Georgia Performance Standards Framework for Science – Grade 1

Unit Two Organizer:
7 weeks
Plants and Animals

OVERVIEW: In this unit students will:

- Identify the basic needs and specific physical characteristics of plants
- Identify the basic needs and specific physical characteristics of animals
- Identify the parts of a plant—root, stem, leaf, and flower
- Investigate how weather and seasonal changes affect plants and animals
- Compare and describe how various animals change as they grow
- Compare and describe how various animals move

STANDARDS ADDRESSED IN THIS UNIT

Focus Standards:
S1L1. Students will investigate the characteristics and basic needs of plants and animals.
   a. Identify the basic needs of a plant.
      1. Air
      2. Water
      3. Light
      4. Nutrients
   b. Identify the basic needs of an animal.
      1. Air
      2. Water
      3. Food
      4. Shelter
   c. Identify the parts of a plant—root, stem, leaf, and flower.
   d. Compare and describe various animals—appearance, motion, growth, basic needs.
STANDARDS ADDRESSED IN THIS UNIT

Supporting Standards:

S1CS7. Students will understand important features of the process of scientific inquiry.

Students will apply the following to inquiry learning practices:

a. Scientists use a common language with precise definitions of terms to make it easier to communicate their observations to each other.
b. In doing science, it is often helpful to work as a team. All team members should reach individual conclusions and share their understandings with other members of the team in order to develop a consensus.
c. Tools such as thermometers, rulers and balances often give more information about things than can be obtained by just observing things without help.
d. Much can be learned about plants and animals by observing them closely, but care must be taken to know the needs of living things and how to provide for them. Advantage can be taken of classroom pets.

SS1H1 The student will read about and describe the life of historical figures in American history.

b. Meriwether Lewis and William Clark with Sacagawea (exploration)

ELA1R1c. Demonstrates an understanding that punctuation and capitalization are used in all written sentences.
ELA1R6. Reads and listens to a variety of texts for information and pleasure.
ELA1W1j. Begins to use common rules of spelling.
ELA1LSV1c. Responds appropriately to orally presented questions.
ELA1R5a. Reads and listens to a variety of texts and uses new words in oral and written language.
ELA1LSV1a. Follows three-part oral directions.
ELA1LSV1b. Recalls information presented orally.
ELA1LSV1f. Uses complete sentences when speaking.
ELA1LSV1d. Increases vocabulary to reflect a growing range of interests and knowledge.
ELA1W1k. Begins to use variety of resources (picture dictionaries, the Internet, and books) and strategies to gather information to write about a topic.
ELA1LSV1e. Communicates effectively when relating experiences and retelling stories read, heard, or viewed.
ELA1R6m. Recognizes and uses graphic features and graphic organizers to understand text.
ELA1SV1: The student uses oral and visual strategies to communicate.
ELA1W1a. Writes texts of length appropriate to address a topic and tell a story.
ELA1LSV1d.-e. Increases vocabulary & Communicates effectively.
ELA2LSV1d. Listens to and views a variety of media.

ENDURING UNDERSTANDINGS

Students will understand that:
- Plants and animals inhabit different environments and have features that help them survive in different kinds of places.
- Plants need: air, water, light, and nutrients.
- Animals need: air, water, food, and shelter.
- Plants have different structures that aid in growth, survival, and reproduction.
- Functions of a plant: roots-holding plants in place and absorbing water; seeds- making new plants; leaves-making food for plants; stems-keeps plants upright and transports materials up and down the plant.
- Animal physical characteristics: body coverings-hair, fur, feathers, scales, and shells; body shape; movement-walking, crawling, flying, swimming.

ESSENTIAL QUESTIONS:
- Why can’t animals all live in the same place?
- How do animals adapt to their environment?
- What are characteristics of animal groups?
- Why are plants and animals important to us?
- How do plants and animals depend on each other to survive?
- Are there plants that don’t need much water to survive? If so, what are they and why don’t they need much water?

MISCONCEPTIONS | TRUTHS
--- | ---
1. Plants and animals do not depend on each other. | 1. Plants and animals need each other to survive.
2. All animals have the same characteristics. | 2. Animals have different characteristics, which help them adapt in different environments.
3. There are no wild animals in the city. | 3. Wild animals are found in the city. The animals are able to find ways to adapt.
4. Plants are not alive in the cold, winter months.
5. Animals can talk, since they talk in books.

4. Some plants go dormant, but grow again once the weather becomes warmer.
5. Books do not always show the animal characters behaving like real animals.

<table>
<thead>
<tr>
<th>CONCEPTS:</th>
<th>KNOW AND DO</th>
<th>LANGUAGE</th>
<th>EVIDENCE OF LEARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plants have basic needs and specific characteristics.</td>
<td>• Identify the basic needs of plants.</td>
<td>Air Water Light Nutrients Root Stem Leaf flower</td>
<td>• Science journal entries:</td>
</tr>
<tr>
<td></td>
<td>• Students will be able to create a poster illustrating the basic needs of a plant.</td>
<td></td>
<td>➢ Predictions about the tallest plant.</td>
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<tr>
<td></td>
<td>• Experiment with plants. Have students suggest places to grow a plant in the classroom and outside. Students will be able to write at least three predictions in their science journal about which plant will grow the tallest. Students plant a seed and will be able to observe, measure (with a ruler), and record data collected in a chart.</td>
<td></td>
<td>➢ Recorded data from the plant observations.</td>
</tr>
<tr>
<td></td>
<td>• Sort picture cards in a Science Center with two titles: Needs of Plants and Items that Plants Do Not Need. The picture cards will have pictures of each animal need and various other items. Students must sort the pictures under the correct title.</td>
<td></td>
<td>➢ Basic parts of the plant illustration.</td>
</tr>
<tr>
<td></td>
<td>• Identify the parts of the plant.</td>
<td></td>
<td>• Correct Science Center sort.</td>
</tr>
<tr>
<td></td>
<td>➢ Draw the basic parts of the plant in science journal. Each part needs to be labeled and tell what each part does (root, stem, leaf, &amp; flower).</td>
<td></td>
<td>• Complete “What Plants Need” Chart</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Venn diagram comparing plants that live in water and on land.</td>
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</table>
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| Animals have basic needs and specific characteristics. | ● Compare plants that live in water and on land. | ● Correct Science Center sort.  
● Word Web of “Animal Needs”  
● Flap-Book about “How to Take Care of a Pet.” |
| --- | --- | --- |
| ● Identify the basic needs of animals.  
   ➢ Sort picture cards in a center with two titles: Needs of Animals and Items That Animals Do Not Need. The picture cards will have pictures of each animal need and various other items. Students must sort the pictures under the correct title.  
● Observe a class pet. Work with a partner to write and illustrate a Flap-Book about: How to Take Care of a Pet. | Air Water Food Shelter | |
| Animals can be classified by characteristics. | ● Observe differences among animals, based on information read in books and observations of animals around them.  
● Create at least 5 riddles about animals. The riddles will be written using clues about appearance, motion, growth, and basic needs. The riddles will then be shared with the class.  
● Compare animals that live in water and on land. | Appearance Motion Growth Basic needs | ● Riddles about animals.  
● Venn diagram in Science Journal.  
● Students are able to match animals to their environments, based on different characteristics animals possess.  
● Compare animals using the Land vs. Water Chart  
● Correct Lewis and Clark Matching Game |
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<table>
<thead>
<tr>
<th>Compare and contrast animals</th>
<th>Weather affects plants and animals.</th>
<th>Migrate Hibernate Adapt</th>
<th>Mural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete a Venn diagram comparing and contrasting two animals.</td>
<td>Identify ways that animals and plants survive in different weather conditions.</td>
<td>Create a mural illustrating the ways weather and seasonal changes affects plants and animals.</td>
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</tbody>
</table>

**EVIDENCE OF LEARNING:**

By the conclusion of this unit, students should be able to demonstrate the following competencies:

- Demonstrate knowledge of all *language* terms used in the unit to describe plants and animals.
- Create a poster which includes all of the parts of the plant and writes what that part of the plant does.
- Experiment with plants to collect data, in turn, discovering the needs of plants.
- Predict environments for plants to grow and select the best environment.
- Through group/partner efforts, observations may be used to understand the needs of animals.
- Demonstrate an understanding of animals, so that students are able to compare and contrast animal physical characteristics.

**Culminating Activity:** Animal and plant poster that displays the basic parts of the plant and the needs of the animal displayed.

**GRASPS**

**Goal:** Students will identify the needs of plants and animals through the use of a poster. The teacher or students will use a digital camera to photograph all posters, to be used in the PowerPoint. The class will create a PowerPoint, which will compare and contrast the different animals that the students displayed on their posters. The compare and contrast session will be guided by the teacher.
Role: Scientist

Audience: K and 1st grade students

Scenario: A kindergarten teacher has asked the first grade students to create a display gallery of posters. The teacher wants the students to illustrate a picture of a plant and animal. Each poster must have a plant with each part labeled. Also, it needs to display an animal. The student must label the basic needs of the animal (example: show the animal’s shelter in the poster). After all posters are complete, the class can create one PowerPoint that compares and contrasts the different animals that the students selected.

Product: Animal and Plant Poster for each student. One PowerPoint for the class.

Standard: S1L1

See attached Animal and Plant Poster Rubric

GENERAL TIMELINE, BALANCED ASSESSMENT PLAN, TASKS

<table>
<thead>
<tr>
<th>Intro / Pre Assess</th>
<th>Plant parts and basic needs of plants</th>
<th>Basic needs of animals</th>
<th>Compare and contrast animals</th>
<th>Effects of weather and seasonal changes on plants and animals</th>
<th>Post Assess</th>
<th>Reteach or Extend</th>
</tr>
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<tbody>
<tr>
<td>1 Lesson</td>
<td>1.5 weeks</td>
<td>1.5 weeks</td>
<td>1 week</td>
<td>2 weeks or less</td>
<td>1 Lesson</td>
<td>2-4 Lessons</td>
</tr>
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BALANCED ASSESSMENT PLAN FOR ORGANIZATION

<table>
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<tr>
<th>Informal Observations</th>
<th>Selected Response</th>
<th>Constructed Response</th>
<th>Performance Assessment</th>
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</thead>
</table>
| • Teacher Observations
  • Conferencing with class or individual student. | • Pre-Assessment
  • Lewis and Clark Animal Matching Activity | • Plant illustration
  • Post-Assessment
  • Land vs. Water Chart
  • What Plants Need | • Animal and Plant Poster Rubric
  • Science Journal
  • Sorting Science Center cards
  • Planting seeds
  • Lewis and Clark Science Journal Entry
  • GRASP activity
  • Story
  • Scientist Chart
  • Mural
  • Venn Diagram
  • Animal Model
  • Flap-Book
  • File Folder
  • Bird Feeder |

TASKS

The following collection of tasks represents the level of depth, rigor and complexity expected of all students to demonstrate evidence of learning.

Lesson: Introduction to Plants and Animals

(1 day)

A. Introduce Standard: S1L1. Students will investigate the characteristics and basic needs of plants and animals. Continue using “language” from the standards during the unit. Refer to posted standard as necessary throughout unit. Create word wall words for the following (to be added once discussed in class): root, stem, leaf, flower, air, water, light, nutrients, food, shelter, appearance, motion, growth, adapt, hibernate, and migrate to the class word wall to encourage students to use these words in their writing.
Description:

B. Use KWL chart. Write what the students already know about the standard under the “K.” Write what the students want to know/learn under the “W.” Under the “L” write what the students learned about the standard after the lessons are complete.

C. Hook – Bring in different photos of plants and of animals. Ask students what is needed to keep the plants and animals alive. Give each student 3 sticky notes. Have students illustrate what is needed in order for the plants and animals to live. Collect all student illustrations and post on a large piece of butcher paper. Lead the class in a discussion about the illustrations. Have students decided what is needed for plants and what is needed for animals. The teacher can write the headings “Plants” and “Animals” on the butcher paper, with a line drawn between the two headings. Students should sort the illustrations on their own with little teacher guidance. Post the butcher paper in the room so that students can refer back to it to make corrections, if needed during the other lessons.

D. Have each student discuss their illustration and why they think it is important for plants or animals.

E. Pre-Assessment

Assessment:

Selected Response-Pre-Assessment, Informal Assessment-Conferencing with class

Suggestions/Resources:

- Record and Post KWL chart on butcher paper, poster board, etc. Use sticky notes to add student knowledge and understanding under “Learned” column.
- Gather plant and animal books to read to students throughout the unit. (See “Suggested Literature”.

Lesson:

**Plant Parts and Basic Needs of Plants: Plant Parts Video Segment**

Description:

Day 1:

Review standard and science words: root, stem, leaf, and flower
Plant Parts video segment
[www.unitedstreaming.com](http://www.unitedstreaming.com) keyword search: Plant Parts and Their Uses: 12 minutes.

Assessment:

Informal Assessment: Teacher observation and Oral Questioning after film – Refer to KWL chart from first lesson.

Suggestions/Resources:

Have students draw a picture of a plant in the student’s science journal. Allow the students to label as many parts as possible and tell what each part does.
### Lesson: Plant Parts and Basic Needs of Plants: Nature Walk

#### Description:

**Day 2:**

A. Review standard, “language” from unit, and journal responses from day one.

B. Take the students on a nature walk around the school grounds. Look for all types of plants. Have students bring their science journal along to draw pictures of the plants they find. Have students label the parts of the plants that they see. Discuss the results in the classroom. Ask students if there were parts of the plants that they were not able to see and why. Have students write what each part of the plant they saw today does (example: seeds-make new plants).

#### Assessment:

Informal Assessment: Teacher observation and Illustrations.

#### Suggestions/Resources:

Go to the following website: [http://www.ahisd.net/campuses/woodridge/student/first/websites/plantparts.htm](http://www.ahisd.net/campuses/woodridge/student/first/websites/plantparts.htm)

Students can click and drag to match the word to the plant part.

### Lesson: Plant Parts and Basic Needs of Plants: Plant Parts

#### Description:

**Days 3 and 4:**

A. Review standard and “language” from unit.

B. Provide students a plant with a flower. Have students look at the plant and draw a picture of what they see. Then the teacher can show the students a carrot. Students should tell how the plants are alike and different using a Venn diagram as a whole class.

(Activity adapted from the Harcourt Science Book, 2002)

#### Assessment:

Informal Assessment: Teacher observation and Oral Questioning—Refer to KWL chart from first lesson and Venn Diagram.

#### Suggestions/Resources:

- Write science words on board: root, stem, leaf, and flower. Ask students to use a new science word (root, stem, leaf, and flower) in a sentence. Have the student write the sentence on an index card and illustrate the word. Students can then share their sentence and illustration with the class. Post the index cards in the room (suggested: Science Center), so that students can use it as a reference.
Lesson: Plant Parts and Basic Needs of Plants: Basic Needs of Plants

Description: Days 5 and 6:

A. Review standard and "language" from unit.
C. Discuss what plants need to grow. Ask students what the seeds will need in order to survive and grow into a plant. Create a chart: What Plants Need
D. Experiment:
   Materials: bean seeds, clear cup, and soil.
   Directions:
   1. Have students work with a partner. Each group will be assigned a particular way to take care of their plant.
   2. The teacher will cut out the squares from the Ways to Take Care of Your Seed attachment. The strips will be folded and placed in a box. One student from each group will pick out one strip and follow the directions for taking care of their seed.
   3. Students will follow the directions for planting their seed and taking care of the plant.
   4. Students will observe the results, chart data on a poster, and write about the daily observations in their science journal. This observation should last at least one week.
   Observations should include:
      ➢ measuring the plant’s height with a ruler
      ➢ number of leaves
      ➢ size of leaves

Read the following books:
Seeds to Plants by Jeffrey Bates
Plant by David Burnie
### Lesson: Plant Parts and Basic Needs of Plants: Basic Needs of Plants

#### Day 7:

**Description:**

A. **Game: Do You Know What a Plant Needs?**
   - Teacher can create game with various picture cards.

   **Student Directions:**
   - The principal has decided to let you pick a plant for the classroom. You must show the principal that you understand the basic needs of a plant. In order to prove this, you must sort the cards into two different groups: A Plant Needs... AND A Plant Does Not Need...

   **Assessment:**
   - Have students sort the cards in a small group.
   - Informal Assessment: Teacher observation

**Suggestions/Resources:**

- Place the game in the Science Center to reinforce science concepts.
- Write a letter to a friend describing all of the basic needs of a plant.
- Add student responses to the KWL chart.
Lesson: Plant Parts and Basic Needs of Plants: Water and Land Adaptations

Description: Day 8:

A. Review standard and “language” from unit.
B. Water and Land Plant Adaptations:
   - Bring in plants that live on land and in water to the classroom. (At least one from each environment.)
   - Allow students to observe the different types of plants in a small group. Have students list the different characteristics and illustrate each plant.
   - The teacher should ask questions and record responses on the board:
     - What do these plants have in common?
     - How are they different?
     - Where do they live?
     - Do they need the same things to survive?
     - How do these plants help people and animals?
   - Explain to students that one of these plants lives in water and the other lives on land. Can they choose the one that lives in water and on land? Ask why the students think so. Review the characteristics of each plant and how they make adaptations to survive in their environment.
   - Have students create a Venn diagram comparing plants that live on land and plants that live in the water.

Assessment: Informal Assessment: Teacher observation

Suggestions/Resources:
- Read books to students that show plant life in water and on land.
- Add student responses to the KWL chart.

Lesson: Basic Needs of Animals: Introduction of Basic Needs

Description: Days 1 and 2:

A. Review standard and science words: air, water, food, and shelter.
B. Ask students:
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- What do you need to grow? Why?
- Why is food important?
- What do people do if they need food?
- What does air allow us to do?
- Is it necessary to drink water? Why or why not?
- How do we stay dry and warm when the weather is bad?

C. Create a word web with “Animal Needs” in the center. Allow students to suggest the needs of animals. The teacher can web out the students’ ideas.

D. Have students draw a picture of their favorite animal. Tell students that they must illustrate what their favorite animal needs to grow.

E. Discuss what the students illustrated. Post illustrations in the classroom.

Assessment:

Informal Assessment: Teacher observation and illustration

Suggestions/Resources:
- Read The Grouchy Lady Bug by Eric Carle
- Read The Magic School Bus: Hops Home- A Book About Animal Habitats by Patricia Relf

Lesson: Basic Needs of Animals: Classroom Pet

Description:

Days 3 and 4:

A. Review standard and science words: air, water, food, and shelter.
B. Have students vote on a classroom pet. (Example of choices include: hamsters, hermit crabs, fish, spiders, ants, birds, etc). Create a picture graph of the results from the class. (Teachers-make sure that the animals are readily available, so that it can be purchased the next day.)
   - Tell students that in order to get the classroom pet, they must be able to determine the basic needs of animals. This will ensure that the pet is taken care of by the students.

After the pet is selected, students will work with a partner to create a flap-book. This book will tell how to take care of the selected class pet. It needs to include the pet’s basic needs and how the needs will be met. Steps to make a flap-book: Fold a white sheet of construction paper into eights. Open the paper and cut 4 flaps along the dotted lines and fold down. See illustration in box below:
Once the flaps are folded down, have the students write:

1\textsuperscript{st} Flap: How to Take Care of a Pet
- Students should illustrate the pet that was voted on under that flap.

2\textsuperscript{nd} Flap: What Our Pet Needs
- Under the flap, students should illustrate the basic needs of the pet.

3\textsuperscript{rd} Flap: How Our Class Will Meet the Basic Needs
- Illustrate what students will do to maintain basic needs (example: making sure the water and food bowl are full)

4\textsuperscript{th} Flap: How Our Pet Will Feel if the Class Meets the Pet’s Basic Needs
- Illustrate the way a pet may be happy and grow.

Assessment:
- Informal Assessment: Teacher observation
- Performance Assessment: Flap-Book

Suggestions/Resources:
- Students can share their flap-book with the class.
- Read the book: 
The Big and Little Animal Book by David Taylor
## Lesson: Basic Needs of Animals: Classroom Pet Story

### Description:

Day 5:

B. Review standard and science words: air, water, food, and shelter.

C. Observe the classroom pet. Write a story about its name, where it lives, how it moves, how it gets water, and what it eats.

Adapted from Georgia Department of Education

D. Game: Do You Know What an Animal Needs?
   - Teacher can create game with various picture cards.

### Student Directions:

You must show that you understand the basic needs of an animal. In order to prove this, you must sort the cards into two different groups: An Animal Needs… AND An Animal Does Not Need…

Have students sort the cards in a small group.

### Assessment:

- Informal Assessment: Teacher observation
- Performance Assessment: Classroom Pet Story

### Suggestions/Resources:

- Students can share their stories with the class.
- Students can role play the life of the class pet in small groups.
- Read the book: *Small Garden Animals* by Terry Jennings
- Place the game in the Science Center to reinforce science concepts.

## Lesson: Basic Needs of Animals: Lewis and Clark Expedition

### Description:

A. Remember what they saw. Have students suggest reasons journals are important.

B. Take students on a walk (“expedition”) around the school to make observations. These observations must be recorded in the students Science Journal. Remind students about the journals that Lewis and Clark kept and the importance of detail.

C. Students must select at least one plant or animal to record in their **Science Journal**.
**Lesson:** Compare and Contrast Animals: Animals in Action  

**Description:** Days 1 and 2:

A. Review standard and science words: appearance, motion, growth, and basic needs.

B. Show the video segment from [www.unitedstreaming.com](http://www.unitedstreaming.com) key words: Animals in Action (20 minutes in all).

- Discuss the different animal movements. Have students demonstrate some of their favorite animals and the way they move. Ask students why that animal moves the way it does.

C. Pass out 1 index card to each student. Tell the students to draw one animal they saw in the video. Allow each student to select a partner. Have the students create a Venn Diagram comparing each other’s animal (teacher-make sure that all partners have different animals). Tell students to compare the way the animals move, what the animals look like, etc.

**Assessment:**

- Informal Assessment: Teacher observation and Oral Questioning.

**Suggestions/Resources:**

- Performance Assessment: Venn Diagram
- Have students share their Venn Diagrams with the class.
- Allow students to stand and act out the animal movements with the video.
### Lesson: Compare and Contrast Animals: Animal Riddles

#### Description: Days 3 and 4:

A. Review standard and science words: appearance, motion, growth, and basic needs.
B. Gather books and resources about all types of animals. Have students think of their favorite animal. Each student should be responsible for creating a word web for their animal. The student must name at least five facts about the selected animal. Allow students to use the books and resources to obtain information about their animal.
C. After the web is complete, the students will create a riddle for each fact and write it on an index card then place in a small paper bag. Students can find a partner and allow the other student to pull out and read each riddle to guess the animal.
   - Riddles must use clues about appearance, motion, growth, and basic needs.
D. Students will build a model of their animal. Use various art materials, leaves, branches, etc. to create a model of their animal. Students can glue down materials on construction paper or build a 3D model. Have students glue their riddles around the model.

#### Assessment:
- Informal Assessment: Teacher observation.
- Performance Assessment: Riddles and Model of Animal.

#### Suggestions/Resources:
- Share riddles as a whole class.
- Extend the activity by grouping animals that are alike after all riddles have been read.
- Extend the model building by allowing students to draw the surrounding environment where the animal lives.

### Lesson: Compare and Contrast Animals: Science Mysteries

#### Description: Days 5 and 6:

A. Review standard and science words: appearance, motion, growth, and basic needs.
B. Show photographs of different types of animals discuss ways to sort the pictures (animals that live in water, live on land, small, large, rough skin, smooth skin, fur, ways they move, what they eat, etc.)
C. Teacher can create a box covered with animal wrapping paper. Write: Mystery Box on the outside. Include items such as: feathers, fake or real fur, shells, snake skin, fake or real hair,
and other body covering that the teacher may find.

- Tell students that they are on a television show called “Science Mysteries” in which they must reach their hand in the Mystery Box and use their sense of touch to describe the item they grab. The teacher can put all students name in a jar and randomly select a student to come to the front to take their chance at guessing the item they grab. (Note: The teacher may want to put one item in the box at a time to deter students from grabbing and describing several items.) The student will feel the item and describe it to the class. The teacher can put the student’s responses on the board and the class can make predictions about what type of animal would have that type of skin covering. This can last as long as the class is actively engaged. The student must then use the predictions from other students and their own sense of touch to guess what type of animal may have that body covering. Have the student pull the object out and show the class. If the student was correct, the teacher can reward him/her with a class cheer, pencil, etc. Discuss the type of animal covering with the class. Check to see if the predictions were correct. Continue until all items are used in the game.

D. Have students write in their science journal about animal body coverings. See how many facts students can recall.

**Assessment:**
- Informal Assessment: Teacher observation.

**Suggestions/Resources:**
- Have students fold a sheet of paper into eighths and make predictions at their seat during the game.
- Students can illustrate body coverings in science journal.

**Lesson:**

**Compare and Contrast Animals: Animals On Land and In Water**

**Description:**

Days 7 and 8:

A. Review standard.
B. Create a chart with the two titles: Ocean and Rainforest; draw a line between the two titles. Ask students to name animals that live in the ocean and animals that live in the rainforest.
C. Read a book about the ocean. Read a book about the rainforest.
(Suggested reading: The Magic School Bus: On the Ocean Floor by Joanna Cole and Bruce Degen)
D. Review Ocean and Rainforest Chart. Ask students to add to the chart.
E. Show students pictures of the following environments: pond, ocean, rainforest, and desert. Pass out an assortment of picture cards that include animals from all of the environments. Have students tape their picture card under the picture of the environment where they think it lives. Review the picture cards with students.

- Ask students questions:
  - Ask why they chose that environment for that animal.
  - Does the animal have a body covering that would make you think it lives in the water?
  - How does that animal move?
  - Does the animal have fur?
  - What does your animal eat?

- Explain that ponds and oceans are water environments and that the rainforest and desert is a land environment. Have students work with a partner to complete the following activity.
  - Let each pair choose one land animal and one water animal.
  - Have students fill in the **Land vs. Water Chart** to compare their animals.
  - Allow students to use books, book-marked Internet resources, etc. to find out more about their animal.

**Assessment:**
- Informal Assessment: Teacher observation.
- Constructed Response: Land vs. Water Chart

**Suggestions/Resources:**
- Make a terrarium and watch the ways that animals and plants interact to survive.
- Have students choose one of the environments: pond, ocean, rainforest, or desert to illustrate. Students can make a diorama of their environment with the animals that live in it.
Lesson: Compare and Contrast Animals: Comparing Animals

Description: Day 9:

F. Review standard and science words: appearance, motion, growth, and basic needs.
G. Have students share what they wrote in science journals about body coverings.
H. Gather pictures of animals with different body coverings. (If possible, have a small plastic bag that holds a sample of the body covering, so that students can use a magnifying glass to view it and to touch it.) Have students select a picture randomly and find a partner. Give each set of students a large sheet of construction paper and two pieces of yarn (about 2 feet long). Have students create a Venn diagram using the yarn to overlap two circles. Students should glue down the yarn and write the name of the two animals, one above each circle. Have students compare and contrast the body coverings of the two animals.
I. Students should then draw a picture of their animal and write about the body covering, making sure to tell why that animal would need that particular covering to survive. Ask questions to make students use the skills they have learned so far about animals. (Examples: Does the animal live in a cold environment? Does the animal sleep underground?)

Assessment:
- Informal Assessment: Teacher observation.
- Performance Assessment: Venn diagram.

Suggestions/Resources:
- Students can write in their science journal about the two different animals and their body coverings.

Lesson: Compare and Contrast Animals: Lewis and Clark’s Animal Discovery

Description: Day 10:

A. Review standard and science words: appearance, motion, growth, and basic needs.
B. Review the Lewis and Clark expedition that the students took earlier in the unit. Discuss what the students saw and wrote in their Science Journal Entries.
C. Review books and other resources about Lewis and Clark.
D. Have students look at images of the animals on the matching activity worksheet.
### Lesson: Effects of Weather and Seasonal Changes on Plants and Animals: Introduction

**Description:** Day 1:

- A. Review standard and science words: migrate, hibernate, and adapt.
- B. Gather books about the following animal habitats: forest, desert, rain forest, and ocean. Read these books to the students or allow students to read in science center for this unit.
- C. Show students photographs of the following animal habitats: forest, desert, rain forest, and ocean.
  - Discuss and write student’s responses on chart paper (The name of each habitat can be written on a large sheet of chart paper and the teacher can write the student’s suggestions under each title.).

#### Assessment:
- Informal Assessment: Teacher observation.
- Selected Response: Lewis and Clark Matching Activity

#### Suggestions/Resources:
- **Lewis and Clark: Animals found in the United States.** Let students try to the name the animals and where the animals would live. Have students tell characteristics of animals, such as, appearance, the way the animal moves, how it grows, and what it needs to live. Allow students to cut out the animal names and try to make a prediction of what picture it matches to using all of the information that the students have learned so far in the unit. (Note: Teacher-make sure to read the names of the animals or have students read the names aloud, making sure that all students are able to read the names.) Next, the students will glue the name under the correct picture. Discuss the similarities and differences among the animals using graphic organizers.
- **Lewis and Clark Links:**
  - [http://adifferentplace.org/lewis_and_clark.htm](http://adifferentplace.org/lewis_and_clark.htm)
  - [http://www.lcsc.edu/lewis.clark/experience/](http://www.lcsc.edu/lewis.clark/experience/)
  - Post matching activity in the science center so that students can refer back to the animals and animal names.
### Lesson: Effects of Weather and Seasonal Changes on Plants and Animals: “Scientists in Action”

**Description:**

Days 2 and 3:

A. Review standard and science words: migrate, hibernate, and adapt.
B. Gather a variety of books and resources about the seasons, weather, and animals.
C. Scientists in Action: How weather and seasonal changes affect plants and animals
   - Students will use the books and other resources to complete this activity.
   - Have students work in small groups (3-4 students).
   - Students will become scientists and review concepts of weather and seasons from unit one. The task will involve students completing the Scientist Chart for the group’s assigned season. The teacher can assign one season to each group.
   - Once all groups are complete, the groups will share what they have learned with the class and explain the chart to the class.

**Assessment:**

- Informal Assessment: Teacher observation and Oral Questioning.
- Performance Assessment: “Scientist Chart”

**Suggestions/Resources:**

Dramatic play can be used to describe the seasons by each group. Puppets can be used to act out how animals respond to weather and seasonal changes.
Lesson: Effect of Weather and Seasonal Changes on Plants and Animals: Season Mural

Description: Days 4 and 5:

A. Review Scientist Charts.
B. Students will create a mural representing the following seasons: winter, spring, summer, and fall.
   - Students will show what plants and animals look like during that season. Students can also write captions telling what some plants and animals are doing during that season.
   - Students can draw the mural or collect pictures and create a collage of each season.

Assessment:
- Informal Assessment: Teacher observation and Oral Questioning.
- Performance Assessment: Mural

Suggestions/Resources: Allow students to create cause and effects of each season. For example: It gets warmer in the spring, the extra sunlight…provides warmth needed for plants to grow.

---

Post Assess

Lesson: Post-Assessment

Description:
A. Review KWL chart from the start of the unit. Allow students to add to the “L”- learned column.
B. Teacher should ask essential questions.
C. Teacher should ensure that the enduring understandings are met by all students through the use of questioning, one-on-one conferencing, science journal entries, performance assessments, and the post-assessment.

Assessment:
- Informal Assessment: Teacher observation, Oral Questioning, and Conferencing.
- Performance Assessment: Science Journal
- Constructed Response: Post-Assessment

Suggestions/Resources:
The following collection of tasks represent the level of depth, rigor and complexity expected of all students to demonstrate evidence of learning. Reteaching provides additional concrete opportunities for students who have shown limited progress in learning and understanding.

### Lesson: Basic Needs and Characteristics of Plants and Animals

**Description:**
A. Based on the results from the assessment and teacher observations, students can create a file folder display that illustrates the characteristics and needs of plants and animals.

- Give the students a blank file folder. Have students follow the following directions individually or in a small group:
  - **Directions for Plants Review:**
    1. Open the file folder.
    2. On the top of the LEFT side write the title: Plants
    3. Look though magazines or other material, or even draw pictures of what plants need to live. Make sure that you find at least 4 things plants need.
    4. Glue and label the needs of a plant under the plants title.
    5. Illustrate one plant. Label the roots, stem, leaf, and flower. Tell why each part is important.

- **Directions for Animal Review:**
  1. Open the file folder.
  2. On the top of the RIGHT side write the title: Animals
  3. Illustrate the basic needs of animals. Draw an animal in an environment (example: ocean, forest, or desert) and make sure to include all of the needs in the illustration.
  4. Tell all about the animal in the illustration.

**Assessment:**
Performance Assessment: File Folder

**Suggestions/Resources:**
- Have students use books and other resources to help complete activity.
### TASKS – Enrichment

The following collection of tasks represent the level of depth, rigor and complexity expected of all students to demonstrate evidence of learning. Enrichment provides additional opportunities for students who have mastery in learning and understanding.

#### Lesson: Animal Explorations

#### Description:

A. Observe winter animals (needs to be done in the winter)

- Have students list the basic needs of animals.
- Have students work individually or in a group to create a word web with “ways animals adapt to the winter season.” Discuss student webs.
- Ask what they could do to help birds that don’t migrate to warmer climates. Is it harder to find food? Why would it be harder to find food? If so, what could the class do to help? List suggestions. (Providing food, through the use of a bird feeder would allow the birds to have access to food easily in the winter months.)
- Students will work in small groups to design a bird feeder.
  - Students need to plan:
    1. What will the bird feeder look like?
    2. What will attract the birds to the feeder?
    3. Create a list of all of the things needed to make a bird feeder (suggest items that can be found around the house or classroom).
  - Students can then create their bird feeder. Once the bird feeder is in use, record observations.
  - Have groups compare the different types of bird feeders each group created. Was there one feeder that worked better than others? Was location a concern? What would your group do if the project could be redone?

#### Assessment:

Performance Assessment: Bird Feeder and Science Journal

#### Suggestions/Resources:

Provide students with resources on birds, bird feeders, and other materials that would be useful.
Lesson: **Dramatic Play: Parts of the Plant**

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Students will work together to use dramatic play to tell about the parts of the plant. Put students in groups of four. Assign each student in the group one part and create a sign to go around that student's neck, telling what part of the plant they represent.</td>
<td></td>
</tr>
<tr>
<td>B. Tell students that somehow there was a mix-up and the plant parts need to be put together again. The students must get in the correct order (lay on the floor or stand in a line) and tell what part of the plant they represent and why that part is important. (Give students plenty of time to rehearse for the class.)</td>
<td></td>
</tr>
<tr>
<td>C. Allow each group to demonstrate their knowledge.</td>
<td></td>
</tr>
</tbody>
</table>

**Assessment:**
Informal Assessment: Teacher Observation and Conferencing with class.

**Suggestions/Resources:**
Allow students to make up fantasy stories while still incorporating the parts of the plants into their dramatic play.

**TEACHER RESOURCES**

Where animals live:
http://www.woodlands-junior.kent.sch.uk/Homework/habitats.html


Animal facts:
http://www.worldalmanacforkids.com/explore/animals.html

Plant parts:
http://www.ahisd.net/campuses/woodridge/student/first/websites/plantparts.htm
Parts of a plant:
http://www.urbanext.uiuc.edu/gpe/case1/c1facts2a.html

Online Book About a Garden
http://www.primarygames.com/storybooks/plant/start.htm

Animal game:
http://sheppardsoftware.com/content/animals/quizzes/kidscorner/animal_games_backyard_flower_large.swf

Human and Animal Habitat Game

Basic Needs of Animals

Build a Fish
http://sv.berkeley.edu/showcase/flash/fish.html

Plant Parts and Their Uses. 100% Educational Videos
unitedstreaming: http://www.unitedstreaming.com/

Lewis and Clark:
http://www.lcsc.edu/lewis.clark/experience/

Lewis and Clark Links:
http://adifferentplace.org/lewis_and_clark.htm
Suggested Literature

Finding Out About Animals by Francis A. Alder

Why is the Grass Green? by Chris Arvetis and Carole Palmer

Seeds to Plants by Jeffrey Bates

Plant by David Burnie

The Grouchy Ladybug by Eric Carle

The Very Quiet Cricket by Eric Carle

Animals and Their Homes by Jennifer Cochrane and Jill Coleman

The Magic School Bus: On the Ocean Floor by Joanna Cole and Bruce Degen

Lewis and Clark by Christy DeVillier

Skeletons and Movement by Maria Gordon

Jellyfish to Insects by William Hemsley

Small Garden Animals by Terry Jennings

Growing and Changing by Brian Knapp

Fur, Feathers, and Flippers by Patricia Lauber
<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plants that Bite Back</td>
<td>Katy Pike and Paul McEvoy</td>
</tr>
<tr>
<td>The Magic School Bus: Hops Home- A Book About Animal Habitats</td>
<td>Patricia Relf</td>
</tr>
<tr>
<td>Grow</td>
<td>Animal Fact/Animal Fable</td>
</tr>
<tr>
<td>The Big and Little Animal Book</td>
<td>David Taylor</td>
</tr>
<tr>
<td>Animal Desguises</td>
<td>Belinda Weber</td>
</tr>
<tr>
<td>Plant Experiments</td>
<td>Vera R. Webster</td>
</tr>
<tr>
<td>Young Scientist Living World: Plants Volume 5</td>
<td>World Book, Inc.</td>
</tr>
</tbody>
</table>
Science Journal

Scientist Name:_________________________________________________

Date of Expedition:______________________________________________

Circle one I saw: PLANT ANIMAL

This is the name of what I saw:__________________________________________

This is a picture of what I saw:

Write everything you see about your plant or animal. REMEMBER, if you were Lewis or Clark you would want to write down as much information as possible!

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

Georgia Department of Education
Kathy Cox, State Superintendent of Schools
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Lewis and Clark: Animals found in the United States

Name: ___________________________________________ Date: ____________________________

Photo from: Animal Planet

Photo from: San Diego National History Museum

Photo from: Animal Planet

Photo from: Wikipedia

Photo from: Animal Planet

Photo from: Animal Planet

Photo from: Animal Planet
Cut out the animal name and paste it under the picture of the animal.

<table>
<thead>
<tr>
<th>Western Rattler</th>
<th>American Bison</th>
<th>Condor</th>
<th>Coho Salmon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grizzly bear</td>
<td>Prairie Dog</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Directions:

1. Draw a plant inside of the box.
2. Label the plant with the words: root, stem, leaf, and flower.

3. Circle the words that tell what plants need to live:
   air  water  house  nutrients  parents  light  flowers

4. Name the things that animals need to live.
## What Plants Need

<table>
<thead>
<tr>
<th>Plants Need</th>
<th>Why?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td></td>
</tr>
<tr>
<td>Air</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from Harcourt Science, 2002
Ways to Take Care of Your Seed

Materials: Clear cup
1 cup of soil
¼ cup of water
1 bean seed

Step 1: Place one cup of soil in the clear cup.
Step 2: Poke a hole with your finger in the top of the soil. Gently place the seed in the hole and cover with soil.
Step 3: Pour ¼ of water into your cup.
Step 4: Place your cup near the classroom window.

Materials: Clear cup
1 cup of soil
¼ cup of water
1 bean seed

Step 1: Place your seed in the clear cup.
Step 2: Pour ¼ of water into your cup.
Step 3: Place your cup near the classroom window.
Step 4: Water your plant with ¼ cup of water each day.
Step 5: Label your cup- No Soil.
Materials: Clear cup  
1/4 cup of water  
1 bean seed

**Step 1:** Place your seed in the clear cup.  
**Step 2:** Pour 1/4 of water into your cup.  
**Step 3:** Place your cup near the classroom window.  
**Step 4:** Water your plant with 1/4 cup of water each day.  
**Step 5:** Label your cup - No Soil.

Materials: Clear cup  
1 cup of soil  
1/4 cup of water  
1 bean seed  
1 small box

**Step 1:** Place one cup of soil in the clear cup.  
**Step 2:** Poke a hole with your finger in the top of the soil. Gently place the seed in the hole and cover with soil.  
**Step 3:** Pour 1/4 of water into your cup.  
**Step 4:** Place your cup in the back of the classroom with a box over it.  
**Step 5:** Water your plant with 1/4 cup of water each day.  
**Step 6:** Label your cup - No Light

Materials: Clear cup  
1 cup of soil  
1/4 cup of water  
1 bean seed  
1 small box

**Step 1:** Place one cup of soil in the clear cup.  
**Step 2:** Poke a hole with your finger in the top of the soil. Gently place the seed in the hole and cover with soil.  
**Step 3:** Pour 1/4 of water into your cup.  
**Step 4:** Place your cup in the back of the classroom with a box over it.  
**Step 5:** Water your plant with 1/4 cup of water each day.  
**Step 6:** Label your cup - No Light
Materials: Clear cup
1 cup of soil
¼ cup of water
1 bean seed

Step 1: Place one cup of soil in the clear cup.
Step 2: Poke a hole with your finger in the top of the soil. Gently place the seed in the hole and cover with soil.
Step 3: Pour ¼ of water into your cup.
Step 4: Place your cup near the classroom window.
Step 5: Make sure to water your plant everyday (1/4 cup).
Materials: Clear cup
          1 cup of soil
          ¼ cup of water
          1 bean seed

Step 1: Place one cup of soil in the clear cup.
Step 2: Poke a hole with your finger in the top of the soil. Gently place the seed in the hole and cover with soil.
Step 3: Pour ¼ of water into your cup.
Step 4: Place your cup in the classroom refrigerator.
Step 5: Make sure to water your plant everyday (1/4 cup).
### Scientist Chart

**Scientists in Action: How weather and seasonal changes affect plants and animals**

Group Member Names: ___________________________________________________________ Date: ______________________

**Directions:**
1. Read books and other resources about your season.
2. Complete the chart, filling in the needed information.

#### Season: ____________________________

<table>
<thead>
<tr>
<th>Weather: Illustrate what it looks like outside during this season.</th>
<th>Draw what a tree would look like during this season.</th>
<th>Draw one animal. What does this animal do during this season?</th>
<th>Can you use the words <strong>migrate</strong>, <strong>hibernate</strong>, or <strong>adapt</strong> when describing this season? Illustrate a picture of a plant or animal using one of the bold words to describe the season.</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
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Science Post-Assessment

Directions: Draw a plant inside of the box. Make sure your label the parts of the plant.

What does a plant need to live and grow?
1. 
2. 
3. 
4. 

If you were a bear, what would you need to live?

How are a cat and dog the same and different? You can draw a Venn Diagram to explain your answer.
# Animal and Plant Poster Rubric

Name:___________________________________  Date:_________________________

<table>
<thead>
<tr>
<th>Category</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illustration</td>
<td>Includes an illustration (drawing by student) of a plant with the following parts labeled: root, stem, leaf, and flower. The illustration also includes an animal with its basic needs labeled: air, water, food, shelter.</td>
<td>Includes an illustration (drawing by student) of a plant with the following parts labeled: root, stem, leaf, and flower. The illustration also includes an animal.</td>
<td>Includes an illustration (drawing not by student) of a plant and animal</td>
<td></td>
</tr>
<tr>
<td>Accuracy of Content</td>
<td>All illustrations made for the poster are correct.</td>
<td>All illustrations but one made for the poster are correct.</td>
<td>The illustrations of the plant and animal are not correct.</td>
<td></td>
</tr>
<tr>
<td>Attractiveness</td>
<td>Contrasting colors were used to give the illustration visual appeal.</td>
<td>Illustration was colored.</td>
<td>Illustration was not colored.</td>
<td></td>
</tr>
<tr>
<td>Accuracy of Labels</td>
<td>All labels included the correct content.</td>
<td>Several labels were incorrect.</td>
<td>No labels were present.</td>
<td></td>
</tr>
<tr>
<td>Understanding of Animal during the Compare and Contrast Discussion with the PowerPoint</td>
<td>Shows a full understanding of the topic.</td>
<td>Shows a good understanding of the topic.</td>
<td>Does not seem to understand the topic very well.</td>
<td></td>
</tr>
<tr>
<td>Comments/Total Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Land vs. Water Chart

Names: __________________________

Directions: Work with your partner to fill in the columns.

<table>
<thead>
<tr>
<th>Animal:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Where does it live? (water or land)</td>
<td></td>
</tr>
<tr>
<td>What does it eat?</td>
<td></td>
</tr>
<tr>
<td>How does it move?</td>
<td></td>
</tr>
<tr>
<td>Draw a picture of your animal.</td>
<td></td>
</tr>
</tbody>
</table>