Ohio's Learning Standards for Technology

GRADES 3 - 5

STRAND 1: Information and Communications Technology The understanding and application of digital learning tools for accessing, creating, evaluating, applying and communicating ideas and information.

- **Topic 1: Identify and use appropriate digital learning tools and resources to accomplish a defined task.**

STANDARD	RESOURCES
With guidance, identify and use digital learning tools or resources to support planning, implementing and reflecting upon a defined task.	**Learning.com Google Docs / Slides / Classroom Botley - Robot (2-3) Cubelets (4-5) Code Programs: Kodable (K-5) Code.org (2-5) Code Monkey (4-5) Bitsbox (3-5) Tynker (5) Snap circuits Keva Planks Osmo**
Explain the use of selected digital learning tools and resources to support productivity and learning.	**Learning.com Google Docs / Slides / Classroom Botley - Robot (2-3) Cubelets (4-5) Code Programs: Kodable (K-5) Code.org (2-5) Code Monkey (4-5) Bitsbox (3-5) Tynker (5) Snap circuits Keva Planks Osmo**

- **Topic 2: Use digital learning tools and resources to locate, evaluate and use information.**

STANDARD	RESOURCES
Identify questions related to a topic of interest to broaden or narrow the topic as needed.	**Learning.com Google Search Kahoot Quiz - Google Search**
Use appropriate search techniques to locate needed information using digital learning tools and resources.	**Learning.com Google Search Kahoot Quiz - Google Search**
Use multiple criteria developed with guidance to differentiate between relevant and irrelevant information found with digital learning tools and resources.	**Learning.com Google Search Kahoot Quiz - Google Search**
Explain basic ideas of plagiarism and copyright.	**Learning.com**
Use digital citation tools to cite sources with appropriate guidance.	**Learning.com EasyBib (Google Add-on)**

- **Topic 3: Use digital learning tools and resources to construct knowledge.**

STANDARD	RESOURCES

Gather, organize and summarize information from multiple digital learning tools and resources to build knowledge of a topic.	States Project (3) Branches of Govt. Project (4) Symbiosis Project (5) Code Solar System (5)
Interpret images, diagrams, maps, graphs, infographics, videos, animations, interactives, etc. in digital learning tools and resources to clarify and add to knowledge.	States Project (3) Branches of Govt. Project (4) Symbiosis Project (5) Code Solar System (5)
Organize observations and data collected during student explorations to determine if patterns are present.	Learning.com Osmo Code Programs: Kodable (K-5) Code.org (2-5) Code Monkey (4-5) Bitsbox (3-5) Tynker (5)
Create artifacts using digital learning tools and resources to demonstrate knowledge.	Google Docs / Slides / Classroom Bitsbox

- **Topic 4: Use digital learning tools and resources to communicate and disseminate information to multiple audiences**

STANDARD	RESOURCES
With guidance, discuss and identify communication needs considering goals, audience and content	Google Docs / Slides
With guidance, select media formats appropriate to content and audience.	Google Docs / Slides

Evaluate the features of digital learning tools and resources based on the characteristics of a specific audience.	**Google Forms / Surveys Kahoot**
Produce and publish information appropriate for a target audience using digital learning tools and resources.	**Google Docs / Slides Bitsbox**

STRAND 2: Society and Technology The interconnectedness of technology, self, society and the natural world, specifically addressing the ethical, legal, political and global impact of technology.

- **Topic 1: Demonstrate an understanding of technology's impact on the advancement of humanity – economically, environmentally and ethically.**

STANDARD	RESOURCES
Demonstrate appropriate use of technology and explain the importance of responsible and ethical technology use.	**Nearpod Common Sense Media Learning.com**
Identify positive and negative impacts your use of personal technology and technology systems (e.g., agriculture, transportation, energy generation, water treatment) can have on your community.	**Nearpod Common Sense Media Learning.com**
Describe legal and responsible practices when utilizing technology.	**Nearpod Common Sense Media Learning.com**

- **Topic 2: Analyze the impact of communication and collaboration in both digital and physical environments.**

STANDARD	RESOURCES
Create a plan and select collaboration and/or communication tools to complete a given task.	**Google Docs / Slides**
Exercise digital etiquette when communicating and collaborating.	**Learning.com Google Classroom**

	Google Docs / Slides
Identify the positive and negative impact the use of technology can have on relationships, communities and self.	**Nearpod Common Sense Media Learning.com**

- **Topic 3: Explain how technology, society, and the individual impact one another.**

<u>STANDARD</u>	<u>RESOURCES</u>
Describe the advantages/disadvantages of technology (past, present, future) to understand the relationship between technology, society and the individual.	**Nearpod Common Sense Media Learning.com**
Demonstrate how technology innovations/inventions can have multiple applications.	**Nearpod Common Sense Media Learning.com**
Identify and discuss how the use of technology affects self and others in various ways.	**Nearpod Common Sense Media Learning.com**
Identify the components of your digital identity and your digital footprint.	**Nearpod Common Sense Media Learning.com**
Identify and discuss laws and rules that apply to digital content and information.	**Nearpod Common Sense Media Learning.com**

STRAND: Design and Technology Addresses the nature of technology to develop and improve products and systems over time to meet human/societal needs and wants through design processes.

- **Topic 1: Define and describe technology, including its core concepts of systems, resources, requirements, processes, controls, optimization and trade-offs.**

STANDARD	RESOURCES
Demonstrate how applying human knowledge using tools and machines extends human capabilities to meet our needs and wants.	**Keva Planks Snap Circuits Tinkerspace Design Challenges Botley robot Cubelets Ozobots**
Give examples of how requirements for a product can limit the design possibilities for that product.	**Keva Planks Snap Circuits Tinkerspace Design Challenges Botley robot Cubelets Ozobots Osmo**
Describe a process as a series of actions and how it is used to produce a result.	**Code Programs Snap Circuits Botley Robot Cubelets Ozobots**
Identify and describe examples of technology products and processes.	**Cubelets Ozobots Snap Circuits Code Programs Google Docs / Slides / Classroom**
Explain how controls use information to cause systems to change, like a home thermostat turning on the heat based on the low temperature of a room.	**Snap Circuits Cubelets Ozobots Code Programs**

- **Topic 2: Identify a problem and use an engineering design process to solve the problem.**

STANDARD	RESOURCES
Critique needs and opportunities for designing solutions.	**Keva Planks Snap Circuits Cubelets Ozobots Tinkerspace Design Challenges**
Plan and implement a design process: identify a problem, think about ways to solve the problem, develop possible solutions, test and evaluate solution(s), present a possible solution, and redesign to improve the solution.	**Keva Planks Snap Circuits Cubelets Ozobots Tinkerspace Design Challenges Osmo**
Generate, develop, and communicate design ideas and decisions using appropriate terms and graphical representations.	**Keva Planks Snap Circuits Cubelets Ozobots Tinkerspace Design Challenges Osmo**

- **Topic 3: Demonstrate that solutions to complex problems require collaboration, interdisciplinary understanding, and systems thinking**

STANDARD	RESOURCES
Design a product with multiple components and describe how the components interact to form a system.	**Snap Circuits Cubelets Ozobots Tinkerspace design challenges**

Explore and document connections between technology and other fields of study.	**Snap Circuits Code Programs Google Search Google Docs / Slides**
Identify a product and describe how people from different disciplines combined their skills in the design and production of the product.	**Snap Circuits Code Programs Google Search Google Docs / Slides**

- **Topic 4: Evaluate designs using functional, aesthetic and creative elements.**

STANDARD	RESOURCES
Use criteria developed with guidance to evaluate a new or improved product for its functional, aesthetic and creative elements.	**Snap Circuits Keva Planks Tinkerspace design challenges**
Examine a familiar product or process and suggest improvements to its design.	**Snap Circuits Keva Planks Tinkerspace design challenges**