochemical cycles, soil and land resources, agriculture, waste management, and characteristics of terrestrial biomes. Recommend Prerequisites: Biology A, Biology B

Environmental Science B

Environmental Science B, the second course of a two-semester series, continues the study of the natural world. Students explore environmental issues and make informed decisions using scientific problem solving. Specific topics include characteristics of aquatic biomes, management of water resources, use of mineral resources and effects of mining, renewable and non-renewable energy resources, atmospheric cycles, climate change, and sustainability. Recommended Prerequisites: Biology A, Biology B

Chemistry A

Chemistry A, the first of a two-semester course, introduces students to the basic concepts of observation, the history of chemistry, and how to reason and use the scientific method. The course also emphasizes the study of matter and energy with focus on identifying differences between states of matter and physical and chemical properties. Fundamental properties of measurement in chemistry along with how to use scientific notation will be introduced early in the course, and these concepts will be reinforced throughout the remaining units. The relation between atomic models and the Periodic Table will be explained along with ways to use

these concepts as tools in the study of chemistry. The remaining units of the course will focus on ions and ionic compounds, molecular compounds, acids and bases, the mole concept, chemical masses, and chemical equations.

Chemistry B

Chemistry B (2007 - 2008) - Chemistry B, the second of a two-semester course, focuses on chemical bonding, molecular geometry and symmetry, Lewis structures, valence shell electron pair repulsion (VSEPR) theory, and resonance structures. In addition, this course introduces thermochemistry, chemical kinetics, and electrochemistry. Along with concepts and definitions, calculation methodology for pH, pOH, and buffering are provided. Key concepts of organic chemistry, nuclear and environmental chemistry, biochemistry, and analytical chemistry are explained. The course ends with a discussion of industrial processes, energy, and careers related to chemistry.

Physics A

The topics covered in this one-semester course include mechanics; oscillatory motion and waves; and electricity, magnetism, and light. Within these topics, students will learn to analyze situations, apply expressions and principles, and understand various concepts and principles.

Physics B

The topics covered in this one-semester course include continued discussion of electricity, magnetism, and light; sound, fluids, gases, and heat; and modern physics, including quantum theory and the Bohr model of the atom. Within these topics, students will learn to analyze situations; write and apply equations; apply situations, principles, and laws; and understand various concepts and principles.

HS Social Studies/Sciences

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AMERICAN HISTORY A

AMERICAN HISTORY A is the first course in a two-semester series that surveys the settlement of the continent through the First World War. Students will identify the origins of the United States, analyze significant documents that have impacted the development of the nation, and identify key events and people in the nation's development.

AMERICAN HISTORY B

AMERICAN HISTORY B is the second course in a two-semester series that surveys the history of the United States from the 1920s to the present day. Students will examine issues that have and still affect the nation, both at home and abroad. They will describe the causes and effects of the wars in which the United States has been involved and discuss the United States as a world power.

ALASKA HISTORY

Alaska History is a one-semester survey on Alaska's history and its people. In this course, students will explore geographic, cultural, political, economic, and social influences on Alaska and the impact these have on Alaska's development from pre-European settlement through the beginning of the twenty-first century.

OKLAHOMA HISTORY

Oklahoma History, a one-semester course, provides a rich study of Oklahoma's history. From Oklahoma's pre-history and the time Coronado etched a record on a rock to more recent national tragedies and accomplishments of notable Oklahomans, students will gain a deep understanding of the history of the 46th state.

WASHINGTON HISTORY

Washington State History, a one-semester course, provides a rich study of Washington's history. From Washington's prehistory and the time Plateau and Northwest Coast tribes ruled the area to the more recent effects of big companies like Boeing and Microsoft have on the state, students will gain a deep understanding of the history of the 42nd state.

WORLD GEOGRAPHY A

WORLD GEOGRAPHY A is the first course in a two-semester series which examines a broad range of geographical perspectives. Students will study each region using a similar structure in order to analyze the similarities and differences between each region. Students will understand the meaning of geography through in-depth exploration of North America, Central America, South America, and Western Europe. The themes of geography will guide the exploration of each region (location, place, human-environmental interaction, movement, and region).

WORLD GEOGRAPHY B

WORLD GEOGRAPHY B is the second course in a two-semester series which examines a broad range of geographical perspectives. Students will study each region using a similar structure in order to analyze the similarities and differences between each region. Students will understand the meaning of geography through in-depth exploration of Eastern Europe and Russia, East Asia, Southeast Asia and the Pacific Cultures, Africa, and India and the Middle East. The themes of geography will guide the exploration of each region (location, place, human-environmental interaction, movement, and region).

WORLD HISTORY A

WORLD HISTORY A, the first course of a two-semester series, surveys world history from prehistoric times through medieval civilizations. Students will examine the beginnings of civilization in the ancient East and Nile civilizations; Greek and Roman societies; the Americas; Muslim, African, and Asian cultures; and the European Middle Ages from socio-economic, political, and ideological perspectives. Students will identify how and why people, goods, and ideas migrated throughout global history. They will be able to explain how the geography of a region affected the cultures that arose from it. Students will identify social, political, economic, and ideological conditions of major eras in world history along with the structure of society and family in historical cultures. Students will interpret and analyze statistics and dates from maps, charts, and graphs. They will identify the scientific, technological, and artistic achievements of civilizations. Students will compare and contrast the development of religious and philosophical beliefs and traditions and how they spread, along with early political systems and their effects on modern-day governments.

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WORLD HISTORY B

WORLD HISTORY B is the second course in a two-semester series that examines the European Renaissance, New Asian Empires, absolutism, Enlightenment, nationalism, Reform, both World Wars, and the Contemporary period. Students will discuss the impact of European imperialism and colonization, and they will recognize the connection between revolution and reform. Students will identify the effect of industrialization and urbanization on the global economy. They will be able to articulate the relationship between historical occurrences and contemporary situations, and they will predict how contemporary issues will affect future generations.

U.S. GOVERNMENT

U.S. GOVERNMENT is the study of the historical backgrounds, governing principles, and institutions of the government of the United States. Students will study the roots of our Constitution and the principles of our government, such as popular sovereignty, separation of powers, and checks and balances. Individual rights, civil liberties, and the importance and responsibility of participating in a democracy will be examined. Students will compare the U.S. system of government with other modern systems and assess the strengths and problems associated with the U.S. system.

ECONOMICS

ECONOMICS is the study of how societies use limited resources to satisfy unlimited demand. In this one-semester course, students will explore the relationship between suppliers, consumers, governments, and multinational organizations in an effort to better understand how money affects the daily lives of people throughout the world. The course provides students with a clear understanding of how an economy functions at the macro- and micro-levels. A thorough knowledge in these areas will further offer students the tools required to understand how all of this can and will affect their own pocket books. Instrumental to students' understanding will be examination of these key topics: law of supply and demand, saving, borrowing and spending, the Federal Reserve System and money supply, and the role of the government in an open market economy.

HS World Languages

French I A

Students begin their introduction to French with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are initially trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, prompting students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All new graphics, video, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Note: Students who have already succeeded in Middle School French II should enroll in French II rather than French I.

French I B

Students continue their introduction to French in the second part of this course with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, prompting students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All new graphics, video, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Note: Students who have already succeeded in Middle School French II should enroll in French II rather than French I.

French II A

In this continuing introduction to French, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then reproduce new vocabulary items in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in French I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. All new graphics, video, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Prerequisite: French I, or equivalent

French II B

French II B continues the instruction of the first semester course. In this continuing introduction to French, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking,

reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then reproduce new vocabulary items in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in French I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. All new graphics, video, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.
Prerequisite: French I, or equivalent

French III A

Intermediate French students who have a strong base in vocabulary, speaking, and listening skills reach a new level of mastery and fluency in this course. Through games and compelling stories, students learn advanced grammar and vocabulary with an emphasis on correct accents and comprehension of real-world native speech. Error-recognition technology helps students eliminate common mistakes from their speaking and writing. All new graphics, video, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.
Prerequisite: French II, or equivalent

French III B

Intermediate French students who have a strong base in vocabulary, speaking, and listening skills reach a new level of mastery and fluency in this course, which is a continuation of French III A. Through games and compelling stories, students learn advanced grammar and vocabulary with an emphasis on correct accents and comprehension of real-world native speech. Error-recognition technology helps students eliminate common mistakes from their speaking and writing. All new graphics, video, and games keep students engaged and make learning French exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.
Prerequisite: French II, or equivalent

German I A

Students begin their introduction to German with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are initially trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, prompting students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All new graphics, video, and games keep students engaged and make learning German exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Note: Students who have already succeeded in Middle School German II should enroll in German II rather than in German I.

German I B

Students continue their introduction to German with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. An ongoing adventure story introduces vocabulary and grammar topics, prompting students to use skills from the four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. All new graphics, video, and games keep students engaged and make learning German exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Note: Students who have already succeeded in Middle School German II should enroll in German II rather than in German I.

German II A

In this continuing introduction to German, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then reproduce new vocabulary items in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in German I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. All new graphics, video, and games keep students engaged and make learning German exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Prerequisite: German I, or equivalent

German II B

In this second semester continuing introduction to German, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then reproduce new vocabulary items in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in German I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. All new graphics, video, and games keep students engaged and make learning German exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Prerequisite: German I, or equivalent

Latin I A

This introduction to Latin clarifies the traditionally difficult aspects of the language through vocabulary that follows all standard Latin rules but allows students to tell modern stories connected to a contemporary adventure. Students study familiar vocabulary so they can bring into focus the special characteristics of Latin, notably noun cases and declensions. Students receive ongoing practice in vocabulary and grammar, which leads to the study of both ecclesiastical and secular post-Classical Latin as embodied in the Vulgate Bible and Medieval Latin texts. All new graphics, videos, and games keep students engaged and make learning Latin exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Latin I B

This continuing introduction to Latin clarifies the traditionally difficult aspects of the language through vocabulary that follows all standard Latin rules but allows students to tell modern stories connected to a contemporary adventure. Students study familiar vocabulary so they can bring into focus the special characteristics of Latin, notably noun cases and declensions. Students receive ongoing practice in vocabulary and grammar, which leads to the study of both ecclesiastical and secular post-Classical Latin as embodied in the Vulgate Bible and Medieval Latin texts. All new graphics, videos, and games keep students engaged and make learning Latin exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Latin II A

Students with a foundation in Latin refine their skills through compelling language lessons and historical and cultural studies. Students go from the basics of Latin to a higher level of sophistication through a learning methodology that uses games and stories. Students foster their abilities to read and understand classical Latin (without using a dictionary) from a variety of authentic sources. All new graphics, videos, and games keep students engaged and make learning Latin exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Prerequisite: Latin I, or equivalent

Latin II B

Building on skills from Latin II A, students with a foundation in Latin refine their skills through compelling language lessons and historical and cultural studies. Students go from the basics of Latin to a higher level of so-

phistication through a learning methodology that uses games and stories. Students foster their abilities to read and understand classical Latin (without using a dictionary) from a variety of authentic sources. All new graphics, videos, and games keep students engaged and make learning Latin exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.
Prerequisite: Latin I, or equivalent

Mandarin I A

Students use compelling stories, games, videos, and multimedia experiences in this introduction to Chinese. Students learn the elegant simplicity of Chinese grammar and the subtleties of Chinese pronunciation through entertaining lessons that provide a base for conversational ability and listening comprehension. Students build a foundation for reading and writing in the Chinese language through an adaptive technology that lets students choose an approach that works best for them. All new graphics, videos, and games keep students engaged and make learning Chinese exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Note: Students who have already succeeded in Middle School Mandarin II should enroll in Mandarin II rather than in Mandarin I.

Mandarin I B

Students use compelling stories, games, videos, and multimedia experiences in this continuing introduction to Chinese. Students learn the elegant simplicity of Chinese grammar and the subtleties of Chinese pronunciation through entertaining lessons that provide a base for conversational ability and listening comprehension. Students build a foundation for reading and writing in the Chinese language through an adaptive technology that lets students choose an approach that works best for them. All new graphics, videos, and games keep students engaged and make learning Chinese exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Note: Students who have already succeeded in Middle School Mandarin II should enroll in Mandarin II rather than in Mandarin I.

Mandarin II A

Students continue with engaging stories, games, videos, and multimedia experiences in this second level of Chinese. Students further their understanding of Chinese grammar and pronunciation through lessons that build on previous conversational ability and listening comprehension. Innovative cultural videos and lessons build awareness of the rich legacy of Chinese culture. Students expand their foundation for reading and writing in Chinese through adaptive technology. This practice provides students with opportunities to generate fun narratives, create well-formed sentences that reflect a solid grasp of grammar structures, and develop a wide vocabulary. All new graphics, videos, and games keep students engaged and make learning Chinese exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Prerequisite: Mandarin I, or equivalent

Mandarin II B

Building on skills from Mandarin II A, students continue with engaging stories, games, videos, and multimedia experiences in this second level of Chinese. Students further their understanding of Chinese grammar and pronunciation through lessons that build on previous conversational ability and listening comprehension. Innovative cultural videos and lessons build awareness of the rich legacy of Chinese culture. Students expand their foundation for reading and writing in Chinese through adaptive technology. This practice provides students with opportunities to generate fun narratives, create well-formed sentences that reflect a solid grasp of grammar structures, and develop a wide vocabulary. All new graphics, videos, and games keep students engaged and make learning Chinese exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Prerequisite: Mandarin I, or equivalent

Spanish I A

Students begin their introduction to Spanish with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are initially trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. Vocabulary and grammar topics are introduced in an ongoing adventure story that prompts students to use skills from all four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. Cultural information covers major Spanish-speaking areas in Europe and the Americas. All new graphics, video, and games keep students engaged, making learning languages exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeakK12, Inc.

Note: Students who have already succeeded in Middle School Spanish II should enroll in Spanish II rather than in Spanish I.

Spanish I B

Students continue their introduction to Spanish with fundamental building blocks in four key areas of world language study: listening comprehension, speaking, reading, and writing. Students are trained to recognize key sounds and basic vocabulary, not only in written form but also through ear training that leads quickly to oral production. Vocabulary and grammar topics are introduced in an ongoing adventure story that prompts students to use skills from all four language-learning areas. Students learn fundamental grammar as embedded in authentic spoken language. Cultural information covers major Spanish-speaking areas in Europe and the Americas. All new graphics, video, and games keep students engaged, making learning languages exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeakK12, Inc.

Note: Students who have already succeeded in Middle School Spanish II should enroll in Spanish II rather than in Spanish I.

Spanish II A

In this continuing introduction to Spanish, students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context, and then to reproduce new vocabulary in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in Spanish I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. Cultural information addresses Spanish as it is used around the globe. All new graphics, video, and games keep students engaged, making learning languages exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeakK12, Inc.

Prerequisite: Spanish I, or equivalent

Spanish II B

Building on abilities developed in Spanish II A, this continuing introduction to Spanish helps students deepen their focus on four key skills in world language acquisition: listening comprehension, speaking, reading, and writing. A continuing storyline introduces and reinforces new vocabulary, while activities prompt students to analyze meaning from context and then to reproduce new vocabulary in real-life oral expression. Additional verb tenses and idiomatic expressions are also introduced. As in Spanish I, students learn grammar through supplemental texts supplying traditional charts, tables, and explanations. Cultural information addresses Spanish as it is used around the globe. All new graphics, video, and games keep students engaged and make learning Spanish exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeakK12, Inc.

Prerequisite: Spanish I, or equivalent

Spanish III A

Intermediate Spanish students who have a strong base in vocabulary, speaking, and listening skills reach a new level of mastery and fluency in this course. Through games and compelling stories, students learn advanced grammar and vocabulary, with an emphasis on correct accents and comprehension of real-world na-

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tive speech. Error-recognition technology helps students eliminate common mistakes from their speaking and writing. All new graphics, video, and games keep students engaged and make learning Spanish exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Prerequisite: Spanish II, or equivalent

Spanish III B

Intermediate Spanish students who have a strong base in vocabulary, speaking, and listening skills reach a new level of mastery and fluency in this course, which is a continuation of Spanish III A. Through games and compelling stories, students learn advanced grammar and vocabulary, with an emphasis on correct accents and comprehension of real-world native speech. Error-recognition technology helps students eliminate common mistakes from their speaking and writing. All new graphics, video, and games keep students engaged and make learning Spanish exciting. An integrated, game-based reward system keeps learners motivated and eager to progress. Content provided by powerspeak12, Inc.

Prerequisite: Spanish II, or equivalent

Diagnostic & Intervention

TuneUp Reading® (MS/HS)

TuneUp Reading® is a one-semester, customizable program designed to meet the needs of individual students over the full reading spectrum. Each student begins the program by taking a diagnostic prescriptive that places the student at an appropriate starting point in the program. Within the program, each student gains comprehension, vocabulary, and fluency skills by reading age-appropriate stories and performing vocabulary exercises. The design of TuneUp Reading® specifically helps native Spanish speakers learn to read in English using the program's optional Spanish audio instructions. TuneUp Reading® not only helps the low-literacy student, it enhances the reading skills of the traditional student and prepares college bound students to succeed on entrance exams.

Content provided by Failure Free Reading®

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Mathematics Intervention

Advanced Academics' Mathematics Intervention program for grades 4 through 7 is designed for students in need of an intensive review of critical standards necessary to be proficient at grade level. The AAMI is available online in a customizable format that can be tailored to individual students' needs. The AAMI includes six units of study which address the major mathematical themes found in the elementary grades.

Algebra Readiness

Advanced Academics' Algebra Readiness program is designed for students in need of an intensive review of critical standards necessary to be prepared to enter Algebra I. The AAAR is available online in a customizable format that can be tailored to individual students' needs. The AAAR includes core pre-algebra and algebra topics, as well as topics addressing fundamental mathematical skills.

Test Prep

English Proficiency Exam – OverPass (HS)

The English/Language Arts portion of the OverPass series addresses academic content standards through early high school. Students initially complete a diagnostic test of both multiple-choice questions and a writing task to identify weaknesses. Students are then provided with individual lesson plans to help improve their English/Language Arts skills. Upon completion of the lesson plan, several mastery examinations are available to

reassess and restructure a student's lesson plan for more studying. The reading topics that are covered within this course include word analysis and fluency, vocabulary development, informational reading, and literary response and analysis. The writing portion covers writing strategies, applications, and conventions. Within the writing portion, students must generate a response to literature, an informational passage, or writing prompt. Each of the English/Language Arts exams covers 27 objectives and includes 72 multiple choice items and 1 written response item.

Math Proficiency Exam – OverPass (MS)

The Middle School Mathematics portion of the OverPass series addresses the academic content standards from middle school and basic geometry. Students initially complete a diagnostic test of multiple-choice questions to identify weaknesses. Students are then provided with individual lesson plans to help improve their math skills. Upon completion of the lesson plan, several mastery examinations are available to reassess and restructure a student's lesson plan for more studying.

Math Proficiency Exam – OverPass (HS)

The Mathematics portion of the OverPass series addresses the academic content standards from middle school mathematics through Algebra I and basic geometry. Students initially complete a diagnostic test of multiple-choice questions to identify weaknesses. Students are then provided with individual lesson plans to help improve their math skills. Upon completion of the lesson plan, several mastery examinations are available to reassess and restructure a student's lesson plan for more studying. Some basic topics included within this course are number sense, computational skills with decimals, fractions, percents, basic statistics, data analysis and probability, measurement, mathematical reasoning, and many algebra and geometry applications. The Math exam covers 53 objectives and includes 80 multiple-choice items.

Mastery & Placement

Mastery and Placement

Advanced Academics offers additional flexibility for its core curriculum content through opportunities for Mastery and Placement examinations. Our Mastery Exam program, also known as Credit By Exam, uses the final semester exams from our core content courses to assess students on their mastery of the required content objectives for each semester course. Depending on your local district and/or state policies, students who score high enough on the exams may be granted credits. Our Placement Exam program provides the opportunity to assess a student's readiness or already mastered content prior to taking an online course. The Placement Exam program uses a set of prescriptive diagnostic exams to assess and then provide a prioritized Lesson Plan for each student. The Placement Exam program is available for a number of our core high school courses. For more information about the Mastery and Placement Exam programs, please contact Advanced Academics.

Louie Flora

From: Sue Hardin [Sue_Hardin@breadnet.middlebury.edu]
Sent: Monday, January 18, 2010 7:17 AM
To: Louie Flora

Dear Louie,

Our superintendent asked me to write to you about our online course offerings. Our school is associated with Virtual High School which is based in Massachusetts. We have several students who take online classes through this program. As part of our association, I am an online teacher of AP English lit and comp. I have 25 students who are located all over the world.

VHS classes are very structured and quite rigorous. My students have weekly writing assignments and online discussions about a wide variety of college-level reading. I have one period per work day that is allotted to me for VHS work.

I am not sure what other information you require, but I'm happy to answer any questions you may have.

Yours,

Sue Hardin

Petersburg High School

INTERIOR DISTANCE EDUCATION OF ALASKA

Galena City School District – Anchorage Field Office – 670 W. Fireweed – Anchorage, AK 99503
907-562-4332 – Fax 907-562-4662

Louie Flora
House Education Committee Aide

January 18, 2010

Dear Mr. Flora,

Superintendent Jim Smith asked that I write to you explaining how the Galena City School District addresses online course offerings.

Even though Galena operates the largest correspondence program in the state, we have found that it is not cost effective to develop online classes internally for use within our programs. Presently we have only one class being operated through the UAF Rural Campus that we offer to our students. This is a Private Pilot Ground School class being offered by our aviation instructor on the GILA campus.

Our IDEA program utilizes various commercial and University offered online classes to meet the needs of our students through grades offered by transcript.

By the nature of our operations, we are very interested in your research and findings concerning online class offerings. We are more than happy to offer our experience in any way if we can be of help in your research.

Sincerely,

Steven D. Musser
Assistant Superintendent/GCSD

Louie Flora

From: PJ Ford Slack [pjford@dgsd.k12.ak.us]
Sent: Friday, January 08, 2010 12:31 PM
To: Louie Flora
Cc: Duncan Ware; Bill Burr; Michael McCowan
Subject: RE: [BULK] AK school district online course offering information and discussion request

Dear Mr. Flora,
Delta/Greely Cyber school is one of the oldest cyber schools in the state. We teach Alaska curriculum using Alaska Certified teachers. We would like to be a part of this conversation.

Best wishes,

PJ Ford Slack Superintendent
Duncan Ware Principal
Bill Burr Technology Director

From: Louie Flora [mailto:Louie_Flora@legis.state.ak.us]
Sent: Friday, 8 January 2010 11:05 AM
To: lhsclaf+akschooldistricts@legis.state.ak.us
Cc: Marcy Herman
Subject: [BULK] AK school district online course offering information and discussion request
Importance: Low

Hello,

The House Education Committee will be holding an overview to discuss the current online course offerings in Alaska School Districts on either January 25th, 27th, or 29th depending on the information we receive back from DEED and the districts. We would like to discuss the different non-correspondence online course offerings in the districts and the costs to the districts of these courses.

Again, this is not an overview on correspondence courses, but online courses as described in the article on Arizona schools below.

Please e-mail me with the online course information for your district and I will be in touch with a date for the discussion asap.

Thank you.

Louie Flora
House Education Committee Aide,
Representative Paul Seaton, Chairman
(907) 235-2921

Arizona expands K-12 online course offerings

[43 comments](#) by Pat Kossan - Jan. 2, 2010 09:15 PM
The Arizona Republic

Louie Flora

Subject: FW: online courses for students

From: Linda Saito [mailto:lsaito@nwarctic.org]
Sent: Sunday, January 10, 2010 9:28 AM
To: Louie Flora
Subject: online courses for students

Louie,
First, let me introduce myself. I am the Curriculum Director at Northwest Arctic Borough School District. Your message to the Superintendent was passed on to me about online courses for students.

Secondly- I am the mother of Anahma. I know that you have also been in touch with my husband Lincoln Saito in the past year.

On the subject of online courses for our students- I believe it is vital that we establish some sort of Virtual School for the rural sites. At this time we are talking about providing Virtual classes to several of our sites due to the fact that we must have Highly Qualified teachers for all of the core subjects. As you know, this is a difficult task to undertake, but it is necessary. If it is at all possible, I would love to be involved in your conversations regarding this because it is the direction we must go.

As you gather information from others and go forward with this, please keep me in the loop as much as possible. We can continue on as a single district doing our "own thing", but it would be so much more standardized for us to work together to develop courses of study for the rural districts.

Thank you very much,
Linda Saito

Linda Saito, Director of Curriculum & Instruction
NWABSD
P.O. Box 51
Kotzebue, Ak. 99752
907-442-3472 ext. 268

Louie Flora

Subject: FW: AK school district online course offering information and discussion request

From: Richard Carlson [mailto:richard.carlson@klawockschool.com]

Sent: Saturday, January 09, 2010 11:40 AM

To: Louie Flora

Subject: RE: AK school district online course offering information and discussion request

The Klawock City School District uses Compass Learning as our primary source of on-line course

Richard E. Carlson
Superintendent
Klawock City School District

Louie Flora

From: Jim Smith [jim.smith@galenanet.com]
Sent: Monday, January 18, 2010 8:50 AM
To: Louie Flora
Subject: to Share
Attachments: virtual.pdf

Dear Mr. Flora,

I've attached an article from the National School Boards Association Newsletter that I think presents "virtual schools" discussion nationally at this time. Maybe you folks have seen this and other attention that seems to grow across the country in this regard. Rural states of course are challenged by the potential of lost child count and funding as well as generally high cost for on-line credits. At \$300 to \$500 a credit it doesn't take many credits to pay for a teacher. We are still trying to sort out a definition for "virtual schools" wondering how our correspondence schools don't fit that bill? Hope you have good discussions.

Sincerely,
Jim Smith



National School Boards Association

1680 Duke Street
Alexandria, VA 22314

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A Service for NSBA National

States and schools grapple with online learning

Growth of virtual schools outpaces policy in many areas of the nation

By Naomi Dillon

The world of online learning represents a new era in education, where instruction can be delivered to students no matter where they are, physically or cognitively.

At least that's the idea.

The phenomenal growth and variety of virtual schools, a catch-all term that encompasses many models and is sometimes used interchangeably with online learning, has not only led to confusion, but also to false starts in some areas, reticence in others, and resistance in still other parts.

What started with just a few fledgling start-up programs offering advanced and supplemental courses in the late 1990s has evolved into a wide-ranging slate of state-led, district-launched, or privately managed public entities offering everything from credit

recovery to full-time options.

No one denies, however, that virtual schools are here to stay.

The most recent data estimated that roughly a million public school students used some form of online learning in 2007-08, a 47 percent increase from just two years earlier. What's more, 44 states offer substantial supplemental and full-time online learning opportunities. Two states, Alabama and Michigan, now require an online learning component to graduate.

"We're seeing [steady] growth of online learning because it works and it's effective," says Susan Patrick, the president of the International Association for K12 Online Learning (iNACOL). "It keeps students learning, learning better, more productively and graduating on time. With time, you will see more and more districts focusing on what works."

But first, what is it?

"I think most policy discussions around online learning have to do with

See Online Learning on page 6

Full-time virtual learning

Florida allows students to take all their classes online

By Naomi Dillon.

Florida has led the way in K-12 virtual education, building a franchise model of supplemental high school courses for both advanced and struggling students, modernizing the funding formula, and introducing new practices like blended learning which marries online learning with traditional classroom time.

But this school year, Florida educators undertook their biggest venture yet: offering full-time virtual learning to any eligible student.

After a decade of increasing its catalog of courses—the inventory includes more than 90 classes covering core subjects, electives, and advanced material—Florida legislators voted last year to require school districts this year to provide a full-time online learning option to any K-12 student previously enrolled in a virtual or traditional school or who is part of a relocated military family.

"The [logic] behind the expansion was Florida Virtual School offers lots of programs but they don't offer everything that everyone needs, and [districts] would say they don't offer a dropout prevention program, or they don't offer this," says Wayne Blanton, executive

director of the Florida School Boards Association.

"The mandate just passed last year in legislation, so it was a very short time and intense thing to get this thing off the ground," says Jamie Sachs, associate director of the Southern Regional Education Board's (SREB) Educational Technology Cooperative, a coalition of higher education and K-12 virtual leaders from the 16 states SREB represents, including Florida. "We were all amazed they got it up and going."

But whether it works is another question that won't be answered until more time has passed.

"Call me in a few months," says Donna Nicolodi, principal of Polk Virtual School in Polk County Public Schools. "Right now the program is new and exciting."

And many find it confusing. Until now, Florida Virtual School (FLVS)—state-led and state-funded—had been the main provider of online high school curriculum to school districts in the state. But the recently passed mandate pushed FLVS to partner with Baltimore-based Connections Academy in order to serve the K-8 students. And if school districts don't like those options, they can choose another state-approved vendor or create their own full-time virtual program.

Complicating matters fur-

ther, the full-time online learning option, as the legislation is interpreted, is not to be confused with the classic supplemental program.

"It's a challenge explaining the difference between the franchise and full-time virtual model because when people think of virtual education they have the concept of anytime, anywhere, any place," Nicolodi says, paraphrasing FLVS's slogan and business model.

In stark contrast, however, students who enroll in the full-time option are required to take a block of six courses, register in person, furnish enrollment criteria such as vaccination records and proof of residence, and follow state mandates like daily attendance.

"In the virtual franchise, if students wanted to do all of their homework on Monday, turn it in and be done, they could do that," Nicolodi says. "But as the legislation [for the full-time online school] is written, there is an attendance component and expectation of regular log-ins and submissions."

Whether enrolled full-time or part-time, Florida public school students and families pay nothing for the online courses. Florida school districts pay nearly \$4,000 per student to the provider, though districts only pay if the full-time online student advances to the next grade or completes the required credits. It's a funding model based on FLVS' own pay-for-performance methodology.



Courtesy of K-12 Inc.

Jacquelyne Higgins, a fifth-grader at the Idaho Virtual Academy, uses a workbook to complete an online assignment. The charter school's goal is to create a multimedia experience for students using both print and online materials.

"While a traditional school district is funded on student population, FLVS is funded on successful student completion," explains Jodie Peco-Olano, FLVS spokeswoman.

As FLVS' popularity grew, and the waiting list for courses grew even longer, Peco-Olano said the state moved from treating the unofficial school district as a line item and more as a business opportunity, agreeing to provide FLVS a weighted FTE allocation—to account for reduced costs like facility maintenance and transportation—for every student that achieved a D or better.

FLVS teachers are salaried and operate on annual contracts, though they are part of the state's teacher retirement system. Teachers are designated course quotas, based on the complexity of the course material and the intensity of teacher grading.

In a franchise model, like

the one at Polk County, districts provide their own teachers. For the full-time option, at least for now, most districts, including Polk County, are contracting with private companies like Kaplan and K-12 Inc., the latter of which has a network of more than 2,000 accredited teachers to draw from.

Options, the underlying theme and goal of the recent Florida legislation, are certainly not lacking in the state's virtual education landscape, which so far this year has enrolled 250 high school and 1,000 primary grade students into the full-time program. But will too many options only serve to confuse and complicate?

"It's going to stay all over the board, not just with us, but any district that does online learning because there are so many offerings and they are coming online so fast," says Blanton. "Quality assurance is the thing we're wrestling with right now." ■

Number of Core Content Courses Offered by Alaska Correspondence Programs

	Language Arts	Social Studies	Mathematics	Science	Potential Capacity
Chugach Extension School	10	12	9	6	Additional 2,000
CyberLynx	8	6	9	8	Target 800
Southeast Island Correspondence	6	4	6	4	
YKSD - Raven Correspondence	4	4	3	3	Additional 2,800
Copper River - Upstream Learning	3	2	2	2	
Craig - PACE **	39	22	20	29	
Delta Cyber School	8	4	10	4	
Denali - PEAK Correspondence**	6 and 20	6 and 22	6 and 15	5 and 5	Additional 2,000
Galena - (IDEA)	3	6	4	6	No Limit
Iditarod**	By request				
Wrangell - (AKVA)**	15	25	17	17	
Ketchikan Fast-Track**	7	6	10	6	

*** Indicates courses provided by commercial vendor*

NOTE: Wrangell and Ketchikan data is based on website information pending response from Districts.

An Overview of Existing Alaska Distance Education Models

Alaska School Districts currently offer a variety of distance education options. No one school district utilizes all options, but moving toward a networked Virtual School program would capture efficiencies, promote best educational practices, and expand opportunities for all Alaskan students.

Course delivery methods vary widely. Some courses offer a blended approach of more than one method, such as video conference with an online component for additional interaction. Some courses are offered entirely online. In many districts, distance tools are further used to enhance and support regular classroom activities. Finally, districts often use distance delivery methods to provide instructional support and enrichment activities for their students. Utilizing a networked Virtual School structure would help to simplify the options for students and parents.

The proposed Virtual School Project includes taking advantage of empty seats in course offerings in schools, common scheduling, maximizing the reach of highly qualified instructors, and partnering with post-secondary providers for developmental courses, occupational training, dual credit, advanced placement, credit recovery, and other educational services important to Alaskan students and parents.

Aleutians East School District is working with getting highly qualified teachers in the 6 sites. Video-Conferencing (VTC) is used for classes, virtual field trips, in-service training for staff and using technology to broaden the curricular offerings of the school district and to bring remote students and staff opportunities that would not be cost-effective under different circumstances. Teaching AP English, Geometry, and Physical Science sharing teaching resources in-district.

Anchorage School District MyHigh Program currently delivers online classes primarily for students in grades 10-12 and plans to expand to other grade levels soon. A wide range of courses are available, many of which were purchased or licensed from Florida Virtual or Apex. In addition, Alaska Studies was developed exclusively by district staff. In many cases, ASD is working to customize course content to be more culturally responsive and aligned to the district's content and performance standards. All core curriculum areas as well as several electives are currently available, and all courses can be completed entirely online (24/7 access). Currently, courses follow our existing school calendar, but the district's goal is to pursue open entry/open exit as soon as feasible. Enrollment has been growing steadily since a pilot project began in the 2004/2005 academic year and is expected to continue to climb at a rapid rate. All teachers who deliver online courses are highly qualified in their subject areas and have completed a credit course in best practices of online teaching strategies.

Bering Strait School District uses a master classroom teacher as a Distance Learning Facilitator to match student and school site needs with the many existing distance learning programs, courses and opportunities. Some of the courses for the current semester include high school and dual-credit courses from University of Alaska Fairbanks, Northwest Campus, and other universities. AVTEC has offered BSSD courses tailored to their needs, and the district has "swapped" courses with other districts in rural Alaska. This has allowed BSSD students to take

specific courses the district is unable to offer in its rural schools, as well as dual-credit offerings for high achieving students, and pre-vocational offerings for specific trades. Content this year has included such diverse examples as Physics from UAF, Anthropology from Harvard, and Academic Writing from Northwest Campus, and Korean from Yonsei University.

Cordova is in the beginning stages of utilizing online digital learning environments. Currently, a science instructor is scheduled to participate in a virtual autopsy for Human Anatomy class. CSD is attempting to deliver as much curricular online as possible. CSD supports credit recovery courses utilizing PLATO, a commercial courseware program, and other online resources, and encourages teachers to participate in additional online learning environments.

Craig City School District and PACE statewide correspondence, students are currently using purchased curriculum (Odysseyware) courses which are taught by district teachers for all content areas. BYU and North Dakota online curriculum is offered as well. District created courses such as Alaska Native cultural courses, digital photography, technology and graduation requirement specifics such as Alaska History.

Delta Greely School District uses a variety of technology aspects including the Delta Cyber School which runs a mixed program of complete turnkey coursework through BlackBoard as well as advanced Elluminate use for class instruction. Delta Greely has also used VTC to communicate blended classes using "face to face" video instruction to add value to the regular education program in other districts. A majority of coursework has been teacher created by DCS staff but the school also uses third party programs and curriculum (Florida Virtual, APEX, Aventa, Giany Campus, and a number of others at different times) that are adjusted to meet the needs of students. The Cyber School has given the option for students in district to expand out the available course offerings through credit recovery and advanced classes along with students from around the state.

Galena City School District developed two multimedia courses in mathematics and language arts through a \$1 million dollar federal grant. Aviation ground school is offered from Galena for dual credit (high school and college) through a distance delivery platform to high school students throughout Alaska using a variety of synchronous and asynchronous platforms. The Interior Distance Education of Alaska (IDEA) program provides a variety of distance delivery courses to over 1,800 home school families in Alaska.

Kenai Peninsula Borough School District offers core classes and some electives which have been purchased from a third party (Apex Learning). Additionally the district offers courses that have been developed in house. All online courses are taught by highly qualified KPBSD employees. Courses are offered to students in brick-and-mortar schools as well as KPBSD home school students. The online program is supplemental and does not issue diplomas. VTC classes are offered on a limited basis.

Ketchikan School District uses third party courses as well as the standards-based curriculum from E2020 and Compass Learning, delivered from their servers. They will be developing courses that will be integrated with their regular student's schedules in an online as well as a blended environment (online learning facilitated by face-to-face teachers) on their course

management system. These courses will be offered to all students (brick and mortar and correspondence students) in various formats depending on student need.

Kodiak Island Borough School District uses the highly-qualified teachers in their town schools to provide classes in the rural schools. Additionally, they are offering enrichment classes in guitar and native language with plans to expand to music appreciation and technical math in the upcoming year. Offering Biology and Math (blended: Moodle, VTC) taught by a Kodiak HS teacher(s) to each of our rural sites. That model is being extended to Music and Journalism with the intention to grow it to other classes as needed.

Kuspuk School District provides live video-conference courses taught by highly qualified teachers to provide more choices for students. Each video-conference course is supported by online resources such as e-mail and Moodle. In the last four years, they have offered Cultural Awareness and Arts, Publications, Service Learning, Advanced English, Algebra 2, Biology, Geometry, Algebra and Pre-Algebra to over fifty students each year. Aviation (ground school) has been taken by twelve students through videoconferencing.

Lower Kuskokwim School District provides live videoconference classes to 26 school sites. This model depends on trained, highly qualified "video conference" teachers as well as on-site teachers trained to help facilitate instruction at each remote site. Each video-conference course is supported by online resources such as email and Moodle. Over 300 students a year are getting instruction in Biology, Earth Science and Ecology and five periods of mathematics including Algebra II. Twelve schools have applied mathematics geared towards career and technical education in their schedule. Two robotics and a visual art courses been added in 2009.

Matanuska Susitna Borough School District is offering rural schools one career technical education class, Customer Service, which is a required course for all their career pathways. Mat-Su uses third party software, Plato and Compass Learning for credit recovery, correspondence, and gifted and talented. Finally, the district uses Moodle for regular classrooms to extend learning beyond the school day.

Petersburg School District has been participating as a member of the Virtual High School consortium (www.govhs.org). This collaborative sharing model allows offers courses for enrollment to students throughout the nation. These online courses use an on-site facilitator and students can take these courses during school hours. Currently, one Petersburg teacher offers an additional Advanced Placement English course during her prep period to students in the consortium. As a result, thirty Petersburg high school and middle school students have access to courses that are not locally available to them. Also all classes are supported by a course management system allowing students while traveling for activities to continue their learning.

Southwest Region School District students have talked live with the astronauts on the International Space Station and received a wide range of other enrichment learning activities via two-way videoconferencing. The district has offered Social Studies district-wide to high school students to provide a highly qualified instructor to small high schools. The district also has a cooperative agreement with the University of Alaska to deliver dual-credit courses in Mathematics and several other academic disciplines to higher level students. Several schools are

also using content from out-of-state providers who are teaming to Alaska certified, highly qualified teachers. In addition to the use of two-way video conferencing to deliver instruction, the district also uses an online content management system to support and enhance face to face instruction in regular classrooms.

Wrangell School District is using a comprehensive turn-key solution, K12 curriculum, to offer a K-8 virtual program available to any student statewide. Additionally, in the fall of 2010 Wrangell Public Schools plans to offer a statewide comprehensive high school program. In the fall of 2010 Wrangell Public Schools, Craig School District, Petersburg City Schools, Haines Borough School District, and Bristol Bay Borough School District will also offer selective virtual classes exclusively between their districts.

Yukon-Koyukuk School District has developed online courses targeting students at-risk. Courses utilize a blend of online and textbook components with online teacher support. Additionally, the district uses video conferencing courses in a variety of academic areas including Science, Mathematics, Native Language, and art instruction. Virtual tours and enrichment opportunities are available K-12th grade. Complete academic schedules are available using curriculum such as OdysseyWare and Success Maker K-12th grade. These programs can be used for individualized instruction, class enrichment and/or remediation. YKSD also utilizes courses through Raven Correspondence School, the districts statewide correspondence program, to provide all district students opportunity for advanced courses, additional course options and credit recovery in all academic and elective areas to meet high school graduation requirements and to assist in passing the HSGQE.

Alaska Vocational Technical Center (AVTEC) teaches a wide range of courses that have previously targeted post-secondary students and teachers. AVTEC provides professional development for teachers on Moodle Course development; Elluminate; VTC; etc. AVTEC plans to offer some CTE courses directly to 9-12 starting in the Fall of 2010. This will begin with a "Math for the Trades/Applied Math" course that will be taught via VTC/Moodle during the school day. In the future AVTEC also would like to offer MS Office Specialist Certification courses as well and students would be able to take the MS Certiport Certification tests online, without having to travel to a testing site.

US News and World Report

Military to Debut Virtual School

A new online curriculum is in the works to ease school transitions for itinerant members' children

By Zach Miners

Posted November 5, 2009

When new assignments force members of the armed forces to move, it often means children need to switch schools. In some military families, children change schools multiple times during the course of their academic lives. The Department of Defense says that the disruptions can produce setbacks in students' schooling, but department officials are working to fix that: They're developing the military's first online virtual high school, to be open in time for the 2010-2011 school year.

The online curriculum is being developed in collaboration with experts at the University of Nevada-Las Vegas under a \$6.2 million contract from the Department of Defense Education Activity program. The coursework is meant not to replace or compete with face-to-face schools but to supplement them.

DoDEA, which is responsible for the education of military members' children, has offered distance-learning programs since the early 1980s. Until now, the majority of distance-learning courses offered by the agency have been classes to supplement the core curriculum, such as Advanced Placement courses. The new virtual school is a bit different: It's meant to offer a complete curriculum of courses necessary to graduate from high school.

If a student switches schools midsemester and a certain course is not available at the new school, the student could pick up where he or she left off through a virtual class that is fully compatible with the regular class's subject material. Agency officials also say that

the virtual high school will provide additional resources to fill gaps when face-to-face courses are not offered at a traditional school and increase flexibility in scheduling.

"It can be frustrating when students move from one place to another, and if the class requirements change, that can push a student back in terms of high school graduation timelines," says Patricia Riley, chief of the new school and of DoDEA's distance-learning initiatives.

The online school will be available worldwide, but not all high school-aged children in military families will be allowed to enroll in its courses. Only students who meet certain requirements to attend DoDEA schools—such as being dependent children of service members on overseas orders or of Defense Department contractors—will be eligible. There are currently 1.2 million school-age children in military families, and approximately 85,000 of them attend DoDEA schools, which are funded by the Defense Department and are mostly located overseas.

Most eligible students will be expected to obtain their high school diplomas from a brick-and-mortar campus, but officials say the virtual school can serve students in remote locations in other countries who do not have access to a regular school. If parents don't have Internet access at home, they will be able to work with their local military unit to find access at another location, officials say.

The online curriculum is based on U.S. state learning standards and aligned with the coursework of a typical American high school. Courses will be taught by DoDEA teachers, and many instructors will have either an orientation toward or experience with distance-learning technologies, Riley says. The agency will run training sessions on teaching online, and UNLV also will provide professional development.

"One of the requirements is that these should be very rigorous courses," says Greg Levitt, the subject-matter expert at UNLV who is heading the project to develop 33 new online courses in core subjects. "This should be the equivalent of, or better than, a face-to-face class."

To achieve that equivalency, synchronous communications tools such as Web conferencing will be used. That will allow a teacher to do such things as bring students together to share lab data for a science class or hold a peer review workshop for an English class.

"The classes will be written in a way that's a little different than a textbook," says Levitt, with "more active involvement from the student" and elements such as video and animation.

Those involved in the project hope to create online middle school courses and elementary coursework in the years ahead. However, the program's underlying goal is not just to offer more classes, they say, but to help students learn to use the new technologies so they can keep using them for the rest of their lives.

Says Riley, "What we're teaching is not only academic coursework to meet students' immediate needs but developing lifelong learning skills for the 21st century so they can meet the demands of the future."

Virtual School Initiative

Designed to emulate new learning technologies, the Virtual School Initiative proposes a user-owned consortium that delivers learning 24 hours a day, 7 days a week, 365 days a year as an alternative for all Alaskan students. Through the Virtual School Initiative, students anywhere in Alaska will be able to individualize their educations with flexible scheduling and access to additional virtual courses and learning opportunities. The Virtual School Initiative breaks the affective barrier by providing students peer-to-peer connections both as social beings and learners.

The Virtual School Initiative proposes to offer courses developed by Alaskans as well as access to courses developed by nationally recognized providers of course content. Courses offered through the Virtual School Initiative will be taught by highly qualified, effective teachers. Additionally, the Virtual School Initiative would help small schools meet the curricular needs of the Governor's Performance Scholarship and provide rural students with advanced and other specialized courses. The Virtual School Initiative would provide Alaskan students access to college courses as well as technical education courses.

Students will not be the only beneficiaries of the Virtual School Initiative. Teachers will benefit through the expansion of professional development and other learning opportunities delivered through a just-in-time platform. Additionally the Virtual School Initiative expands choice for Alaskan families by providing access to a network of virtual educational options.

Funding for the Virtual School Initiative is through the state's federal Title II-D allocation.

Virtual School Working Group

In December, 2009, Commissioner LeDoux convened Virtual School Working group with the dual purpose of providing recommendations on: 1) standards for the Virtual School Program, and 2) ideas for the design of an Alaska Virtual School program. The working group consists of distance education teachers and practitioners, district distance education and technology coordinators, superintendents, post secondary education institutions as well as consultants from virtual school programs in the nation.

Following are links to the background readings that were provided to the Virtual School working group prior to their meeting in December:

Keeping Pace report – National Snapshot & Key Issues

- www.kpk12.com/downloads/KeepingPace09-fullreport.pdf

Learning in the 21st Century: 2009 Trends Update

- www.blackboard.com/resources/k12/Bb_K12_09_TrendsUpdate.pdf

Online Learning Policy Survey: A Survey of the States

- www.convergemag.com/paper/Online-Learning-2009.html

The working group also examined the following states' virtual school programs:

Maryland Virtual Learning Opportunities Program

<http://mdk12online.org/>

The Maryland Virtual Learning Opportunities Program (MVLO), an educational service managed by the Maryland State Department of Education, is designed to expand the access of Maryland public school students to challenging curricula aligned to the Maryland Content Standards as well as to other appropriate standards through the delivery of high quality online courses.

MVLO offers online courses for high school credit in collaboration with the local school systems through the Maryland Virtual School (MVS). The teaching is conducted online with the teacher physically separated from the student.

MVS is not a school and does not offer a complete high school diploma program online. The credit earned by taking a MVS course is entered into the student's record by the local public high school or school system. Students may take a course through MVS only with the permission of the local system and the school principal. Credit can only be awarded for MSDE-approved online courses.

Florida Virtual School

<http://www.flvs.net/Pages/default.aspx>

Florida Virtual School (FLVS) is an established leader in developing and providing virtual K-12 education solutions to students all over Florida, the U.S. and the world. A nationally recognized e-Learning model and recipient of numerous awards, FLVS was founded in 1997 and was the country's first, state-wide Internet-based public high school. Today, FLVS serves students in grades K-12 and provides a variety of custom solutions for schools and districts to meet student needs.

Florida residents take courses for free while non-Florida residents take courses based on tuition rates.

Students in Florida have the right to choose Florida Virtual School as an educational option.

Florida districts have options for setting up FLVS Franchise schools and administrators outside Florida can take advantage of solutions for course licensing to professional development assistance.

Alabama Connecting Classrooms, Educators, Educators & Students Statewide

<http://accessdl.state.al.us/>

ACCESS Distance Learning (Alabama Connecting Classrooms, Educators, and Student Statewide) is an education initiative of the Alabama Department of Education. It provides opportunities and options for Alabama public high school students to engage in Advanced Placement (AP), elective, and other courses to which they may not otherwise have access.

ACCESS Distance Learning courses are available to students enrolled in Grades 9-12 in an Alabama public high school, or those identified as a special education student in a state correctional facility and registered with an Alabama public high school.

Courses are provided at no cost to students. All courses are offered at school during the regular school day under state rules established to govern the program.

It is the responsibility of local schools/school systems to provide computers, Internet connections, software, and textbooks required for specific courses.

Schools must also develop local policies and provide onsite classroom facilitators to assist students during regular class periods.

Virtual Virginia

<http://www.virtualvirginia.org/>

Virtual Virginia offers online Advanced Placement, world language, elective, and core academic courses to students across that state, the nation, and throughout the world.

The courses utilize course management software to maximize the interactivity of each class. Each course contains video segments, audio clips, whiteboard interaction, multimedia activities, and online discussions, as well as text. Instructors are available for telephone and online communication with students throughout the day.

Full-time instructors are available from 8:00 am until 4:00 pm three days a week, and from 12:00 pm until 8:00 pm two days a week. Virtual Virginia courses offer a rich, multimedia, learning environment that appeals to a variety of learning styles.

Virtual Virginia courses can be scheduled flexibly throughout the day, as courses do not have to be taken in 'real' time.

Virtual High School (Massachusetts)

<http://www.govhs.org/Pages/Welcome-Home>

The Virtual High School, a non-profit consortium that offers content-rich, credit-bearing high school courses.

VHS offers full-year and semester-length courses, Gifted & Talented courses for middle school students, Advanced Placement (AP) and Pre-AP courses, is piloting International

Baccalaureate (IB) Diploma Programme courses.

VHS is nationally accredited by the Middle States Commission on Secondary Education.

Schools can join VHS as Individual School Members or Student-Only schools. Individual School Members participate in VHS by freeing a high school teacher one period a day to teach a VHS course online. Student-Only schools do not have a teacher teaching a VHS course, but only have students taking VHS courses. VHS also accepts individual students.

Students are able to attend their classes 24 hours a day, seven days a week, and work cooperatively online with others from a wide variety of ethnicities, backgrounds and geographic locations. Member schools range from 6 students to 4,286, and enrollment for the current year is 11,902. Over 340 courses are offered to 644 schools in 31 states, and 61 international schools in over a dozen foreign countries.