SCR

37

STATE OF ALASKA
THE LEGISLATURE

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May, 1988

Copies of minutes listed below were originally included in this file. The minutes are available on the STAIRS database CMPR. In order to save space copies of minutes have not been left in the files.

Mary Van Nimwegen

HHESS 4-19-88 8:30 a.m.

Senator Rick Uehling

Senate District H
Downtown, Elmendorf, Northeast Anchorage

Senate Finance Committee
Chair, International Trade Committee
Vice-Chair, State Affairs Committee
Labor & Commerce Committee

March 17, 1988

M E M O R A N D U M

TO: Representative Niilo Koponen, Co-Chair
Representative Johnny Ellis, Co-Chair
House Health, Education and Social Services
Committee

FROM: Senator Rick Uehling

SUBJECT: SCR 37, "Relating to the Young Astronaut Program."

I have asked staff to provide the following background to SCR 37, "A Resolution relating to the Young Astronaut Program."

SCR 37 encourages school districts in Alaska to adopt the Young Astronaut Program by starting Young Astronaut Chapters in their schools.

The Young Astronaut Program is a national educational program for elementary and junior high students designed to promote the study of science, mathematics and technological subjects. It was designed to equip students at an early age with the interest and educational skills to live in the technological world of tomorrow.

Solely financed through private sector support, the program costs are minimal: only $20 per Chapter per year for up to 30 students per Chapter. For that $20.00, teachers receive high-quality, technically up-to-date teaching materials each month. In contrast, a science textbook costs approximately $17.00 per student, thus necessitating an expenditure of approximately $510 for a classroom of 30 students and which would become out-of-date much more quickly.

The materials that are distributed by the Young Astronaut Council are high quality as they are reviewed by the Education and Technology Advisory Board composed of representatives from leading U.S. education and space organizations. Additionally, the materials receive preview from fifty Pilot Schools before finally being nationally distributed to Chapters.

P.O. BOX V, JUNEAU, AK 99811 (907) 465-4821 • 3111 C ST. #515, ANCHORAGE, AK 99503 (907) 561-7613

Young Astronaut Council • 1211 Connecticut Avenue, N.W., Suite 800 • Washington, D.C. 20036 • (202) 682-1985

YOUNG ASTRONAUT PROGRAM

F A C T S H E E T

The Young Astronaut Program is a national educational program for elementary and junior high school students designed to promote the study of science, mathematics and technological subjects. It was initiated as a response to the rapidly declining standard of science and mathematical proficiency levels among graduating American students.

The Young Astronaut Program aims to equip students at an early age with the interest and educational skills to live in the technological world of tomorrow. To this end, the U.S. Space Program is used to excite the natural curiosity of students and instill a sense of fun into learning science and mathematics.

The Young Astronaut Program was conceived by columnist Jack Anderson who proposed the concept to President Reagan. The White House Office of Private Sector Initiatives created the Program which is now administered independently by the Young Astronaut Council and Executive Director, T. Wendell Butler. The Program was launched at the White House on October 17, 1984.

The Young Astronaut Program is solely financed through private sector support. Major contributors are Action Packets, Adidas, Allison Manufacturing, Bantam Books, Coleco, Group W Television, Lee Company, Martin Marietta, Marvel, McDonald's, Monogram Models, Pepsi Cola-USA, Pilgrim Sportswear, Rockwell International, Safeway Stores, Sears, S.P.M. Manufacturing, Sports Specialities, Tasco, Thermos and Tymnet.

Chapters of up to 30 student members are set up in schools or community organizations in which Young Astronauts participate in group learning activities.

The core of the Program is the development and distribution of high quality curriculum material to member Chapters located throughout the country. The materials developed by the Young Astronaut Council are reviewed by the Education and Technology Advisory Board composed of representatives from leading U.S. education and space organizations. The material is also provided to fifty Pilot Schools for in class review before finally being nationally distributed to Chapters.

-more-

In addition to curriculum, each Chapter receives a variety of activity packages such as model rocket kits. Also, Chapters are elgible to participate in writing, art, math and science contests. Prizes for the contests sometimes include trips to the Nation's Capital, Space Camp, shuttle launches and student exchanges to Japan, the Soviet Union and other countries. A feature of the Program available to all Chapters at no additional cost is Astronet, a high-tech electronic mail system which provides timely information on the U.S. Space Program. Astronet also carries supplemental curriculum material.

Although the Program is just over two years old, there are already thousands of Chapters throughout the country. Membership is expanding constantly at a rate of hundreds of new Chapters each month. In addition, there are 126 Young Astronaut Chapters and Satellites in 25 foreign countries.

The Young Astronaut Council has put together a licensing program as the major means of raising funds for the education program. Funds are generated and visibility for the Program enhanced with a line of toys by Coleco, Young Astronaut Childrens books by Marvel, Safeway shopping bags, and special Young Astronaut games and facts printed on McDonald's Happy Meal boxes. Adidas has taken the lead in making a full Young Astronaut apparel line which is now offered in Sears stores all over the country. Other licensed products include telescopes and microscopes, models and science kits, caps, belts, lunch pails, computers and school supplies. Each item is designed to bring the Young Astronaut Program to students throughout the United States.

The Young Astronaut Council recently launched its pre-school program and is currently developing a Young Astronaut Magazine which will be offered to every Young Astronaut.

For more information write: The Young Astronaut Council, P.O. Box 65432, Washington, D.C. 20036.

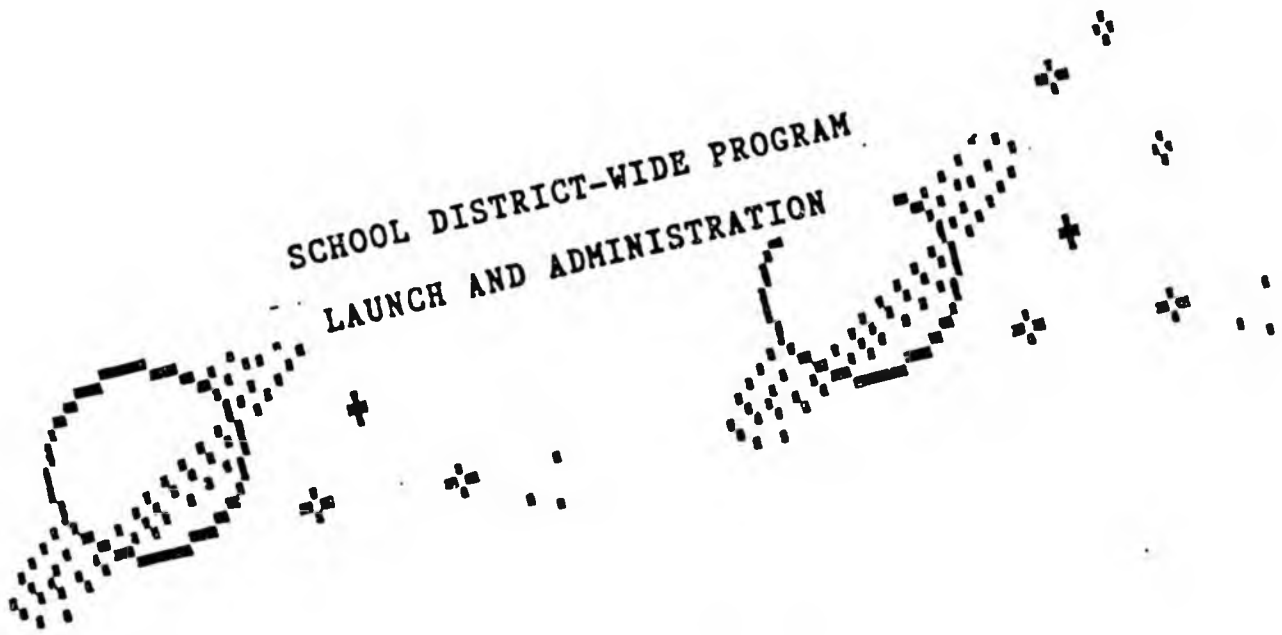
Contact: Edith E. Westermann
(202) 682-1985

# # #

2-10-87

YOUNG ASTRONAUT™ PROGRAM

United States of America



The Young Astronaut Council
1211 Connecticut Avenue, N.W.

Young Astronaut Council • 1211 Connecticut Avenue, N.W., Suite 800 • Washington, D.C. 20036 • (202) 682-1985

The Young Astronaut Program is a co-curricular, national education program for elementary and junior high school students in grades 1-9. It is administered by the Young Astronaut Council, a non-profit, private sector, national education organization. The Program is designed to promote the study of science, mathematics, and technology, using the excitement and motivation generated by the space exploration program. The centerpiece of the Program is the curricular materials distributed to Chapters (5 to 30 students in the group), headed by adult Chapter Leaders/Teachers.

FIVE QUICK POINTS ABOUT THE YOUNG ASRONAUT PROGRAM

1. The Young Astronaut Program is sponsored by the non-profit, private sector funded Young Astronaut Council.

2. School districts signing up as Young Astronaut Districts will receive certificates and special services/recognition.

3. Because the Young Astronaut Program gets corporate support/underwriting for the Program, the cost is only $20.00 per Chapter per year for up to 30 students per Chapter - that's right $20.00 per Chapter! A science textbook costs approximately $17.00 per student or approximately $510.00 for a classroom of 30 students, and there is no way for a textbook to keep pace with the rapidly expanding body of scientific knowledge. The Young Astronaut Program provides topical curricular materials and updates information with "ASTRONET", a computerized system that is covered in the $20.00 membership fee.

4. Teachers receive high-quality, technically up-to-date, teaching materials, each month. The materials are activity-based, with stress on "learning science and mathematics by doing science and mathematics and thinking scientifically."

5. The Chapter Leader's Handbook tells teachers how to set up the fun-filled, science and mathematics, club-like Program that we call Young Astronaut Chapters.

June 1, 1987

Subject: 25 Excerpts from Year-End Comment of Chapter Leaders, May 1987

Included in the Chapter Leaders' responses to the May 1987 curricular questionnaire were the following unsolicited comments on the overall Program:

1. "The Young Astronaut Program is FANTASTIC! I had 100 students wanting to join, just from 4th, 5th, 6th grades. We narrowed down to 32 and each member knows others are begging to join." Judith Dieball, Toledo, OH. (There are many comments using the words, "fantastic", "terrific".)

2. "I feel like the lessons are materials which they can remember and fall back on in life. One instance was the November #3 lesson for Toys That Teach-Roller Skate Cars-Passenger Safety. Many of the children including my own son became instant believers in seat belt wearing. The Nutrition Challenge and the Young Astronaut Fitness Program seem to really interest the students, also influenced a few changes in habits. So the point is besides teaching math, science, technology and interdisciplinary skills, the good common sense of good practical living will follow for a long time. Also, not to mention the learning to work as a team in whatever you do." Connie Havens, Topeka, KS.

3. "The students (and their leaders) have learned a lot about math and science, space exploration and U.S. space history while working with the YA program. It is exciting to see the students have fun while learning, stretching their imaginations and applying what they know." Adrienne Schouten, Sheridan, Oregon.

4. "This program, because of the hands-on nature, has enabled me to utilize it for English as a Second Language, and (for) gifted students with little or no modifications! This program has been a learning experience for me." Morris R. McFadden, Los Angeles, CA.

5. "The goodies like the pop can, posters, packets may not be specifically educational but the motivation and surge of energy that comes with their arrival makes it worthwhile." Robin Eddington, Michigan City, IN.

6. "The materials I have received over the last 3 years have been more than enough. I've shared w/Music, P.E., Art and all educators. I teach children labeled 'Developmentally Handicapped'. My Chapter uses all areas (of the Program). It gives (them) the chance to be good at something." Christine Noland, Dayton, OH.

7. "Your program is the biggest bargain I have found in 18 years of teaching! It does a fabulous job of teaching that science is all around us & that it's fun and so interesting. It really has turned my kids on." Sandra Bagley, Greenway, LA.

8. "I am certain that the Will Rogers Elementary School Chapter of Young Astronauts will produce several astronauts. But, I am more certain that we will produce hundreds and hundreds of adults who are aware of the importance of the space program and who will support it and encourage others to support it." Mrs. Dan Hays, Oklahoma City, OK.

9. "That Program is really important for my Trainees and myself. You should hear them when I have to cancel a session, they beg, implore, etc. for me not to do so. They really enjoy our meetings, and although they haven't started to think in a scientific way (they like to give the first answer that comes to their minds), they have started to give more reasoned answers when they stop and think, and they are doing more of this. The school is more interested in the Program, and the Directors are thinking of including the activities as part of the Science material and then forming one Chapter in each grade. It makes a difference that the Program is done in English, because it helps the students to improve in another language." Dr. Juan Pedro Sanchez, Cancun, Mexico.

10. "SUPERB PROGRAM! Materials are excellent. Please make a list (complete) of Y.A.'s corporate sponsors and addresses. We would like to send 'Thank you' notes. We appreciate their support." Jane A. Sheets, Michigantown, IN.

11. "We love the program. The children are doing some real good thinking and learning." Evelyn Mower, N. Bountiful, VT.

12. "I'm really excited about the potentials of this program. A boy who was demoted from the 8th to the 7th grade this year told me he had gone from an "F" to a "D" since we started."
Robert W. McDill, Soda Springs, ID.

13. "Our Chapters have consisted of students in our gifted program. Wish we had time to do more. The children have thought it was fabulous! Loved the 'doing' things!" S. Rutland, Memphis, TN.

14. "Excellent attendance every session AFTER SCHOOL." Jenlane Gee, Modesta, CA.

15. "I don't actually have a Chapter since I teach grades 10-12. However, I do use the Young Astronaut material in my Basic Math II Class. Since this is a remedial class, much of the information and lesson plans are perfect for them. I especially use the activities on the back of the POSTER because there are three different MATH activities on each--and they are good!"
Laura Reeves, Albuquerque, NM.

16. "The program has been a tremendous boost to the teaching of science and math. Our students, teachers and parents have united and the program is evolving to everyone's excitement and benefit." Mary Ashley Goodrich, Wellsbury, WV.

17. We have enjoyed working with the excellent materials and information which you have sent us. The students are excited and anxious to do the activities." David B. Hosie, Northport, NY.

18. "I heartily endorse the efforts of the Young Astronaut Council and the foresight of the sponsors... We anxiously look forward to a fun-filled and interesting second year in the program as we are scheduling such events as a paper airplane contest and model rocket competition along with at least two field trips to the European Space Center and the Paris Air Show. We have been involved in fund-raising and are preparing to purchase a computer for our sponsoring junior high school." Gerald Adams, Ramstein, West Germany.

19. "It has united our multi-cultural school with a common interest and has sparked excitement." Kathy Price, Bloomfield, NM.

20. "The Young Astronaut program has been very important for our school as a whole, especially for the intermediate grades. Over the last three years, many students have become interested in science, and in turn became more enthusiastic towards school. The materials sent each month are well received and put to good use. At least one science unit a month is based on materials sent to us from the Young Astronaut Council. I use the posters to initiate creative writing assignments. The Newsletter is incorporated into my Reading and Social Science Programs. Without these materials my academic programs would not be as exciting for the children. I would gladly pay double for the materials, they are well worth the cost." Joseph G. Welch, National City, CA.

21. "We were the first Young Astronaut Chapter in Mercer County. Now we have four more Chapters in progress. Thank you for continuing the fine program of the Young Astronauts. Our boys and girls are benefiting from it." Linda Poff/Helena Corvin, Princeton, WV.

22. "The program has been very important. It has increased scientific interest in all members of the Chapter. The most valuable aspects are the various materials and their systemic arrangement. The approach to science is made interesting and fun." Shaareen Vakil, Bombay, India.

23. "I am impressed with the consistent high quality of the curriculum materials and program ideas provided by the Young Astronaut Council and am delighted in the high levels of student interest and enthusiasm about space-related information that I see... You folks are doing a super-fine job. Keep up the good work!" George W. Hastings, Richmond, VA.

24. "I presented a two-hour cross-talk session, 'YAC Leaders' at the March 1987 National Congress on Aviation and Space Education. BRAVO AND HATS OFF to the YAC!! I'M PROUD TO BE PART OF THIS NATIONAL ORGANIZATION!" Bonnie Gardner Mitchell, Danville, IN.

25. "I can't say enough good things about the Young Astronaut Program---in fact, I don't think I can begin to describe to you the impact our Young Astronaut Chapter has had on the Young Astronauts, on me, on our entire school community. Our Chapter has 25 2nd and 3rd graders--we meet weekly, for an hour after school. I think the major accomplishment has been that the kids are just as excited--maybe more excited!--about the program today as they were when they joined last September. They NEVER miss a meeting and they are already begging me to have the club for 4th grade next year. The wealth and variety of materials you send me are invaluable--I couldn't manage without them. Just now the entire school--in fact, our entire community--is living, breathing, thinking SPACE...When we say the pledge.."to learn about space and to help others towards these goals."...we KNOW that we are doing that in a most exhilarating way. Our kids are American, British, Lebanese, Indian--and the Young Astronauts reflect our multi-nationality. I hope that the Young Astronaut Program will continue just as it is--dynamic, exciting, worthwhile--as it impels our kids to wonder, question, experiment, dream, imagine." Mary Fry, Ras Tanura, Saudi Arabia.

YOUNG ASTRONAUT PROGRAM

STRATEGIES FOR ESTABLISHING A SCHOOL DISTRICT-WIDE PROGRAM

DR. SHIRLEY A. JACKSON
DIRECTOR OF EDUCATION

The Young Astronaut Program is designed for local control and autonomy. The Young Astronaut Council, the governing nonprofit organization, believes that, whenever possible, program implementation decisions and services should occur at the local level, as close to the classroom teacher as possible. This philosophy facilitates and maximizes local input in the shaping of a viable program for the children of the school district. It also ensures local school district ownership, provides ease of access to local support services within a supportive environment for Chapter Leaders, and ensures effective implementation and institutionalization of the Program within the school district.

For the reasons stated, the Young Astronaut Council is involved in systematically stimulating the formation of school district-wide Young Astronaut Programs. The Essential Elements for District-wide Programs and Strategies for Implementing Essential Elements follow:

ESSENTIAL ELEMENTS FOR DISTRICT-WIDE PROGRAMS

1. Educational leadership and support from the Superintendent, School Board, and professional leaders
2. Selection of a District Coordinator to oversee the implementation and administration of the program
3. Establishment of an Advisory Group for the Young Astronaut Program
4. Establishment of community/local based financial and technical support for the program
5. Selection of Chapter Leader/Teachers within schools
6. A District-wide inauguration of the Young Astronaut Program
7. Orientation workshop for Chapter Leader/Teachers
8. Monitoring of the operation of the program and support for Chapter Leader/Teachers
9. Evaluation of program implementation and operation
10. Recognition of achievement of Young Astronauts, Chapter Leaders/Teachers, and Chapter accomplishments

STRATEGIES FOR IMPLEMENTING ESSENTIAL ELEMENTS

1. LEADERSHIP:

The Superintendent's visible support is essential to a District-wide Program. Recommended actions include:

- o Presentation of the Program to School Board and significant others, ensuring their support
- o Awareness letters to all Principals and relevant Central Office staff
- o Selection of the District's Local Coordinator
- o Establishment of an Advisory Planning Group to work with the Local Coordinator

2. LOCAL COORDINATOR:

A Local Coordinator is named to provide leadership and to administer the Program. This person is usually the Director of Science, Mathematics, or Curriculum for the school district, although the choice varies among districts. The Local Coordinator is responsible for getting necessary support and resources, organizing, planning, identifying and implementing the procedures for selecting the district's Chapters and Chapter Leaders, start-up, monitoring of implementation, designing an evaluation for the local program, institutionalizing/providing for an orderly continuation of the Program, and being the district's liaison/conduit to the Young Astronaut Council.

3. ADVISORY/PLANNING GROUP:

An Advisory/Planning Group is formed and meets to delineate the school district's programmatic and operational plans. Representatives from the following ranks should be considered for inclusion: key administrators (principals of schools with YAC Chapters and others), district science, mathematics, technology supervisors and resource/lead/master teachers, YAC Chapter Leaders, teacher's union members, PTA/parents groups, and potential providers of resources/support services from the public and private sectors, such as organizations, businesses, volunteer groups, museum education directors, NASA Center education staff, local colleges/universities, State Department of Education Directors of Science, Mathematics and/or Curriculum, public library directors, etc.

4. LOCAL COMMUNITY BASED FUNDING RESOURCES:

- o Sources of funding are identified and funds secured to support the planned number of Young Astronaut Chapters. Local businesses and community organizations have been exceptionally generous in providing school districts with funds and services needed to conduct Young Astronaut Programs - you generally

only have to explain the Program and specifically what you want them to do. Including potential supporters on the Advisory/Planning Group is also an effective way of insuring their participation in the Program. Local businesses/ industry, high-tech companies, the Air Force Association, Federal Aviation Administration, Civil Air Patrol, and Defense Contractors may represent new sources of funding and partnerships. PTAs, Kiwanis Clubs, fraternities, sororities, etc. have also been excellent sources of funding for Chapters.

- o The Young Astronaut Program is an eligible activity for State and Federal funds, such as Title II, Chapter II, ESAA, and Chapter I. (Of course the applicable regulations must be adhered to). Some Boards of Education have allotted Board funds to support the Program.

- o Whatever the source of funding, a three year commitment should be sought to promote Program continuity and increase the academic effect factor for students involved in the Program.

5. RECRUITMENT OF SCHOOLS AND CHAPTER LEADERS:

- o Young Astronaut Program Schools and Chapter Leaders are identified. School administrators and Chapter Leaders should be volunteers if the Program is to be successful. Consider that when at least two (2) Chapters are formed in a school, Chapter Leaders tend to be mutually supportive - team teaching, sharing ideas, plans, materials, etc. This appears to enhance Chapter enthusiasm and implementation of the Program.

- o A letter from the Superintendent of Schools is sent to all of the principals in the district, giving them information about the Program, inviting/encouraging their participation, providing applications with instructions/submission deadlines, and identifying the Local Coordinator who should be contacted if additional assistance is needed. The Local Coordinator should follow-up with schools not submitting by the deadline to find out if they intend to participate, resolve any issues, and answer any questions. Local Coordinators should monitor the process to make sure that applications and checks have been submitted to the Young Astronaut Council, and that materials have been received by the schools.

- o Problems with receipt of materials should be addressed to the Director of Membership Services (202) 682-1985.

6. IMPLEMENTATION:

- o A high visibility, festive, kick-off meeting is planned/held to celebrate the beginning of the Program and to present the school district's program plan to the district's key administrators, public officials, sponsors, business and community leaders, volunteers, media, parents, principals, and Chapter Leaders in identified Young Astronaut Schools.

- School districts should take this opportunity to build community support. Local radio, newspaper and telegram reporters covering education should be invited to the celebration and encouraged to provide positive media coverage.

- The Young Astronaut Council has a videotape that is appropriate for such celebrations. Should you desire a copy of "The New Decade of Discovery" videotape, send a blank tape with your request to the Council.

7. ORIENTATION:

- An Orientation Meeting for all Chapter Leaders is planned and conducted, under the leadership of the Local Coordinator, by the Advisory/Planning Group.

- Topics of the meeting should include: The Chapter Leader's Handbook - contents and uses, the schedule of products and topics for the year overview chart, how the products and topics relate to the district's curriculum and textbooks, resources available to Chapter Leaders (volunteers, funds for field trips, NASA Centers, speakers, etc.), presentations and demonstrations, hands-on sessions using the materials, planning for the use of the Program in their schools by small groups of Chapter Leaders, resolving of questions and concerns that Chapter Leaders may have.

8. MONITORING AND SUPPORT:

- The Local Coordinator, with the assistance of the principals, monitors the start-up of Chapter activities, working with Chapter Leaders to resolve problems impeding successful Chapter start-up and operation.

- The Local Coordinator monitors the Program's implementation to provide mid-course corrections, technical assistance, in-service training, sharing meetings, etc.

- The Local Coordinator continuously assists schools in the district that might wish to expand their Programs or start Programs in their schools.

- The Local Coordinator continuously is alert to opportunities to provide support to Chapter Leaders, such as discretionary funds for purchasing science materials, free and inexpensive materials, volunteers who may assist Chapter Leaders in their preparation and presentation of the activities and on field-trips, sponsors for new Chapters, etc.

- Chapter renewal and continuation activities should be planned and implemented in a manner that provides Chapter Leaders with materials at the beginning of the school year. Replacements for Chapter Leaders not continuing in the Program should be quickly made, with arrangements for orientation for the new persons.

CHECKLIST

STRATEGIES FOR ESTABLISHING A SCHOOL DISTRICT-WIDE YOUNG ASTRONAUT PROGRAM

ACTION/ITEM	DATE PLANNED	DATE COMPLETED
1. Get commitment of Superintendent and top level officials		
2. Identify Local Coordinator		
3. Form Advisory/Planning Group Conduct planning meeting(s)		
4. Identify sources of funds Secure funds for Chapters		
5. Identify schools and Chapter Leaders		
6. Plan Kick-Off Celebration Conduct event		
7. Plan Chapter Leaders Orientation Meeting Conduct meeting		
8. Monitor Chapters start-up and program operations		
9. Design evaluation plan and implement evaluation		
10. Recognize and reward outstanding performance		

9. EVALUATION:

Local Coordinators should provide for Program evaluation. They are asked to cooperate with the Young Astronaut Council in its national evaluation efforts.

10. RECOGNITION AND AWARDS:

Recognition and rewards for outstanding schools, principals, Chapter Leaders, students, volunteers, sponsors, etc. should be sought from private sector businesses and organizations.

The Young Astronaut Council will award certificates to school districts successful in organizing and implementing district-wide Young Astronaut Programs.

Enclosed you will find the items checked:

____ 1. ____ Young Astronaut Program Curriculum Planning Chart(s).

____ 2. ____ Young Astronaut Program brochure(s) with the Chapter Registration Form. You may duplicate as many copies of the Form as you need.

____ 3. ____ Young Astronaut Program Information Packet(s).

____ 4. ____ Young Astronaut Program Introduction Transparency Masters.

____ 5. ____ Young Astronaut Early Childhood Education brochure(s).

Should you need additional information, please contact Dr. Shirley A. Jackson, Director of Education, (202) 682-1985.

YOUNG ASTRONAUT COUNCIL
EDUCATION AND TECHNOLOGY ADVISORY BOARD
ASSOCIATIONS/ORGANIZATIONS

American Association of
School Administrators
1801 North Moore Street
Arlington, VA 22209

American Federation of Teachers
555 New Jersey Avenue, NW
Washington, DC 20001

Association for Educational
Communication and Technology
1126 16th Street, NW
Washington, DC 20036

Association for Supervision
and Curriculum Development
225 North Washington Street
Alexandria, VA 22314

Association of Science and
Technology Centers
1413 K Street, NW
Washington, DC 20005

Council of Chief State
School Officers
379 Hall of the States
400 North Capital Street, NW
Washington, DC 20001

Council of Greater
City Schools
1413 K Street, NW
Fourth Floor
Washington, DC 20005

National Aeronautics and
Space Administration
400 Maryland Avenue, SW
Washington, DC 20546

National Association of
Elementary School Principals
1920 Association Drive
Reston, VA 22091

National Association of
Secondary School Principals
1904 Association Drive
Reston, VA 22091

National Association of
State Boards of Education
701 North Fairfax Street
Suite 340
Alexandria, Va 22314

National Catholic Educators
Association
1077 30th Street, NW
Washington, DC 20007

National Council of
Parents and Teachers
1201 16th Street, NW
Washington, DC 20036

National Council of Teachers
of Mathematics
1906 Association Drive
Reston, VA 22091

National Education Association
1201 16th Street, NW
Washington, DC 20036

National Institute of
Education/USDE
1200 19th Street, NW
Stop 1641
Washington, DC 20208

National School Boards
Association
1680 Duke Street
Alexandria, VA 22314

National Science Foundation
1800 G Street, NW
Room 527
Washington, DC 20553

National Science Teachers
Association
1742 Connecticut Avenue, NW
Washington, DC 20009

JETS, INC.
National Society for Professional Engineers
1420 King Street
Alexandria, VA 22314

Young Astronaut Council
1211 Connecticut Ave., NW
Suite 800
Washington, DC 20036

YOUNG ASTRONAUTS™

UNITED STATES of AMÉRICA

1987-1988 School Year

"Astronomy"

Dear Chapter Leader:

The chart on the reverse side of this page is designed to help you with your lesson planning during the year by providing you an outline of the types of products you will receive, the subjects they will cover and a schedule. By reading the descriptions and the specifics on the chart, you will be able to make optimum use of the Young Astronaut Program materials.

There will be some form of Young Astronaut Council communication with Chapters every month. In addition to the products and topics listed, information about special programs and activities will be sent as appropriate.

Best wishes for a great Young Astronaut year.

The Young Astronaut™ Program

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YOUNG ASTRONAUTS™
UNITED STATES OF AMERICA

YOUNG ASTRONAUT PROGRAM
CURRICULUM PLANNING CHART
PRODUCTS & TOPICS

PRODUCT	NAMING THE NEW SHUTTLE	BLAST-OFF	GALAXIES!	LOOKING FOR LIFE	STA
	SEPTEMBER	OCTOBER (1)	NOVEMBER	DECEMBER (2)	JA
Adventure Series Toys That Teach Physics of Fun Recycled Science		• Water Rockets • Jumping Up action reaction, diving gymnastics • Balloon & Baggie Rockets	• Galaxy Flyers Frisbee dynamics • Earth's Place in Milky Way • Big Bang Balloon • Telescopes & Water Lenses	• Life Zones Temp., Earthlike Planets • Aliens • Clay Aliens different environments	• Prism Rainbo • Star T Colors • Star (tions, 3 birth o Supern
Space Watch		Astronaut Star Tracking	Andromeda Galaxy & Milky Way	Finding Our Stellar Neighbors	Stars in
Curriculum Posters	A Universe of Names Poster #0031	Mural: Space History Poster #0032		Great Galaxy in Andromeda Poster #0033	
Curriculum Activity Packages	What's In A Name?		Living Among the Stars: The Space Station		
Newsletter /Magazine			No. 1		No. 2
Competitions /Contests		#1 Astrophotography Essay		(#1 Entries due by Dec. 15, 1987)	
Astronet™ Space Update	Shuttle Update	Spacecraft	Galaxies Galore/ Hubble Space Telescope	Life in Space?/ AXAF Status	Notable Progran
Space Camp Alpha (Serial Story)	Space Camp Alpha	Space Camp Alpha	Space Camp Alpha	Space Camp Alpha	Space
Curriculum Update (Astro-Teaching Tips)	Introduction Astro-Teaching Tips	Spacecraft History	The Milky Way	Aliens	The Sta
Astrobits (Chapter Chatter)	September Update	October Update	November Update	December Update	January

*1 - **SEPTEMBER** - Receipt of Oct., Nov., Dec. Curriculum Package 2 - **DECEMBER** - Receipt of*

r 1987-1988

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)WER	THE SUN	PLANET PROPERTIES	COMPARING PLANETS	SPACESHIP EARTH	WATERY EARTH
ARY	FEBRUARY	MARCH (3)	APRIL	MAY	SUMMER
Films & .. & Crea- dels of &	• Solar Powered Toys • Pinhole Solar Observatory • Solar Energy Collecting	• Balancing Planet Mobile • Planet Distances scale models • 3D Planet Models scale models	• Robot Planet Explorers • Interplanetary Weather • Cratering eruptions, volcanic geology	• Satellite Jigsaw puzzle of Earth • Dynamics of Earth/ Moon system • Space Suits	• Aquanauts motion in water (water training) • Watery worlds value & search for water • Terrarium/Aquarium, closed ecosystems
	Sun Path Ethno-Zodiac Astronomy	Planet Paths	Wander Stars Ethno-Astronomy Myths	Moon Watching	Astrophotography
		The Solar System Poster #0034			
	Brightly Shining Among the Stars				
		No. 3		No. 4	No. 5
	#2 The Solar System Mobiles & 3D Scale Models of Planets		(#2 Entries due by April 1, 1988)		
s/SETI	Solar Power/SMM Program/ Polar Data	Planet Mapping/ Phobos and Mars Orbiter	Robot Planet explorers/SPOT & other remote sensing programs	Tides & Return to the Moon	
) Alpha	Space Camp Alpha	Space Camp Alpha	Space Camp Alpha	Space Camp Alpha	
	The Sun	Exploring Planets	Interplanetary Weather	The Moon	
date	February Update	March Update	April Update	May Update	June Update

Feb., Mar. Curriculum Package *3 - MARCH - Receipt of Apr., May, June Curriculum Package*

Description of Products:

ADVENTURE SERIES:

TOYS THAT TEACH shows how the action of familiar toys can lead to scientific investigations on Earth and in space. PHYSICS OF FUN uses children's experiences at amusement parks, playgrounds and sports events to introduce physical science concepts. RECYCLED SCIENCE draws on common household items as resources for science experiments.

SPACEWATCH:

SPACEWATCH uses the night sky as a celestial blackboard for in-class and take-home astronomy and computer science activities.

CURRICULUM POSTERS:

Full-color, high motivation pictures depict space events with curriculum materials in science, mathematics, technology and interdisciplinary fields for each grade level.

CURRICULUM ACTIVITY PACKAGES:

These packages are usually hands-on manipulatives or extended print materials designed for group projects and require longer-term involvement than do poster activities.

NEWSLETTERS/MAGAZINES:

Newsletters/Magazines will contain information about special Chapter activities throughout the country as well as puzzles, computer activities, articles on space, general news and other materials for Young Astronauts.

COMPETITION/CONTESTS:

COMPETITIONS highlight achievement directly related to science, mathematics, and Technology while CONTESTS emphasize creativity in other areas, such as language arts.

ASTRONET™:

A private telecommunications system providing astronomy and space program updates and other materials is available to all Chapters. The serialized Space Camp Alpha story, Chapter news and supplementary curriculum materials will be updated monthly. Access requires a computer with modem hook-up.

Your suggestions are always welcome. Please write us at:

Young Astronaut Council
P.O. Box 65432
Washington, D.C. 20036

Adventure Series

PHYSICS OF FUN

YOUNG ASTRONAUT PROGRAM

VOL.1, NO.7

United States of America

TEACHER INFORMATION

LEARNING GOALS:
These activities focus on the science of playing baseball.

- *Trainees* will determine where to hit a baseball with a bat. They will also experiment with aiming the ball when hitting it.
- *Pilots* will figure out how high a baseball travels by timing its flight.
- *Commanders* will calculate the velocity of a baseball and a baseball player. They will learn to estimate distances and to use these distances to estimate speeds.

GUIDING THE ACTIVITIES:
These activities overlap in Young Astronaut abilities. After reading all the activities, you might decide to try some version of all three activities with your group. A field trip to a baseball game can be a group activity to complement this Adventure Series. The HOW HIGH, HOW FAR AND HOW FAST activities can be used at a real ball game.

BATTER UP: Young Astronauts can divide into groups to try this experiment. Each group will need a ruler, a baseball, and two pieces of tape. Instruct groups to mark the place where the ruler hits the baseball with one piece of tape. The second piece of tape should mark the place where the baseball stops. The groups can use their rulers to measure the distances.

Watch as groups complete the activities. They should observe that the ball goes farther when it is hit with the end of the ruler. The ruler's end is traveling faster than any other part of the ruler. Since it is traveling faster, it can give more momentum to the ball. If your Young Astronauts get different results, they are unconsciously swinging harder when they hit the ball with the close part of the ruler.

Read over the second part of the activity with your groups. Provide enough room on the floor for the swinging motions. Both drawings show students hitting the ball with their left hands. This seems to be a natural motion that does not result in the ball traveling so far. To minimize confusion, insist that students do the experiment as it is drawn and to sketch in the path of the ball. They will discover that when they swing early, the ball moves to the left. When they swing late, the ball moves to the right. Ask if any of the Young Astronauts play baseball. Have a right-handed baseball player swing an imaginary bat for the group. Decide which way the ball will move if he swings early or late. Then demonstrate the swing of a left-hander. Have the students decide if swinging early or late has the same effect. They will discover that it has the opposite effect for a lefty.

HOW HIGH: Young Astronauts will need stopwatches and baseballs for this experiment. Students can work in groups of two or more. One student throws the ball straight up, while the other times how long it takes for the ball to return. The graph on the activity page shows how high the ball went. Review graph-reading skills if necessary at this point in the activity. Compare results to see who can throw a baseball the highest. If your Chapter decides to attend a baseball game, students can time pop flies to see how high they go. If students go on their own, they can make a report to the group.

HOW FAR AND HOW FAST: This activity requires a baseball game and a stopwatch. A televised game can be used. Students first get practice in calculating speed as a function of distance and time. Since students tend to think of speeds in English units, the activity has been set up to produce velocities in feet/sec. or miles/hour. You may convert your findings to metric if you wish.

The speeds of line drives and fast balls usually surprise students. To get very accurate results, they will need to read results in tenths of a second if this is possible. They will also have more difficulty in estimating distances from television. Suggest that they use cues like the distance to the back fence. This information is often painted on the fence. For those attending a live game, this information may be in the program.

As an advanced activity, students can also see if the hits from fast balls travel farther. Foul balls can also be used for this activity. As an extension of this activity, you might get a high school or college baseball coach to visit the group and talk about baseball pitching and batting techniques. There are interesting physics lessons involved in how the different pitches are thrown.

PHYSICS OF FUN

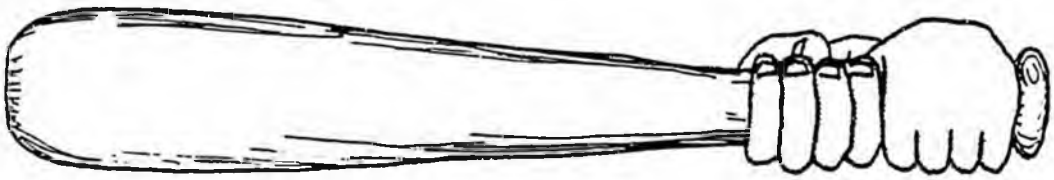
BATTER UP

The batter hits the baseball. Where on the bat should the ball hit for the longest hit? Try this experiment to find out. Place a baseball on the floor. Swing at it with a ruler. Try to keep your swings constant. Hit the baseball with the ruler's end. Mark how far the ball rolls.

Hit the baseball in the middle of the ruler. Mark how far the ball rolls.

Hit the baseball with the part of the ruler next to your hand. Mark how far the ball rolls.

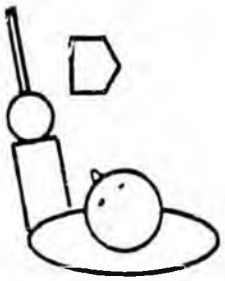
Put an "X" on the place where the batter below should hit the ball with his bat.



Have a friend roll the baseball slowly toward you. Swing early so that you hit it before it reaches the plate. Draw how it moves on the sketch below.

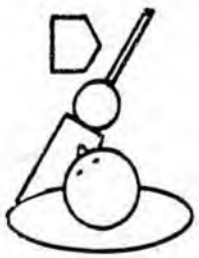
Have your friend roll the ball again. This time swing late so that you hit the ball after it reaches the plate. Draw how this ball moves on the sketch below.

PITCHER



BATTER

PITCHER



BATTER

Explain how hitters aim the balls that they hit.

TOYS THAT TEACH

Adventure Series

YOUNG ASTRONAUT™ PROGRAM

VOL. 1, NO. 7

United States of America

TEACHER INFORMATION

LEARNING GOALS:

The paddleball was one of the first ten toys taken into space. Its behavior was interesting and predictable.

- *Trainees* will investigate which direction is best for paddleball hitting and will also explain why.
- *Pilots* and *Commanders* will make a g-detector out of a paddleball. They will also learn what the term "1 g" means.
- *Commanders* will carry the finished paddleball g-detectors on elevators, in cars, and to playgrounds in search of different g-force sensations.

GUIDING THE ACTIVITIES:

There are two different kinds of activities in this series. The trainee activity uses the paddleball as a toy. It can be done as a group at any level. If possible, obtain the "The Toys in Space" videotape and play the footage on the paddleball at the conclusion of the activity. The videotape is available through your nearest NASA regional service center. See your Chapter Leader's Handbook to find your regional center. The other two activities convert the paddleball into a force detector. *Pilots* and *Commanders* must do the paddleball g-detector activity. Both *Pilots* and *Commanders* can then use the final activity to measure forces in the environment.

PADDLING THE BALL: This activity gives Young Astronauts experience in collecting and displaying data. Younger students will also gain experience counting. The students will also see that data do not always agree. Some students may paddle better upward, and others may paddle better downward. In general, most students get more bounces when paddling downward because gravity slows the ball down as it reaches the paddle. The ball is then easier to hit. Also when paddling sideways, gravity pulls the ball down and below the paddle. A ball bounced downward will usually return to the vicinity of the paddle.

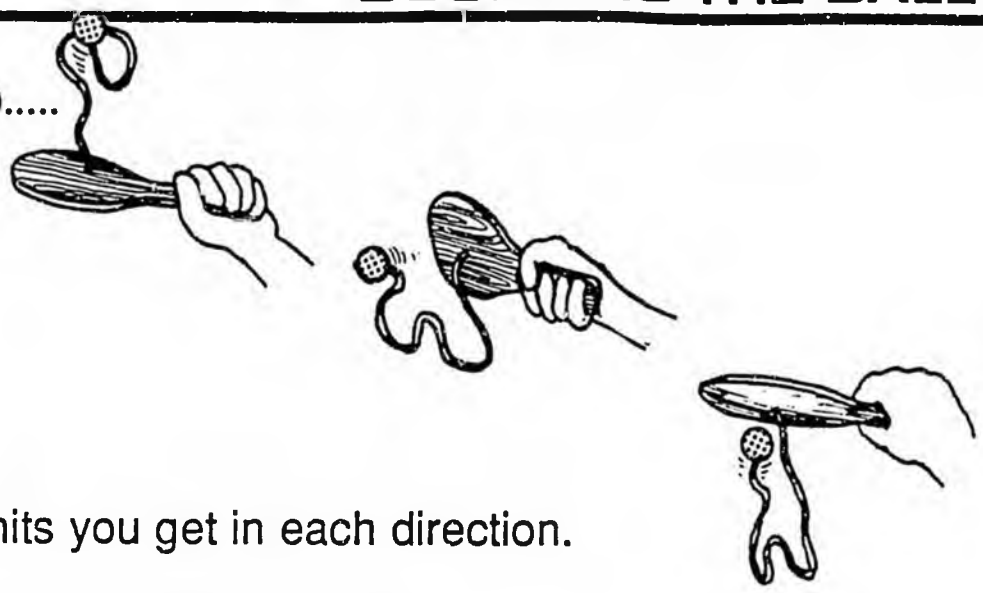
PADDLEBALL g-DETECTOR: This is, perhaps, the easiest and safest force detector that students can build. First they glue the pattern on a paddleball. Then they suspend the ball in front of the paddle by attaching the string to the paddle's top. The string should be just long enough to have the ball hang freely at the "1 g" reading. This paddleball g-detector can be calibrated because most paddleball balls have about the same mass. When purchasing paddleballs for this activity, be certain to get balls that are not too light. After the detectors are completed, discuss what g's are. Astronauts use the term to describe the sensations of space flight. One g is the force you feel as you sit or stand on the earth's surface. If you travel upward quickly (like an astronaut at lift off), you may feel twice or three times as heavy as normal. This is called 2 or 3 g's. If you fall on a roller coaster or elevator, you feel lighter than normal. Then you are experiencing less than 1 g.

MEASURING g's: Once Young Astronauts have made their g-detectors, this can be a fun community activity to determine where people feel heavier and lighter than normal. The fast elevator in a sky skyscraper can be the source of changing forces. To verify their paddleball readings, Young Astronauts can also carry a bathroom scale on the elevator ride. The bathroom scale is more sensitive to small changes in force. Students can have a contest to see who can gain or lose the most weight. The paddleball g-detector or bathroom scale will read lower g's as the elevator stops or starts. Readings will be greater than normal when the elevator starts up or stops going down. In a car, force changes are even greater. A sudden bump can send a passenger off the seat. This is a moment of zero g or weightlessness. Passengers can feel themselves pushed into their seats in a steep valley or dip. In discussing the g's felt in cars, be sure to urge proper speeds and safety precautions. Playground forces depend on how fast the riders are going. Once again safety precautions must be stressed. Students must always hold on with both hands on the swing, merry-go-round, and see-saw. They can tie their g-detectors in place before the ride begins. The swing and see-saw can produce weightless sensations as riders reach the highest point and fall downward again. The merry-go-round spinning rapidly can give almost one g of sideways force. In talking about the g's felt, remind students that the Shuttle astronauts never feel more than 3 g's -- even at lift off. For safety's sake, students should also avoid experiences that pull over 3 g's.

TOYS THAT TEACH

BOUNCING THE BALL

Paddle a paddleball up.....
sideways.....
and then down.



Count the number of hits you get in each direction.
Record the numbers.
Watch five of your friends paddle the ball.
Record their names and scores.

Paddler	Paddle Up	Paddle Down	Paddle Sideways
Me			

Which direction is the easiest?

Which direction is the hardest?

Can you explain why?

TOYS THAT TEACH

Adventure Series

YOUNG ASTRONAUT PROGRAM

PADDLEBALL G-DETECTOR

United States of America

A paddleball can be used to measure the forces you feel. Cut out the paddleball pattern and glue it to the side of the paddle where the ball is not attached. Push a tack into the top of the paddle. Hang the ball from the tack by attaching the string to the tack. Fix the string's length so that the ball hangs just in front of the 1g circle. Your g-detector is now complete.

Hold it in front of you. As you stand still on the earth's surface, you feel a 1g force. That is what your paddleball reads.

Can you think of places where your paddleball force detector would not read 1g?

TOYS THAT TEACH

MEASURING G'S

nce you have made a g-detector, you can measure the forces you feel. If you feel a force at is twice as strong as the earth's pull on you, your g-detector will register 2g's. If you el no forces for a moment, then you are feeling 0g, or weightless. See what happens to ur g's in these places:

ON ELEVATORS:
Use your g-detector to show the changing forces in an elevator. Pick the tallest and fastest elevator you can find. Describe the results in the table below:

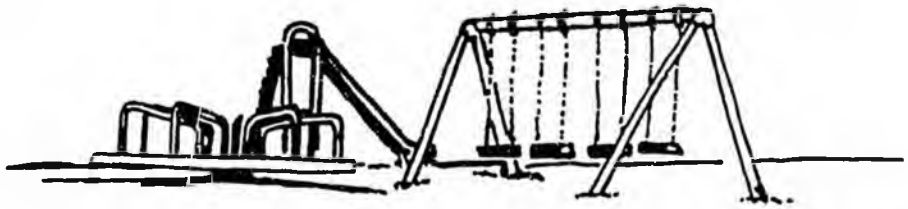
LOCATION	g's MEASURED	SENSATION
As elevator starts up		
As elevator stops going up		
As elevator starts down		
As elevator stops going down		

IN CARS:

Carry your g-detector in a car. Bumpy roads with hills work best. Be sure that your driver is careful. What happens as you go over a bump or hill? What happens as you go through a valley or dip?

AT PLAYGROUND:

Find out where you feel the strongest forces: on a swing, on a merry-go-round, on a see-saw, or on a slide.



PHYSICS OF FUN

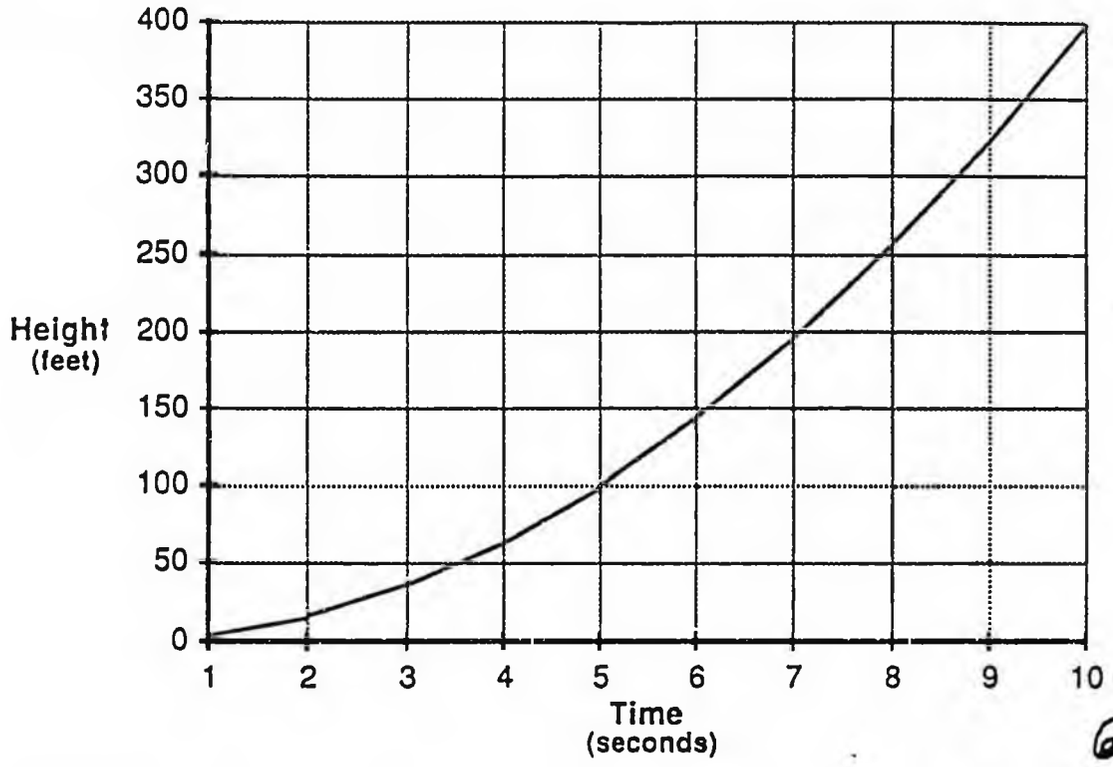
Adventure Series

YOUNG ASTRONAUT™ PROGRAM

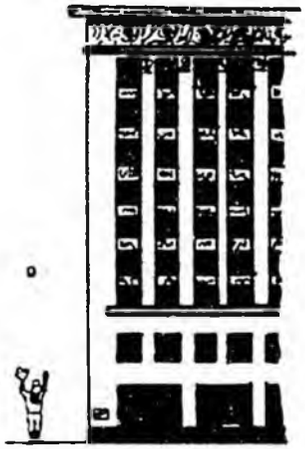
United States of America

HOW HIGH

For this experiment you will need a stopwatch and a baseball. Throw the ball straight up. Have a classmate time how long it takes for the ball to return to your hand. Read the graph below to find out how high your ball went.



Your highest toss is _____ feet.
Each story of a building is 12 feet high.
With your toss, you could put a baseball on top of a _____ story building.



Go to a baseball game. Time how long it takes for a pop fly to return to the ground. Figure out how high the pop fly traveled.

PHYSICS OF FUN

HOW FAR AND HOW FAST

A baseball diamond is 90 feet on a side.
Watch a baseball game in the stands or on television.
Time how long it takes for a runner to get to first base.
Record this time along with the player's position, i.e., pitcher, catcher, outfielder, infielder.
Divide 90 feet by this time. The result is the player's speed in feet per second. Multiply this number by .68. The product is the baseball player's speed in miles per hour. Convert your results to kilometers per hour. (mi/hr) X 1.6

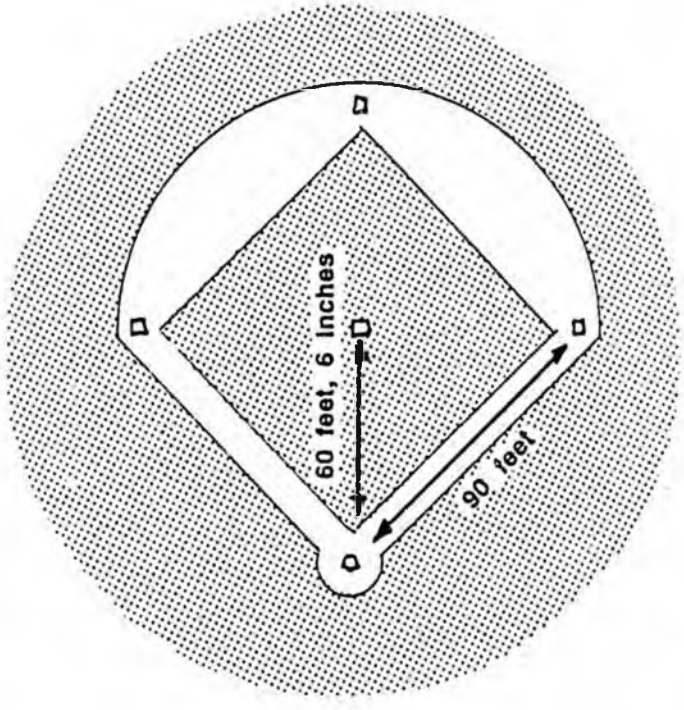
PLAYER'S POSITION	TIME (sec)	SPEED (ft/sec)	SPEED (mi/hr)

Which players are the fastest?
Is this logical? Why or why not?

Time a line drive from impact with the bat to being caught by a fielder. Estimate how far the ball traveled. Use the length of the base lines as a guide. Divide the distance by the time to find out how fast the ball traveled.

Time of line drive:
Approximate distance traveled:
Approximate speed:

The pitcher's mound is usually 60 feet 6 inches from the plate. Time how long it takes for a ball to leave the pitcher's hand and reach the plate. Divide this time into 60. The result is the ball's speed in feet per second. What is the fastest pitch you see in an inning? Convert this speed to miles per hour? Then kilometers per hours.



FASTEST SPEED	ft/sec):	(mi/hr):

YOUNG ASTRONAUT™

The Official Newsletter of the Young Astronaut Council Volume III, No. 4 March/April 1987

Soviet Visitors Leave a Lasting Impression

The word "drug" became a common one during the 13 days the Soviet Young Cosmonaut delegation spent in the United States. It means friend in English and there were new friends to be made in Washington, Orlando, Huntsville, Houston and New York. In addition, there were old friends to renew relationships with along the way.

Ten Young Cosmonauts and five adults, including the Soviet Cosmonaut who holds the record for time spent in space, arrived at Dulles International Airport on December 9. They were greeted by an enthusiastic crowd of more than 50 Young Astronauts from Hutchison Elementary School in Herndon, Virginia and other dignitaries including columnist Jack Anderson, the Chairman of the Young Astronaut Council, Wendell Butler, Executive Director of the Council, and Florida Congressman Bill Nelson, who flew aboard Space Mission Columbia 61-C in January 1986. Nelson entertained the Hutchison students with tales of space adventures while the Soviets were checked through Customs.

And then they arrived. Vladimir Shaplyko, the leader of the delegation and the Secretary of the Komsomol Central Committee, Vladimir Solovyov, the Soviet Cosmonaut who spent 362 days in space aboard two separate missions, Viktor Yevseyenkov, Chief of Section, Committee on Youth Organizations (CYO), Viktor Boychevskiy, CYO staff member, Elena Kolesnikova, a teacher at the Moscow Teachers Training College, and Young Cosmonauts Aleksey Alkhov, Michayl Baskov, Yuliya Grishina, Yuri Zolotov, Aleksander (Sasha) Konkov, Oleg Korotovskikh, Pavel Kudryavtsev, Tanya Nikitina, Igor Novikov, and Anton Perkusev. The Hutchison students waved their Soviet and American flags wildly and later gave each member of the delegation a gift of flowers. The Soviets in return shared souvenirs with the Hutchison Young Astronauts.

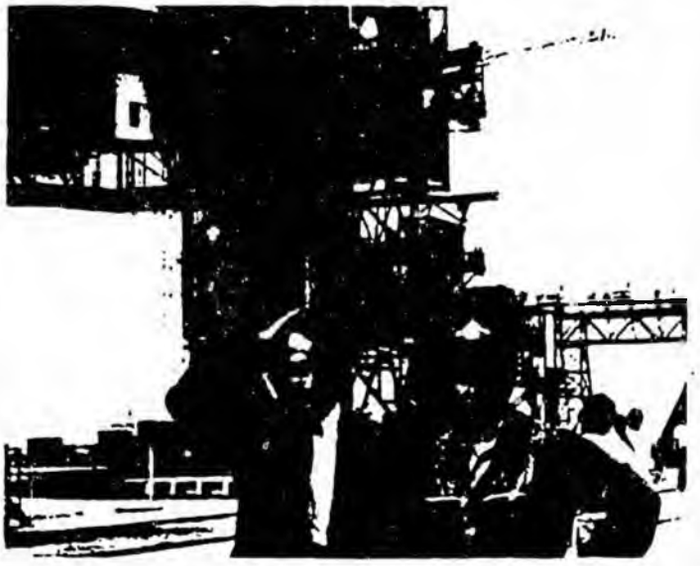
Anderson welcomed the Soviet delegation warmly and said, "I look forward to a great time together and in ten years we will be going to Mars together." Shaplyko thanked

continued

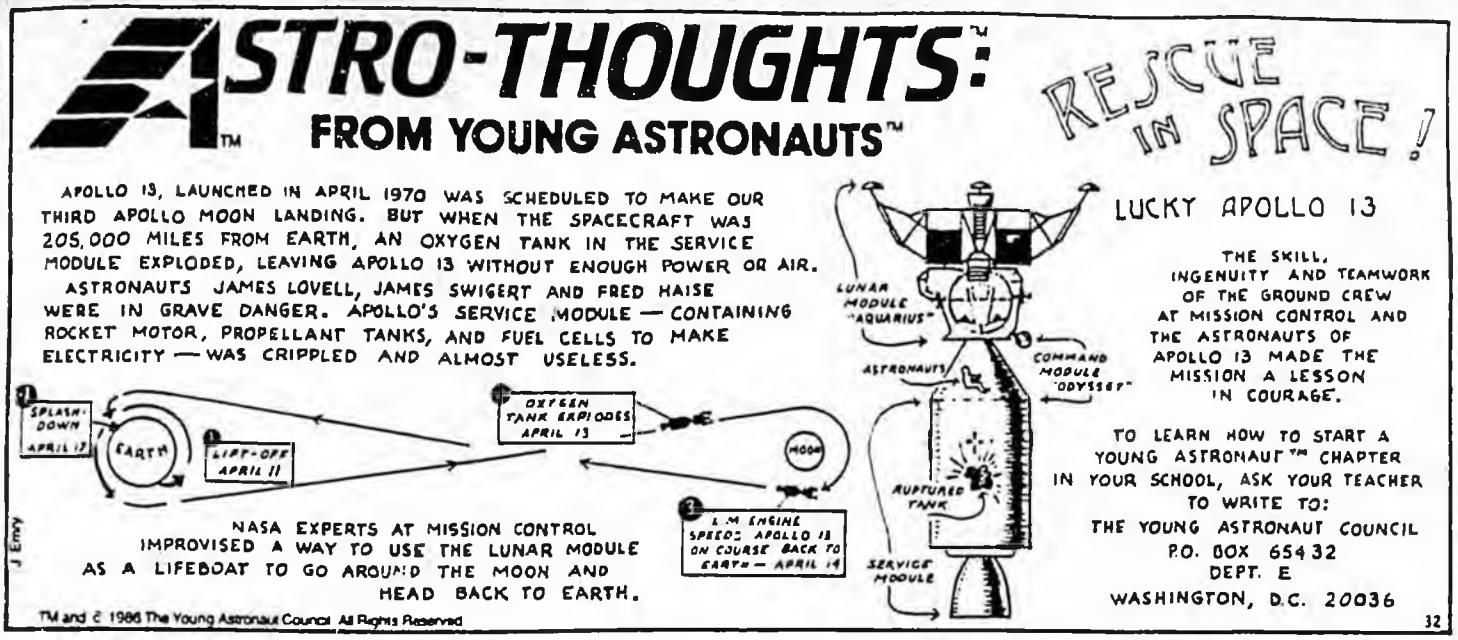
SOVIETS STEP-OUT — Members of the Soviet delegation enjoy a jaunt to Disney World's Magic Kingdom and share a moment with Mickey Mouse and Pluto. They are from left to right: Young Cosmonauts Aleksey Alkhov, Michayl Baskov, Pavel Kudryavtsev, Igor Novikov, Yuliya Grishina, Oleg Korotovskikh, Tanya Nikitina and Elena Kolesnikova, a Soviet teacher and translator for the group.
Photo by Walt Disney Corporation

WELCOME — Young Astronauts from Hutchison Elementary School, in Herndon, Virginia, give the Soviet delegation a rousing welcome when they arrive at Dulles International Airport on the first leg of their 13 day tour.

Photo by Vicki Warren



LAUNCH PAD INSPECTION — Vladimir Shaplyko, leader of the Soviet delegation and Vladimir Solovyov, a Soviet Cosmonaut, take a close-up tour of a launch pad at the Kennedy Space Center, Cape Canaveral, Florida.



everyone for the warm reception and added, "When we go back home, we will tell our children everything we have seen."

Amy Grubb, of Clairton, Pennsylvania, one of the Young Astronauts who visited the Soviet Union in October, flew to Washington to greet the delegation and to see Tanya, Yuri and Sasha again. She grew friendly with the trio during the time she spent in the Soviet Union. Amy gave Solovyov an American and a Soviet flag.

After the reception, it was on to a visit at Hutchison Elementary School. The Soviet delegation hopped aboard a bus donated by Safeway Stores to ferry them about Washington. At Hutchison, the group had a chance to view the kind of projects American students are involved in at their schools. They also shared two six-foot long submarine sandwiches with the students, teachers and other guests.

Here is how one Hutchison student described the Soviet visit, "When I first heard about them coming, I had a picture of them in my head. The Cosmonauts looked nothing like I had expected. They looked just like us. I really enjoyed participating in it. I think Friendship Through Space is a very good thing to do. I think we should do more things with the Young Cosmonauts and Cosmonauts."

The next two days spent in Washington were action-packed. From the National Air and Space Museum where the delegation got a chance to examine U.S. space artifacts and view the film "The Dream is Alive" on a giant screen, to Arlington Cemetery where the group laid a wreath at the Tomb of the Unknown Soldier, there was plenty to see and do. The delegation was also invited to a private session at NASA headquarters with James Fletcher, the current head of the space agency. Fletcher was the head of NASA during the days of Apollo-Soyuz, the joint American-Soviet mission. At NASA, the delegation was given a variety of space gifts, including an autographed picture of Astronaut Frederick H. Hauck, who showed slides of his mission into space.

Other highlights of the Washington part of the U.S. visit included the viewing of Star Trek IV, a reception at the Soviet Embassy, viewing the White House Christmas tree lighting, a visit to the graves of President John F. Kennedy and Astronaut Dick Scobee, lunch at McDonalds and a bus tour of Washington. One of the more poignant moments occurred during a lunch at Joe and Mo's Restaurant. According to Tanya, one of the most important holidays in the Soviet Union is a person's birthday. Appropriately, her sixteenth birthday fell on the group's third day in Washington and everyone shared a grand celebration provided by Joe and Mo's, a popular Washington restaurant. Liza Mallott, a staff member at the United States Information Agency, baked a special cake decorated with flags of the Soviet Union and the United States. The Council presented Tanya with a Young Astronaut cabbage patch doll. Those at the lunch were also treated to a musical

continued

FIRST HAND LOOK — Members of the Soviet delegation get a close-up view of space equipment at the Marshall Space Flight Center in Huntsville, Alabama.

REAL TASTE OF AMERICA — Tanya enjoys a lunch break at McDonalds restaurant during the Soviet delegation's visit. The McDonalds Corporation treated the delegation and visiting dignitaries to some "real American food."

rendition of "Happy Birthday" by the Joe and Mo waiters, and Lolita Hickman, Deputy Director of the Council, sang "O Holy Night." Also invited were representatives of the Future Farmers of America who concluded that the Soviet Young Cosmonauts "were just regular kids." It was a special occasion in every way.

The group hardly had time to settle into their lovely accommodations provided by the Mayflower Hotel before they were off to Orlando, Florida. Thanks to the Department of Transportation, a special plane was made available to the group for the entire trip. American Airlines was generous enough to provide two stewardesses, Gale Sloan and Martha Flannagan.

rockets are on permanent display.

During a press conference held by NASA at Kennedy Space Center, Soviet Cosmonaut Solovyov told the group that during his most recent space trip to the Soviet Space Station Mir, he took a picture of the seven Challenger astronauts with him. "I wanted those seven brave astronauts to go to outer space," he said.

Soviet Young Cosmonaut Yuri Zolotov had this to say about Kennedy Space Center, "We have a saying in Russian, it's better to see something once, than to hear about the same thing seven times."

Later, back at the hotel the delegation was honored by Action Packets, a sponsor of the Young Astronaut Program.

SPACE UPDATE — Young Astronaut Antonio Smith, second from left, joins the Young Cosmonauts examining space equipment at Marshall Space Flight Center in Huntsville, Alabama.

ASTRONAUT HONORED — Yullya Grishina and Sasha Konkov honor Challenger Astronaut Dick Scobee by placing flowers on his grave at the Arlington Cemetery.

Photo by Katherine Lambert

Disney World in Orlando was a big hit with the Young Cosmonauts. They thoroughly enjoyed Epcot Center, the Magic Kingdom and the wonderful accommodations provided by Orlando Marriott World Center. They loved the glass outdoor elevators, indoor and outdoor swimming pools and jacuzzis. The Young Cosmonauts also tried their hand at video games for the first time and got "hooked."

The Florida trip included a stop at Kennedy Space Center, where the delegation had the unique opportunity to walk out onto a Shuttle Launch Pad, tour the Vehicle Assembly Building, a 52-story structure where Shuttles are readied for lift-off, visit the Apollo Moon Program Flight Simulator and stop at the Space Port Visitors Center, where a variety of

A press conference was held and the Young Cosmonauts were interviewed by local junior and high school journalists. Adult members of the press were also there, but it was the student journalists who impressed the Young Cosmonauts the most.

A barbecue was also held by Action Packets. Besides getting a taste of good old American food, the Soviets were treated to a square dance complete with straw hats and bandannas. After sharing the American dance tradition, the Soviets treated everyone to a display of Russian dancing.

The next two days were spent at Epcot Center and Disney's Magic Kingdom, both made more enjoyable because of the hospitality of the Walt Disney Corporation and the three escorts they made available. At Epcot Center, the group really enjoyed the spectacular battle between good and evil fought by planes, boats, hydroplanes, hand gliders and dragons. Good won and everyone cheered.

At Disney's Magic Kingdom, everyone enjoyed shaking hands with Mickey Mouse, Pluto and Donald Duck. The parade marking Disney's fifteenth anniversary was also a special hit.

The next stop on the delegation's whirlwind American tour was another Young Cosmonaut favorite — United States Space Camp in Huntsville, Alabama. Eastern Airlines was kind enough to offer all the Young Astronauts who visited the Soviet Union a flight to Huntsville, and Space Camp opened its doors to the entire group of Young Astronauts and Young Cosmonauts. Officials at Space Camp had the facility's technical manuals translated into Russian for the Young Cosmonauts and had interpreters on hand to aid the Cosmonauts while they were in training. The Young Cosmonauts and Young Astronauts participated in two simulated shuttle missions and later were given wings as part of their graduation.

Cont. on page 6

FLYING HIGH — Soviet Young cosmonaut Yuri Zolotov and American Young Astronaut Chip Yarborough get a chance to "fly" at U.S. Space Camp in Huntsville, Alabama.

Young Cosmonauts Come To Houston

By Dr. Carolyn Sumners
Director of Astronomy
Houston Museum of Natural Science

On December 17, the Soviet delegation of Young Cosmonauts landed in Houston. They were tired, but ready for the day of fast-paced activity that awaited them.

The first stop was a Safeway grocery store where the group got a chance to meet some local high school students who had been studying Russian. The students and the Young Cosmonauts had plenty to talk about. A tour of the grocery store and a lovely reception followed, and some of the Russians did seem a bit surprised by our food selection — especially the variety of fresh fruits and vegetables in the winter.

After a brief check-in at their hotel, the group arrived for the evening's festivities at the Houston Museum of Natural Science. The Mayors of both Houston and Friendswood proclaimed December 17 and 18 as "Young Cosmonauts' Days." A bilingual program entitled "Sharing the Space Adventure" was enjoyed by the Soviet delegation and the Houston Young Astronauts and their families. The audience was "carried" to Venus, Mars and the Moon. At each destination, the theme of Americans and Soviets exploring space together was reintroduced. The finale of the program was a picture of the Earth as seen from space and a restatement of the idea that we are all brothers sharing the Earth and sky.

The Young Cosmonauts then joined the Museum's Young Astronaut Commanders in a tour of the Observatory with its optics and computer labs. Along the way, they met a Russian-speaking robot, had their hair stand on end with a Vandergraff generator, learned how laser light shows are produced, and experimented with the Museum's microcomputers.

By this time, everyone was starved, and the group quickly joined all the other Young Astronauts around the Museum's big dinosaur. Twelve long library tables held over 120 different dishes prepared by the Museum's Young Astronaut Chapter members. They helped serve their dish to members of the Soviet delegation and other visiting dignitaries.

In the formal, after-dinner program, the Houston Young Astronauts presented a bilingual welcome with banners and signs. Captain Alan Bean, the fourth man to walk on the Moon, described what it was like to explore the lunar surface. Jim Oberg, an American expert on the Soviet Space Program, welcomed the delegation on behalf of space enthusiasts of all nations. Thanking them for their expressions of grief over the loss of the Challenger astronauts, June Scobee, wife of Challenger Commander Dick Scobee, spoke eloquently to the Soviet delegation. Soviet Cosmonaut Vladimir Solovyov ended the speeches with his own personal hope for cooperative space efforts between our two countries.

The evening's final event was a telecommunications conference on CompuServe. Callers from around the country were encouraged to ask questions using their computers. The questions were translated into Russian and then answered by the Young Cosmonauts. The discussion allowed many more Americans to participate in the visit by the Soviet delegation.

The next day, the Soviet delegation and five Young Astronaut Commanders from the Museum enjoyed a VIP tour of the Johnson Space Center. Eight astronauts accompanied the group and led them through a Space Station Mock-up and the Shuttle trainers. The Young Astronauts and Young Cosmonauts sat in the trainer cockpit, operated the remote manipulator arm from the flight deck trainer, and rode on the frictionless table where astronauts train to operate the Manned Maneuvering Unit. The delegation also visited Mission Control and was allowed to push buttons and turn dials. Everyone saw different kinds of moon rocks and how rockets were handled. Later, they were treated to a lunch in the Space Center Cafeteria by the American Institute for Aeronautics and Astronautics.

The visit ended with the Young Astronauts wishing the Young Cosmonauts a fond farewell at the airport. At the next Young Astronaut meeting, everyone shared memories and memorabilia from the delegation's stop. Many of the Young Astronauts had collected autographs, others had addresses of their favorite Young Cosmonaut so they could write letters and the Commanders had been given lapel pins and small gifts from their new Soviet friends. We are now researching whether CompuServe can send electronic mail to the Soviet Union so that we can send our new friends our thoughts and best wishes.

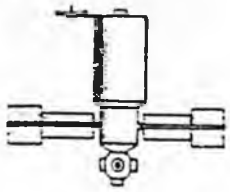
SPACE STATION — Young Cosmonauts and Young Astronauts get a close-up view of the Space Station's Operation Module at the Johnson Space Center in Houston.

Trainee Activity

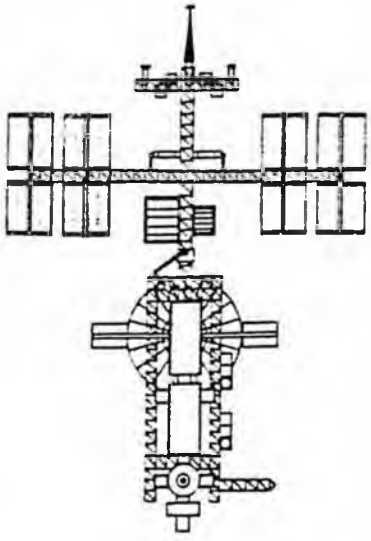
Space Stations of Today and Tomorrow

The Soviet Union launched its Mir Space Station in 1986. The United States plans to launch its Space Station in the mid 1990's. The Space Stations are similar in many ways — both have solar panels for power, docking places for transfer vehicles, and both have crew quarters and communication antennas. The United States Space Station design has been changed from the preliminary drawing on the right. On the Space Stations shown on the next page, color the solar panels blue, the docking ports green, the communication antennas red and the crew quarters yellow. Can you name the vehicles which carry astronauts and cosmonauts to these Space Stations?

SUPERMARKET WELCOME — Safeway Stores welcomed the Young Cosmonaut delegation to Houston with a reception inside one of their grocery stores. Members of the delegation enjoyed walking around and seeing what kinds of foods are available to Americans in their supermarkets.



U S S R Mir Space Station



U.S. Space Station

Pilot Activity

Name That Date

The Soviet and American space programs have moved ahead with a series of firsts. Name the years of the following special first space occasions.

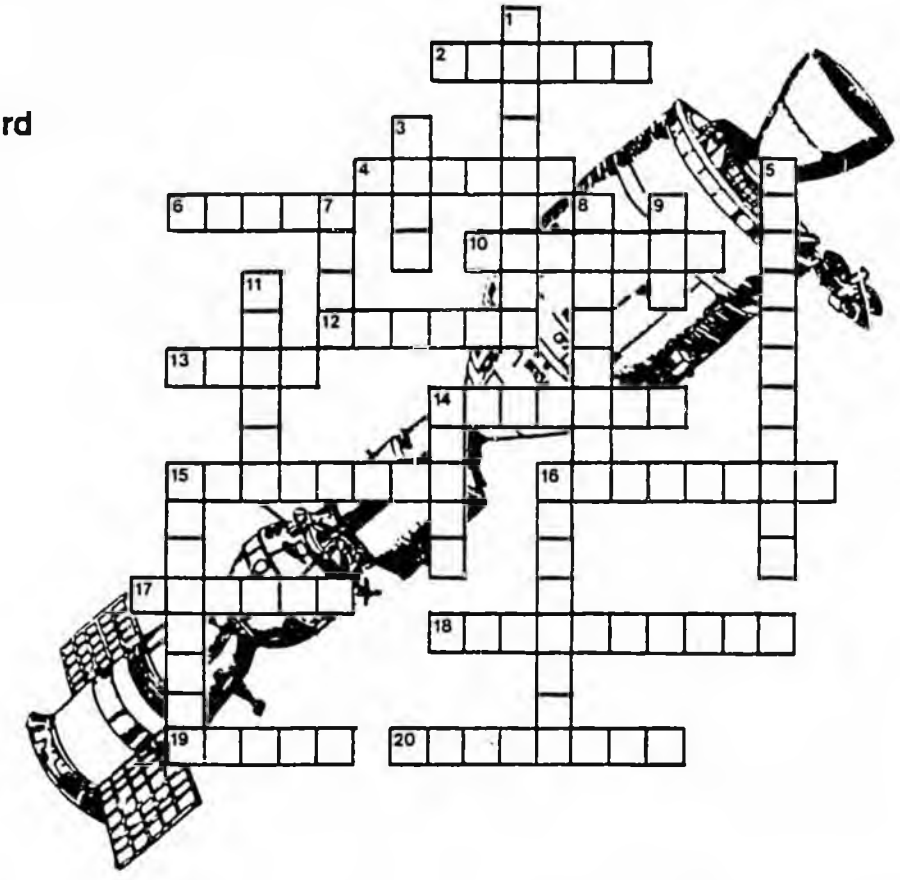
* Sputnik 1, the first artificial Earth satellite, is launched by the Soviet Union. First puppy orbits the Earth.
* America's first satellite is launched.
* Luna 2 crashes into the Moon's surface. Luna 3 makes the first photographs of the Moon's far side.
* Soviet Cosmonaut Yuri Gagarin becomes the first man in space. He is followed one month later by American Astronaut Alan Shepard in a suborbital flight.
* John Glenn is the first American Astronaut to orbit the Earth. Mariner 2 successfully completes flyby of Venus and sends back first useful information.
* America's first manned rendezvous in space aboard Gemini VI and Gemini VII.
* The Soviet Luna 9 craft makes the first soft landing on the Moon. Venera 3 crashes on Venus, the first man-made machine to land on another planet.
* Apollo 8 orbits the Moon with three astronauts
* Apollo 11 lands on the Moon. Neil Armstrong becomes the first human to set foot on another world.
* Luna 16 lands on the Moon and scoops up materials which it returns to Earth. Luna 17 discharges the robot Lunokhod 1, which explores the Moon.

Commander Activity

Soviet Space Program Crossword

Discover how much you know about the Soviet space program. Fill in the crossword puzzle below using these words:

Apollo	Plesetsk
Baikonur	Progress
Cosmonaut	Salyut
Gagarin	Solovyov
Kizim	Soyuz
Luna	Sputnik
Lunokhod	Star City
Mars	Tereshkova
Mir	Tsiolkovsky
Moscow	Vega
	Venera
	Venus



ACROSS

2. American craft that docked with a Soviet craft.
4. First man to walk in space.
6. One of the cosmonauts who first visited Mir.
10. First man in space.
12. First Soviet Space Station.
13. Soviet unmanned Moon craft.
14. First artificial satellite.
15. Place where cosmonauts train.
16. Soviet supply freighter.
17. Capital city of the Soviet Union.
18. First woman in space.
19. Planet that Soviet spacecraft visited first.
20. Unmanned Soviet lunar rover.

DOWN

1. Soviet Cosmonaut.
3. Soviet Halley's Comet probe.
5. Soviet scientist who formulated the theoretical foundations of space travel.
7. Planet that Soviets and Americans would like to visit.
8. Cosmodrome for manned flight.
9. New Soviet Space Station.
11. Soviet unmanned Venus probe.
14. Soviet space taxi.
15. Cosmonaut who first visited Mir and who visited U.S. with Young Cosmonauts in 1986.
16. Military and unmanned cosmodrome.

FOOT-STOMPING IN ANY LANGUAGE — The Soviet delegation was treated to a square dance by Young Astronaut sponsor Action Packets in Orlando, Florida, complete with straw hats.

Also on the agenda in Huntsville was a stop at Marshall Space Flight Center where everyone viewed a Shuttle mock-up, a Space Station mock-up, the Manned Manuevering Unit and the bouyancy tank where astronauts try out equipment under water to simulate zero gravity conditions.

From Huntsville, it was on to Houston, Texas and a reception put on by Safeway Stores. The event gave the Soviet delegation a chance to see what is available in American grocery stores. Pepsi-Cola gave the group gift bags at the reception and later they were whisked off to the Warwick Hotel where rooms were provided for their Houston stay. Special events were planned by Dr. Carolyn Sumners and the Young Astronauts at the Houston Museum of Natural Science (more on that part of the trip on page 4).

After a fun visit to the Museum and Johnson Space Center, the government plane was waiting to take the group to New York City and the final leg of the Soviets' American trip. Donald Trump hosted the adults in the delegation for a special dinner as a welcome to the City. It was beautifully decorated for Christmas, and the Soviets enjoyed shopping, especially for electronic goods like radios. Young Astronaut Rica Buxbaum's school, the Robert F. Wagner Junior High School, invited the delegation for a special program. The student orchestra played, mimes entertained and dignitaries spoke. It was an enjoyable morning and later the delegation was treated to some shared computer time with students from Robert F. Wagner.

ENTERTAINING — The Soviet Young Cosmonaut delegation found many interesting things to see and do at the Robert F. Wagner Junior High School. The student body put on a show for the visitors which included music and mime.

A visit to the Empire State Building was of great interest to the delegation. The group rode the elevators to the 102nd floor and had a panoramic view of the entire city. Skyscrapers don't exist in the Soviet Union and the group was impressed by the height of the Empire State Building.

Other highlights of the New York visit included the Christmas show at the Radio City Music Hall complete with the Rockettes. The following evening, McGregor's Sports Specialties arranged for the delegation to enjoy an elegant dinner at the private club at Madison Square Garden. Afterwards, they had a chance to meet members of the New York Knicks basketball team. Adidas later hosted the delegation at a team basketball game.

had become our precious "drougs" in the 13 days they spent here in the United States. They had been given gifts at every stop along the way and Sasha said he came with two suitcases and was leaving with six. Pavel was interested in the number of hats and bags that the group was being showered with. At one point, he had 12 bags and 10 hats. There were also bags and sweatshirts specially designed by the Fashion Institute of Design and Merchandising and books from Bantam Books. In addition, special thanks has to be given to Rockwell International, United Technologies and the Harris Corporation for money they donated to fund the trip.

YOUNG COSMONAUT GETTING READY FOR TAKE-OFF — Igor Novikov, a member of the Soviet Young Cosmonaut delegation, tries some space equipment on for size at Marshall Space Flight Center in Huntsville, Alabama.

It was hard to believe, but the time had come for the delegation to leave. After a farewell brunch at the New York Marriott Marquis, the group boarded a bus for John F. Kennedy Airport and the flight home. Fifteen people

The Soviets were warm and wonderful people who left a special feeling whereever they went. When they left, they bid us all "dosvedanaya" or good-by.

TOO MUCH TOURING — It was an action-packed tour of the United States for the Soviet Young Cosmonaut delegation and Michayl Baskov and Pavel Kudryavtsev take time out for a little rest.

taff

oung Astronaut Council am operations running ht, Lorelle Goodpaster, T. thouser and Jennifer Rae. g, Lolita Hickman and Liane

Photo by: Vicki Warren

t to President Reagan in with his idea for an nization to foster young ple's interest in math and nce by using the excite- of the space program. gan assigned the idea to ffice on Private Sector tives and asked them to de whether or not the House should get id the plan. They voted to r it, after a Blueprint nittee designed a model ducational experts gave ea their okay. That was than two years ago and now the rest — 10,000 Astronaut Chapters, ational Youth Exchanges

ng Astronauts

CHOOL NAUTS

FIRST — Walnut Street Toms River, New Jersey, ry for their prize-winning bove. Chapter Leader were the largest group . Walnut St. Elementary tronaut Program for two t Chapters at the school dults joined the Young was viewed by 80,000

and rapidly growing interest at home and abroad in adopting the Program.

Butler's interest in space goes back to his days as an Air Force officer more than two decades ago. He then went to work for a variety of Presidents, from John F. Kennedy to Ronald Reagan.

Still he has been most successful as the leader of the Young Astronaut Program and predicts even better days ahead.

One of the keys to the growth of the Young Astronaut Program has been the top flight staff at the Council. At no time was it more essential then when the Program first got started. In those days, getting the ball rolling fell to Lolita Hickman, Butler's right hand "man." Today, Hickman is the Deputy Director for Administration and she watches over personnel and finance matters. She holds a Masters Degree in industrial psychology from Southern Illinois University and her specialty is organizational development.

Russ Ritchie, a newcomer from NASA, serves as Deputy for Operations. Russ oversees the programs and projects of the Council and makes certain that quality work is produced on schedule. Russ worked for 25 years as a federal executive and brings experience and space education knowledge to his post.

Mary Ellen Foster came on board in December, 1985 and for a time acted as secretary for Lolita and Wendell. Today, she is an administrative assistant and assists the accountant. Her years of experience in office work for the Defense Department draw other office workers at the Council to her for advice. She says that space is "a mystery" to her and is more interested in the Young Astronaut Program for what it does for children.

The Hon. Dick Funkhouser has been with Butler and the Program since its inception. He was a career Foreign Service Officer and Ambassador with the State Department and served in the Soviet Union, France, Romania, Vietnam and several African and Middle Eastern countries. It is only logical that Funkhouser head up the international side of the Young Astronaut Program. He has built up the foreign segment of the Program to 144 overseas Chapters and Satellites in 29 foreign countries and has negotiated exchange visits with Canada, Japan and the Soviet Union. Funkhouser also serves as "quality control" for all official documents and handles the "Pilot" schools which pretest Young Astronaut Program curricular materials in the classroom.

Lorelie Goodpaster serves as the accountant for the Council. She began overseeing the books in April 1986. Prior to her work for the Council, she served as an accountant with the Center for Strategic and International Studies. She holds two degrees — one in accounting and another in commercial education. One reason she came to the Council is she saw the potential for growth and she herself has witnessed it since she began working there.

A more recent arrival at the Council is Butler's personal secretary Liane Kerry, who started work last October. Kerry is also studying for a liberal arts degree at a nearby college. She is a science fiction buff and so has an indirect interest in space.

Linda Long serves as Butler's special assistant and helped organize the Soviet-American Youth Exchange. She was a member of the delegation to the Soviet Union in October and accompanied the Soviet delegation during their U.S. visit. Long, who has a law degree from Delaware Law School, worked for NASA and later served as a public relations person for Christa McAuliffe. She has been at the Council for about a year and has been successful furthering the organization's aims. Her next move is to help in marketing at the Council.

When you call the Young Astronaut Office, the first voice you usually hear belongs to Jennifer Rae, the receptionist for the Council for the past year. Before she came to the Young Astronaut Program, she worked in financial planning for two years. She has an undergraduate degree from Sweet Briar College in political science.

Congratulations to all for a job well done!

Contest News

Throughout the year, the Young Astronaut Council holds a variety of contests designed to challenge the creativity and imagination of Chapter members. Winners of one competition were recently selected — The Young Astronaut Space Olympiad Contest. Young Astronauts were asked to invent games that could be played in the zero gravity conditions of space and the 40 percent gravity of a Mars Space Station.

The entries were both imaginative and ingenious. Judging was difficult and T. Wendell Butler, Executive Director of the Young Astronaut Council, along with Glenn Swengros of the President's Council on Physical Fitness, commended all the participants for their outstanding ideas.

Congratulations to the following Young Astronauts for their winning entries:

Commander Level

First Place:
Sean MacNew
Roland Park Middle School
Baltimore, MD
Jeff Brady
Arcola Intermediate School
Norristown, PA
David Gradella
Ockerman Jr. High School
Florence, KY

Second Place:
Richard Essary
West Jordan Middle School
West Jordan, UT
Shane Pulver
Churubusco Jr. High School
Churubusco, IN
Brian Thomas
Bryson City Elementary School
Bryson City, NC
Jeremy Wiesbrook
Otter Space Young Astronauts
Streator, IL
Alberto Sanchez
Mary Help of Christians School
Tampa, FL
Ron Wales
Twin Spruce Jr. High School
Gillette, WY

Pilot Level

First Place
Jason Bates
Thomas E. Bowe School
Glassboro, NJ
Arin Leber
Woodlawn Elementary School
Danville, KY
Steve Bailey
Jerabek Elementary School
San Diego, CA

Second Place:
Michael Jensen
Douglas T. Orchard
Elementary School
West Valley City, UT
Allison Hipwell
St. Luke's Episcopal School
Baton Rouge, LA
Richard Miller
North Belle Vernon Elementary
Belle Vernon, PA
Jonathan Panz
A.J. Griffin Middle School
High Point, NC
Michael Murphey
Erie Elementary School
Erie, IL

Trainee Level

First Place:
James Wadell
Chadds Ford Elementary School
Chadds Ford, PA

Daniel Hesler
Lapeer Young Astros
Lapeer, MI
Laura Vrabel
Schuchard Elementary School
Sterling Heights, MI

Second Place:
Quentin Harrison
Charlotte Anderson Elementary
School
Arlington, TX
Raj Singaraju
Club #923 Aliens
Alburquerque, NM
Keith Chilton
Southwestern Elem. School
Hanover, IN
Juan Pedro Sanchez
Young Astronauts of Cancun
Cancun, Mexico
Matthew Kemmis
St. Patrick School
Jaffrey, NH
Shelly Jo Engel
SkyMaker Pilots
Long Beach, NC

Additional Third Place and Honorable Mention winners were selected and are being notified by mail. Congratulations to all those who entered the contest. You did an outstanding job.

Trainee Answers

The Soyuz carries cosmonauts. The Shuttle will carry astronauts. The solar panels are the flat panels on the sides of both stations. The docking ports are the concentric round circles. The crew quarters are the cylinders. The antennas are obvious.

Pilot Answers

1957
Soutnik 1, the first artificial Earth satellite, is launched by the Soviet Union. "Laika," a part-Samoyan puppy, orbits the Earth aboard Sputnik 2.

1958
Explorer I, America's first satellite is launched on January 31.

1959
Luna 2 crashes to the Moon's surface. Luna 3 makes the first photographs of the Moon's far side.

1961
Yuri Gagarin becomes the first man in space. One month later, Alan Shepherd completes a suborbital flight aboard Freedom 7.

1962
John Glenn becomes the first American to orbit the Earth on February 20.

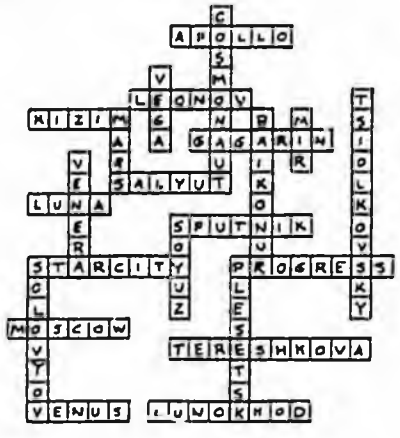
1965
On December 4, Gemini VII is launched and 11 days later Gemini VI lifts off. They meet each other in space for the first manned rendezvous

1966
The Soviet Luna 9 craft makes the first soft landing on the Moon.
Venera 3 crashes on Venus, the first man-made machine to land on another planet.
In December, Mariner 2 is launched and completes a 109 day mission and sends back the first useful information.

1968
Apollo 8 orbits the Moon with three astronauts.

1969
Apollo 11 lands on the Moon. Neil Armstrong became the first human to set foot on another world.

1970
Luna 16 lands on the Moon and scoops up materials which it returns to the Earth. Luna 17 discharges the robot Lunokhod 1, which explores the Moon.



Announcement for all Young Astronauts: Each Young Astronaut is eligible to receive a Personalized Membership Kit containing Young Astronaut stickers, a Certificate of Membership suitable for framing and a personalized Membership card. If you have not already sent for your kit, call toll-free 1-800-328-2791 (in Minnesota call collect: 612-881-3409) for more details about this special offer.

Young Astronaut Program List of Corporate Sponsors

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HOUSE COMMITTEE REPORT

(7)

Date referred: 3/17/88 FURTHER REFERRALS:

DATE: April 19, 1988

The Health, Education and Social Services Committee has considered CSSCR 37(HESS)

Relating to the Young Astronaut Program.

RECOMMENDS:

[ ] replace with ______ [ ] the same title

[ ] attached amendment(s) [ ] a new title

[X] do pass

[ ] do not pass

[ ] no recommendation

[ ] individual recommendations

[ ] additional referral to the ______ Committee

ADOPTS: [ ] ______ letter of intent

ATTACHES NEW FISCAL NOTE(s):

[ ] fiscal impact

[ ] zero fiscal note

[ ] zero with analysis

[ ] same as previous fiscal note published ______

[X] same as previous zero fiscal note published 2/25/88

SIGNING DO PASS:

Johny Ellis

[illegible]

Bill Hudson

Max Gruenberg

Niilo Koponen

[illegible] Hanley

Dave Donley

SIGNING OTHER RECOMMENDATIONS:

Niilo E Koponen

Co Chairman's Signature

Johny Ellis

STATE OF ALASKA
1988 LEGISLATIVE SESSION

BILL VERSION: CSSCR-37 (Hess)
PUBLISH DATE: 2/25/88

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: . . young astronaut program. . .

Agency Affected: Education
BRU: _____

Sponsor: Uehling
Requestor: Senate HESS

Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING		Ø	Ø	Ø	Ø	Ø
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND		Ø	Ø	Ø	Ø	Ø
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

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Division: Commissioner's Office
Phone: 465-2800
Date: 2-19-88

Approved by Commissioner: William G. Demmert
Agency: Department of Education
Date: 2-19-88

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