K-5 Science & Technology/Engineering Strand Map

2.1. Identify a problem that reflects the need for shelter, storage, or convenience.

2.2. Describe different ways in which a problem can be represented, e.g., sketches, diagrams, graphic organizers, and lists.

2.3. Identify relevant design features (e.g., size, shape, weight) for building a prototype of a solution to a given problem.

3.5

1.3. Identify and explain the difference between simple and complex machines, e.g., hand can opener that includes multiple gears, wheel, wedge, gear, and lever.

2.4. Compare natural systems with mechanical systems that are designed to serve similar purposes, e.g., a bird’s wings as compared to an airplane’s wings.

1.2. Identify and explain the appropriate materials and tools (e.g., hammer, screwdriver, pliers, tape measure, screws, nails, and other mechanical fasteners) to construct a given prototype safely.

6-8

1.1. Identify materials used to accomplish a design task based on a specific property, e.g., strength, hardness, and flexibility.

1.1. Identify characteristics of natural materials (e.g., wood, cotton, fur, wool) and human-made materials (e.g., plastic, Styrofoam).

1.2. Identify and explain some possible uses for natural materials (e.g., wood, cotton, fur, wool) and human-made materials (e.g., plastic, Styrofoam).

2.1. Identify tools and simple machines used for a specific purpose, e.g., ramp, wheel, pulley, lever.

2.2. Describe how human beings use parts of the body as tools (e.g., teeth for cutting, hands for grasping and catching), and compare their use with the ways in which animals use those parts of their bodies.

1.3. Identify and describe the safe and proper use of tools and materials (e.g., glue, scissors, tape, ruler, paper, toothpicks, straws, spools) to construct simple structures.

1.1. Identify characteristics of natural materials (e.g., wood, cotton, fur, wool) and human-made materials (e.g., plastic, Styrofoam).

5. Recognize that under some conditions, objects can be balanced.

12. Light travels in a straight line until it strikes an object or travels from one medium to another. Light can be reflected, refracted, and absorbed.