ISTE SEAL OF ALIGNMENT REVIEW FINDINGS ADDENDUM REPORT

BrainPOP LLC

BrainPOP Jr.

April 2022
# TABLE OF CONTENTS

## ABOUT

- About ISTE 3
- ISTE Seal of Alignment 3

## RESOURCE DESCRIPTION

- What is BrainPOP Jr.? 4
- How is BrainPOP Jr. Implemented? 4

## ISTE SEAL OF ALIGNMENT REVIEW

- Review Methodology 5
- Scope of Review 5
- Review Findings 6

## CONCLUSION

12
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
RESOURCES DESCRIPTION

WHAT IS BRAINPOP JR.?

Brainpop Jr. offers digital educational content for children in kindergarten through third grade. With over 250 topics, it gently encourages young learners to ask questions and form their own ideas.

BrainPop Jr. is a hub of resources that covers instructional topics targeted at young learners. Major topics include Science (11), Health (8), Reading and Writing (9), Social Studies (10), Math (10), and Arts and Technology (3), with the number of subtopics for each available at the time of review listed in parentheses. Each of these subtopics are further divided, accounting for a total of approximately 300 lessons. Some lessons appear in multiple topics.

HOW IS BRAINPOP JR. IMPLEMENTED?

Within Brainpop Jr., teachers can go to the Dashboard area to create a class, which generates a class code. Students then navigate to Brainpop Jr. and enter the code on the homepage, and create an account either via email, Google, or Clever.

Once a class with at least one student is established, teachers can then create assignments, which they can assign to the class or specific students. There, they add topics and various activities (“features”), which are further described in the following paragraph. Finally, they can choose to add instructions, rearrange the activities, and assign the lesson to students. Students also have the option to freely explore the site on their own.

Each lesson is introduced by an animated video, featuring the main character Moby the Robot, as well as his friends. The videos are about five minutes in length or less. Videos feature transcripts and closed captioning features. Optional activities may include:

- quizzes, Make-A-Map (a mind-mapping tool),
- Creative Coding (students practice coding to extend their learning on the given topic),
- Word Play (vocabulary activity),
- Draw About It (students draw about the topic),
- Write About It (a short writing exercise using vocabulary words),
- Activity (an extension of the lesson),
- Belly Up (a comic strip about the lesson),
- Talk About It (discussion prompts),
- Pop a Joke (a short joke about the lesson).

Other teacher resources include Lesson Ideas, Create Quiz, and a feature to Assign the lesson to students. While the lessons on Brainpop are individual, there are also whole-class components, generally found in the Lesson Ideas segments.
Product: BrainPOP Jr.
Organization: BrainPOP LLC
Date of Award: April 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
Brainpop, Jr. was reviewed for alignment against the ISTE Standards for Students. ISTE reviewers examined all lessons that appeared to have content aligned to the Standards. Of these, reviewers emphasized content in the videos, as they were critical to introducing the material and all other activities were optional. All optional activities under relevant topics were also examined, including Lesson Ideas.
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.

BrainPOP Jr. was found to align to the ISTE Standards for Students in the following areas:

<table>
<thead>
<tr>
<th>ISTE STANDARDS FOR STUDENTS</th>
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<tbody>
<tr>
<td>Standard 1: Empowered Learner</td>
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<td>Standard 2: Digital Citizen</td>
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<td>Standard 3: Knowledge Constructor</td>
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<td>Standard 4: Collaborator</td>
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<td>Standard 5: Innovative Designer</td>
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<td>Standard 6: Computational Thinker</td>
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<td>Standard 7: Creative Communicator</td>
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**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.
BrainPOP was found to address the ISTE Standards for Students in the following ways:

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<tr>
<th>ISTE STANDARD</th>
<th>FOUNDATIONAL FINDING STATEMENT</th>
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<tr>
<td><strong>1. Empowered Learner.</strong> Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.</td>
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</table>
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. |
|  
1.b. Build networks and customize their learning environments in ways that support the learning process. | Students are taught about communication tools, such as email, that they can use to build their learning networks. They are advised to have adults help them in connecting with other learners. |
|  
1.c. Use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways. |  |
|  
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. | Students are taught about various technology tools and how they work, such as parts of a computer, using blogs, and how to take photos. |
| **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.

Students are taught about internet safety when dealing with strangers, the pitfalls of cyberbullying and how to avoid them, and digital etiquette when engaging online (including citing sources).

2.c. Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

Students are taught to credit their sources and seek permission before reposting resources.

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.

Students are taught about the importance of strong passwords, as well as the importance of keeping them secret.

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.

Students are taught the steps of the design process, and learn about ways to document their observations.

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.

Students are taught the importance of research in making predictions and observations, and are exposed to modeling of the brainstorming phase of the Engineering and Design Process.

### 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. | Students are taught about the steps of the scientific method, as well as the Engineering Design Process. |
| 4.b. Select and use digital tools to plan and manage a design process that considers design constraints and calculated risks. | |
| 4.c. Develop, test and refine prototypes as part of a cyclical design process. | Students are taught to use the Engineering and Design Process, containing steps such as those listed in the indicator. Additionally, in the Computational Thinking lesson, students are encouraged to iterate to develop better solutions. |
| 4.d. Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems. | Students are taught in several lessons such as Making Predictions, Computer Programming, and Engineering and Design Process that making mistakes is a natural part of the learning process, and that they should persevere when running into such issues. |

### 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.

Students are taught lessons on topics such as booleans and conditionals to help them learn to code.

5.c. Break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

Students are taught to understand the problem, find relevant keywords, and break down problems into component parts within lessons such as Choosing an Operation and Computational Thinking.

5.d. Understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

Students are taught to sequence the steps of an operation in order to code, as well as to identify relevant keywords, make a plan, and solve them.

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.

Students are taught ways to communicate with others including email and instant messaging. They also learn what can be sent over email, such as photos, documents, pictures, and emails.

6.b. Create original works or responsibly repurpose or remix digital resources into new creations.

6.c. Communicate complex ideas clearly and effectively by creating or using a variety of digital objects.
such as visualizations, models or simulations.

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<tr>
<th>6.d. Publish or present content that customizes the message and medium for their intended audiences.</th>
<th>Students learn about how to use digital tools to communicate, such as blogs and emails.</th>
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**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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<tr>
<th>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.</th>
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<tr>
<td>7.b. Use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.</td>
<td>Students are taught how to use asynchronous tools such as blogs and email to communicate with others</td>
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<tr>
<td>7.c. Contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.</td>
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<tr>
<td>7.d. Explore local and global issues and use collaborative technologies to work with others to investigate solutions.</td>
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CONCLUSION

Brainpop Jr. is a tool for learning that breaks down complex topics in an age-appropriate way for young learners. It provides students with multiple exposures to given topics, and is designed so that students with varying interests have ways to demonstrate their learning. The videos are engaging, and provide accessibility tools so that all children can access the content. The design is bright and colorful, and the characters who follow the children throughout their learning journey are funny and engaging, all of which will help keep the attention of this particular demographic.

In this addendum review, Reviewers found new alignment findings at the foundational level, as the videos (the main pieces of each lesson) gave direct instruction on the topic. However, teachers and caregivers were also provided with several optional activities for each lesson that, when assigned, allow students to have more hands-on experience with each topic.

Notably, Brainpop Jr. provides a good foundation of Digital Citizenship, an area that is difficult to reach with younger learners, as they are not yet old enough to practice authentically with their own social media accounts. With the help of an adult, students are able to begin working on these skills, which play a large role in today’s society. Furthermore, potentially complicated topics, such as Booleans and Algorithms, are explained in a way that young learners are able to understand, which will give them the foundation of this increasingly important skill. Finally, by exposing students to both the scientific method and engineering and design process, students will gain a greater understanding of methods and processes to solve problems.