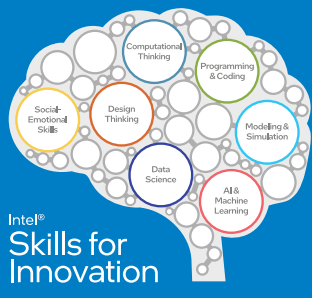




intel®



Intel® Skills for Innovation Starter Pack Overview

“The Starter Pack lessons can lead to some really powerful learning, especially in regards to connecting content with purposeful digital projects. Technology can be a strong tool and with an ever-growing and developing world, digital skills are essential for students to have.”

Kerry H.
Teacher, The Ovington School, Brooklyn, New York

Intel® Skills for Innovation Framework







Targeted Mindsets & Skillsets

The Intel® Skills for Innovation (Intel® SFI) Framework envisions a world in which students possess the skills necessary to meet the shifting landscape of the Fourth Industrial Revolution. Students are empowered to be innovators as they prepare for, imagine and create the jobs of the future.

The framework provides a direction for decision makers and educators to integrate technology activities into the existing curriculum to build essential mindsets and skillsets.

Path to Adopting Intel Skills for Innovation

<p>1</p> <h3>Plan</h3> <p>Understand new skill requirements in the post-pandemic environment. Rethink technology's role in education system to foster skill building.</p>  <p>Intel® SFI Planning Toolkit For Decision Makers Modular workshops and planning workbook</p>	<p>2</p> <h3>Experience</h3> <p>Experience technology used for skill building in the actual learning environment and verify viability.</p>  <p>Intel® SFI Starter Pack For Educators and Learners 70 activities with more than 140 hours of class time</p>	<p>3</p> <h3>Learn</h3> <p>Develop educators' competencies to facilitate higher-order skills development in their students.</p>  <p>Intel® SFI Professional Development For Educators 80+ hours of professional development for all levels</p>	<p>4</p> <h3>Deploy</h3> <p>Adopt technology-supported, skills-based learning models across the entire education system.</p>  <p>Engage with Intel® Partner Ecosystem For Education Institutions SFI-trained service and technology providers</p>
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Introduction to Intel® SFI Starter Pack

The Intel SFI Starter Pack provides educators with ready-to-use, technology-infused learning experiences that develop skills of the future for learners. Using hands-on activities based on real-world scenarios, educators can effectively integrate innovation skills supported by digital technologies into their existing curriculum. Activities are designed for in-person, remote, or virtual learning and work well for flipped classrooms. The Intel SFI Starter Pack is hosted on the Intel SFI Platform.

With a growing library of

70 activities spanning **140** hours of content across various subjects for K-12 schools.

The Intel SFI Starter Pack maps innovation skills under the Intel SFI Framework to existing curriculum, integrating technology into engaging, grade-level-appropriate activities and projects. Using technology tools in real-world scenarios helps students build skills of the future.

Technology Usage Examples

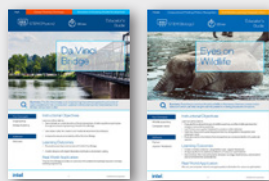
- Cloud-based software for 3D modeling, simulation, and data analysis
- Programming software, including Scratch and Python
- Digital fabrication tools such as 3D printing and laser cutting

Developing Skills for the Future

- Ability to create, evaluate, and analyze (higher-order cognitive skills)
- Innovation mindset
- Improved readiness for the demands of the Fourth Industrial Revolution

Exploring an Intel SFI Starter Pack Activity

Each Intel SFI Starter Pack activity is a complete resource for educators, designed to provide support in different curriculum subjects. It includes an educator's guide, teaching deck and working files. The estimated duration of each activity is two hours.



Educator's Guide

- Learning objectives
- Lesson overview
- Activity guide
- Troubleshooting tips
- Assessment & rubrics

Teaching Deck

- Introduction to topic
- Hands-on activities
- Guided learning
- Discussion topics
- Reflection

Working Files

- Worksheets
- Installation guides
- Applications
- Source files or codes
- Data sets

All activities can be conducted on a Windows or Chromebook* platform.

*Refer to the Intel SFI Starter Pack glossary for the list of activities that can be conducted on a Chromebook

What is Included in the Intel® SFI Starter Pack Activity

The Educator's Guide provides educators with detailed information about what to expect when they carry out the activity in the classroom.

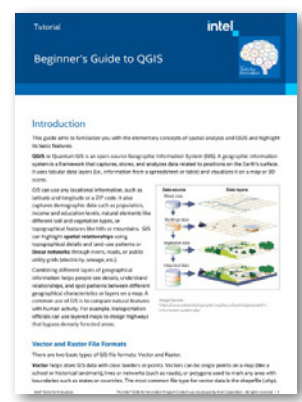
The screenshot shows an activity page for 'VR Science Museum' with the following callouts:

- Grade level:** Points to the 'Elementary' tab in the top navigation bar.
- Subject area:** Points to the 'Biology' subject area.
- Duration:** Points to the '120 min' duration indicator.
- Mindset:** Points to the 'Simulation & Modeling | Problem Definition' category.
- Skillset:** Points to the 'Computational Thinking | Algorithms' category.
- Key concept covered in each activity is highlighted:** Points to the 'Key Concepts' section, which lists 'Virtual Reality' and 'Simulation'.
- Technology used – A variety of technology ranging from programming to cloud-based software has been selected for the 70 activities:** Points to the 'Software' section, which lists 'CoSpaces Web'.
- This section integrates both the learning objectives of the topic in the subject as well as the outcome of a tech-infused lesson. An example of a real-world application is also included to show the relevance of this activity beyond the classroom.** Points to the 'Instructional Objectives', 'Learning Outcomes', and 'Real World Application' sections.

Each Starter Pack activity focuses on at least one mindset and skillset under the 7 innovation skills. All 70 activities are designed to develop social-emotional skills in learners.

New to the Technology?

Beginner's guides have also been created for educators who are interested in finding out more about how to use and apply the software or technology introduced in the Intel® SFI Starter Pack activities. As a supplementary resource, the guides provide additional support to educators in using technology with greater confidence.



Intel® SFI Starter Pack for K-12 Schools

Grade-level-appropriate Intel® SFI Starter Pack activities are categorized into various subject areas, making it easy for educators to select activities that match their areas of specialization.

Categorization of Intel SFI Starter Pack Activities

	Languages	STEM	Humanities
Elementary (15 Activities)	<ul style="list-style-type: none"> English Literature 		<ul style="list-style-type: none"> Geography History Social Studies
Middle (25 Activities)	<ul style="list-style-type: none"> English Literature Language Arts 	<ul style="list-style-type: none"> Mathematics Biology Chemistry Physics 	<ul style="list-style-type: none"> Geography History Social Studies
High (30 Activities)	<ul style="list-style-type: none"> English Literature Language Arts 		<ul style="list-style-type: none"> Economics Geography History Social Studies

Curriculum Integration

Each Intel® SFI Starter Pack activity has been designed for seamless integration into the local curriculum.

The SFI Starter Pack Activities are currently aligned to several sets of U.S.-based standards, including Common Core, NGSS and ISTE.

The Starter Pack Activities are also aligned to the National Curriculum of both Singapore and the United Kingdom.

Subject	Activity Title	Description	Software used	Engineering Technology	Mindset	Skillset	Chromebook
Language	AI Roleplaying	Experience game-based learning in creative writing using AI Dungeon to simulate text adventures.	AI Dungeon	Comp. Thinking: Algorithms	AI & Machine Learning	Natural Language Processing	✓
Social Studies	Anatomy of Safety	Learn how to use 3D game engines to discover potential danger zones or fall areas for senior citizens.	Unity	Design Thinking: Define	Simulation & Modeling	Problem Definition	
STEM (Physics)	Architecture of Wind	Learn how architects test to see if the tall buildings they are designing will be able to withstand strong winds.	Ansys 3D, Ansys Virtual, Wind	Design Thinking: Test	Programming & Coding	Iterative Refinement	
History	As A Matter of Fake	Learn how to differentiate fake news or deliberate online falsehoods by analyzing text using natural language processing.	Python, Jupyter Notebook	Comp. Thinking: Pattern Recognition	AI & Machine Learning	Natural Language Processing	✓
STEM (Math)	Benford's Law	Create a computational experiment using the Monte Carlo Method and Markov Chain to solve complex problems.	Python, Jupyter Notebook	Comp. Thinking: Abstraction	Data Science: Data Modeling		✓
STEM (Math)	Big O Notation	Learn about Big O notation and how it is used in coding to explain the complexity of an algorithm.	Python	Comp. Thinking: Algorithms	Programming & Coding	Iterative Refinement	✓
History	Causes of Genocides	Investigate the causes of genocides through data wrangling to prepare data for trend and correlation analysis.	Python, Jupyter Notebook	Comp. Thinking: Decomposition	Data Science: Data Wrangling		✓
Geography	Clean Water	Investigate the relationship between a lack of access to good sanitation and child mortality using Gapminder.	Gapminder, Dollarstreet	Design Thinking: Empathize	Data Science: Data Visualization		✓
STEM (Physics)	Da Vinci Bridge	Reconstruct the historical Da Vinci Bridge without nails or ropes using laser cutting.	Inkscape	Design Thinking: Prototype	Simulation & Modeling	Model Development	
STEM (Biology)	Diversity of Flowers	Investigate how diversity enables flowers to adapt to their environment and create a machine learning model to classify irises.	Python, Jupyter Notebook	Comp. Thinking: Algorithms	AI & Machine Learning	Learning Models	✓

List of Intel SFI Starter Pack Activities

For detailed information including learning objectives, platform compatibility, technology used and innovation skills covered in each Intel SFI Starter Pack activity, refer to the [Starter Pack Catalog](#).

Intel® SFI Learning Platform

The Intel® SFI Learning Platform provides educators and administrators with access to a rich, interactive social learning environment to learn, share, collaborate and connect with a global population of educators. With system-wide reporting and analytics, administrators can access powerful insights to track and support the progress of their staff on behalf of their entire organization.

Learning

Interactive learning & completion certificates

Resource Library

Lesson plans, PDFs, videos, beginner's guides, presentations, and much more



Live Discussions

Grouped by cohort, topic, subject, and thread

Insight Surveys

Capture trends of the innovative approaches to learning and student development

Community-Generated Content

Shared lesson plans, best practices, and an opportunity to connect with other professionals through the community

Intelligent Search

Search categories and filters aligned to educators' interests

Ready to Get Started?

The Intel® SFI Starter Pack is designed to meet the evolving pedagogical needs of educators and prepare learners to excel as part of tomorrow's workforce. This program is available under license from Intel.

For more information about how to deploy Intel® SFI Starter Pack in your education environment, please contact your Intel Technology Provider.

To continue building educators' capacity to create technology-infused learning experiences, see [Intel® SFI Professional Development](#), another key component of the Intel® Skills for Innovation Framework.

For more information, visit

skillsforinnovation.intel.com

Intel technologies may require enabled hardware, software or service activation.

No product or component can be absolutely secure.

Your costs and results may vary.

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