Fourth Grade **Standard 5** **Unit Test A**

Utah Environments

Multiple Choice

1. If most of the land in Utah was left in its natural state, which environment would it be?

   A. Desert
   B. Wetland
   C. Ocean
   D. Forest

2. The Bear River flows into Great Salt Lake. The area where the two come together is marshy. What type of area is this?

   A. Desert
   B. Wetland
   C. Ocean
   D. Forest

3. Which plant would most likely be found in a desert area of Utah?

   A. Cottonwood Tree
   B. Cactus
   C. Cattail
   D. Blue Spruce

Use this information on a location in Utah to answer the next two questions.

Temperature Range	Elevation	Rainfall
68° - 96° F	3,000 – 4,500 feet	Below 5" per year

4. This area in Utah is probably which type?

   A. Desert
   B. Wetland
   C. Mountain
   D. Forest

5. Which animal might be found living there?

   A. Bear
   B. Moose
   C. Tortoise
   D. Seagull

6. How is climate in the mountains different than nearby valleys?

   A. Colder, less precipitation
   B. Colder, more precipitation
   C. Warmer, more precipitation
   D. Warmer, less precipitation

7. Tyler is looking for information about the animals only found in a forest. Which book would help him the most?

   A. Amazing Animal Antics
   B. Animal Babies
   C. Endangered Animals
   D. Mountain Animals

8. How would a model of a wetland be different than a model of a desert? The wetland would….

   A. Have wet soil
   B. Have fewer animals
   C. Be bigger
   D. Have fewer plants

9. Which environment would have the most coniferous trees?

   A. Desert
   B. Grasslands
   C. Wetland
   D. Forest

10. Which of the following best explains why a beaver is found in a forest? Beavers …

    A. Build dams and eat bark from trees
    B. Have small, rounded ears
    C. Have webbed feet to swim fast.
    D. Like to live alone raising a family

11. How do beavers change the environment they live in?

A. They swim in the water behind their dam
B. Their dam prevents water from rushing downstream
C. They chase away other animals that eat fish.
D. The tail provides warning for other animals.

12. Which beak would best be adapted for eating small animals?

A B C D

13. Which adaptation would help a desert plant survive a hot summer?

A. Large, thin leaves
B. Lots of leaves in bunches
C. A dark green color
D. Small, thick, waxy leaves

14. Which of the following would help a rattlesnake get food?

A. Long legs to run fast
B. Poisonous bite
C. Scaly skin
D. Being cold-blooded

Constructed Response

1. Write the names of these animals under the environment they would most likely be found:

   jackrabbit, frog, moose, tortoise, elk, grey squirrel, rattlesnake, blue jay, roadrunner

Desert	**Forest**

2. How does the elevation affect which trees will grow on a mountain?

3. List 3 ways squirrels interact with the area (environment) they live in.

4. How does an environment benefit from the squirrel?

5. How is a rattlesnake's body adapted to the food it eats?

6. Tell three ways the following animals interact with their environments.

Example: Bear – eats berries

1. Deer
   1.
   2.
   3.
2. Snake
   1.
   2.
   3.
3. Beaver
   1.
   2.
   3.

Answers:

Multiple Choice:

1. A
2. B
3. B
4. A
5. C
6. B
7. D
8. A
9. D
10. A
11. B
12. C
13. D
14. B

Constructed Response

1. Answers:

Desert:	**Forest:**
(Jackrabbit)	(Frog)
(Tortoise)	(Moose)
(Rattlesnake)	(Elk)
(Roadrunner)	(Grey Squirrel)
	(Blue Jay)

2. A higher elevation will cause the temperature to be colder and more rain or snow to fall. Conifers and pines will grow in colder areas, deciduous in more temperate areas.

3. A tree provides food for the squirrel, shelter for it to live in, and protection from enemies.

4. The squirrel helps the tree by scattering seeds throughout the forest.

5. They have sharp claws and teeth to kill and eat their prey. They have strong legs to leap and run after the things they eat.

6.

1. Deer	1. (eats shrubs) 2. (runs away from mountain lions) 3. (sleeps in the shelter of a tree)
2. Snake	1. (eats mice) 2. (slithers away from hawks) 3. (uses plants for camouflage)
3. Beaver	1. (hides from bears) 2. (makes a dam to create a pond) 3. (cuts trees for shelter)

Performance Test 1

A Model of a Utah Ecosystem

Activity Description
Students will research the plants and animals found in Utah (desert, forest, wetland). They will then use this information to create a paper model of their environment.

Materials Needed
Books showing pictures of Utah animals (The Utah Fish and Game Department has colorful wildlife materials), white and colored construction paper, scissors, markers, crayons, glue, and books on ecosystems found in Utah. If classroom computers are available, this would make an excellent power point presentation for students.

Prior to Assessment
Students should have learned that there are three Utah environments and that each contains characteristic plants and animals.

Time Needed for Assessment
1 -2 class periods

Procedure
1. Students will work together in groups of four to research the Utah environments: forest, desert, or wetland.
2. Each member of the group will work on one of the three ecosystems so the whole group will have a complete model of all three.
3. Students will be required to include at least 3 plants and animals found in that ecosystem.

The completed poster should include: Environment name, average rainfall and elevation, 3 plants and 3 animals.

Suggested Scoring Guide:
1. Name of environment ……. 1 pt.
2. Average rainfall …….. 1 pt.
3. Elevation ……. 1 pt.
4. 3 animals displayed …….3 pts.
5. 3 plants displayed ……... 3 pts.
6. Colored/neatness ……. 1 pt.

Possible 10 pts.

Performance Test 2

Plant Adaptations

Activity Description
Students will examine several plants from two different environments and compare the differences.

Materials Needed
1 copy of the worksheet per student, several plants found in a desert, wetland, and forest. (Try to get whole plants, including roots, etc.)

Prior to Assessment
Students should have learned the three Utah environments, and discussed that plants are different because of the amount of water available, type of soil, etc.

Time Needed For Assessment
1 class period

Procedure
1. Have students brainstorm together types of plants that live in a desert, a wetland or a forest. Have them fill in the plant names on the worksheet.
2. Discuss differences in the plants because of the amount of rainfall and temperatures.
3. Share plants with students and let them examine the parts of the plant, such as roots, leaves, stems, etc.
4. Students will complete the chart with their observations.
5. Students will summarize what they have found out about plant adaptations.

Suggested Scoring Guide:
1. Each plant observed and the data completed …… 5 pts. each
2. Each question answered……. 3 pts. Each
3. Conclusion …… 8 pts.

Possible 16 pts.

Student Page

Plant Adaptations

Name _____

Introduction: In this activity you will compare plants that live in the three different Utah environments.

Directions

1. Look at each plant provided and record your observations in the tables below.
2. Move from one plant to another as your teacher directs. Look carefully at each plant.
3. Answer the questions.

_____Plants

Plant Name	Color	Shape	Leaf Size	Root	Unusual Features

_____Plants

Plant Name	Color	Shape	Leaf Size	Root	Unusual Features

_____Plants

Plant Name	Color	Shape	Leaf Size	Root	Unusual Features

Write a sentence of each of the following:

1. Difference in roots:
   a. Wetlands _____
   b. Deserts _____
   c. Forests _____

2. Difference in leaves:
   a. Wetlands _____
   b. Deserts _____
   c. Forests _____

3. Differences in plant size:
   a. Wetlands _____
   b. Deserts _____
   c. Forests _____

4. Things that are the same in each plant _____

_____

_____

5. Why are the plants different? _____

_____

_____

Grade 4 **Standard 5** **Unit Test B**

Classifying Life

Multiple Choice

1. Your neighbor gets a new breed of dog that you have never seen before. Because it is a dog, you know something about it. Why?

    A. All dogs are exactly alike
    B. No two dogs are alike
    C. As a group, dogs are similar
    D. Dogs have few similarities

2. What is a way to know if something is an animal or a plant?

    A. Animals all move
    B. Plants do not reproduce
    C. Animals must eat other things
    D. Plants must have water every day.

3. Which of these animals would be placed in a group with a dog, cat, mouse and cow?

    A. Pig
    B. Snake
    C. Fish
    D. Bird

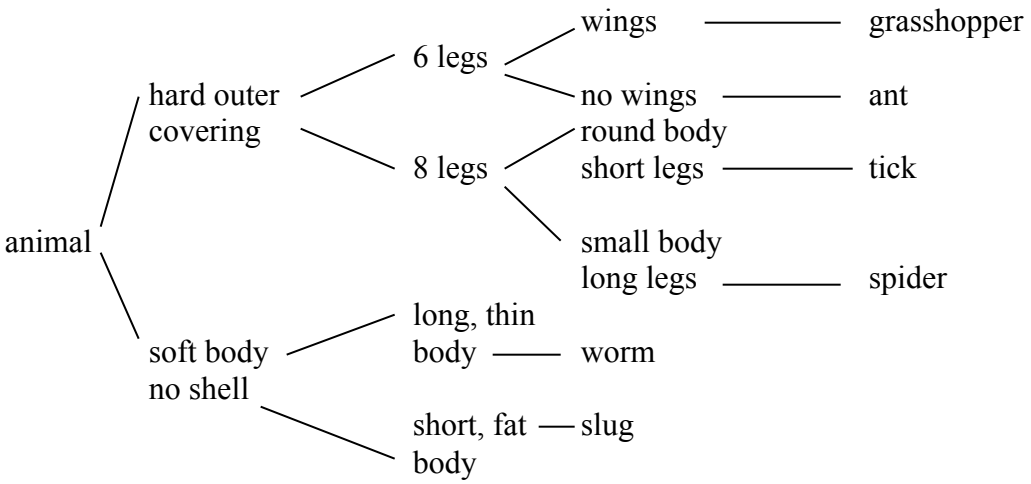
4. What is an important difference between a lizard and cat?

    A. Cats cannot live outdoors.
    B. Lizards eat meat
    C. Cats are warm-blooded
    D. Lizards are wild

5. What must you know about a plant or animal to use a classification key?

    A. Its name
    B. Its characteristics
    C. Where it lives on Earth
    D. What people use it for

Use this classification key to answer questions 6 and 7.



6. What is the name of this animal?

   A. bug
   B. tick
   C. beetle
   D. worm

7. What is the main difference between a worm and a slug?

   A. how many legs they have
   B. what color they are
   C. what type of body covering they have
   D. the shape of their bodies

Use this classification key to answer the next two questions:

Tree Key

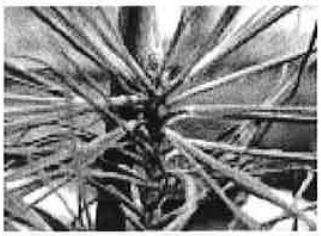
1a. Leaf is flat and rounded in shape …… go to 2
1b. Leaf is needle-like ……... go to 4

2a. Branch has one leaf on it …… go to 3
2b. Branch has more than one leaflet …….. Box Elder

3a. Leaf edge is toothed …… Aspen
3b. Leaf edge is notched or lobed …… Oak

4a. Leaves are in clusters of two or more …… Pine
4b. Leaves are single ……. Spruce

8. Which tree is this leaf from?



   A. Box Elder
   B. Oak
   C. Aspen
   D. Pine

9. What pathway did you follow to find its name?

   A. 1a, 2b, 4a
   B. 1a, 2a, 3a
   C. 1b, 4a
   D. 1b, 4b

10. What two leaves would be on coniferous trees?

   A. Aspen and Box Elder
   B. Pine and Spruce
   C. Oak and Aspen
   D. Spruce and Oak

11. How does an elk survive cold, mountain winters in Utah?

   A. It grows an extra heavy fur coat
   B. It migrates to another country
   C. It hibernates in a den
   D. It waits to have cubs in the spring

12. A beaver family eats the bark off of aspen trees. What else do they use the aspen trees for?

A. To trap fish underwater with
B. To build their dams
C. To stop snow from entering the stream
D. To build bridges across the stream

13. What is an important difference between a reptile and an amphibian?

A. A reptile walks on two legs, amphibians walk on four
B. A reptile is smaller than an amphibian
C. A reptile is warm-blooded, amphibians are cold-blooded
D. A reptile lays eggs on land, amphibians in water

14. How does the reptile's skin help it live in a dry environment? It has …

A. Scaly, tough skin
B. Colorful patterns on the skin
C. Soft, think skin
D. Short, thick hair on the skin

15. How do most birds survive the Utah winter? They …

A. Build warm nests and save food
B. Hibernate until winter is over
C. Fly to a warmer location
D. Grow extra feathers to stay warm

Constructed Response

1. What does a classification key help you find out about a plant or animal?

2. Why are living things classified into groups?

3. Categorize the following creatures into three separate groups: dragon, horse, wolf, chipmunk, bear, cow, mermaid, elephant, deer, cat, unicorn and lion. Look to see what the group members have in common: (Write the names and what they have in common under each group.)

Group 1 **Group 2** **Group 3**

4. Describe two ways animals have adapted to surviving winter in Utah.

5. List two ways amphibians are similar to reptiles and two ways they are different.

Similar	Different
1. Amphibians and reptiles …	1. Amphibians _____ while reptiles _____
2.	2.

Answers:

Multiple Choice

1. C
2. C
3. A
4. C
5. B
6. B
7. D
8. D
9. C
10. B
11. A
12. B
13. D
14. A
15. C

Constructed Response

1. Its name

2. To give them names; to see how they are alike or different; to learn more about them

3. (Answers will vary) One group may be imaginary animals; the others may be animals with hooves, domestic animals, meat eaters, wild animals, farm animals, etc.

4. They can grow extra hair, store fat in their bodies, hibernate, go to lower elevations or warmer climates, store food.

5. Similarities: They walk on four legs (if they walk – snakes are legless); they are small animals (in Utah); they are cold-blooded; they are egg-laying.

   Differences: Amphibians lay their eggs in water, reptiles lay eggs on land. Reptiles have thick, scaly skin; amphibians have thin, moist skin. Amphibians often spend part of their lives in water; most reptiles do not. Some reptiles in Utah have poisonous bites; no Utah amphibians do.

Performance Test 1

Leaf Study

Activity
Students will classify a group of leaves according to their characteristics.

Materials
An assortment of fresh or preserved leaves. Leaves can be laminated or taped to cards with book tape or covered in plastic wrap. Obtain as varied an assortment of leaves as possible, with some compound leaves (more than one leaflet on the branch) and some simple leaves (a single leaf on the branch). Each team can have different leaves or they can all have a similar set. If leaves are limited they can be passed around from team to team.

Prior to Assessment
Students should understand that living things are grouped by their characteristics or traits. They should know that the living things can be classified in only one group.

Time Needed
It depends on the number of leaves being classified; probably about an hour.

Procedure
1. Students should work in teams of three or four.
2. Explain that students will be given an assortment of leaves and asked to categorize them in a certain number of groups. If each team has ten leaves, you might have them create four groups. Some groups will have more leaves than others.
3. Remind students that a leaf can only be classified in one group.
4. Give students a handout similar to the one provided. Give them time to categorize the leaves.
5. When students think they have their leaves grouped properly, they should draw each leaf in the box provided and below it, write what the leaves in that group have in common.
6. Assign a student from each group to explain to the class how their team classified the leaves.

Suggested Scoring Guide:

1. Students work cooperatively in the team …… 5 pts.
2. Students group and draw leaves …… 10 pts.
3. Students write reasons for classification …… 5 pts.
4. Students share their ideas with the class …… 5 pts.

Possible 25 pts.

Leaf Study

Draw the leaves you have grouped together in the boxes below. Write under the box what the leaves have in common.

Group 1 – These leaves all …	Group 2 – These leaves all …

Group 3 – These leaves all ...	Group 4 – These leaves all …

Performance Test 2

Using a Key for Utah Trees

Activity Description
Students will use a key to identify trees.

Materials Needed
Tree key (see following page). Students need access to either the out-of-doors to find trees or they need samples collected for them and brought to the classroom. They could be assigned to bring in samples as well.

Prior to Assessment
Students should know how to use a simple key. They should be familiar with the vocabulary dealing with trees.

Time Needed for Assessment
Will vary depending on the number of trees to identify and the method of collection.

Procedure

1. Hand out the keys and ask students if they see any words they don't know.
2. Explain to students where tree specimens will be located.
3. Allow students time to draw and name the trees using the key. You may want to use the worksheet on the next page.

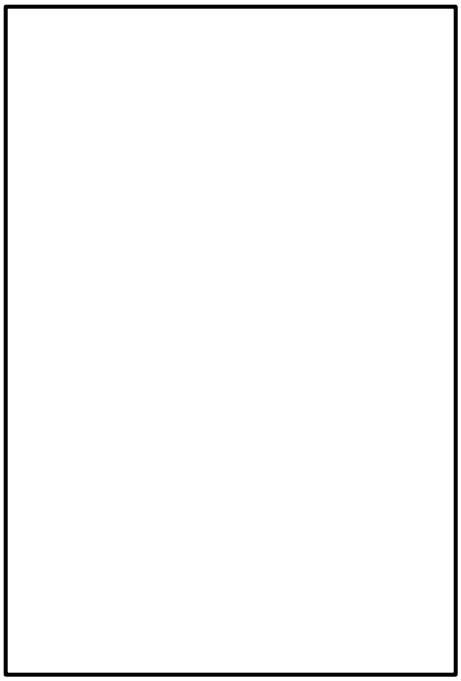
Suggested Scoring Guide:

1. Students draw and name the correct number of trees ……. 10 pts.
2. Students correctly identify the specimens …….. 5 pts.

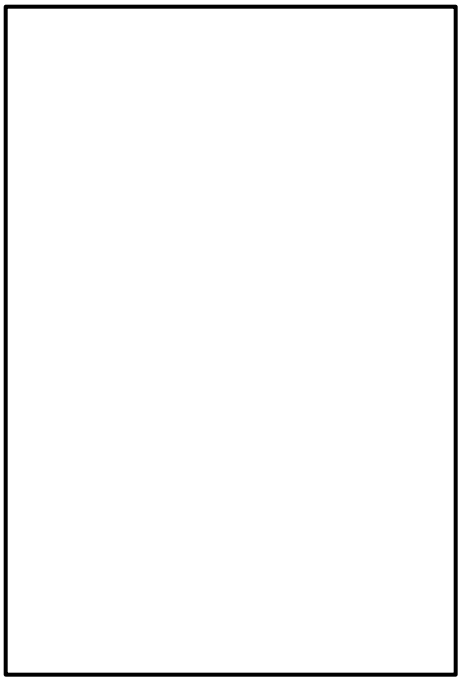
Possible 15 pts.

Using a Key

Name the trees your teacher has identified. Use the key provided. Draw each one and put its name under it.



Name _____



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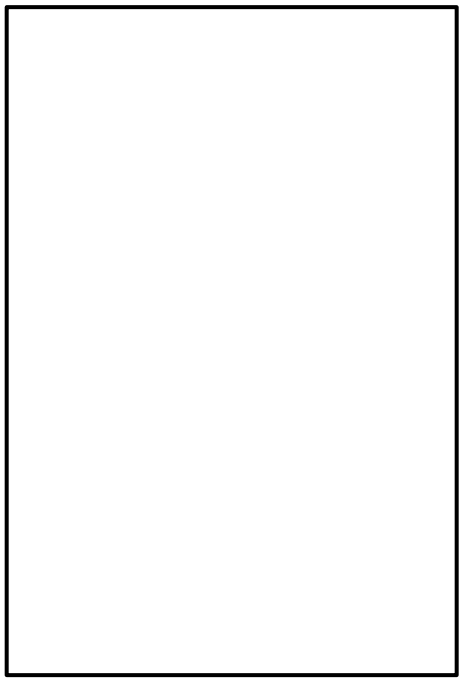
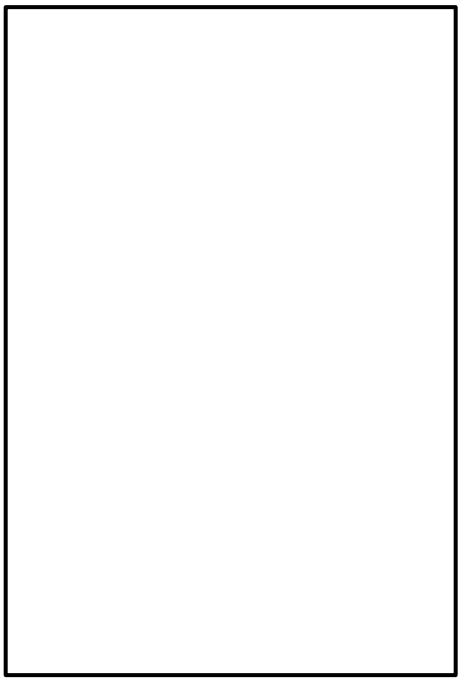


Name _____



Name _____

Tree Key for Utah Trees

1a. Trees with needle-like or scaly leaves …… go to 2
1b. Trees with flat leaves of different widths …….. go to 4

2a. Have cones and long, thin needles ……. go to 3
2b. Short, blunt, scaly leaves, berries instead of cones …… **Juniper**

3a. Shorter, square needles, not in clusters ……. **Spruce**
3b. Longer needles in clusters ……. **Pine**

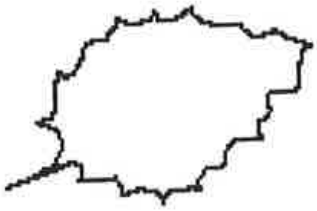
4a. Trees with simple, single leaves ……... go to 5
4b. Trees with compound leaves …… go to 6

5a. Edges of leaves are toothed …….. go to 6
5b. Edges lobed …….. go to 8

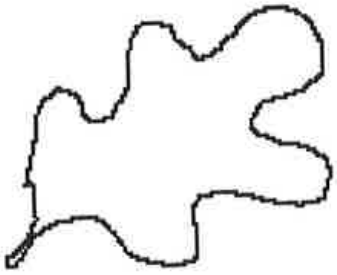
6a. Leaves longer than wide …….. **Willow**
6b. Leaves rounded …… go to 7

7a. Leaf nearly round, white bark on tree …….. **Aspen**
7b. Leaves triangular in shape, bark rough …….. **Cottonwood**

8a. Fruit is an acorn, lobes rounded …… **Oak**
8b. Seeds have "wings," lobes are pointed on leaves ……. **Maple**



A leaf with teeth



A leaf with lobes