Intel®-based Windows PC-powered Remote Learning During COVID-19*

Usage Study

For today's connected teens, a typical day of learning, socializing, and downtime looks a lot different than it did even just a few months ago. Remote learning and social distancing are driving the demand for constant connectivity, and for devices powerful enough to handle increased workloads.

This transition to remote learning has created a need for devices that can uphold both the demands of a traditional classroom in addition to new, remote-based tasks. Digital classrooms that rely on collaborative involvement and communication among students also demand powerful multitasking devices, so that students can stream an instructional video, take notes, communicate with classmates, browse the web, and finish a homework assignment—often at the same time. However, today's students are finding that not all devices are created equal. Notebooks with keyboards, USB-C ports, full software capabilities and larger screen sizes enable students to consume and create content in a way that tablets don't.

In homes across the country, students rely on their Intel®-based Windows* PC devices to handle the daily multitasking demands of remote learning—everything from video conferencing to advanced gaming and design work. And with high-performance processors and Intel® WiFi 6 capability, students are finding that devices with Intel processors inside give them the power and speed they need to stay connected beyond the classroom.

When Dylan started at Bayview High School, he never imagined that he'd be finishing up his first year at home. As an outgoing student that thrives on being involved, Dylan admits that he misses the days of just hanging out after school with his friends. But while remote learning has been an adjustment, Dylan's parents are impressed with the way he's been able to adapt and maintain his class load while pursuing some of his passion projects—especially when it comes to computer science and esports.

Today's students need computing devices that are powerful enough to keep up with their multitasking demands: everything from video streaming to esports. And—with their fast processors, high-resolution graphics, and advanced WiFi* capability—Intel-based Windows PCs are proving to be an excellent choice for a student's increased workloads.

Improved Performance

The latest generation of Intel® Pentium® processors commonly found in education devices are expected to deliver up to 1.12x the performance of the previous generation.*

1.12x
Performance Increase

*For more complete information about performance and benchmark results see www.Intel.com/benchmarks.

intel®

Fortunately, prior to quarantine, Dylan was able to check out one of the school's newest Windows PC devices to continue learning from home when his school closed due to COVID-19. After logging in to his existing school accounts, he was up and running in no time.

With access to the same design and developer software applications that he was using at school, Dylan was able to use his Intel-based PC to continue working on his existing school projects while connecting virtually with his classmates and teachers.

A Day in the Life of a Windows PC

In what's become his normal routine, Dylan begins his morning by setting up his PC in the kitchen to get ready for his first class. While fixing breakfast for his younger brother, Dylan logs into his device and checks for any updates. He's just finishing up a homework assignment when Dylan sees an email message pop up on the screen. He checks the time, responds quickly to his teacher, and then moves to the dining room table for a live video class.

Dylan logs into Microsoft Teams* just in time to join a conversation in progress between two of his classmates. He's busily discussing strategy for the upcoming esports tournament when his teacher joins the meeting and everyone settles in.

During the class, Dylan's teacher assigns each student to a small group for a research assignment. While the teacher explains the requirements, Dylan takes notes on his PC and opens his web browser. He knows a little about the topic already but he wants to get a jump start. As he listens, Dylan searches online and finds a good resource to share with his group:

Remote Learning Resources for Parents and Educators

Parents and educators alike use Intel-based Windows PCs to stay connected while reimagining the modern classroom: bridging the gap between traditional learning and remote learning. Intel has sponsored the creation of two guides and a collection of resources to support authentic learning from home.
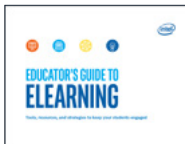
Educator's Guide to Elearning
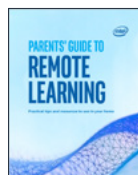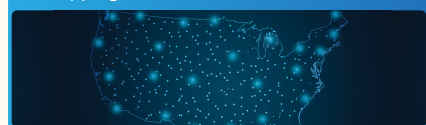

Parents' Guide to Remote Learning

José, Pete, Sana

Check this out

This website is sic!

mappingoutaction.com

– 2 –

As his teacher wraps up class, Dylan finds a video he thinks might be useful for his research assignment. He downloads the video to watch later, then signs off from Teams and goes to check in with his younger brother.

With both of his parents working full time from home, Dylan often helps his brother with his schoolwork. The desperate look on his brother's face today says it all! After some words of encouragement, Dylan opens his PC and streams an instructional video from Khan Academy* that he thinks might help.

While his brother watches the video, Dylan checks his phone and scrolls through Instagram* to see what his friends are up to. He posts on his feed:


Dylan has always been an outgoing student, so it was no surprise when his guidance counselor suggested that Dylan choose Journalism as his elective course this semester. His favorite part of the class so far has been designing and editing pages for the school yearbook. And while he really enjoyed taking photos at school events, Dylan has no choice but to use student-submitted photos of his classmates at home to complete the layout for this year's yearbook.

With just one week until the submission deadline, Dylan opens OneDrive* on his PC and gets to work.

Windows Devices by the Numbers

Windows-based device deployments increased by 1% during Q4 2019 — used by 27.1% of the U.S. K-12 education market.*

27.1%
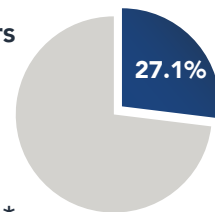
*Source: Futuresource K-12 Personal Computing Market Track Q4 2019

He downloads several new photos from OneDrive to his device. Then he opens the files in Adobe Photoshop* and plugs in a USB-C mouse to do some detailed photo editing. After cropping, resizing, adjusting color balance, and sharpening the photos, Dylan is happy with the quality of his photos and saves them back to OneDrive.

Dylan opens his Adobe InDesign* layout file. He imports the newly edited photos and adds a few advanced design elements and text features that he thinks will really impress his yearbook advisor during their weekly check-in.

Dylan logs into Teams and presents his work on the layout. His teacher is impressed with Dylan's level of creative design, and asks Dylan to share the final layout on Friday so she can send it to the printer.

After a short break for lunch, Dylan opts for a change of scenery and takes his PC outside. Thanks to the LACE (Localized Adaptive Contrast Enhancement) technology on the screen, reading in the bright sunlight is a breeze and Dylan quickly finishes

his algebra assignment. He uploads his work and heads back inside for a meet-up with his computer science group.

While Dylan has always been interested in computers, he really started to find his passion this year when he enrolled in an Intro to Computer Science class. All semester he's been working tirelessly with a group of his classmates to design a new app for incoming freshman students. He's hoping that his work will prepare him to take the AP Computer Science exam as Junior.

Dylan's computer science project hit a little bump in the road, however, when COVID-19 caused his school to transition to remote learning. But, luckily, he's been able to connect with his group through video conferencing, where they can all work on their project together in real time.

Dylan opens Office365* to find his group's presentation file and is surprised to discover that two of his classmates are already inside the file working on it! He joins the video call and shares his screen to show what he's been working on—a new app feature that he programmed using MS Visual Studio*. After they work through a few bugs in the code, his group decides to call it a day and they make a plan to meet up again next week.

After a full day of learning, Dylan takes a well-earned break and joins some of his teammates for a multiplayer game of Rocket League*. Dylan joined the school's esports team earlier this year, and he's quickly grown to appreciate the strategy and competitiveness. He's completely immersed in the game and about to score another goal when he hears his mom calling him to dinner. Dylan sends his friend a message asking to play later, then closes his PC and heads downstairs.

After a full day of learning, connecting with friends, and enjoying some of his favorite downtime activities, Dylan's battery is still going strong. He plugs in his Intel-based Windows PC and gets ready for bed. It's been a busy day, and he's pleased with everything he was able to accomplish. As for mastering the new Rocket League arena….well, there's always tomorrow!

Intel-based Windows Devices for Learning

The latest generation of Intel-based PCs can help prepare students and educators to better meet the challenges of remote learning.

- Powerful Intel-based processors help students be more productive — whether multitasking online or creating complex graphical or interactive content
- Safer and more secure with built-in protections, password-free login using Windows* Hello, and automatic updates
- Intel® WiFi 6-ready to support high performance networking
- Available Localized Adaptive Contrast Enhancement (LACE) to support learning anywhere
- Variety of form factors including 2-in-1s or thin, lightweight notebooks

How Did the Windows PC Perform?

Dylan's Intel-based Windows PC "flexed its muscle" as a fast, powerful device that helped him to stay productive and connected throughout the day.

Dylan's powerful PC device allowed for the challenging workloads and collaborative communication vital to remote learning. And the built-in webcam and USB-C port seamlessly met his learning demands throughout the day.

Dylan's world moves fast. Even while running multiple applications, downloading a video, and browsing information online, his multitasking PC device never slowed him down—thanks to the Intel® Pentium® processor using built-in technologies to accelerate commonly used functions.

Dylan's PC provided reliable access to the advanced software applications needed for designing and engineering from home: everything from Adobe to Visual Studio! And with the collaborative file sharing in Office365, Dylan was able to work seamlessly in real time with his classmates.

From virtual class meetings to streaming video and online gaming, Dylan's Windows PC provided high-performance Intel® WiFi 6 network connectivity when he needed it most.

With the durability and portability of a PC, Dylan was able to carry his device from room to room. And the anti-glare LACE technology meant that Dylan didn't have to worry about moving outside to work in the bright sunlight.

Dylan's parents understand the inherent risks of being online. They are reassured, knowing that his Windows PC keeps Dylan's data safe from malware with automatic updates and hardware-accelerated encryption.

Esports are Dylan's life. With high-resolution graphics and fast connection speeds, Dylan knows he's getting the best gaming experience possible.

The Right Windows Device for Learning

Explore how Intel-based Windows devices compare against other processor manufacturers when running typical classroom learning scenarios.

View the report

Discover additional resources for learning at
www.Intel.com/education

(intel)