



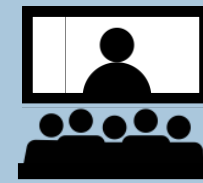
## Online Learning

Delivery of core courses or content online.

[Example: Ketchikan Digital Academy](#)

### Bandwidth Requirements

384 Kbps - 1.5 Mbps per concurrent user  
WiFi 54 mbps access points



## Virtual Telepresence & Video Conferencing

Delivery of instructional content, professional development and special services from inside or outside the district.

[Example: Kodiak Island School District](#)

### Bandwidth Requirements

2 Mbps per robot,  
4 Mbps per video unit (dedicated)  
Robot: Overlapping WiFi



## Use of Bandwidth in Instruction

### Recommendations:

ConnectED Initiative and State Technology Education Director's Association  
Goal: 1 Mbps per student by 2018



## High Access Learning Environments and Personalized Learning

Teachers and students use technology to amplify learning by researching, creating content and digital products, and communicating through email, video and audio.

[Example: CDL device per learner \(140+ schools\)](#)

### Bandwidth Recommendations

500 Kbps per concurrent user  
Overlapping Wifi Access per classroom



## Collaborative Learning

Creativity and communication platform for sharing and tracking high level STEM learning activities.

[Example: Trillium Learning/Copper River/KIBSD](#)

### Bandwidth Recommendations

500 Kbps per concurrent use  
(dependent on content)