

Render a video  
and save over  
3 minutes

in PowerDirector®



Edit an audio clip  
and save  
over 4 minutes

in Lexis Audio Editor



Save a presentation  
and save over  
2 minutes

in Explain Everything™

## Save time during busy student life

A Google Pixelbook powered by an Intel® Core™ i5 processor saved time on video and audio editing, school presentations, and more

When someone in your household is off to college, you've got an important choice to make: Which laptop should you buy? Colleges often post minimum technology requirements, but these hardly narrow the search. Besides—college students require devices that can keep up with their needs and interests. Devices that only adhere to the minimum requirements might not make the cut.

At Principled Technologies, we tested two Chromebooks™ to demonstrate why investing in a Chromebook with a powerful Intel Core i-series processor may make more sense for college students. In our tests, the latest Chromebook from Google—the Intel Core i5 processor-powered Pixelbook—saved time for common school, gaming, and multimedia tasks compared to a Chromebook powered by the Intel® Celeron® N3160 processor.

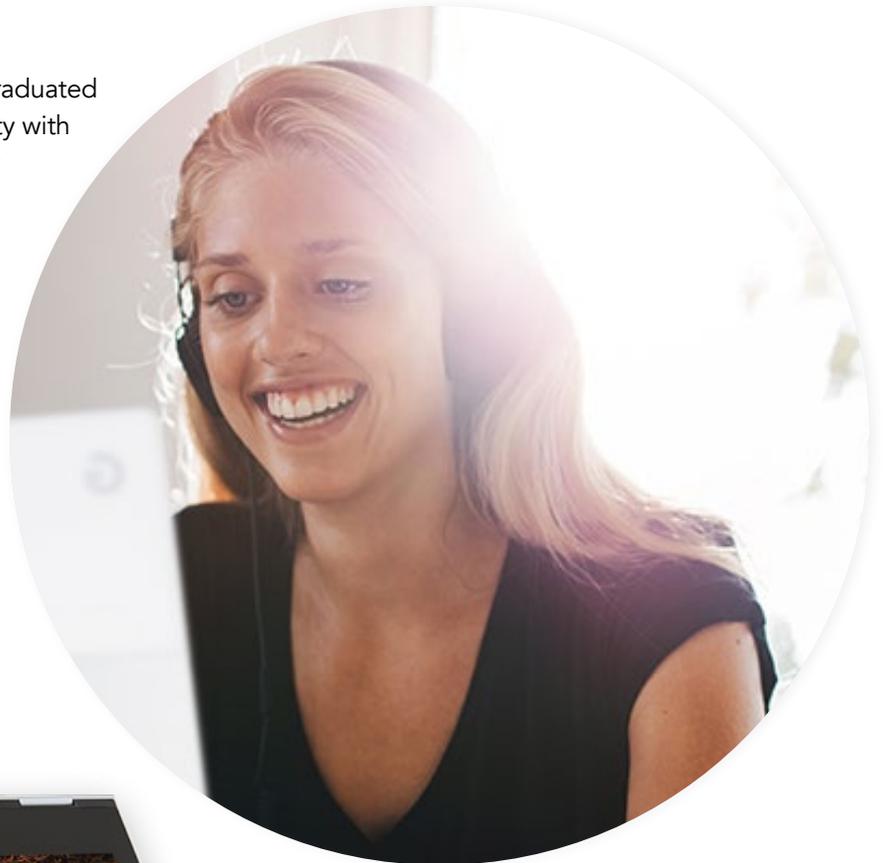
For students who need to create and edit photos, video, and other school-related content, the Pixelbook may save time over their college career. Read on for more.

The following pages describe a fictional scenario in which a college freshman uses her Intel Core processor-powered Google Pixelbook for her everyday student needs. Though the story is hypothetical, it's based on PT facts. For more detailed testing information, see the [appendices](#) beginning on page 11.

## Kassie's story

It's been a great year for Kassie so far. She graduated from high school, got accepted to a university with a great videography program, and spent her summer among the sands and canopies of Costa Rica.

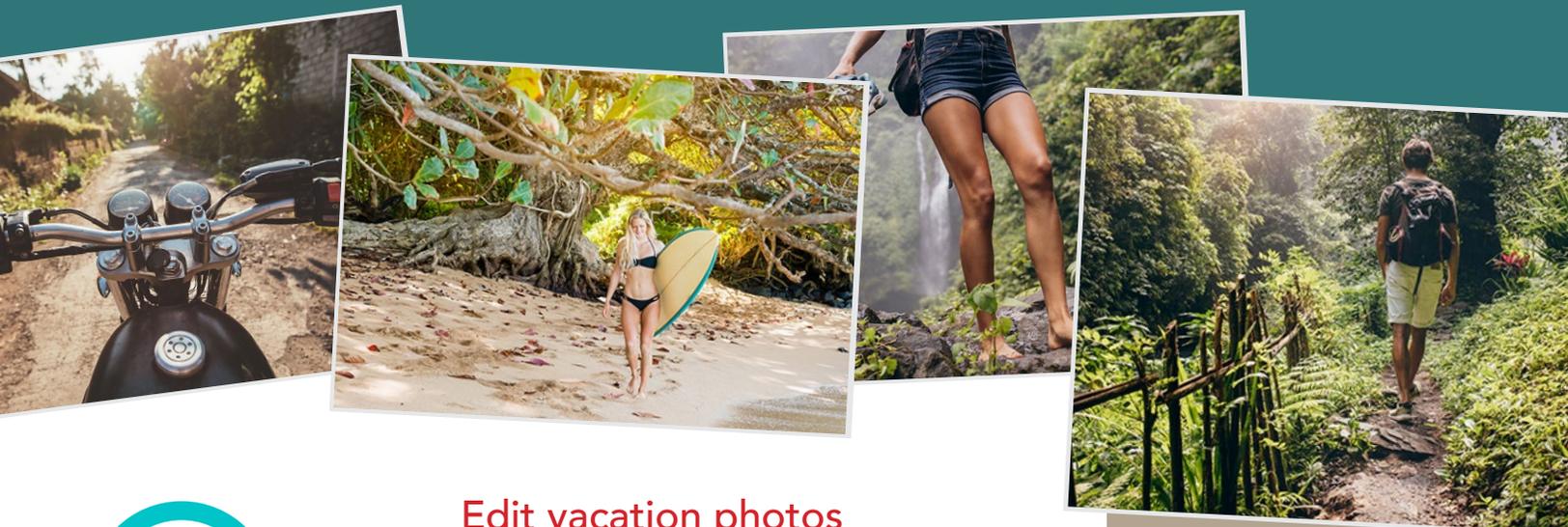
Her trip may even come in handy for college—Kassie wants to use the footage she captured for her first big assignment. But to work efficiently, she needs technology that can handle all her needs. Read Kassie's story to see how the latest Chromebook from Google—an Intel Core i5 processor-powered Pixelbook—could help save the day.



### Android™ apps for Chromebooks

Google is rolling out support for Android apps on many Chromebook devices. Being able to install apps from the Google Play™ store opens your Chromebook to new possibilities and functionality you can't get with older or unsupported models.

To learn more about Android apps and the Chromebooks that support them, visit <https://sites.google.com/a/chromium.org/dev/chromium-os/chrome-os-systems-supporting-android-apps>.



## Edit vacation photos faster with an Intel processor-powered Pixelbook

From her cramped-yet-cozy west campus dorm, Kassie waits for yet another panorama photo to load on her Intel Celeron N3160 processor-powered Chromebook—an artifact of her high school days. The pictures, taken with her Pixel 2 XL phone, are gorgeous. But sorting through them is stressful, as each photo takes more than six seconds to load and nine seconds to save after editing. Kassie wonders: If her Chromebook is this slow with photos, how will it handle the critical video work she needs for her major?

Kassie calls her mom for advice. She explains how tedious it is to wait while editing photos, working with school documents, and more. Her Intel Celeron N3160 processor-powered Chromebook has gotten her through some tough assignments in high school, but now it's hurting her productivity. Now, she needs something more.

Luckily, Kassie has a solution in mind: A new Pixelbook from Google, powered by an Intel Core i5 processor. Reviews say it's faster and more responsive than the Chromebook Kassie has now. After a convincing argument, her mother is more than happy to pay for the investment.

Google Photos™  
 App rating: 4.5/5 stars<sup>1\*</sup>  
 Monthly users: 500 million+<sup>2</sup>

Originally an offshoot of the Google+™ social media app, Google Photos has become one of the most widely used apps for storing, sharing, and editing images. With generous storage capacity, plentiful organization options, and the ability to back up and share photos among different devices or with friends, it's no wonder users upload 1.2 billion photos to the service



Open 360 panorama in Google Photos

Time (sec)  
lower is better



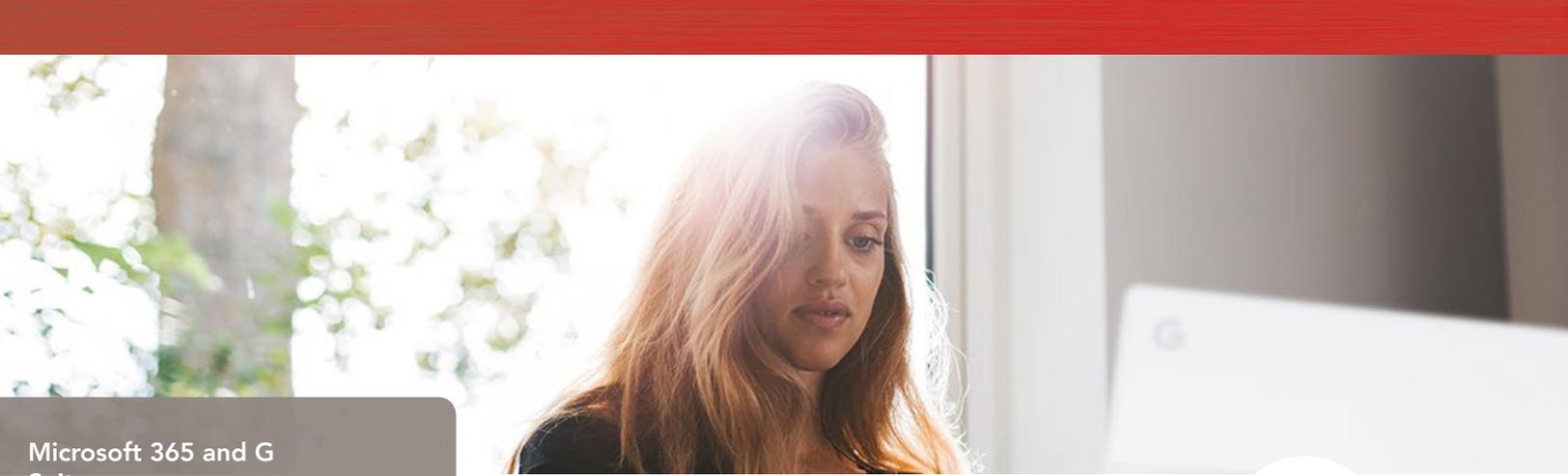
Save edits to panorama in Google Photos

Time (sec)  
lower is better



- Pixelbook with Intel Core i5-7Y57 processor
- Chromebook with Intel Celeron N3160 processor

\* On Google Play store



### Microsoft 365 and G Suite apps

More than 1.2 billion people use Microsoft Office products worldwide.<sup>3</sup> In 2017, over half of U.S. primary and secondary schoolchildren used G Suite products such as Google Docs.<sup>4</sup>

## Download and print lecture notes faster

A week later, Kassie and her roommate unbox her brand-new Intel Core i5 processor-powered Pixelbook.

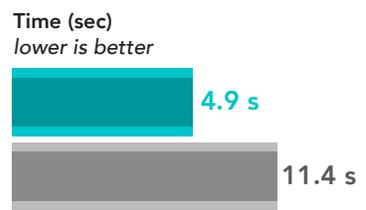
Kassie's roommate marvels at the sleek, chrome body. "Top of the line. And chic! But how does it run?"

As a test, they race to see who can print the lecture notes for their next class faster: Kassie on her new Pixelbook, or her roommate using her old Chromebook?

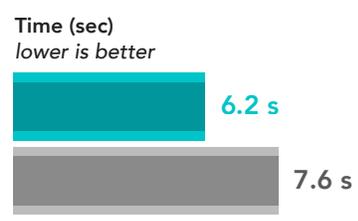
Whether she uses Google Slides or Microsoft PowerPoint, Kassie's Intel Core i5 processor-powered Pixelbook is faster than the Chromebook at every turn. She opens the lecture notes from the cloud 1.4 seconds faster than her roommate. She saves the notes to her device 6.5 seconds faster. Finally, she loads a print preview of the notes up to 5.9 seconds faster than her roommate. Kassie gets up to retrieve the notes from the printer before her roommate can even save them to her device.



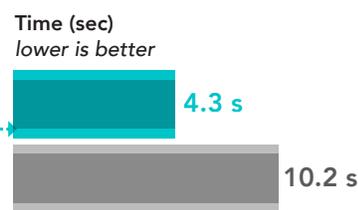
### Save presentation to PDF in Google Slides



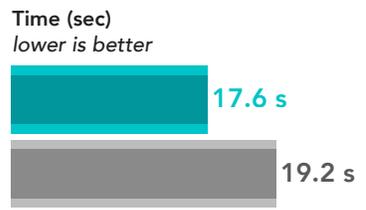
### Open presentation in Microsoft® PowerPoint®



### Preview shared slides in Google Slides



### Preview presentation in Microsoft PowerPoint



- Pixelbook with Intel Core i5-7Y57 processor
- Chromebook with Intel Celeron N3160 processor



**Open a cloud file**  
in Microsoft Word

Time (sec)  
lower is better



**Export file on a local device**  
in Microsoft Word

Time (sec)  
lower is better



## Streamline classroom document work

Despite her roommate's slowdown, both women make it to their video class on time. Today's an important day: They're finally getting the details for their first project. The professor tells the class to open the rubric and assignment notes on their devices while he explains.

The assignment is to create a video promo for the tourism department of a country of their choice, as well as to record a presentation pitching the idea. By the end of the presentation, the viewer should feel *compelled* to visit the country.

Kassie's head is abuzz with ideas—she has so much video material from her Costa Rica trip, and now she finally has a device that can keep up with her ambitions.

Kassie saves the assignment notes to her Pixelbook, prints them, and rushes back to her dorm to get started.



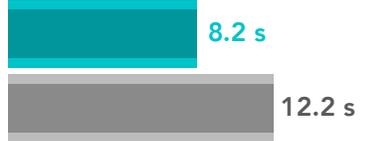
**Open a file from a local drive**  
in Microsoft Word

Time (sec)  
lower is better



**Preview file for print**  
in Microsoft Word

Time (sec)  
lower is better



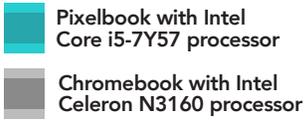
**Load shared paper**  
in Google Docs™

Time (sec)  
lower is better



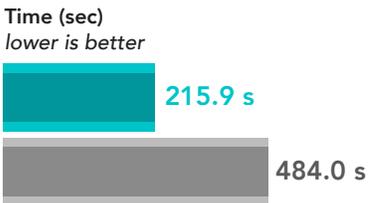
**Preview shared paper**  
in Google Docs

Time (sec)  
lower is better





**Increase audio clip speed**  
in Lexis Audio Editor



**Tweak audio faster**

Kassie's brother is an audio whiz. On their vacation, he recorded hours of sounds from rainforests, oceans, and bays. Kassie calls him up on Google Hangouts™ to ask about using his recordings for her assignment.

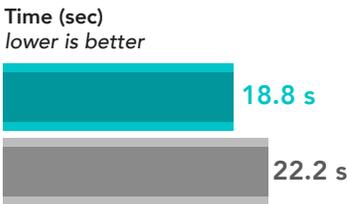
"Go ahead," he tells her, but warns that it might take a while to edit. With the same model of Chromebook Kassie had, it usually takes him eight minutes just to change minor settings. But Kassie knows her Pixelbook is up for the challenge.

Before he signs off, Kassie's brother sends her some audio tips as a Word doc. She saves them to her Drive, thanks him, and sets to work.

It takes Kassie 47 fewer seconds to open a 50MB audio file than it would with her brother's Intel Celeron N3160 processor-powered Chromebook. Merging tracks in SoundTrap® (which Kassie's brother says has a great online community), takes less than 15 seconds on Kassie's Pixelbook, whereas her brother's Chromebook would take more than 40. When Kassie's all done with editing, the Intel Core i5 processor-powered Pixelbook saves her 8 minutes and 20 seconds on exporting the final file. She does this with the popular Lexis Audio Editor<sup>5</sup>.



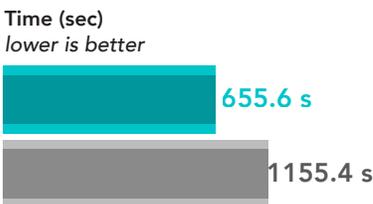
**Convert from Word Doc**  
in Google Docs



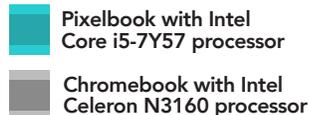
**Open 50MB audio file**  
in Lexis Audio Editor



**Export edited audio file**  
in Lexis Audio Editor



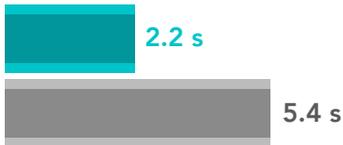
**Merge audio tracks**  
in Soundtrap





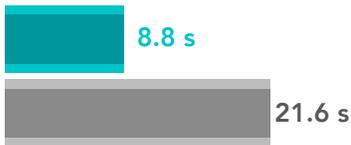
### Preview GoPro® video in Lomotif™

Time (sec)  
lower is better



### Export GoPro video in Lomotif

Time (sec)  
lower is better



### Open local presentation in Explain Everything

Time (sec)  
lower is better



## Faster video rendering

Since middle school, Kassie has dreamed of making movies that move people. Now, she can finally show the world what she can do. (Well...show her *class*, at least.)

Already, she can tell her Pixelbook will be a huge asset; her render times are a fraction of what they would be on her old Chromebook. Because Pixelbooks and Chromebooks now support the large library of Android™ apps on the Google Play™ store, Kassie has lots of options for video editing software.

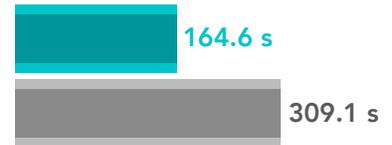
In Lomotif, which has millions of worldwide users<sup>6</sup>, Kassie can preview and export her GoPro videos in 12.8 fewer seconds than with her old Chromebook. With WeVideo editor, which won the Android Excellence App award from Google<sup>7</sup>, Kassie can export a video 2 minutes and 25 second faster. And finally, with PowerDirector, which won the Google Play Best of 2017 award in the “Most Entertaining” category<sup>8</sup>, Kassie can finish an export just over three minutes sooner, giving her more time to perfect her creation without stressing out about a lengthy rendering process.

The last step for her project is to record a video pitch using the professor's preferred software. Opening a project takes three fewer seconds than it would on her Intel Celeron N3160 processor-powered Chromebook. Exporting her own presentation video is more than two minutes faster.



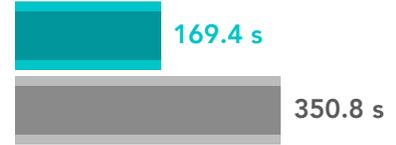
### Render HD GoPro video in WeVideo™

Time (sec)  
lower is better



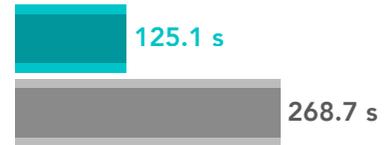
### Render HD GoPro video in PowerDirector

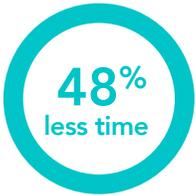
Time (sec)  
lower is better



### Export presentation video in Explain Everything

Time (sec)  
lower is better





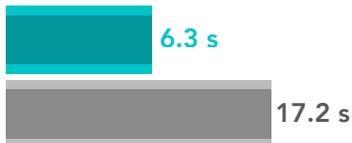
**Load splash screen**  
in Asphalt 8: Airborne

Time (sec)  
lower is better



**Load quick solo race**  
in Asphalt 8: Airborne

Time (sec)  
lower is better



## A fast track for gaming

After working hard on her assignment, Kassie has more time left than she thought she would. To relax, she loads up Asphalt 8: Airborne, a video game Kassie has enjoyed for years and which has a robust online user base.<sup>9</sup> She kicks up her feet, and enters chill mode.

The Pixelbook, however, has no chill. Even now, it's working hard to make Kassie's gaming experience swift and streamlined. The game's first level loads 10 seconds faster than it would on her old Chromebook, and a quick solo race loads 10.9 seconds faster.

After a long gaming session, Kassie realizes it's getting late and her roommate is still out working on her project. Kassie shoots a quick text to make sure she's OK, then texts her parents to thank them again for her fast, responsive Pixelbook.



**Load first race level**  
in Asphalt 8: Airborne

Time (sec)  
lower is better



 Pixelbook with Intel Core i5-7Y57 processor  
 Chromebook with Intel Celeron N3160 processor

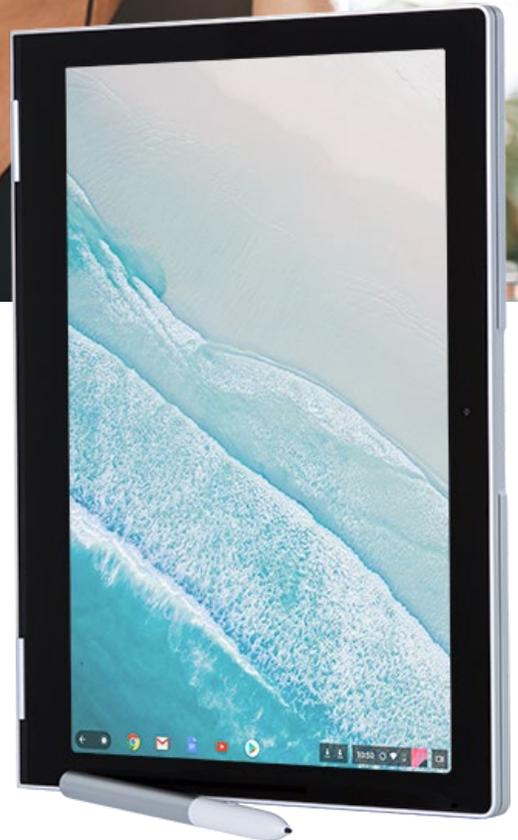
## Google Pixelbook Pen

The pressure-sensitive Pixelbook Pen allows students to draw and take notes on their Pixelbook device. The Pixelbook Pen is also the only stylus that works with Google Assistant. Hold down the pen's button and the device will send everything you touch to Google Assistant for analysis, giving you fast access to Google's wealth of worldly knowledge.



## Conclusion

The transition from high school to college can be stressful—but having the right tech can make the jump smoother and pave the way for success. Our hands-on performance results make the Intel Core i5-7Y57 processor-powered Google Pixelbook a choice worth exploring. All in all, the Pixelbook saved eighteen total minutes for the tasks we tested—and that time saved will rack up over the course of a semester. The Pixelbook also excelled at non-academic tasks, rounding out its fast performance to cover creativity and entertainment in addition to productivity.



- 
- 1 "Google Photos - Android Apps on Google Play," Accessed 26 March 2018: <https://play.google.com/store/apps/details?id=com.google.android.apps.photos&hl=en>
  - 2 Matney, Lucas. "Google has 2 billion users on Android, 500M on. Google Photos," Accessed 26 March 2018: <https://techcrunch.com/2017/05/17/google-has-2-billion-users-on-android-500m-on-google-photos/>
  - 3 "More than 1.2 billion people use Microsoft Office. + Microsoft By the Numbers," Accessed 26 March 2018: <https://news.microsoft.com/bythenumbers/planet-office>
  - 4 Singer, Natasha. "How Google Took Over the Classroom," Accessed 26 March 2018: <https://www.nytimes.com/2017/05/13/technology/google-education-chromebooks-schools.html>
  - 5 "Lexis Audio Editor - Android Apps on Google Play," Accessed 26 March 2018: <https://play.google.com/store/apps/details?id=com.pamsys.lexisaudioeditor&hl=en>
  - 6 "Lomotif - Music Video Editor - Android Apps on Google Play," Accessed 26 March, 2018: <https://play.google.com/store/apps/details?id=com.lomotif.android&hl=en>
  - 7 "WeVideo Awarded as Android Excellence App by Google," Accessed 26 March 2018: <http://www.prweb.com/releases/2018/02/prweb15220090.htm>
  - 8 "Cyberlink PowerDirector and ActionDirector Android Apps Receive Google Play's "Editors' Choice" Award," Accessed 26 March 2018: <https://www.businesswire.com/news/home/20180110005386/en/CyberLink-PowerDirector-ActionDirector-Android-Apps-Receive-Google>
  - 9 "Asphalt 8: Airborne - Android Apps on Google Play," Accessed 26 March 2018: <https://play.google.com/store/apps/details?id=com.gameloft.android.ANMP.GloftA8HM&hl=en>

On September 4, 2018, we finalized the hardware and software configurations we tested. Updates for current and recently released hardware and software appear often, so unavoidably these configurations may not represent the latest versions available when this report appears. For older systems, we chose configurations representative of typical purchases of those systems. We concluded hands-on testing on September 7, 2018.

## Appendix A: System configuration information

System	Google Pixelbook	Acer® Chromebook R 11
Processor	Intel i5-7Y57	Intel Celeron N3160
Processor freq (GHz)	1.2-3.3	1.6-2.24
Processor cores	2	4
Memory (GB)	8	4
Storage (GB)	128	32
Battery type	Li-Ion	Li-Ion
Battery capacity (Wh)	41	32
Display dimensions	12.3"	11.6"
Display resolution	2400 x 1600	1366 x 768
Wireless	802.11 AC	802.11 AC
Bluetooth	4.0	4.0
USB ports	2 x USB-C	1 x USB 3.0, 1 x USB 2.0
System weight (lbs.)	2.4	2.7
OS (version)	67.0.3396.99	68.0.3440.118
Build/firmware	Eve.9584.107.0	Cyan.7287.57.165

# Appendix B: How we tested

## Creating the background workload

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

1. From the shelf, open Chromebook settings.
2. Navigate to the On Startup section of the settings, and select Open a specific page or set of pages.
3. Insert the following URLs, and click OK.
  - forbes.com
  - markets.ft.com/data
  - arstechnica.com
  - mail.google.com
  - slack.com
  - drive.google.com
  - docs.google.com
  - youtube.com/feed/music
  - sheets.google.com
  - twitter.com
  - facebook.com
4. Restart the Chromebook. Before testing, navigate through each tab to ensure that both devices have fully loaded all the same content.

## Testing each application

### Google Photos

#### Opening 360 panorama (Pixel XL 2)

1. Install Google Photos from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. Click the menu icon in the top left, and click Device Folders.
4. From Photos on device, click the Download folder.
5. Click the test image to bring up the panorama preview.
6. Start the timer, and click the 360 icon to load the panorama.
7. Stop the timer when the panorama fully loads.

#### Sharing photo to Instagram Story

1. Launch the app from the shelf.
2. Click the menu icon in the top left, and click Device Folders.
3. From Photos on device, click the Download folder.
4. Click the test image.
5. Click the share menu icon in the bottom left.
6. Start the timer, and click the Instagram icon labeled "Your Story."
7. Stop the timer when the Instagram app fully loads, and the test image fully loads.

#### Saving edits to 7.6MB panorama (Pixel XI 2)

1. Launch the app from the shelf.
2. Click the menu icon in the top left, and click Device Folders.
3. From Photos on device, click the Download folder.
4. Click the test image to bring up the panorama.
5. Click the sliders icon in the bottom middle to bring up the editing menu.
6. From the editing menu, click the Alpaca preset.
7. Start the timer, and click Save.
8. Stop the timer when Saved appears in the bottom middle of the screen.

## Microsoft PowerPoint

### Opening a presentation

1. Install PowerPoint from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. Log in with the test Office 365™ account.
4. Close the app, and reopen it.
5. Click Open other documents.
6. Click This device, and navigate to the Download folder.
7. Start the timer, and click the test PowerPoint document.
8. Stop the timer when the document fully loads.

### Previewing a presentation

1. Launch the app from the shelf.
2. Click Open other documents.
3. Click This device, and navigate to the Download folder.
4. Click to open the test PowerPoint document.
5. Click the Slide Show tab.
6. Start the timer, and click From Beginning.
7. Stop the timer when the slide show presentation fully loads.

### Exporting a file to the local drive

1. Launch the app from the shelf.
2. Click Open other documents.
3. Click This device, and navigate to the Download folder.
4. Click to open the test document.
5. Click File.
6. Click Save As.
7. From the Save menu, enter a new file name. Start the timer, and click Save.
8. Stop the timer when the saving dialog closes.

## Google Slides

### Loading shared slides

1. Install Google Slides from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. From the Recent Files list, start the timer, and click the test document.
4. Stop the timer when the test document fully loads.

### Previewing shared slides

1. Launch the app from the shelf.
2. From the Recent Files list, click the test document.
3. When the document loads, click the dropdown menu icon.
4. Click Share and export.
5. Start the timer, and click Print.
6. Stop the timer when the print preview fully loads.

### Exporting slides to PDF

1. Launch the app from the shelf.
2. From the Recent Files list, click the test document.
3. When the document loads, click the dropdown menu icon.
4. Click Share and export.
5. Click Save As.
6. Change the selection from Google Slides to PDF document (.pdf).
7. Start the timer, and click OK.
8. Stop the timer when the saving dialog completes.

## Microsoft Word

### Opening a 14MB file

1. Install Microsoft Word from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. Log in with the test Office 365 account, close, and reopen the app.
4. Click Open other documents.
5. Click This device, and navigate to the OneDrive folder.
6. Start the timer, and click the test Word document.
7. Stop the timer when the document fully loads.

### Previewing a file for print

1. Launch the app from the shelf.
2. Click Open other documents.
3. Click This device, and navigate to the Download folder.
4. Click to open the test document.
5. Click File.
6. Start the timer, and click Print.
7. Stop the timer when the print preview fully loads.

### Exporting a file on a local device

1. Launch the app from the shelf.
2. Click Open other documents.
3. Click This device, and navigate to the Download folder.
4. Click to open the test document.
5. Click File.
6. Click Save As.
7. From the Save menu, enter a new file name. Start the timer, and click Save.
8. Stop the timer when the saving dialog closes.

### Opening 14MB file from local drive

1. Launch the app from the shelf.
2. Log in with the test Office 365 account.
3. Close the app, and reopen it.
4. Click Open other documents.
5. Click This device, and navigate to the Download folder.
6. Start the timer, and click the test Word document.
7. Stop the timer when the document fully loads.

## Google Docs

### Loading a shared paper

1. Install Google Docs from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. Start the timer, and click the file from the Recent Files list.
4. Stop the timer when the document fully loads.

### Converting a shared document in Word

1. From the shelf, click the Google Docs icon to launch the app.
2. Click the Word document from the Recent Files list.
3. Click the dropdown menu icon.
4. Click Share & Export.
5. Click Save As...
6. Start the timer, and click OK.
7. Stop the timer when the saving dialog closes.

### Loading a print preview of a shared paper

1. From the shelf, click the Google Docs icon to launch the app.
2. Click the Word document from the Recent Files list.
3. Click the dropdown menu icon.
4. Click Share & Export.
5. Start the timer and click Print.
6. Stop the timer when the print preview fully loads.

## Lexis Audio Editor

### Opening a 50MB audio file

1. Install Lexis Audio Editor from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. Click Allow to enable app access to photos, media, and files on the device.
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.

### Increasing audio clip speed

1. Launch the app from the shelf.
2. Click Open.
3. Navigate to the device's download folder, and select the test audio file.
4. Click the dropdown menu icon.
5. From the menu, click Effects → Change speed.
6. From the Change speed dialog, drag the slider to +25%.
7. Start the timer, and click Apply.
8. Stop the timer when the speed modification fully completes.

### Exporting an edited audio file

1. Launch the app from the shelf.
2. Click Open.
3. Navigate to the device's download folder, and select the test audio file.
4. Click the dropdown menu icon.
5. From the menu, click Effects → Change speed.
6. From the Change speed dialog, drag the slider to +25%.
7. Click Apply.
8. When the app applies the effect, click Save.
9. From the Save menu, enter a file name. Start the timer, and click Save.
10. Stop the timer when saving completes.

## SoundTrap

### Merging tracks

1. From the Chrome browser, navigate to soundtrap.com.
2. Sign in with the test account.
3. From the landing page, click Enter Studio.
4. From the template selection screen, click Dubstep DEMO.
5. From the horizontal dropdown menu, Click Settings, and click Merge Tracks...
6. Check each instrument track to be merged.
7. With all tracks selected, start the timer, and click Merge.
8. Stop the timer when merging completes.

## Lomotif

### Processing a video

1. Install Lomotif from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. Click the green plus icon.
4. To enable access to device media storage, select Allow.
5. Select the Downloads folder, and click the test footage.
6. Click the Next arrow.
7. Click the song at the top of the Find Music section.
8. Start the timer, and click the Next arrow.
9. Stop the timer when the video finishes processing.

### Exporting a video

1. Launch the app from the shelf.
2. Click the green plus icon.
3. To enable access to device storage, select Allow.
4. Select the Downloads folder, and click the test footage.
5. Click the Next arrow.
6. Click the song at the top of the Find Music section.
7. Click the Next arrow.
8. When the video finishes processing, start the timer, and click the Export icon.
9. Stop the timer when the video finishes exporting.

## WeVideo Video Editor

### Rendering a video for free

1. Install WeVideo from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. Click the blue plus icon.
4. Click Gallery.
5. To enable access to device media storage, click Allow.
6. From the folder browser, select the test footage, and click the green checkmark icon.
7. Click the paper airplane icon.
8. Start the timer, and click Save with watermark.
9. Stop the timer when the saving completes.

## PowerDirector

### Encoding an HD GoPro video with music track

1. Install PowerDirector from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. To enable access to device media storage, click Allow.
4. Click the New Project icon, and enter a name for the test project.
5. Click the Download folder, and click the test footage to insert the footage onto the timeline.
6. Click the layers icon, and select the text icon to insert a title into the beginning of the clip. Name the title "Test HD Video."
7. Click the Film and Music icon.
8. Click the Music icon.
9. Click the Download folder.
10. Click the music clip, and click the plus icon.
11. To return to the playlist editor, click Back twice.
12. Click the Export icon.
13. Click More Output Options.
14. Select HD video resolution, start the timer, and click Next.
15. Stop the timer when the video share screen appears.

## Explain Everything

### Opening a local presentation

1. Install Explain Everything from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. Start the timer, and click the Immune System local project.
4. Stop the timer when the project fully loads.

### Exporting a presentation video (2m 32s video)

1. From the shelf, click the Explain Everything icon to launch the app.
2. Click the local project.
3. Click the Export icon in the top right.
4. Click the Video tab, and click Local Storage.
5. Start the timer, and click Export.
6. Stop the timer when the export completes.

## Asphalt 8: Airborne

### Loading a quick solo race

1. Install Asphalt 8: Airborne from the Google Play Store, and pin the app to the shelf.
2. Launch the app from the shelf.
3. Click OK to enable permissions. Click Allow on the device access dialogs.
4. Click Yes to download the additional game files.
5. Enter an age and account information, and close out of the first launch notifications.
6. Close, and reopen the app.
7. Click Play.
8. Click More Racing Options.
9. Click Quick Solo Race.
10. Click Select to enter Classic mode.
11. Click Next to use the default car.
12. Start the timer, and click Start Race.
13. Stop the timer when the race fully loads.

### Loading the first race level

1. Launch the app from the shelf.
2. Click Play.
3. Click Career.
4. Click the first level.
5. Click Next to use the default car.
6. Start the timer, and click Start Race.
7. Stop the timer when the race fully loads.

### Loading the splash screen

1. Start the timer, and launch the app from the shelf.
2. Stop the timer when the app splash screen fully loads.

This project was commissioned by Intel Corp.

Read the original report in English at <http://facts.pt/l44o2e>.



Facts matter.®

Principled Technologies is a registered trademark of Principled Technologies, Inc.  
All other product names are the trademarks of their respective owners.

**DISCLAIMER OF WARRANTIES; LIMITATION OF LIABILITY:**

Principled Technologies, Inc. has made reasonable efforts to ensure the accuracy and validity of its testing, however, Principled Technologies, Inc. specifically disclaims any warranty, expressed or implied, relating to the test results and analysis, their accuracy, completeness or quality, including any implied warranty of fitness for any particular purpose. All persons or entities relying on the results of any testing do so at their own risk, and agree that Principled Technologies, Inc., its employees and its subcontractors shall have no liability whatsoever from any claim of loss or damage on account of any alleged error or defect in any testing procedure or result.

In no event shall Principled Technologies, Inc. be liable for indirect, special, incidental, or consequential damages in connection with its testing, even if advised of the possibility of such damages. In no event shall Principled Technologies, Inc.'s liability, including for direct damages, exceed the amounts paid in connection with Principled Technologies, Inc.'s testing. Customer's sole and exclusive remedies are as set forth herein.