International Society for Technology in Education

ISTE SEAL OF ALIGNMENT REVIEW FINDINGS REPORT

TechFactors Inc.

TekHigh

March 2022

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ABOUT

ABOUT ISTE

The International Society for Technology in Education (ISTE) is the premier nonprofit membership organization serving educators and education leaders. ISTE is committed to empowering connected learners in a connected world and serves more than 100,000 education stakeholders throughout the world.

As the creator and steward of the definitive education technology standards, our mission is to empower learners to nourish in a connected world by cultivating a passionate professional learning community, linking educators and partners, leveraging knowledge and expertise, advocating for strategic policies, and continually improving learning and teaching.

ISTE SEAL OF ALIGNMENT

Resources and products designed with the ISTE Standards in mind are choosing to demonstrate their commitment to support critical digital age learning skills and knowledge. Regardless of a solution's intended grade level, purpose or content area, by addressing the ISTE Standards and earning a Seal of Alignment, a solution is shown to consciously, purposefully and meaningfully support best practices for digital age teaching and learning.

ISTE considers a solution aligned to the ISTE Standards only after an extensive review conducted by trained ISTE Seal of Alignment reviewers, and it has been determined to meet all critical elements of a particular standard indicator in accordance with specific review criteria.

By earning a Seal of Alignment, ISTE verifies that this product:

- Promotes critical technology skills
- Supports the use of technology in appropriate ways
- Contributes to the pedagogically robust use of technology for teaching and learning
- Aligns to the ISTE Standards in specific ways as described in the review finding report

RESOURCE DESCRIPTION

WHAT IS TEKHIGH?

TekHigh is a comprehensive catalog of courses designed for Grades 6 through High School. The courses are presented to provide students with a solid foundation in how ICT skills are used as critical tools within the given topic. Students work through the authentic tasks embedded in each course area, with online and offline practice provided.

The courses included in this review are:

Accounting topics Animation C++ Networking CAD Database Concepts Desktop Publishing Digital Art - Photoshop Digital Design - Photoshop Office Productivity	Digital Video E-Commerce Scratch Programming C# Programming IT Project Management Java Programming MakerTek Robotics Mobile Application Development ICT and Society	Problem solving with Robotics Programming Fundamentals Responsive Web Design Software Development VBNET Programming Video Production and Photography Web Design

HOW IS TEK HIGH IMPLEMENTED?

Each course has a hard-copy textbook that guides students through the concepts and activities. Students may work from the textbook or through the online platform. The content in the textbook is mirrored on the learning management system. If the course is delivered through the online platform/learning management system, all task may be assigned and turned in through the platform. Additionally, for each lesson there is an interactive game which serves as a formative assessment.

ISTE SEAL OF ALIGNMENT REVIEW

Product: TekHigh
Organization: TechFactors Inc.
Date of Award: March 2022

REVIEW METHODOLOGY

ISTE Seal of Alignment reviews are conducted by a panel of education and instructional experts. Reviewers use data collected both separately and collectively to determine how a solution addresses specific elements described in each of the indicators of the ISTE Standards. Special instruments are used by reviewers to collect data on potential alignment across all resource materials. Alignment is determined based on the extent to which all or some of specific elements are addressed within the materials. Reviewers conduct regular calibrations to assure the validity and reliability of the results and final review findings are combined for an overall score for alignment on each individual indicator.

SCOPE OF REVIEW

TekHigh was reviewed for alignment against the ISTE Standards for Students. ISTE reviewers examined the student facing materials, both hardcopy and through the learning management system. Teachers' Guides were also consulted to understand the guidance the teacher is given regarding learning outcomes, assignments, questioning techniques, and assessments.

REVIEW FINDINGS

The ISTE Standards can be aligned at the following levels:

- **Foundational** - Resources and activities aligned at the *foundational* level primarily focus on skills and knowledge that facilitate skill acquisition to eventually meet ISTE Standard indicators.
- **Applied** – Resources and activities aligned at the *applied* level primarily focus on practical, real-world, and/or relevant opportunities to practice the skills and knowledge learned in the curriculum.

TekHigh was found to align to the ISTE Standards for Students in the following areas:

ISTE STANDARDS FOR STUDENTS

	Standard 1 Empowered Learner	Standard 2 Digital Citizen	Standard 3 Knowledge Constructor	Standard 4 Collaborator	Standard 5 Innovative Designer	Standard 6 Computational Thinker	Standard 7 Creative Communicator
Indicator A							
Indicator B							
Indicator C							
Indicator D							

Foundational resources and activities focus primarily on knowledge that facilitates skills acquisition to eventually meet ISTE Standards indicators.

Applied resources and activities focus primarily on practical, real-world and/or relevant opportunities to practice the skills and knowledge learned in the curriculum.

Google Applied Digital Skills was found to address the ISTE Standards for Students in the following ways:

ISTE STANDARD	FOUNDATIONAL FINDING STATEMENT
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.a. Articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.	Courses make direct connections to real-world career options, allowing students to explore interests related to ICT careers.
1.b. Build networks and customize their learning environments in ways that support the learning process.	
1.c. Use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.	A variety of online tools for providing feedback are referenced.
1.d. 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.	All courses are focused on achieving a deep understanding of how technology works, what the components of a system are, and how to effectively and efficiently manage technology.

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.	
2.a. Cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.	
2.b. Engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.	Digital Ethics are referenced consistently throughout the topics
2.c. Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.	The concept of Intellectual property is explored. Citing works as a responsibility is mentioned where appropriate.
2.d. Manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.	
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.	
3.a. Plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.	
3.b. Evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.	

3.c. Curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.	
3.d. Build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.	
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.	
4.a. Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.	Web Design, Robotics, and MakerTek courses all employ the design process as part of the course content.
4.b. Select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.	A variety of tools are introduced as part of learning strategies in the design process.
4.c. Develop, test and refine prototypes as part of a cyclical design process.	MakerTek, Robotics, and programming courses include testing and refining code. Most code is given, so testing and refining is more debugging than design redefinition.
4.d. Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.	Performance tasks often begin with a problem definition. Higher level robotics courses are open-ended.
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.	

5.a. Formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.	
5.b. 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.	Spreadsheet and database courses introduce the collection and organizing of data.
5.c. Break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.	Course activities, while anchored in real-life tasks, break the task goals into steps and parts, focusing on key information and the larger system.
5.d. Understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.	All of the courses reflect how ICT components employ automation and algorithmic thinking as a way to work efficiently.
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.	
6.a. Choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.	
6.b. Create original works or responsibly repurpose or remix digital resources into new creations.	Web design, art, photography, video production introduce the software applications to create original works.
6.c. Communicate complex ideas clearly and effectively by creating or using a variety of	Design course and Java programming courses guide students through the creation of a variety of objects related to each application.

digital objects such as visualizations, models or simulations.	
6.d. Publish or present content that customizes the message and medium for their intended audiences.	Web Design and Java programming courses include customizations and responsive strategies as part of the design
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.	
7.a. 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.	
7.b. Use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.	
7.c. Contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.	Many courses ask students to work in teams and, where appropriate, assign roles to complete projects.
7.d. Explore local and global issues and use collaborative technologies to work with others to investigate solutions.	The course content is anchored in real-world contexts and explores how technology can be an aid in solving problems.

CONCLUSION

TekHigh does an excellent job of connecting to career development and interests. The courses in the TekHigh syllabus give students an excellent foundational understanding in the basic skills and concepts in using ICT in the current business world. Students get a virtual look at how tasks are accomplished in each of the topic areas. Students with access to technology receive guided practice in learning the software fundamentals. If delivered through the learning management system, students will complete authentic tasks within the context of a variety of career pathways.