KINDERGARTEN SCIENCE

Students should be able to use and practice the:

Science and Engineering Practices

- Students will use the science and engineering practices, including the process skills of scientific inquiry to develop understandings of science content.

Relationships Among Organisms and Environments

- Organisms live in environments where their needs are met
- An environment includes the organisms and also the nonliving things- soil, water, air, etc.
- Demonstrate an understanding of various environments and the kinds of organisms that live these environments
- Some organisms such as plants can make their own food while others cannot
- Conduct structured investigations to determine what plants need to live and grow
- Analyze and interpret data to describe how humans use their senses to learn about the world around them
- Technology can be used to collect data and address problems
- Analyze and interpret data from observations, measurements, or investigations to understand patterns and meanings

Daily and Seasonal Weather Patterns

- Know that weather is a combination of sunlight, wind, precipitation, and temperature in a given region at a given time
- Compare daily and seasonal weather patterns
- Analyze and interpret local weather data
- Describe weather patterns and use graphs and weather symbols
- Develop and use models to predict seasonal weather patterns and changes
- Communicate how the seasons affect plants and animals

Properties of Matter

- Classify objects by observable, qualitative properties (such as size, shape, magnetic attraction, weight, texture, and sinking or floating in water)
- Compare the properties of different types of materials (including wood, plastic, metal, cloth, and paper) from which objects are made
- Discuss how the properties of different types of materials determine how these materials are used
- Conduct investigations to determine which materials have the best properties for particular uses

Activities

Have your child:

- Take a walk with your child and note the living and nonliving things in your surroundings. With a your phone or a digital camera, you can also take pictures or even record your observations.
- Cut pieces of fabric, cork, paper and other such items into similar shapes. With eyes closed, have your child try to identify the different materials based on touch.
- Plant some radish or bean seeds in a cup or container and see what happens.
- Visit a community garden and discuss the kinds of plants and other organisms that you see.
- Collect leaves and sort them by size, shape, color, and texture. Have your child invent a way to measure the size using an object other than a ruler such as his hand. (Be aware of any poisonous plants.)
- Go to the market or a farmers' market and describe the various kinds of fruits and vegetables.
- Visit a zoo and ask your child to tell you what animals in the same section of the zoo have in common; also look for differences among the animals.
- Track the weather for several days in a row and ask your child to try to predict the next day's weather. Ask him/her to tell you why he/she predicted what would happen.
- If you have some photos or pictures of people, have your child make predictions about what the weather was like from looking at the photos or pictures.
- Discover what objects will stick to a kitchen magnet . Identify an object by the type of material from which it is made (wood, plastic, metal, cloth, or paper).
- Foster your child's innate curiosity.

Books:

- Aliki. *My Five Senses*
- Aliki. *My Visit to the Zoo*
- Fowler, Allan. *What Magnets Can Do*
- Gibbons, Gail. *Seasons of Arnold's Apple Tree*
- Hall, Zoe. *The Surprise Garden*
- Hickman, Pamela. *A Seed Grows*
- Kingfisher Publishing. *Animal Babies on the Farm*
- DK Publishing. *Growing Things (Play and Learn)*
- DK Publishing. *See How They Grow: (Frog, Duck, Owl)*
- Pascoe, Elaine. *Nature Close-Up - Slime, Mold and Fungi* (Board book)

Websites:

- The Surprise Garden (read aloud) https://www.youtube.com/watch?v=Ir66Gt4xs5Q
- AAAS Science Netlinks - www.sciencenetlinks.com
- National Wildlife Federation- www.nwf.org/kids/