

# 1st Grade Technology Curriculum

Revised 7/2025

## NJSLS Standards

8.1.2.CS.1, 8.1.2.CS.2, 8.1.2.CS.3, 8.1.2.NI.1, 8.1.2.NI.2, 8.1.2.NI.3, 8.1.2.NI.4, 8.1.2.IC.1, 8.1.2.DA.1, 8.1.2.DA.2, 8.1.2.DA.3, 8.1.2.DA.4, 8.1.2.AP.1, 8.1.2.AP.2, 8.1.2.AP.3, 8.1.2.AP.4, 8.1.2.AP.5, 8.1.2.AP.6, 8.2.2.ED.1, 8.2.2.ED.2, 8.2.2.ED.3, 8.2.2.ED.4, 8.2.2.ITH.1, 8.2.2.ITH.2, 8.2.2.ITH.3, 8.2.2.ITH.4, 8.2.2.ITH.5, 8.2.2.NT.1, 8.2.2.NT.2, 8.2.2.ETW.1, 8.2.2.ETW.2, 8.2.2.ETW.3, 8.2.2.ETW.4, 8.2.2.EC.1

## 8.1 Computer Science

- Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
- Explain the functions of common software and hardware components of computing systems.
- Describe basic hardware and software problems using accurate terminology.
- Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- Describe how the Internet enables individuals to connect with others worldwide.
- Create a password that secures access to a device. Explain why it is important to create unique passwords that are not shared with others.
- Explain why access to devices needs to be secured.
- Compare how individuals live and work before and after the implementation of new computing technology.
- Collect and present data, including climate change data, in various visual formats.
- Store, copy, search, retrieve, modify, and delete data using a computing device.
- Identify and describe patterns in data visualizations.
- Make predictions based on data using charts or graphs.
- Model daily processes by creating and following algorithms to complete tasks.
- Model the way programs store and manipulate data by using numbers or other symbols to represent information.
- Create programs with sequences and simple loops to accomplish tasks.
- Break down a task into a sequence of steps.
- Describe a program's sequence of events, goals, and expected outcomes.
- Debug errors in an algorithm or program that includes sequences and simple loops.

## 8.2 Design Thinking

- Communicate the function of a product or device.
- Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.
- Select and use appropriate tools and materials to build a product using the design process.
- Identify constraints and their role in the engineering design process.
- Identify products that are designed to meet human wants or needs.
- Explain the purpose of a product and its value.
- Identify how technology impacts or improves life.

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- Identify how various tools reduce work and improve daily tasks.
- Design a solution to a problem affecting the community in a collaborative team and explain the intended impact of the solution.
- Model and explain how a product works after taking it apart, identifying the relationship of each part, and putting it back together.
- Brainstorm how to build a product, improve a designed product, fix a product that has stopped working, or solve a simple problem.
- Classify products as resulting from nature or produced as a result of technology.
- Identify the natural resources needed to create a product.
- Describe or model the system used for recycling technology.
- Explain how the disposal of or reusing a product affects the local and global environment. Identify and compare technology used in different schools, communities, regions, and parts of the world.

## Extended Activities

1. **Keyboarding & Typing Practice** - ABCya Game: *Typing Rocket* or *Keyboard Challenge*  
Objective: Improve letter recognition and keyboard familiarity  
Students type letters as they appear on rockets or targets. They will focus on proper finger placement and speed. Students type their names and 2–3 sight words on a blank document (or use ABCya's Story Maker).
2. **Math: Addition & Subtraction** - ABCya Game: *Math Facts Practice* or *Balloon Pop Math*  
Objective: Build fluency with basic addition and subtraction  
Activity: Students solve math facts and pop balloons with the correct answers. The difficulty level will be set based on students' skill level. For advanced learners - There will be pairs of students to compete in solving math problems the fastest (friendly competition).

## Gifted and Talented

1. **Logic & Problem Solving** - ABCya Game: *Marble Math Junior* or *Puzzle Pics*  
Objective: Develop critical thinking and early problem-solving  
Activity: Students roll marbles through number mazes or solve puzzles by arranging tiles. The teacher will encourage strategy and planning. Upon completion, have students explain their reasoning or strategy to a partner.