K-ESS2 Earth's Systems

K-ESS2	Earth's Systems

Students who demonstrate understanding can:

K-ESS2-1. **Use and share observations of local weather conditions to describe patterns over time.** [Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.] [Assessment Boundary: Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.]

K-ESS2-2. **Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.** [Clarification Statement: Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. ▪ Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-ESS2-1) **Engaging in Argument from Evidence** Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s). ▪ Construct an argument with evidence to support a claim. (K-ESS2-2) --- ***Connections to Nature of Science*** **Science Knowledge is Based on Empirical Evidence** ▪ Scientists look for patterns and order when making observations about the world. (K-ESS2-1)	**ESS2.D: Weather and Climate** ▪ Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. (K-ESS2-1) **ESS2.E: Biogeology** ▪ Plants and animals can change their environment. (K-ESS2-2) **ESS3.C: Human Impacts on Earth Systems** ▪ Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. *(secondary to K-ESS2-2)*	**Patterns** ▪ Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (K-ESS2-1) **Systems and System Models** ▪ Systems in the natural and designed world have parts that work together. (K-ESS2-2)

Connections to other DCIs in kindergarten: N/A

Articulation of DCIs across grade-levels: **2.ESS2.A** (K-ESS2-1); **3.ESS2.D** (K-ESS2-1); **4.ESS2.A** (K-ESS2-1); **4.ESS2.E** (K-ESS2-2); **5.ESS2.A** (K-ESS2-2)

Common Core State Standards Connections:
ELA/Literacy –

RI.K.1	With prompting and support, ask and answer questions about key details in a text. (K-ESS2-2)
W.K.1	Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book. (K-ESS2-2)
W.K.2	Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. *(K-ESS2-2)*
W.K.7	Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-ESS2-1)

Mathematics –

MP.2	Reason abstractly and quantitatively. (K-ESS2-1)
MP.4	Model with mathematics. (K-ESS2-1)
K.CC.A	Know number names and the count sequence. (K-ESS2-1)
K.MD.A.1	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. (K-ESS2-1)
K.MD.B.3	Classify objects into given categories; count the number of objects in each category and sort the categories by count. (K-ESS2-1)