

2nd and 3rd grade standards for Bright Kids - PPL Electric Utilities - Pennsylvania

Science and Technology

3.1. Unifying Themes

- A. Know that natural and human-made objects are made up of parts.
- Identify and describe what parts make up a system.
 - Identify system parts that are natural and human-made (e.g., ball point pen, simple electrical circuits, plant anatomy).
- B. Know models as useful simplifications of objects or processes.
- Identify and apply models as tools for prediction and insight.

3.2. Inquiry and Design

- A. Identify and use the nature of scientific and technological knowledge.
- Provide clear explanations that account for observations and results.
 - Relate how new information can change existing perceptions.
- B. Describe objects in the world using the five senses.
- Recognize observational descriptors from each of the five senses
 - Use observations to develop a descriptive vocabulary.
- C. Recognize and use the elements of scientific inquiry to solve problems.
- Generate questions about objects, organisms and/or events that can be answered through scientific investigations.
 - Design an investigation.
 - Conduct an experiment.
 - State a conclusion that is consistent with the information.

3.4. Physical Science- Chemistry and Physics

- B. Know basic energy types, sources and conversions.
- Identify energy forms and examples (e.g., sunlight, heat, stored, motion).
 - Know the concept of the flow of energy by measuring flow through an object or system.
 - Apply knowledge of the basic electrical circuits to design and construction simple direct current circuits.
 - Classify materials as conductors and nonconductors.
 - Know and demonstrate the basic properties of heat by producing it in a variety of ways.

3.7. Technological Devices

- A. Explore the use of basic tools, simple materials and techniques to safely solve problems.
- Select and safely apply appropriate tools and materials to solve simple problems.

3.8. Science, Technology and Human Endeavors

- A. Know that people select, create and use science and technology and that they are limited by social and physical restraints.
- Identify and describe positive and negative impacts that influence or result from new tools and techniques.
- B. Know how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.
- Identify and distinguish between natural and human-made resources

Environment and Ecology

4.2. Renewable and Nonrenewable Resources

- A. Identify needs of people.
- Identify plants, animals, water, air, minerals and fossil fuels as natural resources.
 - Identify how the environment provides for the needs of people.
- B. Identify products derived from natural resources.
- Identify the sources of manmade products (e.g., plastics, metal, aluminum, fabrics, paper, cardboard).
- C. Know that some natural resources have limited life spans.
- Identify renewable and nonrenewable resources used in the local community.
 - Identify various means of conserving natural resources.
 - Know that natural resources have varying life spans.
- D. Identify by-products and their use of natural resources.
- Identify those items that can be recycled and those that cannot.
 - Identify use of reusable products.

4.8. Humans and the Environment

- A. Identify the biological requirements of humans.
- Identify several ways that people use natural resources.
- D. Know the importance of natural resources in daily life.
- Identify items used in daily life that come from natural resources.
 - Identify ways to conserve our natural resources.