Ohio Science - Extended Learning Standards

Kindergarten

Earth and Space Science

1 Weather changes are long term and short term. K.ESS.1

- Know that wind is moving air. K.ESS.1.A
- Describe that the Earth is surrounded by air. K.ESS.1.B
- Map weather patterns for a month recording precipitation and temperature. Was it windy? Did it rain today? Was it hot or cold? Do I need a sweater to go outside? Do I need an umbrella? K.ESS.1.C
- Identify seasons that occur in children's literature. K.ESS.1.D
- List the characteristics of the weather for each season. In summer it is hot and sometimes rainy. The sun is out a long time. In spring it is really rainy. In fall, the leaves change color and fall off the trees. In the winter there can be snow and ice. K.ESS.1.E
- Relate holidays to the seasons when they occur (e.g., Christmas in winter, Fourth of July in summer). K.ESS.1.F
- Relate activities to the different seasons (e.g., planting flowers in the spring, swimming in the summer, picking apples in the fall, sledding in the winter) K.ESS.1.G
- Identify what happens before it storms (e.g., sky gets dark, temperature drops, wind increases). K.ESS.1.H
- Describe what constitutes a rainy day ane note the characteristics (cloudy, dark or gray skies, lots of precipitation, little sunshine). K.ESS.1.I
- Describe what constitutes a sunny day and note the characteristics (blue sky, no rain, sunshine). K.ESS.1.J
- Recognize when wind is blowing. Recognize the effects of wind (leaves rustling, branches blowing down, flag waving). K.ESS.1.K

2 The moon, sun and stars can be observed at different times of the day or night. K.ESS.2

- Use media to illustrate the motion of the sun and the stars over a period of time. K.ESS.2.A
- Record and describe when and where you see the moon for a month. Note that the moon can sometimes be seen during the day. K.ESS.2.B
- Describe that the pattern of stars looks different at different times of the night and in different seasons. K.ESS.2.C
- Describe that the moon appears in different places in the sky at different times. K.ESS.2.D
- Describe that the moon looks different on different nights (e.g., crescent, full moon, half moon) K.ESS.2.E
- Identify pictures (can be from children's literature) that show various times of day (e.g., lunchtime, bedtime). K.ESS.2.F
- Track the sun across the sky during a day noticing how its position changes. Recognize that the sun is highest in the sky in the middle of the day. K.ESS.2.G
- Record what can be seen in the daytime sky (sun, sometimes the moon) and the nighttime sky (stars, sometimes the moon). K.ESS.2.H
- Identify pictures that show nighttime and daytime. K.ESS.2.I

j. Describe what is daytime (light) and what is nighttime (dark). K.ESS.2.J

Life Science

1 Living things have specific characteristics and traits. K.LS.1

- Recognize that all living things grow, reproduce, require energy, respond to stimuli. K.LS.1.A
- Describe how a plant responds to a stimulus (e.g., bends toward light, loses leaves in the fall) K.LS.1.B
- Describe how an animal responds to a stimulus (e.g., a fish in an aquarium responds to food, a dog comes when called). K.LS.1.C
- Recognize that living things come from other living things (e.g., seeds grow new plants, eggs hatch, cats have baby kittens). K.LS.1.D
- Describe that plants and animals grow during their lifetime (change from seedlings to mature plants or babies to adult animals). K.LS.1.E
- Recognize plants need light to grow. K.LS.1.F
- Recognize that animals need to eat to stay alive. K.LS.1.G
- Name some plants that are in the school or home environment (e.g., grass, tree, flowers). K.LS.1.H
- Name some animals that are in the school or home environment (e.g., dog, cat, worm, insects, fish). K.LS.1.I

2 Living things have physical traits and behaviors, which influence their survival. K.LS.2

- Compare physical traits and characteristics of various living things. K.LS.2.A
- Identify specific traits and characteristics of a given set of living things. K.LS.2.B
- Determine how various physical traits and characteristics of living things help them to survive. K.LS.2.C
- Identify physical traits that help living things to perform various functions (e.g., birds have wings so they can fly, dogs have fur to keep them warm, trees have trunks to support their branches, plants have roots to get water). K.LS.2.D
- Observe physical traits and characteristics of various living things. K.LS.2.E

Physical Science

1 Objects and materials can be sorted and described by their properties K.PS.1

- Track the measurement of something over time (height of a plant, temperature over the school year) in standard or nonstandard units, display the data in a chart or graph. K.PS.1.A
- Use nonstandard units to measure (marks on a dowel to measure the depth of snow, number of paperclips to balance an object, number of straws wide the table is). K.PS.1.B
- Describe which attribute would be most appropriate to use to compare a given set of objects. K.PS.1.C
- Recognize that there is more than one way to sort the same group of object. K.PS.1.D
- Compare two objects using a property (this one is heavier, this one is hotter, this one is rougher, this one is more flexible). This could include objects under a magnifying glass. K.PS.1.E
- Dictate or write a description of an object including as many attributes as possible. K.PS.1.F
- Handle a variety of materials to compare their textures and flexibilities (cotton, wool, wood, bark, clay, metal, glass). K.PS.1.G
- Use a magnifying glass to look at details of objects, describe what is seen. K.PS.1.H
- Smell a variety of substances that have detectable odors (perfume, flowers, lemons, pine needles, vanilla) describe the smells, recognize that smells vary and that smell can help identify a substance. K.PS.1.I
- Given a set of objects arrange them from largest to smallest. K.PS.1.J
- Compare the temperature of two cups of water (cool, warm) by touching with a finger. K.PS.1.K
- Given a group of objects sort them by shape. K.PS.1.L
- Given a group of objects sort them by color. K.PS.1.M
- Given two objects choose the larger one. K.PS.1.N

2 Some objects and materials can be made to vibrate to produce sound. K.PS.2

- Suggest adjustments to make the instruments change pitch, try the adjustments, report/record results. K.PS.2.A
- Construct homemade instruments. K.PS.2.B
- Recognize that vibrations are associated with sound (e.g., watch rice on the surface of a drum, watch video of a vibrating string on an instrument, hit a cymbal or triangle and place it in a bowl of still water). K.PS.2.C
- Listen to sounds, predict whether they were made by tapping, blowing or plucking. K.PS.2.D
- Blow on a whistle, wind instrument, or bottle, compare the sounds. K.PS.2.E
- Pluck different lengths of the same material, compare the sounds (higher, lower). K.PS.2.F
- Listen to sounds, describe them has high or low. K.PS.2.G
- Pluck a rubber band and a guitar string and describe the sounds. K.PS.2.H
- Describe what happens if you tap harder (gets louder). K.PS.2.I
- Tap on a variety of objects (or listen while they are tapped), describe the different sounds made. K.PS.2.J