

## Bandwidth for Online Learning Recommendations

To optimize your success in online courses, the following download speeds are recommended by activity.

Activity	Recommended Download Speed (Average for a single user)
Email and web browsing	500 Kbps
Download a 1 MB digital book in 5.3 seconds	1.5 Mbps
Online learning	250 Kbps
HD-quality video streaming	4 Mbps
Zoom group video session	8 Mbps

(Adapted from Fox et al., 2012)

### Testing Your Bandwidth Capacity

#### Using your mobile phone or tablet:

- Download a free app, such as TEST IT or Speedtest, for Android or iOS to determine your bandwidth capabilities.

#### Using your desktop or laptop:

- Visit <https://www.speedtest.net/> to test your internet capabilities.
- Visit your internet provider's website for more information.

#### If your bandwidth capacity is low, try these options (Cornelius 2015)

1. Turn off video or phone into Zoom meetings.
2. Make sure you're using the standard webcam and not HD webcam.
3. Switch to programs that require less bandwidth such as Google Hangouts, Whatsapp, or Facetime.
4. Plug in your Ethernet cable.

#### Resources:

Cornelius, C. 2015. "How Much Bandwidth Do You Need to Teach Online." Accessed April 8, 2020.

<https://theonlineenglishteacher.com/2015/01/08/how-much-bandwidth-do-you-need-to-teach-online/>

Fox, C., Waters, J., Fletcher, G., & Levin, D. 2012. The Broadband Imperative: Recommendations to Address K-12 Education Infrastructure Needs. Washington, DC: State Educational Technology Directors Association (SETDA).