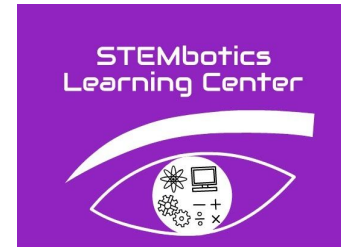


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3-5 Computer Science National Standards Connections

Click [here](#) to view the entire complete list of Computer Science Standards.

Computing Systems

1B-CS-01

Describe how internal and external parts of computing devices function to form a system.

1B-CS-03

Determine potential solutions to solve simple hardware and software problems using common troubleshooting strategies

Data and Analysis

1B-DA-06

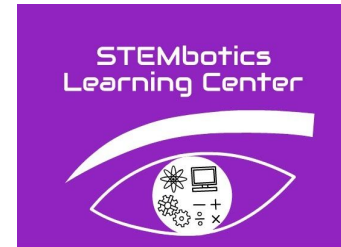
Organize and present collected data visually to highlight relationships and support a claim.

1B-DA-07

Use data to highlight or propose cause-and-effect relationships, predict outcomes, or communicate an idea.

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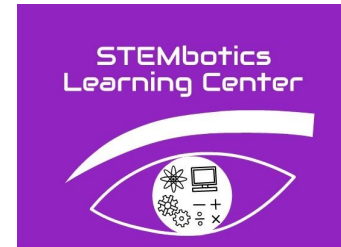


Algorithms & Programming

1B-AP-08	Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
1B-AP-09	Create programs that use variables to store and modify data.
1B-AP-10	Create programs that include sequences, events, loops, and conditionals.
1B-AP-11	Decompose (break down) problems into smaller, manageable subproblems to facilitate the program development process
1B-AP-12	1B-AP-12 Modify, remix, or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features.
1B-AP-14	Observe intellectual property rights and give appropriate attribution when creating or remixing programs.
1B-AP-15	Test and debug (identify and fix errors) a program or algorithm to ensure it runs as intended.
1B-AP-16	Take on varying roles, with teacher guidance, when collaborating with peers during the design, implementation, and review stages of program development
1B-AP-17	Describe choices made during program development using code comments, presentations, and demonstrations.

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Impacts of Computing

1B-IC-18

Discuss computing technologies that have changed the world, and express how those technologies influence, and are influenced by, cultural practices.

1B-IC-19

Brainstorm ways to improve the accessibility and usability of technology products for the diverse needs and wants of users.

3-5 National K-12 Science Standards Connections

Click [here](#) to view the complete document of science standards.

Third Grade

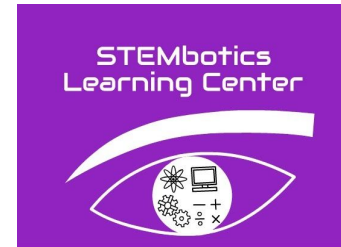
Motion & Stability: Forces & Interactions

3-PS2-2.

Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion

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From Molecules to Organisms: Structures & Processes

3-LS1-1.

Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death

Heredity: Inheritance and Variation of Traits

3-LS1-1.

Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death

3-LS3-2.

Use evidence to support the explanation that traits can be influenced by the environment

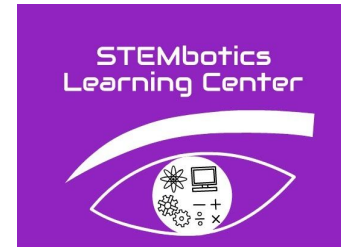
Biological Evolution: Unity & Diversity

3-LS4-3.

Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

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Earth's Systems

3-ESS2-2.

Obtain and combine information to describe climates in different regions of the world.

Fourth Grade

Energy

4-PS3-3.

Ask questions and predict outcomes about the changes in energy that occur when objects collide

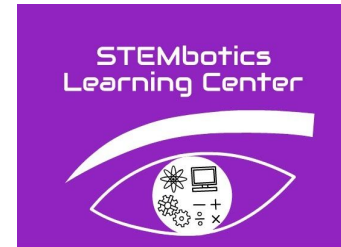
From Molecules to Organisms: Structures & Processes

4-LS1-1.

Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction

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Earth's Systems

4-ESS2-1.

Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation

Earth & Human Activity

4-ESS3-2.

Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

Fifth Grade

Motion & Stability: Forces & Interactions

5-PS2-1.

Support an argument that the gravitational force exerted by Earth on objects is directed down.

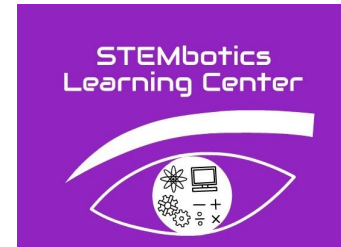
From Molecules to Organisms: Structures & Processes

5-LS1-1.

Support an argument that plants get the materials they need for growth chiefly from air and water.

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Earth's Place in the University

5-ESS1-2.

Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

Earth & Human Activity

5-ESS3-1.

Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Engineering Design Process (3rd-5th Grade)

3-5-ETS1-1.

Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

3-5-ETS1-2.

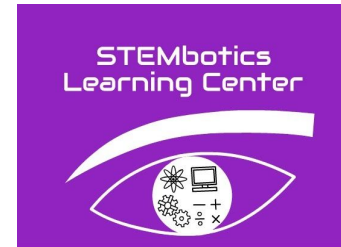
Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

3-5-ETS1-3.

Plan and carry out fair tests in which variables are con

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3-5 Common Core Math Standards

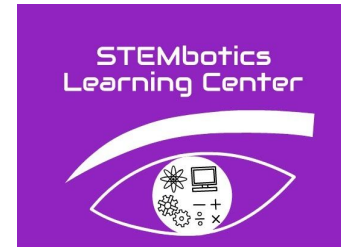
Click [here](#) for the complete K-2 Common Core Math Standards.

Third Grade

Operations & Algebraic Thinking	Represent and solve problems involving multiplication and division.
Operation & Algebraic Thinking	Solve problems involving the four operations, and identify and explain patterns in arithmetic.
Number and Operations—Fractions	Develop understanding of fractions as numbers.
Measurement and Data	Represent and interpret data.
Measurement and Data	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
Measurement and Data	Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.
Geometry	Reason with shapes and their attributes.

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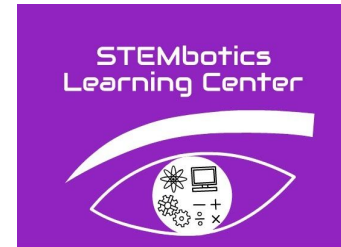


Fourth Grade

Operations & Algebraic Thinking	Gain familiarity with factors and multiples.
Operation & Algebraic Thinking	Generate and analyze patterns.
Number and Operations—Fractions	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers
Number and Operations—Fractions	Understand decimal notation for fractions, and compare decimal fractions.
Measurement and Data	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
Measurement and Data	Represent and interpret data.
Measurement and Data	Geometric measurement: understand concepts of angle and measure angles.
Geometry	Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

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Fifth Grade

Operations & Algebraic Thinking	Write and interpret numerical expressions.
Number and Operations—Fractions	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
Number and Operations—Fractions	Use equivalent fractions as a strategy to add and subtract fractions.
Measurement & Data	Represent and interpret data
Geometry	Graph points on the coordinate plane to solve real-world and mathematical problems