Education

Intel® Skills for Innovation Case Study

Building Future-Ready Skills in the Alternative School Classroom

By engaging in hands-on, innovative activities from the Intel® Skills for Innovation (Intel® SFI) Starter Pack, students at Options Secondary Program (OSP) gain skills to succeed in the ever-evolving future job market.

Options Secondary Program Vision

To create a purposeful community that values meaningful relationships, an engaging learning environment, and a dedication to academic and personal success.

Options Secondary Program in Littleton, Colorado, provides a non-traditional classroom setting and highly structured program to meet the needs of at-risk students in grades 6 through 12. Students come from schools throughout the Littleton School District. OSP's dedicated educators and staff focus on equipping their students with the social-emotional and higher cognitive skills they will need to thrive in the changing world that awaits them. To help reach that goal, OSP educators challenged students with technology-infused lessons and activities from the Intel SFI Starter Pack, at appropriate levels of complexity. The engaging experiences fostered skill building and growth for students and educators alike.

Challenges

- **Engage** students requiring extra academic, social, and emotional support.
- **Empower** educators with tools and skills to integrate technology into daily lessons in all subjects for better learning outcomes.
- **Grow** social-emotional skills through collaborative lessons, discussions, and purposeful activity in an environment where classroom culture can sometimes make the difference between a thriving or apathetic learner.

Solution

The Intel SFI Starter Pack provides hands-on experience with using technology tools to solve real-world problems, giving educators an effective way to help students build the skills they need for future career readiness. Easy to implement with ready-to-use-materials, Starter Pack activities help keep students engaged whether at home or at school. Materials include detailed, grade-level-appropriate lesson plans, presentations, and working files to be loaded into software apps.

Starter Pack activities are hosted on the Intel SFI Platform, which offers a rich, interactive, professional learning community with collaborative features that enable educators to share best practices, ideas, inspiration, and support.

"Starter Pack gives our students an opportunity to dip their toes into what might be out there as they progress through their academic and professional careers."

Jeff Pickering
Assistant Principal

Results

Deploying the Intel SFI Starter Pack jump-started significant progress for students and educators at OSP:

- Hands-on experience using technology tools to solve real-world problems helped bridge the gap between learning concepts and applying them.
- Building mindsets and skillsets for effective problem-solving using technology renewed student motivation and self-confidence. It helped them see themselves as future innovators.
- Using technology in new ways to improve learning outcomes enabled OSP to maximize the benefit of their technology investment.

Figure 1. Students use green screen technology to record and edit their backdrops as they learn the fundamentals of live news production.

With its low student-to-teacher ratio, social-emotional curriculum, and passionate staff, OSP is well-organized to aid students who need more support and intervention than might be available at other schools in the Littleton district. When trailblazing OSP educators prepared to introduce Intel SFI Starter Pack activities to their classes, they set their students up for success. The educators carefully chose specific Starter Pack activities for their relevance to Colorado state standards, curriculum alignment, and technology accessibility. Then, supported by Starter Pack resources, they guided their students through the new experiences.

Empowering Today's Students to Become Tomorrow's Innovators

The Intel SFI Starter Pack's ready-to-use, technology-infused learning experiences helped OSP educators create an environment that inspires innovation. The growing Starter Pack library—currently with 70 activities spanning 140 hours of content across various K-12 subjects—made it easy to integrate skill building supported by digital technologies into their existing curriculum. As they became more familiar with the Starter Pack activities, which are hosted on the Intel SFI Platform, the educators came to appreciate their adaptability, noting that the activities are well-suited to virtual, hybrid, or in-person classroom environments.

Using Technology to Solve Real-World Problems Boosts Engagement

To start, individual OSP educators chose Starter Pack activities appropriate for the subject and grade levels they were teaching. Selected activities included "History and Uses of Democracy," "Better Sensing Makes Better Sense," "Time to Log Off," and "Virtual Tourism."

While the topics varied widely, all of the activities offered students opportunities to apply the concepts learned to real-world problems. Both students and educators expressed excitement about how these linkages allowed students to understand the relevance of the material being taught to their everyday lives. Similarly, students and educators were impressed by how seamlessly a single Starter Pack activity would integrate multiple subject areas. In doing so, the activities raised students' awareness of how a variety of subjects might come into play when attempting to thoroughly understand a dynamic concept such as screen time, for example.

> "That's the beauty of it. They're real-world questions that could be applied in different subject areas."

Nathan Johnson,
Social Studies Teacher

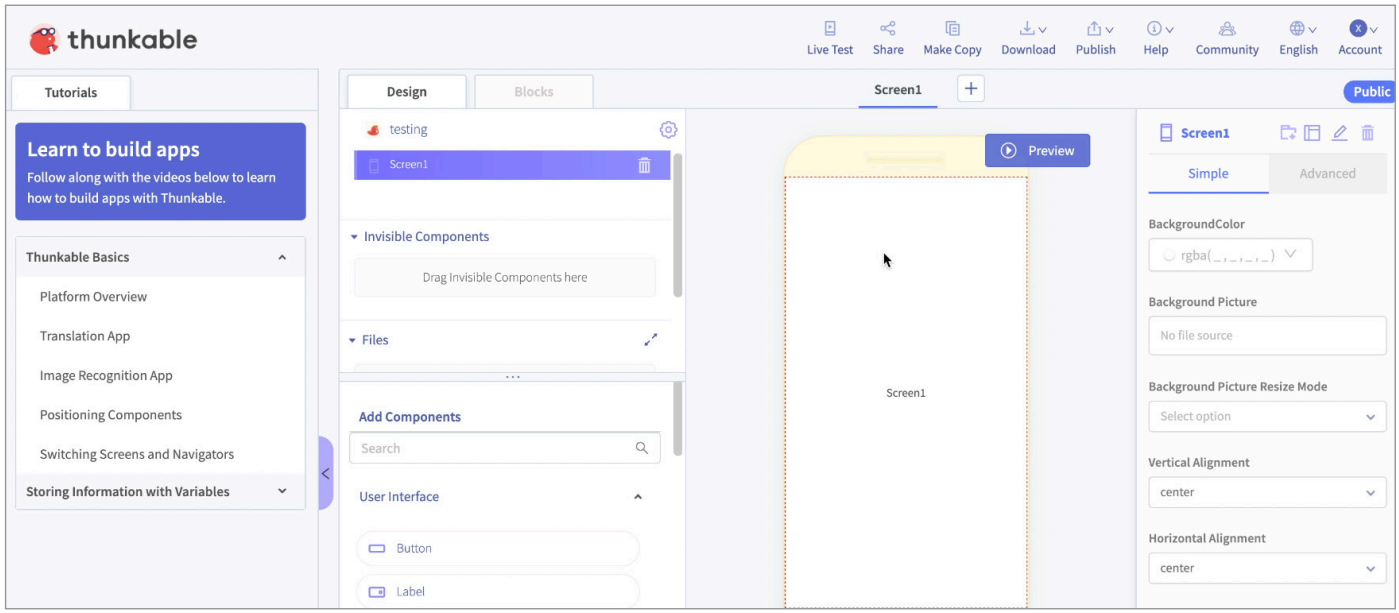


Figure 2. Students explore how to build a Speech Recognition app using Thunkable in the Starter Pack 'Better Sensing Makes Better Sense.'

"Some of them are more advanced at Scratch than I am now, and it's because we're teaching it to them at a younger age. They're going to be able to apply the skills that they're learning from Scratch to any type of coding program later on, which I think is important because we are shifting to a world of technology."

- Lexi Karet,
Science Teacher

The Right Mindsets and Technology Tools Enable Effective, Innovative Solutions

Though progress was steady once the effort got underway, the students at OSP encountered a few bumps at the outset. While many are digital natives, they were used to viewing technology more as an access point for entertainment than as a tool for data collection or problem-solving. Their teachers reported a bit of uncertainty as the students adjusted their mindsets. Working together, the educators and students overcame this initial discomfort. Ultimately, students were pleasantly surprised to find that activities they had initially perceived to be too challenging for their academic level(s) had, in fact, turned out to be meaningful and positive learning experiences.

Intel SFI Starter Pack activities are designed to be grade-level appropriate, challenging students with the right levels of complexity. Through the activities, students have the opportunity to use technology as a tool to solve problems. In the process, they raise their cognitive level from simply remembering and understanding to applying, analyzing, and inventing.

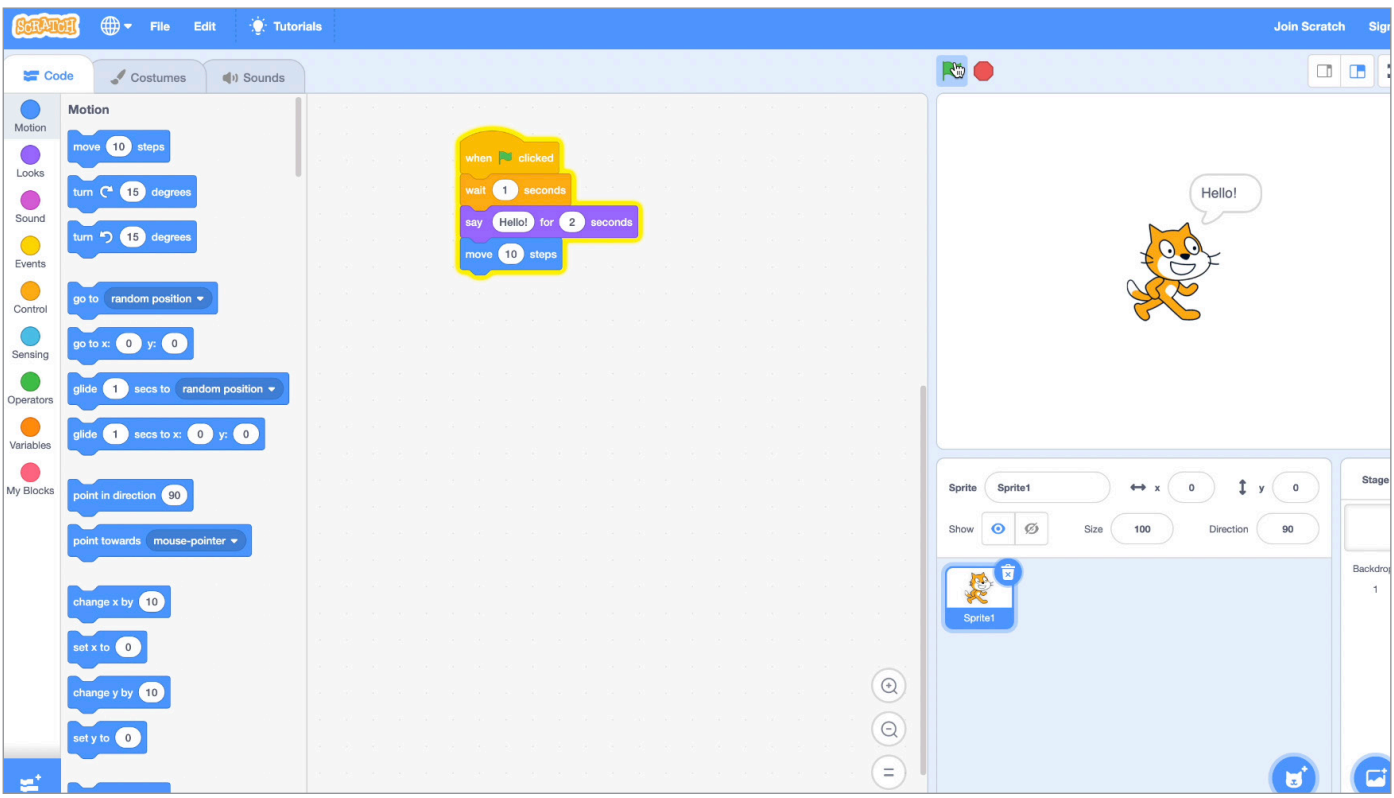
Reflecting on the engagement, OSP educators noted an additional success: beyond improving their design thinking and problem-solving skills, the students also grew socially and emotionally. Working together on Starter Pack activities fostered collaborative learning skills and empathy—and teachers cited the "Better Sensing Makes Better Sense" activity, specifically, as an example of academic rigor presented in a manner that fosters mental resilience. A focus on social-emotional skills such as these, which will be essential as students advance in their academic and professional careers, is at the heart of OSP's mission.

Maximize the Benefit of Your Technology Investment to Maximize Learning Outcomes

With ready-to-use, grade-level appropriate lesson plans, presentations, and working files to be loaded into software apps, the Intel SFI Starter Pack simplifies classroom implementation.

Grade 6 science teacher Lexi Karet noted that the prepared lesson plans relieved her stress about lesson planning, which allowed her more energy and focus to enjoy conducting the lessons. She added that she clearly is not

Figure 3. In the Starter Pack 'Water Cycle,' students use Scratch to create short animations to explain the water cycle.



the only one who enjoyed the program—one of her students loved it so much that he spent an additional 24 hours exploring independently outside of class time!

Language arts teacher Carol Boorom shared that her experience with technology through the Starter Pack lessons opened her eyes to new and different ways of using the same technology in her classroom.

"The green screen generally isn't the first thing that comes to mind, but now I know that it's pretty easy and engaging, I can see helpful ways to use it in all sorts of lessons."

Carol Boorom,
Language Arts Teacher

For students, the opportunity to challenge themselves—and succeed—with models and sophisticated programs strengthened their confidence in themselves and their future prospects while energizing them about school.

Summary

The school closures prompted by the global pandemic underscored the value of adaptability in education. Now more than ever, students' academic and future workplace success depends on developing adaptable mindsets and technological skillsets. Keenly aware of this, educators and staff at OSP chose the Intel SFI Starter Pack to help them help their students build these essential skills.

As their experience demonstrates, the Intel SFI Starter Pack simplifies technology integration in the classroom—whether virtual, hybrid, or in-person—and helps keep students engaged, at home or at school. The staff and students at OSP look forward to continuing to build on their success!

Ready to Get Started?

Intel SFI Starter Pack is designed to meet the evolving pedagogical needs of educators who are preparing learners for a future workforce. The program is available under license from Intel. For more information, please contact your Intel Technology Provider.

Figure 4. Students put themselves in the shoes of newscasters in the Starter Pack 'Green Screen Newscast.'

Watch the video

About Intel Skills for Innovation Framework

Intel Skills for Innovation Framework empowers educators to become leaders of technology-infused learning experiences. Using the framework helps educators integrate technology into their programs and plans to build skills and help students develop their cognitive, technical, and social-emotional skills.

For more information, visit **skillsforinnovation.intel.com**

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