The science behind the report:

Work and collaborate remotely with an Intel processor-powered Chromebook

This document describes what we tested, how we tested, and what we found. To learn how these facts translate into real-world benefits, read the report Work and collaborate remotely with an Intel processor-powered Chromebook.

We concluded our hands-on testing on June 1, 2020. During testing, we determined the appropriate hardware and software configurations and applied updates as they became available. The results in this report reflect configurations that we finalized on May 18, 2020 or earlier. Unavoidably, these configurations may not represent the latest versions available when this report appears.

Our results

Table 1: Time in seconds to complete tasks in various apps.

Task	ASUS* Chromebook C436F with an Intel® Core™ i3-10110U processor	Apple® iPad® 10.2" 7th Gen A2197 with an Apple A10 Fusion processor	Chromebook™ percentage win
Google Meet			
Launching a new meeting	2.9	4.8	39%
Explain Everything			
Opening a local presentation	1.9	4.3	55%
Trinket			
Opening the "from" block to code Lesson	4.3	6.9	37%
Tinkercad			
Opening a 3D model	21.8	28.0	22%
Lexis Audio Editor			
Exporting an audio file	41.1	94.6	56%
Opening an audio file	8.4	11.7	28%

System configuration information

Table 2: The table below presents detailed information on the systems we tested.

System	ASUS Chromebook C436F with an **Intel Core i3-10110U processor**	Apple iPad 10.2" 7th Gen A2197 with an **Apple A10 Fusion processor**
Processor	Intel Core i3-10110U	Apple A10 Fusion
Processor frequency (GHz)	2.1	2.34
Processor cores	2	4
Memory (GB)	8	3
Storage (GB)	128	32
Bluetooth	4.2	4.2
USB	2x USB 3.1 Type-C	Lightning to USB Cable included
Battery type	Lithium-Ion	Lithium-polymer
Battery capacity (Wh)	47	32.4
Display	14" 1920 x 1080	10.2" 2160 x 1620
OS (version)	81.0.4044.141	13.4.1
System weight (lbs.)	3.09	1.07

How we tested

Creating the background workload

To simulate typical use, we ran a combination of news, email, chat, music, document viewing, and social media websites in the background. For websites that required accounts, we created test profiles and logged in the users on each device. We opened a Chrome browser with the following tabs:

1. From the shelf, open Chromebook settings.
2. Navigate to the On Startup section of the settings.
3. Select Open a specific page or set of pages.
4. Insert the following URLs, and click OK.

   - Forbes.com
   - Markets.ft.com/data
   - Arstechnica.com
   - mail.google.com
   - slack.com (logged into Slack chat, #general channel)
   - drive.google.com
   - docs.google.com (viewing document)
   - youtube.com/feed/music
   - drive.google.com (viewing document)
   - sheets.google.com (viewing spreadsheet)
   - twitter.com
   - facebook.com

5. Restart the Chromebook. Before testing, navigate through each tab to ensure that both devices have fully loaded the same content.

Testing the applications

Google Meet

Launching a new meeting

1. From the Google Play Store or the Apple App Store, install Google Meet.
2. Launch the Google Meet app.
3. Simultaneously start the timer and click New Meeting.
4. Stop the timer when the meeting invite appears.

Explain Everything

Open local presentation

1. From the Google Play store or Apple App Store, install Explain Everything.
2. Launch the Explain Everything app.
3. Simultaneously start the timer and click the test project.
4. When the test project has fully loaded, stop the timer.

Lexis Audio Editor

Opening a 50MB audio file

1. From the Google Play Store or the Apple App Store, install Lexis Audio Editor.
2. Launch the app.
3. To enable app access to photos, media, and files on the device, click Allow.
4. Close and reopen the app.
5. Click Open.
6. Navigate to the device's download folder, and select the test audio file.
7. Start the timer, and click Open.
8. Stop the timer when the audio file has fully loaded.

Exporting an edited audio file

1. Launch the Lexis Audio Editor app.
2. Click Open.
3. Navigate to the device's download folder, and select the test audio file.
4. Click Save.
5. From the Save menu, enter a file name. Start the timer, and click Save.
6. Stop the timer when saving completes.

Tinkercad

Opening the Retail Row model

1. From the Chrome browser, navigate to tinkercad.com.
2. Click Gallery.
3. Click the Retail Row design.
4. Simultaneously start the timer and click Copy and Tinker.
5. When the model fully loads, stop the timer.

Trinket

Opening the "From Block to Code" lesson

1. From the Chrome browser, navigate to trinket.io.
2. Sign in with your Google account.
3. Click Learn.
4. Simultaneously start the timer and click Let's Go under From Blocks to Code.
5. When the project editor fully loads, stop the timer.

Read the report at http://facts.pt/3nmgr2u ▶

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