

ISTE Standards Alignment

Student Standards



EXPLORE

Legend

| | |
|---|---|
| • | The standard is clearly addressed by program activities. |
| - | This standard potentially could be addressed as part of FIRST® LEGO® League Explore either by actions that the coach or teacher takes when working with the students or by conditions established by the program. |

All Grades

| Cluster | Indicator | Indicator Statement | Addressed |
|-----------------------|-----------|---|-----------|
| Empowered Learner | 1 | Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. | - |
| | 1a | <i>Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.</i> | - |
| | 1b | <i>Students build networks and customize their learning environments in ways that support the learning process.</i> | - |
| | 1c | <i>Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.</i> | - |
| | 1d | <i>Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.</i> | - |
| Digital Citizen | 2 | 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. | - |
| | 2a | <i>Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.</i> | - |
| | 2b | <i>Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.</i> | - |
| | 2c | <i>Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.</i> | - |
| | 2d | <i>Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.</i> | - |
| Knowledge Constructor | 3 | 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. | - |
| | 3a | <i>Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.</i> | - |
| | 3b | <i>Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.</i> | - |
| | 3c | <i>Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.</i> | - |
| | 3d | <i>Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.</i> | - |
| Innovative Designer | 4 | Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. | • |
| | 4a | <i>Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.</i> | • |
| | 4b | <i>Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.</i> | - |
| | 4c | <i>Students develop, test and refine prototypes as part of a cyclical design process.</i> | - |
| | 4d | <i>Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.</i> | • |

| | | | |
|-----------------------|----|--|---|
| Computational Thinker | 5 | Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. | ● |
| | 5a | <i>Students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.</i> | - |
| | 5b | <i>Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.</i> | - |
| | 5c | <i>Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.</i> | ● |
| | 5d | <i>Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.</i> | ● |
| Creative Communicator | 6 | 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. | ● |
| | 6a | <i>Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.</i> | ● |
| | 6b | <i>Students create original works or responsibly repurpose or remix digital resources into new creations.</i> | ● |
| | 6c | <i>Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.</i> | - |
| | 6d | <i>Students publish or present content that customizes the message and medium for their intended audiences.</i> | ● |
| Global Collaborator | 7 | Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally. | ● |
| | 7a | <i>Students use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.</i> | - |
| | 7b | <i>Students use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.</i> | - |
| | 7c | <i>Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.</i> | ● |
| | 7d | <i>Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.</i> | - |