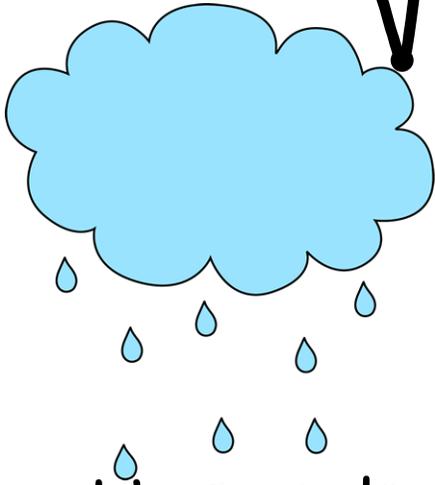


Water Cycle



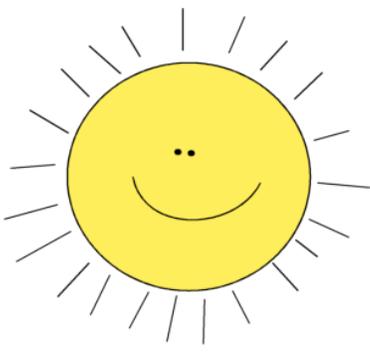
4th Grade Science Standard 1

1. I can understand that water changes state as it moves through the water cycle.

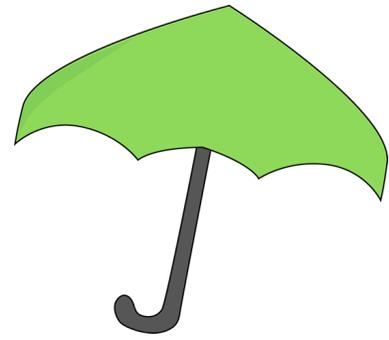
- 1.a I can identify the relative amount and kind of water found in various places on Earth. For example: Oceans hold most of the Earth's water. Glaciers and snowfields contain the most fresh water.
- 1.b I can identify the sun as the source of energy that evaporates water from the Earth's surface.
- 1.c I can compare the processes of evaporation and condensation of water.
- 1.d I can investigate and record temperature data to show the effects of heat energy on changing the effects of water.

2. I can describe the water cycle.

- 2.a I can locate examples of the evaporation and condensation in the water cycle. For example: water evaporates when heated. Clouds form when vapor is cooled.
- 2.b I can describe the processes of evaporation, condensation, and precipitation as they relate to the water cycle.
- 2.c I can identify locations that hold water as it passes through the water. For example: oceans, atmosphere, fresh surface water, snow, ice, and ground water.
- 2.d I can construct a model or diagram to show how water continuously moves through the water cycle over time.
- 2.e I can describe how the water cycle relates to the water supply in my community.



Weather



4th Grade Science Standard 2

1. I can observe, measure, and record the basic elements of weather.

- 1.a I can identify basic cloud types. For example: cumulus, cirrus, and stratus clouds.
- 1.b I can observe, measure, and record data on the basic elements of weather over a period of time. For example: precipitation, air temperature, wind speed and direction, and air pressure.
- 1.c I can investigate evidence that air is a substance. For example: air takes up space, moves as wind, temperature can be measured.
- 1.d I can compare the components of severe weather phenomena to normal weather conditions. For example: thunderstorm with high winds compared to showers with breeze.

2. I can interpret recorded weather data for simple patterns.

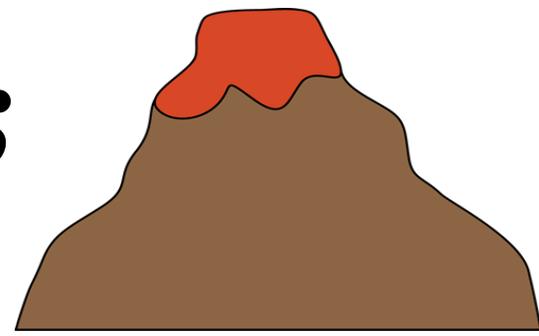
- 2.a I can observe and record effects of air temperature on precipitation. For example: below freezing results in snow.
- 2.b I can graph recorded data to show daily and seasonal patterns in weather.
- 2.c I can infer relationships between wind and weather change. For example: windy days often precede changes in the weather.

3. I can evaluate weather predictions based upon observational data.

- 3.a I can identify and use the tools of a meteorologist.
- 3.b I can describe how weather and forecasts affect people's lives.
- 3.c I can predict weather and justify prediction with observable evidence.
- 3.d I can evaluate the accuracy of student and professional weather forecasts.
- 3.e I can relate weather forecast accuracy to evidence or tools used to make the forecast.

Rocks

4th Grade Science Standard 3



1. I can identify basic properties of minerals and rocks.

- 1.a □ I can describe the differences between minerals and rocks.
- 1.b □ I can observe rocks using a magnifying glass and draw shapes and colors of the minerals.
- 1.c □ I can sort rocks by appearance according to the three basic types: sedimentary, igneous, and metamorphic.
- 1.d □ I can classify common rocks found in Utah as sedimentary (i.e. sandstone, conglomerate, shale), igneous (i.e. basalt, granite, obsidian, pumice) and metamorphic (i.e. marble, gneiss, schist).

2. I can explain how the processes of weathering and erosion change and move materials.

- 2.a □ I can identify the processes of physical weathering that break down rocks at Earth's surface. For example: water movement, freezing, plant growth, and wind.
- 2.b □ I can distinguish between weathering (wearing down and breaking of rock surfaces) and erosion (the movement of materials).
- 2.c □ I can model erosion of Earth materials and collection of these materials as part of the process that leads to soil.
- 2.d □ I can investigate layers of soil in the local area and predict the sources of the sand and rocks in the soil.

3. I can observe the basic components of soil and relate the components to plant growth.

- 3.a □ I observe and list the components of soil and distinguish between the living, nonliving, and once living components of soil.
- 3.b □ I can diagram or model a soil profile showing topsoil, subsoil, and bedrock, and how the layers differ in composition.
- 3.c □ I can relate the components of soils to the growth of plants in soil (mineral nutrients, water).
- 3.d □ I can explain how plants may help control the erosion of soil.
- 3.e □ I can research and investigate ways to provide mineral nutrients for plants to grow without soil.

Fossils

4th Grade Science

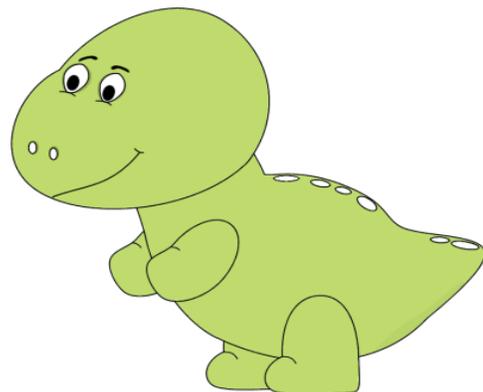
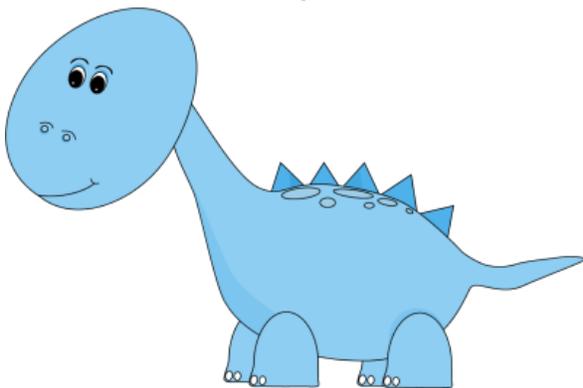
Standard 4

1. I can describe Utah fossils and explain how they were formed.

- 1.a I can identify features of fossils that can be used to compare them to living organisms that are familiar. For example: shape, size, and structure of skeleton, patterns of leaves.
- 1.b I can describe three ways fossils are formed in sedimentary rock.
- 1.c I can research locations where fossils are found in Utah and construct a simple fossil map.

2. I can explain how fossils can be used to make inferences about past life and climate.

- 2.a I can explain why fossils are usually found in sedimentary rock.
- 2.b I can, based on the fossils found in various locations, infer how Utah environments have changed over time.
- 2.c I can research information on two scientific explanations for the extinction of dinosaurs and other prehistoric organisms.
- 2.d I can formulate questions that can be answered using information gathered on the extinction of dinosaurs.



Environments

4th Grade Science

Standard 5

1. I can describe the physical characteristics of Utah's wetlands, forests, and deserts.

- 1.a I can compare the physical characteristics (e.g. precipitation, temperature, and surface terrain) of Utah's wetlands, forests, and deserts.
- 1.b I can describe Utah's wetlands, forests, and deserts.
- 1.c I can locate examples of areas that have characteristics of wetlands, forests, or deserts in Utah.
- 1.d I can, based upon information gathered, classify areas of Utah that are generally identified as wetlands, forests, or deserts.
- 1.e I can create models of wetlands, forests, and deserts.



2. I can describe the common plants and animals found in Utah environments and how these organisms have adapted to the environment in which they live.

- 2.a I can identify common plants and animals that inhabit Utah's forests, wetlands, and deserts.
- 2.b I can cite examples of physical features that allow particular plants and animals to live in specific environments. For example: duck has webbed feet, cactus has waxy coating.
- 2.c I can describe some of the interactions between animals and plants of a given environment.
- 2.d I can identify the effect elevation has on types of plants and animals that live in a specific wetland, forest, or desert.
- 2.e I can find examples of endangered Utah plants and animals and describe steps being taken to protect them.

Environments

4th Grade Science

Standard 5

3. I can use a simple scheme to classify Utah plants and animals.

- 3.a I can explain how scientists use classification schemes.
- 3.b I can use a simple classification system to classify unfamiliar Utah plants or animals (e.g. fish/ reptile, invertebrate/vertebrate, tree/shrub).

4. I can observe and record the behavior of Utah animals.

- 4.a I can observe and record the behavior of birds.
For example: caring for young, obtaining food, surviving winter.
- 4.b I can describe how the behavior and adaptations of Utah mammals help them survive winter. For example: obtaining food, building homes, hibernation, migration.
- 4.c I can research and report on the behavior of a species of Utah fish.
For example: feeding on the bottom or surface, time of year for spawning, types of food.
- 4.c I can use simple classification schemes to sort Utah's common insects and spiders.

