

K

Physical Science

Students will explore the concept of **patterns** by observing the repeated effects of different strengths or directions of pushes and pulls on the motion of an object.

Earth Science

Students will explore the concept of **order** by observing patterns and variations in local weather and the purpose of weather forecasting.

Life Science

Students will engage in experiences to develop their understanding of what plants and animals (including humans) need to survive and the **relationship** between their needs and where they live.



Physical Science

Students will explore the concept of **relationships** by developing an understanding of the relationship between sound and vibrating materials as well as between the availability of light and the ability to see objects.

Life Science

Students will explore the concept of **structures** by looking at how plants and animals use their external parts to help them survive, grow, and meet their needs as well as how behaviors of parents and offspring help the offspring survive.

Earth Science

Students will explore the concept of **patterns** by observing, describing, and making predictions related to the movement of objects in the sky.



1 GRADE

2 GRADE

Life Science

Students will explore the concept of **relationships** by developing an understanding of the codependency of plants and animals within a diversity of habitats.

Physical Science

Students will explore the concept of **structures** by exploring how parts are used to make up a whole, and through an analysis of observable properties of materials.

Earth Science

Students will apply the concept of **change** by observing the ways in which wind and water can transform the shape of the land, and they will identify and represent the shapes and kinds of land and bodies of water in an area.

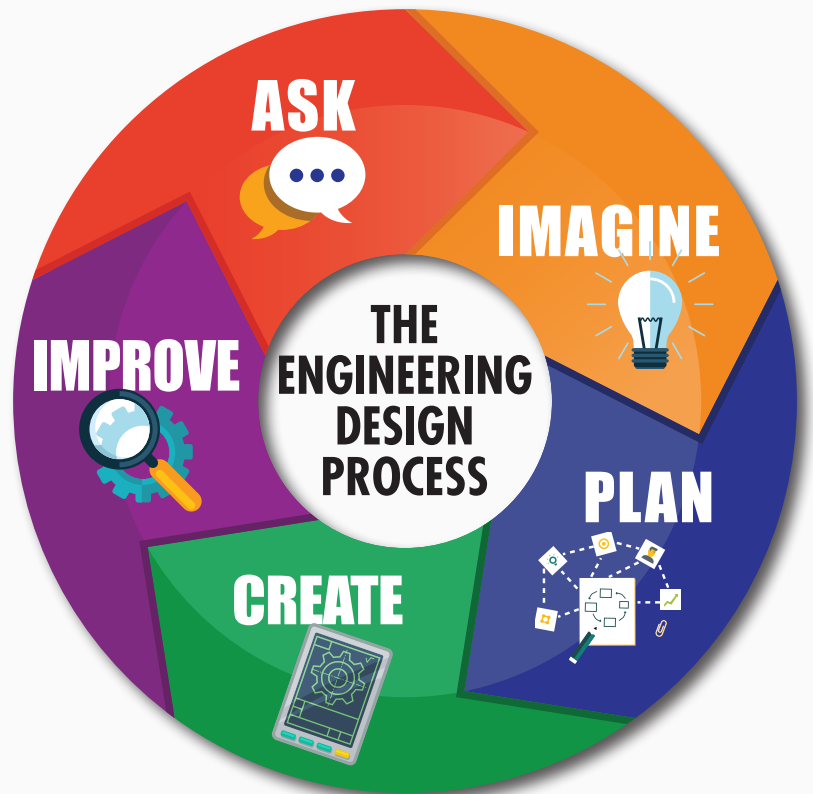


Students will engage in solving real-world problems in each content-based unit using the **Engineering Design Process** in both the science lab and the classroom. Problems might be pre-determined, or discovered through inquiry. **Some examples of content-related projects are:**

Kindergarten (Earth Science) Student engineers design and build a structure that is water resistant, wind-proof and insulated.

First Grade (Physical Science) Student engineers create a device that helps them communicate across a distance using their knowledge of how sound waves travel through different material.

Second Grade (Life Science) After studying pollination, student biologists create, test, and improve a hand pollinator.



Engineering K-2



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.

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.

Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each object performs.