

Seventh Grade Nature of Science

(Application) 7.N.2.1. Students are able to conduct scientific investigations using given procedures.

I can perform (conduct) scientific experiments (scientific investigations):

- using equipment correctly
- making a hypothesis
- identifying a control
- identifying a variable
- making predictions
- making observations
- drawing conclusions

using given directions (procedures).

Seventh Grade Nature of Science Performance Descriptors

Seventh grade students performing at the advanced level:

- design a replicable scientific investigation.

Seventh grade students performing at the proficient level:

- conduct scientific investigations using given procedures.

Seventh grade students performing at the basic level:

- identify steps necessary to conduct a replicable scientific investigation.

Seventh Grade Physical Science

After careful consideration of current research and input from educators throughout the state, the Committee revised former standards to facilitate effective instruction and student mastery. Grade seven standards emphasize Life Science.

Seventh Grade Life Science

(Knowledge) 7.L.1.1. Students are able to identify basic cell organelles and their functions.

I can select from given information (identify) vacuoles, nucleus, cell membrane, cell wall and cytoplasm (cell organelles).

I can select from given information the job or purpose (functions) of the vacuoles, nucleus, cell membrane, cell wall and cytoplasm (cell organelles).

Note: the cell membrane, cell wall and cytoplasm are not technically organelles.

(Comprehension) 7.L.1.2. Students are able to identify and explain the function of the human systems and the organs within each system.

I can select from given information (identify) and give reasons for (explain) the job or purpose (function) of the skeletal, muscular, digestive, respiratory, circulatory, and reproductive systems (human systems).

I can select from given information (identify) and give reasons for (explain) the job or purpose (function) of the organs.

(Application) 7.L.1.3. Students are able to classify organisms by using the currently recognized kingdoms.

I can group (classify) living things (organisms) into the broadest or most generalized division of biological classifications (kingdoms).

(Comprehension) 7.L.1.4. Students are able to describe and identify the structure of vascular and non-vascular plants.

I can tell in words or numbers (describe) the structure of plants having xylem and phloem (vascular plants) and plants lacking xylem and phloem (non-vascular plants).
I can select from given information (identify) the structure of plants having xylem and phloem (vascular plants) and plants lacking xylem and phloem (non-vascular plants).

(Comprehension) 7.L.2.1. Students are able to distinguish between processes involved in sexual and asexual reproduction.

I can tell the difference between meiosis and mitosis stages (processes) involved in:
- a new organism produced from two parents (sexual reproduction).
- a new organism produced from one parent (asexual reproduction).

(Application) 7.L.3.1. Students are able to predict the effects of biotic and abiotic factors on a species' survival.

I can use information to make a best guess (predict) about the effects of living or was living (biotic) and non-living or never living (abiotic) factors on the survival of the species.

Seventh Grade Life Science Performance Descriptors

Seventh grade students performing at the advanced level:

- compare and contrast hierarchical levels within the five kingdoms;
- identify organism by taxonomic level using a dichotomous key;
- given the characteristics of a plant, classify it as vascular or non-vascular;
- compare and contrast sexual and asexual reproduction in plants and animals.

Seventh grade students performing at the proficient level:

- identify basic cell organelles and their functions;
- identify and explain the function of the human systems and the organs within each system;
- classify organisms by using the currently recognized kingdoms;
- describe and identify the structure of vascular and nonvascular plants;
- distinguish between processes involved in sexual and asexual reproduction;
- predict the effects of biotic and abiotic factors on a species survival.

Seventh grade students performing at the basic level:

- label the basic cell parts using a word bank;
- using a list, order the organization of organisms;
- give examples and characteristics of organisms from each kingdom;

- using a word bank, label the parts of a flower;
- define sexual and asexual reproduction.

Seventh Grade Earth/Space Science

After careful consideration of current research and input from educators throughout the state, the Committee revised former standards to facilitate effective instruction and student mastery. Grade seven standards emphasize Life Science.

Seventh Grade Science, Technology, Environment, and Society

(Comprehension) 7.S.1.1. Students are able to describe how science and technology are used to solve problems in different professions and businesses.

I can tell in words or numbers (describe) how science and the practical application of scientific principles (technology) are used to solve problems in different careers in agriculture, medicine and biotechnology (professions and businesses).

(Application) 7.S.2.1. Students are able, given a scenario, to predict the consequence(s) of human activity on the local, regional, or global environment.

I can, given a story (scenario), use information to make a best guess (predict) about the consequence(s) of urban expansion, pollution, water and land management (human activity) on the biotic and abiotic factors (environment) in the local, regional, or global area.

Seventh Grade Science, Technology, Environment, and Society Performance Descriptors

Seventh grade students performing at the advanced level:

- develop solutions to problems.

Seventh grade students performing at the proficient level:

- describe how science and technology are used to solve problems in different professions and businesses;
- given a scenario, predict the consequence(s) of human activity on the local, regional, or global environment.

Seventh grade students performing at the basic level:

- identify the problem and one possible solution.