

K-ESS2-2 Earth's Systems

Students who demonstrate understanding can:

- 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 expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices

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.

Disciplinary Core Ideas

ESS2.E: Biogeology

- Plants and animals can change their environment.

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*)

Crosscutting Concepts

Systems and System Models

- Systems in the natural and designed world have parts that work together.

Observable features of the student performance by the end of the grade:

1	Supported claims
a	Students make a claim to be supported about a phenomenon. In their claim, students include the idea that plants and animals (including humans) can change the environment to meet their needs.
2	Identifying scientific evidence
a	Students identify and describe* the given evidence to support the claim, including: <ol style="list-style-type: none"> Examples of plants changing their environments (e.g., plant roots lifting sidewalks). Examples of animals (including humans) changing their environments (e.g., ants building an ant hill, humans clearing land to build houses, birds building a nest, squirrels digging holes to hide food). Examples of plant and animal needs (e.g., shelter, food, room to grow).
3	Evaluating and critiquing evidence
a	Students describe* how the examples do or do not support the claim.
4	Reasoning and synthesis
a	Students support the claim and present an argument by logically connecting various needs of plants and animals to evidence about how plants/animals change their environments to meet their needs. Students include: <ol style="list-style-type: none"> Examples of how plants affect other parts of their systems by changing their environments to meet their needs (e.g., roots push soil aside as they grow to better absorb water). Examples of how animals affect other parts of their systems by changing their environments to meet their needs (e.g., ants, birds, rabbits, and humans use natural materials to build shelter; some animals store food for winter).