

# Remote Learning Bandwidth Needs

## Recommended Bandwidth in Megabits per Second

**Household:** At least 25 Mbps  
**Per device:** 5 Mbps Up/Down

**Minimum Data:** 10GB/month per student (unlimited preferred)

A quality broadband connection is required to ensure students are able to complete the educational tasks assigned to them by their teacher. The table below shows the recommended minimum speed to accomplish common educational tasks.

## Typical Bandwidth Needs per Device by Educational Task (Download speed average)

Educational Tasks	<3 Mbps	3 Mbps	5 Mbps	10 Mbps	25 Mbps
Email/Text/Web Browsing					
Audio Streaming (Calls/Podcast)					
Video Conferencing (Zoom, Meets, Teams, etc.)					
Streaming Video (Up/Down) (Youtube) Non 4K					
4K Video Streaming					

Adequate

Marginal

Not Adequate

<b>What might be impacting my current internet connection and bandwidth usage?</b>	<b>What can I do about it?</b>
<p>Internet connections are often “non-symmetrical”. This means that your upload speed may be much slower than your download speed. This could negatively affect video calls or file uploads.</p>	<p>Please make sure to ask your provider what your upload speed is as well as your download speed. Providers often only give the download speed. You can test speeds by using an Internet Speed Test. Note for the most accurate speed test please use a device that is on a wired connection.</p>
<p>Multiple users in the household are all accessing internet resources at the same time.</p>	<ul style="list-style-type: none"> <li>● Video uses the most amount of bandwidth. Try and schedule video calls and video streaming so that everyone in the household is not doing these activities at the same time.</li> <li>● Adjust the settings of the application you are using such as turning off video in a video call when not needed, reducing the quality of your streaming video. Example: in YouTube click in the video player, click settings and click quality.</li> </ul>
<p>If you are on wireless/microwave, you are likely sharing a pool of available bandwidth with other customers in your neighborhood</p>	<ul style="list-style-type: none"> <li>● Understand the limitations of different types of internet access. You may not receive your full promised Internet speed during peak usage times.</li> </ul>
<p>Your router/modem is your gateway to the internet.</p>	<ul style="list-style-type: none"> <li>● If you are far away from your wireless access point, try moving closer to see if it helps.</li> <li>● If you have lots of neighbors close by with WiFi networks, try to ensure that your router is set to use the best available WiFi channel to reduce interference.</li> <li>● Where possible utilize 5GHZ over 2.4GHZ channels as there is less interference in the 5GHZ range</li> <li>● Use speedtest sites or applications to gauge your connection speed</li> </ul>
<p>Some providers limit the amount of bandwidth that you can use in a given month (“data cap”).How much data is considered adequate for a student to complete educational tasks?</p>	<ul style="list-style-type: none"> <li>● As with bandwidth speed, this depends on the tasks. Higher bandwidth tasks such as video based activities, will consume more data.</li> <li>● If possible, choose a solution with no data caps (unlimited data). When not possible, aim for at least 10GB (Educational material)</li> </ul>
<p>Is there a place I can go to get more information about adequate home internet connectivity for educational use?</p>	<ul style="list-style-type: none"> <li>● Each state will have specific resources located on their website</li> </ul>