

Kindergarten 2020 Unit #1: Science - Engineering and Technology

Content Area: **Science**
Course(s): **Science 1, Generic Course**
Time Period: **Marking Period 1**
Length: **24 Days**
Status: **Published**

Established Goals/Standards

Please choose the appropriate Goals/Standards from the Standards tab above.

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|-------------------|---|
| MA.K.MD.A.2 | Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. |
| 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. |
| K-ESS3-3.ETS1.B.1 | Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people. |
| K-PS2-1.2.1 | Simple tests can be designed to gather evidence to support or refute student ideas about causes. |
| K-PS2-1.3 | Planning and Carrying Out Investigations |
| K-PS2-1.3.1 | With guidance, plan and conduct an investigation in collaboration with peers. |
| K-PS2-2.4.1 | Analyze data from tests of an object or tool to determine if it works as intended. |
| K-PS3-2.6.1 | Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. |

Essential Questions

Please add your Essential Questions by clicking on the Lists tab above.

- How can we use a design process?
- What does an engineer do?
- What is a problem?
- What is a solution?
- What is technology?
- What types of questions do engineers ask to solve problems?

Enduring Understanding

Please add your Enduring Understandings by clicking on the Lists tab above.

- A problem is something that needs to be fixed or made better. You can observe to help solve a problem.
- A problem may have many solutions. Engineers need to make observations to decide how to fix the particular problem.
- A solution is something that helps fix a problem.
- An engineer is someone who uses math and science to solve problems.
- Technology is what engineers make and use to solve problems. Both a desk and a phone are kinds of technology.
- The design process contains steps that solve problems. It helps us use observations and analyze a situation to solve a problem.

Content

SWBAT define a simple problem that can be solved by developing a new or improved tool.

SWBAT ask questions, make observations, and gather information helpful in thinking about a problem.

SWBAT make a model based on evidence to represent a tool that solves a problem.

SWBAT compare and test design solutions to a problem.

SWBAT use sketches and models to communicate a solution to a problem.

Resources

HMHCO Online Component

HMHCO Student Workbook

Non-Fiction Leveled Readers (How Can We Solve Problems and Make a Better Bird Feeder)

United Streaming

Brain Pop

Experiments/Observations/Journals

Mystery Science

Let's Find Out Scholastic Magazine

Science Spin - Let's Find Out Scholastic Magazine

Assessment

Lesson Check

Self Check

Unit 1 Assessment