# STEMbotics Learning Center

K-2 Curriculum Standards Connections
Computer Science, Science & Math
www.stemboticsnv.com

## K-2 Computer Science National Standards Connections

Click here to view the entire complete list of Computer Science Standards.

| | |
|---|---|
| **Computing Systems** | |
| 1A-CS-02 | Use appropriate terminology in identifying and describing the function of common physical components of computing systems (hardware). |
| **Data and Analysis** | |
| 1A-DA-06 | Collect and present the same data in various visual formats. |
| 1A-DA-07 | Identify and describe patterns in data visualizations, such as charts or graphs, to make predictions |

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| Algorithms & Programming | |
|---|---|
| 1A-AP-08 | Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks. |
| 1A-AP-09 | Model the way programs store and manipulate data by using numbers or other symbols to represent information. |
| 1A-AP-10 | Develop programs with sequences and simple loops, to express ideas or address a problem. |
| 1A-AP-13 | Give attribution when using the ideas and creations of others while developing programs. |
| 1A-AP-14 | Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. |
| 1A-AP-15 | Using correct terminology, describe steps taken and choices made during the iterative process of program development |

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| Impacts of Computing | |
|---|---|
| 1A-IC-16 | Compare how people live and work before and after the implementation or adoption of new computing technology. |
| 1A-IC-17 | Work respectfully and responsibly with others online. |

## K-2 National K-12 Science Standards Connections

Click here to view the complete document of science standards.

| Kindergarten | |
|---|---|
| **Motion & Stability: Forces & Interactions** | |
| K-PS2-1. | Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. |
| K-PS2-2. | Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.* |

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| | |
|---|---|
| **From Molecules to Organisms** | |
| K-LS1-1. | Use observations to describe patterns of what plants and animals (including humans) need to survive. |
| **Earth's Systems** | |
| K-ESS2-2. | Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. |
| **Earth & Human Activity** | |
| K-ESS3-3. | Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.* |

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| Engineering Design Process | |
|---|---|
| K-2-ETS1-1. | Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. |
| K-2-ETS1-2. | Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. |
| K-2-ETS1-3. | Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. |
| **First Grade** | |
| 1-LS1-2. | Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. |

| Heredity: Inheritance and Variation of Traits | |
|---|---|
| 1-LS3-1. | Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents |
| **Earth's Place in the Universe** | |
| 1-ESS1-1. | Use observations of the sun, moon, and stars to describe patterns that can be predicted. |
| 1-ESS1-2. | Make observations at different times of year to relate the amount of daylight to the time of year. |

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| | |
|---|---|
| **Engineering Design Process** | |
| K-2-ETS1-1. | Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. |
| K-2-ETS1-2. | Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. |
| K-2-ETS1-3. | Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. |
| **Second Grade** | |
| **Biological Evolution: Unity & Diversity** | |
| 2-LS4-1. | Make observations of plants and animals to compare the diversity of life in different habitats. |

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# K-2 Common Core Math Standards

Click here for the complete K-2 Common Core Math Standards.

## Kindergarten

| | |
|---|---|
| Measurement & Data | Describe and compare measurable attributes |
| Measurement & Data | Classify objects and count the number of objects in categories. |
| Geometry | Identify and describe shapes. |
| Geometry | Analyze, compare, create, and compose shapes. |

## First Grade

| | |
|---|---|
| Measurement & Data | Measure lengths indirectly and by iterating length units. |
| Measurement & Data | Represent and interpret data. |
| Geometry | Reason with shapes and their attributes. |

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| Second Grade | |
|---|---|
| Measurement & Data | Measure and estimate lengths in standard units. |
| Measurement & Data | Relate addition and subtraction to length. |
| Measurement & Data | Represent and interpret data. |
| Geometry | Reason with shapes and their attributes. |