Google for Education

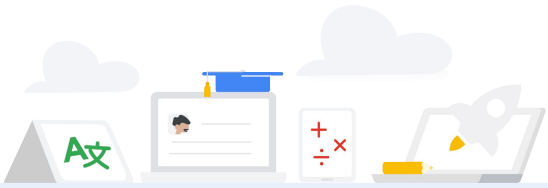
Selecting the right Chromebook for your school, staff and students

This document walks you through four steps to help you choose the right Chromebook:

1. Identify the primary use case, or how the device will be used.
2. Map out the device specifications required for these use cases.
3. Make recommendations for devices that meet these needs.
4. Compare across the device ecosystem and find the right device.

Last Updated: January 2022
Next Update: July 2022
NOTE: Placement of devices within use case categories will be evaluated & updated bi-annually.

Finding the right Chromebook



Basic Classroom Use

Shared student devices

Web browsing

Email

Google Workspace or browser based classwork

Assignments and testing

Recommended software/apps

Google Workspace for Education

Minimum system requirements

RAM: 4GB

Learning Anywhere

Classroom and distance learning devices

Supports multiple browser tabs, Google Workspace, **concurrently** with video conferencing with 100+ participants

Recommended software/apps

Google Workspace for Education

Google Meet/Classroom

Zoom

Minimum system requirements

RAM: 4GB

CPU:

- **Intel:** N4020 /4100 /4120 /4500 /5000 /5100/6000
- **AMD:** 3015Ce/Athlon Silver 3050C/Athlon Gold 3150C
- **MTK:** 8183, 8192
- **QC:** 7c

Advanced Use

Teachers, staff, higher education, high school devices

Recommended for heavy workloads including content creation/editing, coding, running apps in virtualized environments

Supports heavy multitasking (large video calls with 100+ participants, multiple browser tabs, Google Workspace, external monitors/displays)

Recommended software/apps

VC/Comms: Google Meet/Classroom, Zoom, Cisco Webex, RingCentral, Slack and more

VDI: Citrix, VMware, Parallels

Coding: Linux

Print: Papercut, Canon, HP Print, PrinterLogic, Ricoh

Productivity: Google Workspace for Education

Minimum system requirements

RAM: 8GB

CPU:

- **Intel:** Fan - i3, i5, i7, Fanless - i5*, i7
- **AMD:** Ryzen 3, 5, 7

**Fanless i3 devices can support select use cases such as VDI*

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Finding the right device

In the following pages you can find a list of devices organized by manufacturer. The tables above should help you identify the specifications your customer needs. Find the right device that matches their required specs and suits their needs.

Some configurations may only be available in select markets. Please contact your OEM representative regarding the availability of specific devices and configurations. We will update with additional devices twice per year.

Devices marked in more advanced segments can be leveraged for those in more basic segments, but not vice versa. Example - Devices marked for Advanced Use will be able to handle all the workloads in the segments below (i.e. Learning Anywhere, Basic Classroom) e.g., large video calls concurrently with other advanced use cases such as virtualization, coding. However, the devices marked as 'Basic Classroom Use' may not be able to optimally support large video calls with 15+ participants.

AUE: Auto update expiration

You can find information about Auto update expiration for your devices here.

Zero-touch enrollment

For the most updated list of devices enabled for zero-touch enrollment, reference here

Devices that support Parallels

The recommended hardware specifications for Parallels are available here. Devices eligible for Parallels is available to reference here

Connected devices

Devices with WiFi6/LTE/5G SKUs have been color coded

Supported peripherals

Works With Chromebook is a peripherals certification program ensuring compatibility across all makes of Chromebook devices. Here is the list of certified peripherals across various categories including Headsets, webcams, mice, external storage, cables & adapters, wall chargers and others.

Basic Classroom Use

CB 311 (C733/C733U/C733T) [N4000, 4GB]			
CB 314 (C933/C933T/C933TL/C933LT) [N4000, 4GB]			
CB Spin 511 (R752/R752T/R752TN) [N4000, 4/8GB]			

Learning Anywhere

CB 712 (C871, C871T) [CM5205/ PMD6405U, 4GB]			
CB 311 (C733/U/T) [N4020/4100/4120, 4GB]			
CB 311 (C722/T) [MTK8183, 4GB]			
CB 314 (C933, C933T, C933L, C933LT) [N4020/4120/PQCN5030, 4/8GB]			
CB 314 (C934/C934T) [4500/5100/PQCN6000, 4/8GB]			
CB 511 (C741/L/LT) [SC7180/7c, 4GB]			
CB 512 (C852/C852T0 [N4500, 5100], 4/8GB)			
CB 511 (C734, C734T) [N4500,5100, 4/8GB]			
CB Spin 511 (R752T/TN) [N4020/4120, 4/8GB]			
CB Spin 511 (R753T/TN) [N4500/5100, 4/8GB]			
CB Spin 512 (R851TN, R852T/TN) [N4020/4120/PQCN5030, 4/8GB]			
CB Spin 512 (R853TA/TNA) [N4500/5100/PQCN6000, 4/8GB]			
CB Spin 513 (R841T/LT) [SC7180, 4/8GB]			
CB Spin 311 (R722T) [MT 8183, 4GB]			
CB Spin 314 [N4500,5100,6000, 4/8GB]			

Advanced Use

CB 712 (C871/T) [i3, 8GB]			
CB Spin 713 (CP713-2W/-3W) [i3/i5/i7, 8/16GB]			
CB Spin 514 (CP514-1W/-1WH) [R3/5/7, 8/16GB]			
Chromebox CXI4 [i3/i5/i7, 8/16GB]			
CB 514 (CB514-1W/-1WT) [i3/i5, 8GB]			
Spin 514 (CP514-2H) [i3/i5, 8GB/16GB)			
CB515 (CB515-1W/-1WT) [i3/ i5/ i7, 8GB/16GB			

KEY Devices that have WiFi6 enabled SKU Devices that have an LTE/5G SKU Automatic update expiration date of June 2026

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Basic Classroom Use			
Chromebox 4 [Celeron, 4/8GB]			

Learning Anywhere			
C204 [Clamshell - N4020, 4GB]			
C214 [Flip N4020, 4GB]			
CM5(CM5500) [Flip R3/5, 4GB]			
CZ1000 [Tablet MTK8183,4GB]			
CM3000 [Tablet MTK8183,4GB]			
C433 [Flip Fanless i3, 4GB]			
C434 [Flip Fanless i3, 4GB]			
C424 [Clamshell N4200, 4GB]			
C425 [Fanless i3, 4/8GB]			
CR1 (CR110C, CR1101C) [Clamshell N4500,N5100,N6000, 4/8GB]			
CR1 (CR1100F) [Flip N4500,N5100,N6000, 4/8GB]			
CM1 (CM1400F) [Flip 3015CE, 4GB]			
CM3 (CM3200F) [Flip MTK8192, 4GB]			
CX3 (CX3400F) [Flip Fan i3, 4GB]			
CX1 (CX1101C) [N4020, 4GB]			
CX1 (CX1400C, CX1500C) [Clamshell N4500, N5100, N6000, 4/8GB]			
CX1 (CX1400F, CX1500F) [Flip N4500, N5100, N6000, 4/8/16GB]			

Advanced Use			
C433 [Flip Fanless i5, 8GB]			
C434 [Flip Fanless i5, 8GB]			
C436FA [Flip i3/i5/i7, 8GB]			
CX9 (CX9400C) [Clamshell i3/i5/i7, 8/16GB]			
CX5 (CX5601F, CX5500F, CX5400F) [Flip i5/i7, 8/16GB]			
CX3 (CX3400F) [Flip Fan i3, 8/16GB]			
Chromebox 4 [i3/i5/i7, 8/16GB]			

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Basic Classroom Use			
None			

Learning Anywhere			
Dell Chromebook 3100 [N4020, 4GB]			
Dell Chromebook 3100 2-in-1 [N4020, 4/8GB]			
Dell Chromebook 3110 [N4500, 4/8GB]			
Dell Chromebook 3110 (2 in 1) [N4500, 4/8GB]			
Latitude 5400 [Celeron 4305U, 4GB]			
Latitude 5400 [i3, 4GB]			
Latitude 5400 [i5, 4GB]			

Advanced Use			
Latitude 5400 [i7, 8GB]			
Latitude 7410 [i3/i5/i7, 8/16GB]			

KEY Devices that have WiFi6 enabled SKU Devices that have an LTE/5G SKU Automatic update expiration date of August 2026

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Basic Classroom Use			
CB 11A G8 EE [A4/6, 4/8GB]			
CB 14A G5 [A4/6, 4/8GB]			

Learning Anywhere			
CB 11 G8 [N4020/N4120, 4/8GB]			
CB 11 G9 [N5100, 4/8GB]			
CB 11 MK G9 [MT8183, 4/8GB]			
CB 14 G6 [N4020/N4120, 4/8GB]			
CB 14 G7 [N5100, 4/8GB]			
CB X360 11 G3 [N4120, 4/8GB]			
CB X360 11 MK G3 [MT8183, 4/8GB]			
CB X360 11 G4 [N5100, 4/8GB]			
Fortis 14 G10 [N4500/5100/6000, 4/8GB]			
Fortis 11 G9 Q [QC, 4/8GB]			

Advanced Use			
Pro c640 [i3/i5/i7, 8/16GB]			
Pro c645 [Ryzen 3/5/7, 8/16GB]			
Elite c1030 [i3/i5/i7, 8/16GB]			
Chromebox G3 [i3/i5/i7, 8/16GB]			
Elite Dragonfly [i3/i5/i7 8/16/32GB]			

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Lenovo

Basic Classroom Use			
14e [A4/A6, 4GB]			
100e 2nd Gen [A4,4GB]			
300e 2nd Gen [A4, 4GB]			
S340-14 [N4000, 4GB]			
S340-14 with touch [N4000, 4GB]			

Learning Anywhere			
100e 2nd Gen [N4020, 4GB]			
100e 2nd Gen MTK 2 [MTK8183, 4GB]			
100e Gen 3 [3015Ce, 4GB]			
300e 2nd Gen [N4020/N4100, 4GB]			
300e Gen 3 [3015Ce, 4GB]			
500e 2nd Gen [N4020/N4100, 4GB]			
500e Gen 3 [N5100/6000, 4/8GB]			
C340-11 [N4020, 4GB]			
IdeaPad Flex 5i [i3, 4GB] [Celeron, 4GB]			
ThinkPad C13 Yoga [Athlon, 8GB]			
10e Tablet [MT8183, 4GB]			
Ideapad Duet [MT8183, 4GB]			
14e Chromebook Gen 2 [3015Ce, 4/8GB]			

Advanced Use			
ThinkPad C13 Yoga [Ryzen 3/5/7, 8/16GB]			
IdeaPad Flex 5i [i3, 8GB]			

KEY Devices that have WiFi6 enabled SKU Devices that have an LTE/5G SKU Automatic update expiration date of June 2026

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SAMSUNG

Basic Classroom Use			
None			

Learning Anywhere			
Chromebook 4/4+ [N4020, 4/6GB]			
Galaxy Chromebook 2 [Celeron, 8GB]			
Galaxy Chromebook Go [N4500, 4/8GB]			
Galaxy Chromebook 2 360 [N4500, 4/8GB]			

Advanced Use			
Galaxy Chromebook [i5, 8GB]			
Galaxy Chromebook 2 [i3, 8GB]			

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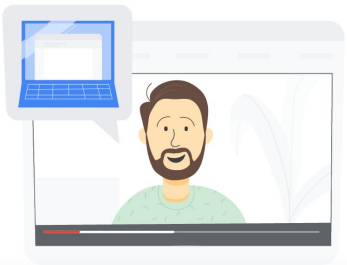
How to make video-conferencing work better on Basic Classroom Devices



While not all devices are recommended for distance learning, we recognize there are situations where devices not recommended will need to be used for distance learning. This guide provides resources for understanding which devices those are and how to make sure that students and teachers have the tools to get the most out of these devices when they need to be used for video conferencing.

How can I tell if I have a Basic Classroom Device?

In order to find out which type of Chrome OS device you have, please refer to our device-selection guide where you'll see a detailed view of all our Education device types and capabilities.

What can I do to improve my video call performance?

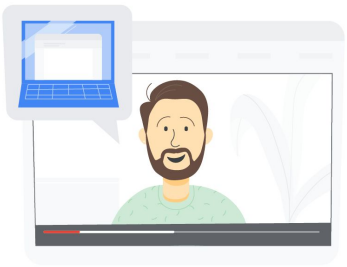
On video-call apps like Meet & Zoom we recommend the following

- Livestream instead of joining live to improve device performance
  - To keep things interactive, you can use Slides Q&A for engagement while livestreaming. Or, pre-record a lesson and then send it out afterwards (Meet) (Zoom)
- Virtual backgrounds are fun, but they consume significant CPU. Turning off virtual backgrounds will help improve video performance, especially in larger meetings (Meet) (Zoom)
- If device performance is still not acceptable, consider askings users to turn their camera off temporarily (Meet) (Zoom)
- If needed, you can also ask Admins to restrict virtual backgrounds (Meet) (Zoom)

On your Chromebook

- Update to the latest version of Chrome OS
  - Go to **chrome://version** and check the device listed as part of the "Firmware Version"
- Reduce the number of open tabs and apps (especially videos/games) to avoid spreading your CPU usage. You should see incremental improvement as you close additional tabs.
- Toggle off Chrome Extensions, especially those that interact with Google Meet
- Internet/Connectivity & Bandwidth:
  - Your home internet might not be as reliable as you think. Cable internet can get slowed down by other users (entertainment streaming, etc.).
  - Run a speed test to make sure your internet is stable. Make sure you have at least 3.2 Mbps uplink and downlink
- Limit Meet bandwidth usage for users in a specific organizational unit by setting the default video quality in Google Admin console.

How to make video-conferencing work better on Basic Classroom Devices



Devices/ Miscellaneous tips

- If possible, upgrade to a Learning Anywhere device
- Ventilation - use your Chromebook on a hard surface like a desk or countertop to keep it well ventilated, especially if you have a fanless device. Your Chromebook's performance may degrade if it overheats. Cushioned surfaces, like a sofa or pillow, keep heat in and prevent the Chromebook from cooling off.
- Charging - as much as possible, avoid charging the laptop while you are in a video call (this can also affect device temperature since charging the battery generates heat, which may lead to additional performance impact).

Additional help for families

- The Guardian's Guide to Google Meet contains an overview of this specific tool, why it was chosen, and how students use it.
- The Teacher Center has the Tech Toolkit for educators to use in understanding how to use Google tools to communicate more effectively with families.
- Tech toolkit video for families and guardians: Google Meet - Google Innovator and GEG leader, Lesleigh Altmann, walks through Google Meet and what Families and Guardians need to know.
- For more information about Meet and the work we're doing to help families, parents, and guardians, please visit our blogs outlined below:
  - A guide to Google Meet for parents and guardians
  - How we're improving Meet's performance on Chromebooks