ISTE Student Standards

View the 28 [ISTE Student Standards](#) in their entirety and accompanying explanation videos.

1.1   Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.

1.2   Digital Citizen

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.

1.3   Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.

1.4   Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.

1.5   Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

1.6   Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

1.7   Global Collaborator

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

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Rover Kit - Summary

Mission	Security Zone	Ultrasonic Drum	Resistor Piano	Runaway Rover	Rover Sensor Steering
Key Skills & Competencies	Build a circuit with an ultrasonic range finder; Code with loops, comparison operators, and conditionals; Graph ultrasonic data	Use the ultrasonic sensor to create air music" based on distance; map distance values to notes in a scale; code with loops, conditionals, and comparison operators	Create a panel of resistors and play notes with a jumper wire; map sounds to a list	Build a rover robot and a circuit to control 2 servo motors and an ultrasonic sensor; Calibrate servo motors; Write an algorithm to navigate the rover through a maze	Build a rover robot and a circuit to control 2 servo motors and an ultrasonic sensor; map ultrasonic distance to servo motor speeds; Refine algorithm to turn wheels accurately
Vocabulary	Conditionals, sensor, ultrasonic, echolocation, comparison operators	Variables, sensor, ultrasonic,	Resistor, voltage, lists	Servo motors, calibration, functions	Ultrasonic sensor, variables, mapping input and output values,
Build Difficulty	Intermediate	Intermediate	Intermediate	Advanced	Advanced
Code Difficulty	Beginner	Intermediate	Advanced	Intermediate	Intermediate

ROVER KIT - ISTE STANDARDS ALIGNMENT

Mission	Security Zone	Ultrasonic Drum	Resistor Piano	Runaway Rover	Rover Sensor Steering
Empowered Learner					
Feedback to Improve Practice 1.1.c	✔	✔	✔	✔	✔
Technology Operations 1.1.d	✔	✔	✔	✔	✔
Knowledge Constructor					
Real-World Issues 1.3.d	✔				
Computational Thinker					
Problem Definitions 1.5.a					
Data Sets 1.5.b	✔	✔			
Decomposition 1.5.c	✔	✔	✔	✔	✔
Algorithmic Thinking 1.5.d	✔	✔	✔	✔	✔
Global Collaborator					
Project Teams 1.7.c	?	?	?	?	?

Note: There are 28 ISTE standards. For better readability, the standards in the table show only the standards covered by the Rover Kit.