Supplies Needed for the New 2020 1st Grade SEEd Science Core

(The bolded word(s) in the standard is the **Science and Engineering Practice**)
(The brown, underlined word is the Crosscutting Concept)
(The bullets are supplies that could be used for that standard)
(The capital letters at the end of the standard is the NGSS standard(s) it is connected to.)
(*Any sentences in italics are for engineering.*)

Stand 1.1 Seasons and Space Patterns

Standard 1.1.1

Obtain, evaluate, and communicate information about the movement of the Sun, Moon, and stars to describe predictable patterns. Examples of patterns could include how the Sun and Moon appear to rise in one part of the sky, move across the sky, and set; or how stars, other than the Sun, are visible at night but not during the day. (ESS1.A)

- Pictures of the sun at different places in the sky during the lighted day.
- Pictures of the moon at different places in the sky during the lighted day or dark night of the night.
- Pictures of the stars in a dark sky.

Standard 1.1.2

Obtain, evaluate, and communicate information about the patterns observed at different times of the year to relate the amount of daylight to the time of year. Emphasize the variation in daylight patterns at different times of the day and different times of the year. Examples could include varying locations and regions throughout the state, country, and world. (ESS1.B)

- Charts of the amount of daylight for our region throughout the year.
- Charts of the amount of daylight in different locations throughout the state, country and the world.

Standard 1.1.3

Design a device that measures the varying patterns of daylight. *Define the problem by asking questions and gathering information, convey designs through sketches, drawings, or physical models, and compare and test designs.* Examples could include sundials for telling the time or tracking the movement of shadows throughout the day. (ESS1.B, ETS1.A, ETS1.B, ETS1.C)

- Gather materials together for this engineering project to measure varying changes in sunlight using shadows.

Strand 1.2 The Needs of Living Things and Their Offspring

Standard 1.2.1

Plan and carry out an investigation to determine the effect of sunlight and water on plant growth. Emphasize investigations that test one variable at a time. (LS1.C)

- Cups, soil, water, heat lamps.

Standard 1.2.2

Construct an explanation by observing patterns of external features of living things that survive in different locations. Emphasize how plants and nonhuman animals, found in specific surroundings, share similar physical characteristics. Examples could include that plants living in dry areas are more likely to have thick outer coatings that hold in water, animals living in cold locations have longer and thicker fur, or most desert animals are awake at night. (LS1.A, LS1.D)

- Pictures of plants living in their environments.
- Pictures of animals living in their environments.

Standard 1.2.3

Obtain, evaluate, and communicate information about the patterns of plants and nonhuman animals that are alike, but not exactly like, their parents. An example could include that most carrots are orange and shaped like a cone but may be different sizes or have differing tastes. (LS3.A, LS3.B)

- Pictures, books, and/or videos of different animals and their offspring.
- Pictures, books, and/or videos of different plants and their offspring.

Standard 1.2.4

Construct an explanation of the patterns in the behaviors of parents and offspring which help offspring to survive. Examples of behavioral patterns could include the signals that offspring make such as crying, chirping, and other vocalizations or the responses of the parents such as feeding, comforting, and protecting the offspring. (LS1.B)

- Pictures, books and/or videos of the responses of parents to offsprings' signals.

Strand 1.3 Light and Sound

Standard 1.3.1

Plan and carry out an investigation to show the cause and effect relationship between sound and vibrating matter. Emphasize that vibrating matter can make sound and that sound can make matter vibrate. (PS4.A)

- Tone bells, bells, drums, blowing over a bottle, instruments such as a horn, guitar, ukulele, etc.
- Rice on a balloon stretched over a tin can with both ends cut out.

Standard 1.3.2

Use a model to show the effect of light on objects. Emphasize that objects can be seen when light is available to illuminate them or if they give off their own light. (PS4.B)

- Boxes with lids to put objects in them. Boxes have small holes on the sides or lid to look into the box.
- Objects of sorts: books, pencils, crayons, pens, desk items to put in boxes (to be illuminated)
- Flashlights (luminates) to see the objects in the boxes (illuminates)
- Luminated objects run by batteries to put inside the boxes such as a battery operated tea candle or a light connected to a battery to see them luminated

Standard 1.3.3

Plan and carry out an investigation to determine the **effect** of materials in the path of a beam of light. Emphasize that light can travel through some materials, can be reflected off some materials, and some materials block light causing shadows. Examples of materials could include clear plastic, wax paper, cardboard, or a mirror. (PS4.B)

- Clear, hard plastic; clear, plastic wrap; wax paper; and/or eye glasses for light to pass through
- Mirrors, shiny metal, or any surface that is shiny that can reflect light
- Cardboard, book, pencil, lunch box, etc. for light to be blocked to cause shadows

Standard 1.3.4

Design a device in which the structure of the device uses light or sound to solve the problem of communicating over a distance. *Define the problem by asking questions and gathering information, convey designs through sketches, drawings, or physical models, and compare and test designs.* Examples of devices could include a light source to send signals, paper-cup-and-string telephones, or a pattern of drum beats. (PS4.C, ETS1.A, ETS1.B, ETS1.C)

- Gather materials together for this engineering project to use a light source to send signals, paper cups and string for telephones, drums to beat a pattern.