

Component	Theme
Grade Level:	K-5
Lesson Title:	My Backyard Habitat
Focus:	Animal Habitats

Materials:

- My Backyard Habitat Field Guide (1 per student) (copies per student are optional)
- Scratch paper and pencils

Opening

State the objective

Today we will:

- Learn about animal habitats
- Find out what we know about backyard habitats

Gain prior knowledge by asking students the following questions

- What is a habitat? (Simply put, a habitat is an environment where plants and animals live. A habitat provides the plants and animals the food, water and shelter it needs to survive).
- Close your eyes and think about your backyard or outside area near your house.

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Activate Prior Knowledge

This activity will give you an idea of what youth already know about a particular habitat and develop interest in learning more.

- Write the word BACKYARD HABITAT on the board.
- Ask students to briefly write or draw what they know about their backyard habitat.
- Ask several students to share what they wrote.
- Read the following to the students;

Remember, a habitat is a space where plants and animals live and are provided food, shelter, and water. Your backyard is a habitat too! Do you have a pet? They are animals that live in your backyard habitat! Is there grass or plants in your backyard? They are part of your backyard too!

- Ask students to review their original statements and add anything they learned from the reading.
- Ask for volunteers to share their additions with the large group.

*Activity → Teachable Moment(s) *throughout*

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.



Research

- Give each student a copy of the "My Backyard Habitat Field Guide" or recreate it on the board for students to copy onto blank paper.
- Ask students to think about what is in their backyards or outside areas to fill in the Field Guide.
- Students can work independently, in pairs, or in small groups.
- When students have completed their Field Guides, come together as a large group to fill out a Field Guide with everyone's new information.

	Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

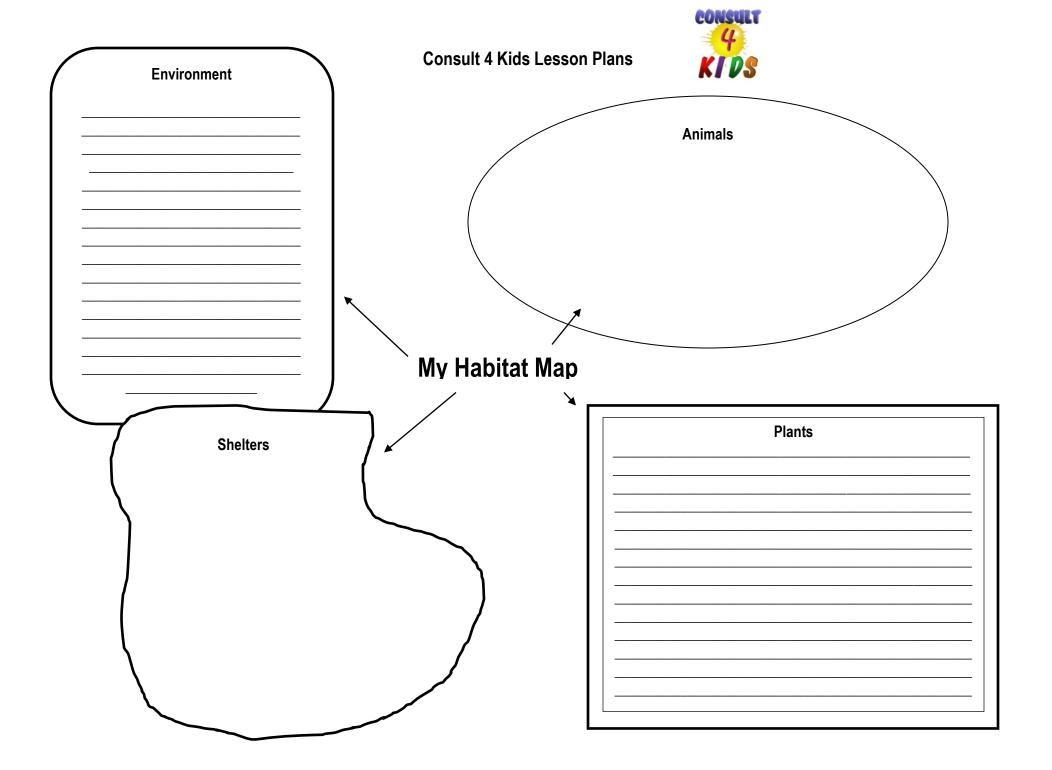
Debrief

Three Whats

Ask the following three "what" questions:

- 1. What did you enjoy most about this activity?
- 2. What was the biggest challenge with this activity?
- 3. What did you learn from the group?

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)



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Component	Theme
Grade Level:	K-5
Lesson Title:	Layers of Soil Cups
Focus:	Animal Habitats

Materials:

Layers of Soil Reading Handout

Layers of Soil Cups Materials (for a group of 20-25)

- 1 box of chocolate pudding (prepared prior to activity)
- 2 tubs of whipped topping
- 1 whole Oreo cookie per student
- 1 bowl crushed Oreo cookies
- Sprinkles
- Gummy Worms
- Plastic Spoons
- Clear, plastic cups
- Mixing Bowls

Opening

State the objective

Today we will:

Learn about the different layers of soil

Gain prior knowledge by asking students the following questions

- Review what students know about underground habitats.
- What animals and plants live in this habitat?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Layers of Soil

 Choose a universal reading strategy (or more than one) for students to use while reading "Layers of Soil." Monitor as necessary.

Modeled Reading: Read aloud to the students, either personally or play the audio book

Paired Readings: Partner students together. Partners take turns reading to one another.

All Read: During this activity, students take turns reading aloud. It is a person's turn to

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During the lesson check in with students repeatedly.
Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or



read when they have been given the talking stick (or teddy bear, or other).

Speed Reading: Have students form a circle. Number them of, 1, 2, 1, 2, 1, 2 and so forth. Having the students stay in the circle, have the twos move to stand in front of the person who said "1" on his/her left. Give each student an opportunity to read aloud to his/her partner for 1 minute. Have one of the circles move and repeat the process. Have the other circle move and repeat for the third time.

Independent Timed Reading: Have students read on their own.

- Lead a discussion with students to recap what they learned from the reading. You
 may want to draw the layers on the board or on chart paper as you go. Label each
 layer as you talk about it and write the various examples in the appropriate layers.
 (Use a student volunteer to write as you talk, if they are able).
- Set up 4-5 stations. Each station should include the items needed to make the Layers of Soil Cup.
- Ask students to place a cookie in the bottom of their cup. This represents the bedrock.
- Next, ask students to take turns placing a spoonful of the whipped topping in their cups. This represents the subsoil, which is generally lighter than the topsoil.
- Next, students can add a spoonful of chocolate pudding to represent the darker colored topsoil. Spoon crushed cookies over the pudding to represent the texture of soil.
- Lastly, add sprinkles and gummy worms to represent the organic materials and living things in soil.
- Eat and enjoy!

understanding. Ask openended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

WHI?

Ask the following three questions:

- 1. What were some of the questions that came up in your group?
- 2. How did you go about including everyone?
- 3. If you were to try this again, what might you do differently?



- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)



Layers of Soil

Think about the animals that call the underground habitat their home. Name three. Think about the plants that start out as seeds underneath the ground. Name three. We know that many plants grow from under the ground and many animals live there. So what is the ground? The "ground" has many layers that go very deep into the Earth's surface, to its core. That very top layer is called soil. It is the part of the Earth's crust that you can pick up in your hands.



Soil is made of air, water, finely crushed rocks, and organic matter. Organic matter is decayed plants and animals and animal waste. It is these things that allow plants to grow in soil. Think about it... do plants grow in sand? Sand doesn't have the nutrients plants need to grow like soil does. Soil supports living things, like plants, and gives animals a home.



Soil has three layers.

The top layer is called topsoil. This is generally the soil that is between 2 and 8 inches deep. If you dug a hole in the ground, you would probably be digging topsoil.

The next layer is called subsoil. This layer is made up of other materials, like clay. It is usually a little harder and chunkier.

The bottom layer of soil is called bedrock. This layer is made up of compressed rocks. It is hard.

Now you know all about soil! Will you ever dig a hole deep enough to find the bedrock?



Component	Theme
Grade Level:	K-5
Lesson Title:	Introducing- The Desert
Focus:	Animal Habitats

Materials:

- Desert Habitat Field Guide (1 per student) (copies per student are optional)
- Scratch paper and pencils
- Various research materials, depending on grade level. Examples include books or magazines about the desert, printouts from the Internet, access to computers, etc.

Opening

State the objective

Today we will:

- Learn about animal habitats
- Find out what we know about desert habitats

Gain prior knowledge by asking students the following questions

- What is a habitat? (Simply put, a habitat is an environment where plants and animals live. A habitat provides the plants and animals the food, water and shelter it needs to survive).
- What is a desert? Have you ever been to a desert? What was it like? What did you see?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Activate Prior Knowledge

This activity will give you an idea of what youth already know about a particular habitat and develop interest in learning more.

- Write the word DESERT on the board.
- Ask students to briefly write or draw what they know about the desert habitat.
- Ask several students to share what they wrote.
- Read the following to the students;

Desert habitats are generally described as hot, dry places. They do not receive much rain. Deserts are mostly made up of sand and rock and sometimes, mountains. Temperatures can be very hot. Some deserts can reach up to 120 degrees! But, they become very cold at night. Even though it is very hot, and sometimes very cold, there are many plants and animals that have adapted to live in this habitat. Many desert animal live underground as a way to survive or are nocturnal. Plants in the desert often have very tough leaves and are designed to hold and store water. The Mojave Desert and the Sonora deserts are

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn"



examples of deserts in the United States of America.

- Ask students to review their original statements and add anything they learned from the reading.
- Ask for volunteers to share their additions with the large group.

Research

- Give each student a copy of the "Desert Habitat Field Guide" or recreate it on the board for students to copy onto blank paper.
- Allow students to access the research materials you have provided to fill in the boxes on the paper.
- Students can work independently, in pairs, or in small groups.
- When students have completed their Field Guides, come together as a large group to fill out a Field Guide with everyone's new information.

opportunity and have the student become the teacher.

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Review

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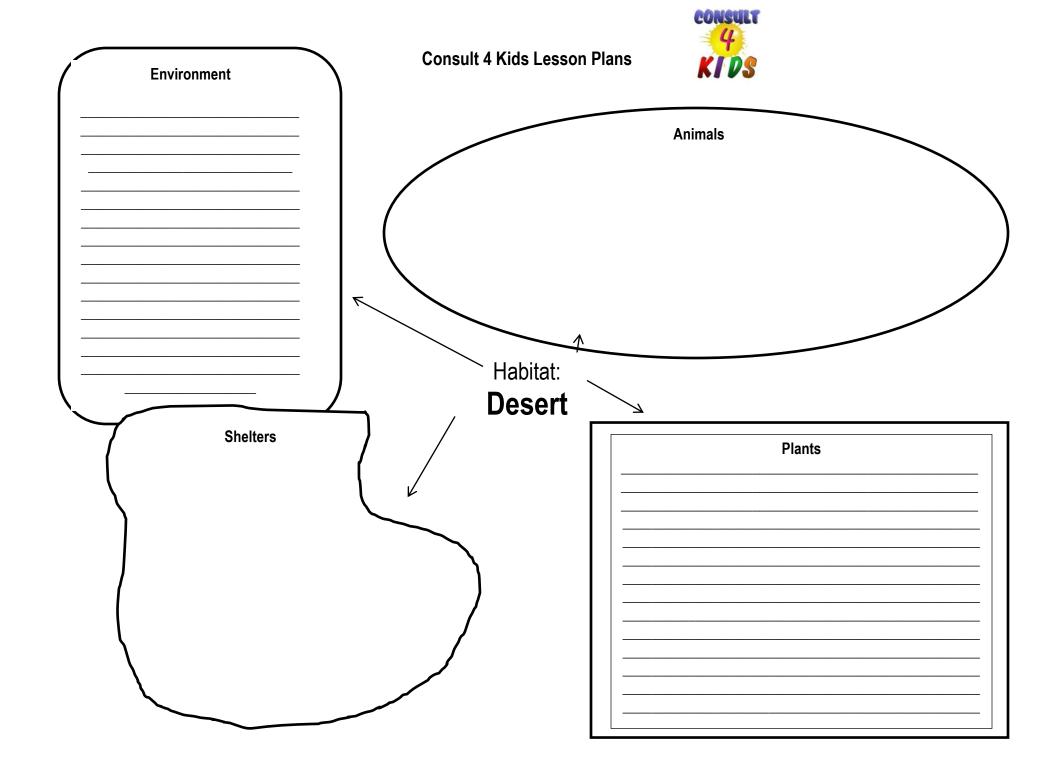
Debrief

Three Whats

Ask the following three "what" questions:

- 1. What did you enjoy most about this activity?
- 2. What was the biggest challenge with this activity?
- 3. What did you learn from the group?

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)





Component	Theme
Grade Level:	K-5
Lesson Title:	Desert Animals- Roadrunner
Focus:	Animal Habitats

Materials:

- "The Roadrunner" Handout (1 per student or one per pair).
- Topic/Detail Story Map (1 per student)
- Crayons or markers

Opening

State the objective

Today we will:

- · Learn fun facts about a desert animal called a roadrunner
- Complete a drawn story map about the roadrunner

Gain prior knowledge by asking students the following questions

What is a roadrunner? Have you ever seen one? What did it look like?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Roadrunner Fun Facts

- Give students "The Roadrunner" handout. Allow students to read the Fun Facts individually or with a partner.
- When students have completed the reading, ask "right there" questions to ensure comprehension. ("Right there" questions are questions to which the answers can literally be found right in the text. They generally begin with what, where, when, why, or how.)
- Give students the Topic/Detail handout or recreate it on the board for students to draw on blank paper.
- Allow time for students to fill in the boxes with pictures using the topic (the roadrunner) and supporting detail they learned about the roadrunner (the information surrounding the roadrunner).
- Allow students to share their drawn story maps with others.

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the

student become the teacher.



Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on

- Ask students to think about what they did today.
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The Roadrunner

Where do I live?

I live primarily in the deserts of the Southwestern United States from Arkansas to California. You can also find me in Mexico.



What is my full name?

I am called the Greater Roadrunner. My scientific name is <u>Geococcyx</u> <u>californianus.</u>

What do I eat?

I think insects, lizards, spiders, snakes fruit and seeds are yummy. Every now and again, I will snack on a small rodent.

What is my habitat/home?

I build a nest out of twigs and sticks. I make sure that I build it in a bush or a cactus several feet off the ground, so that predators cannot get me while I'm sleeping.

How big am I?



I am not the same size, but I weigh as much and am as long as a newborn human baby. I am anywhere from 8-12 ounces and between 18-22 inches from the tip of my beak to the tip of my tail!



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Component	Theme
Grade Level:	K-5
Lesson Title:	Desert Landscapes
Focus:	Animal Habitats

Materials:

- Sheets of sandpaper, any size (1 per student) *Bigger works out better*
- Markers
- Colored sand (optional)
- Glue (optional)

Opening

State the objective

Today we will:

Create a desert landscape using sandpaper.

Gain prior knowledge by asking students the following questions

- Review what students know about the desert habitat.
- What plants and animals can be found in the desert?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Desert Landscapes

- The sandpaper will be used as the drawing paper for the landscapes in this activity.
 Give each student a sheet of paper.
- Students will use markers and colored sand, if available, to create a desert landscape on the sandpaper. Students should only use animals and plants that live in this habitat.
- If you are using the colored sand. Draw the shape of the item you want on the sandpaper in GLUE. Then, sprinkle the sand over the top of the glue. Shake the excess off.
- Allow students time to finish their drawings.
- Allow students to share their drawings with the whole group or even another class!

*Activity → Teachable Moment(s) throughout

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Check in about what is happening and what they are thinking.

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Closing

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Component	Theme
Grade Level:	K-5
Lesson Title:	The Amazing Cactus
Focus:	Animal Habitats

Materials:

- Clear plastic cups (2 for every group of 4)
- Ordinary kitchen sponges (2 for every group of 4)
- Toothpicks (4-6 for every group of four)
- 4x6 (approximately) piece of wax paper (1 for every group of four)
- Scissors (1 for every group of 4)

Opening

State the objective

Today we will:

- Learn about the adaptations of a desert plant- a cactus
- Conduct an experiment to find out how cactus plant store water and survive in the desert

Gain prior knowledge by asking students the following questions

• What is a cactus? What are the characteristics of a cactus?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Activate Prior Knowledge

- Write the word CACTUS on the board.
- Ask students to draw a picture of a cactus.
- Ask students to turn to a partner and share their drawing, making sure to describe the
 picture and explain why they drew it that way.
- Share the following with students.

Cactus plants are a type of plant called a succulent. Most cacti are 'stem succulents' because they store water in their stems. Cacti live in deserts, where there is not much rain, so it is important for cacti to store water for periods of drought.

What is an example of something that you save or store up so that you will have enough of it later on?

• Ask students to turn to a partner and discuss the information they just heard.

How do cactus plants store water? -Demonstration

- Group students into small groups of 3 or 4.
- Each group will need two of the plastic cups, 2 sponges, a pair of scissors, several

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When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.



toothpicks and a piece of wax paper.

- Ask students to choose two members from each group to be Cactus Cutters.
- Ask the Cactus Cutters to cut a cactus shape from each sponge.
- Ask students to choose two members from each group to be the Spine Stickers.
- Ask the Spine Stickers to carefully stick the toothpicks through the sponge cacti to represent the spines.
- Ask all students to identify the stem of their cacti (the sponge). Ask them to identify the spines (the toothpicks). Which part of the cacti is going to store the water?
- Fill each plastic cup with approximately 2 inches of water.
- Ask students to set their cacti in the cups so that the bottom of the cactus stem touches the bottom of the cup.
- Ask students to watch how the water travels through the cactus. Allow for a few minutes of observation.
- Ask students which part of their cacti is storing the water.
- Ask students to carefully take their cacti out of the water. Squeeze the cacti gently- do not squeeze all of the water out, but just enough so that their sponges are not dripping.
- Place both cacti side by side on a table where they can stay overnight. (Do not place on paper towels; the towels will suck the water out and ruin your experiment)!
- Remove the toothpicks from the cacti and throw away. Place one sheet of wax paper over one of the cacti. This will act as the cactus' waxy skin.

The Next Day

• When you arrive the next day, ask students to check on their cacti. Are they dry? Which cactus is holding the most water? How do these sponge cacti represent real cacti living in the desert? (Just like the sponges, desert cacti store water in their stems. Their waxy skins protects them from the heat of the sun evaporating all of their stored water, just as the wax paper protected the sponges from drying as much as the unprotected sponge.

	Closing
	Review
Say:	
 Plea 	ase recap what we did today.
	we achieve our objectives?
	Debrief

WHI?

Ask the following three questions:

- 1. What were some of the questions that came up in your group?
- 2. How did you go about including everyone?
- 3. If you were to try this again, what might you do differently?



- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)



Component	Theme
Grade Level:	K-5
Lesson Title:	Desert Habitats- Memory
Focus:	Animal Habitats

Materials:

- "Deserts" Memory Sets (printed on heavy paper, such as cardstock); 1 per every pair or small group of students.
- Scissors (if students will be cutting out games cards)

Opening

State the objective

Today we will:

Review the habitats we are learning about by playing a game.

Gain prior knowledge by asking students the following questions

Explain to students that they will be playing a memory game to review the concepts we learned about desert habitats.

- Has anyone ever played Memory?
- What are the rules of the game?
- What are some ways that we can behave so that everyone can learn at their best and have fun?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Instructions for Desert Memory- Review with Students!

Each game set consists of picture cards (Set #1) and fact cards (Set #2). Group students into groups of 2-4 players. Each group will cut out all cards in the game set. To play:

- 1. Turn all cards face down in a 5 x 4 grid.
- 2. One at a time, players will choose two cards to turn face up so that all players can
- A player gets a match if the question card matches the answer card. The pictures
 match for correct matches, as well. They keep the match and turn over two new
 cards.
- 4. If a player doesn't get a match, it is the next players turn.
- 5. Continue until all cards have been matched. Player with the most matches wins.

Demonstration

Choose a student to come to the front with you. Show students how to lay out cards and how to play. Play a few rounds with your volunteer so students can see how the game is played.

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.



Students can play multiple times, as time allows.	

Closing Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)

Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Modification:

You may want to have cards cut prior to student arrival for younger students.



I am a habitat with a hot, dry climate





We are 2 deserts in the United States of America.



Mojave and Sonoma Deserts



Roadrunners can grow to be as big as a



A human baby!



I eat insects, spiders, lizards, snakes, fruit, and seeds I find in the desert.



The Greater Roadrunner

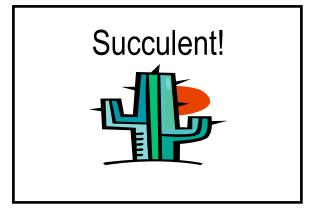


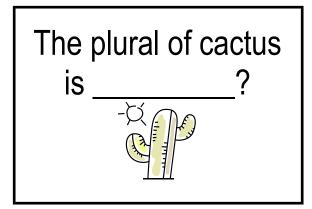
Cactus plants are a large type of



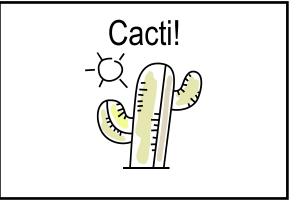






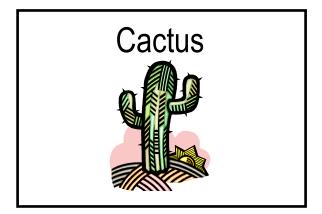




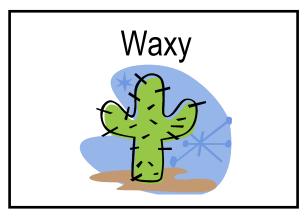


I live in the desert. I store water in my stems.





Cacti are covered with what type of stem to help store water?



Roadrunners live here.



Southwestern
United States and
Mexico



Habitat

An environment where plants and animals live.



Component	Theme
Grade Level:	K-5
Lesson Title:	Introducing- Pond Habitats
Focus:	Animal Habitats

Materials:

- Pond Habitat Field Guide (1 per student) (copies per student are optional)
- Scratch paper and pencils
- Various research materials, depending on grade level. Examples include books or magazines about ponds, printouts from the Internet, access to computers, etc.

Opening

State the objective

Today we will:

- Learn about animal habitats
- Find out what we know about pond habitats

Gain prior knowledge by asking students the following questions

- What is a habitat? (Simply put, a habitat is an environment where plants and animals live. A habitat provides the plants and animals the food, water and shelter it needs to survive).
- What is a pond? How does a pond differ from a lake? A river?
- Describe your experiences at a pond.

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Activate Prior Knowledge

This activity will give you an idea of what youth already know about a particular habitat and develop interest in learning more.

- Write the word POND on the board.
- Ask students to briefly write or draw what they know about the pond habitat.
- Ask several students to share what they wrote.
- Read the following to the students;

A pond is a small body of water, not as large as a lake, which is surrounded by land. Ponds can be made of either fresh or salt water. Pond waters tend to be pretty still; there are no waves to move the water around, only the wind and animals. Ponds have a large variety of plants and animals that can survive in this habitat. There are plants and animals that live under the water, beside the water, or even on top of it. The plants and animals can be very, very small or large. The plants and animals of the pond have adapted and found ways to live together and help each other.

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn"



- Ask students to review their original statements and add anything they learned from the reading.
- Ask for volunteers to share their additions with the large group.

opportunity and have the student become the teacher.

Research

- Give each student a copy of the "Pond Habitat Field Guide" or recreate it on the board for students to copy onto blank paper.
- Allow students to access the research materials you have provided to fill in the boxes on the paper.
- Students can work independently, in pairs, or in small groups.
- When students have completed their Field Guides, come together as a large group to fill out a Field Guide with everyone's new information.

Closing

Review

Say:

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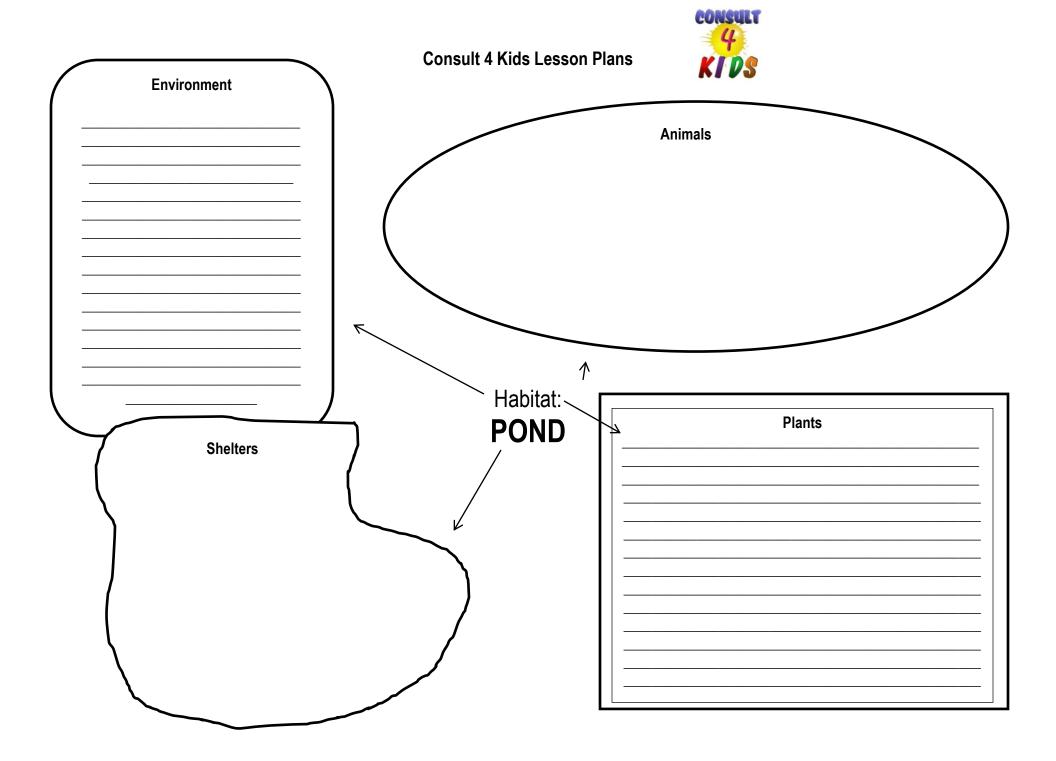
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Three Whats

Ask the following three "what" questions:

- 1. What did you enjoy most about this activity?
- 2. What was the biggest challenge with this activity?
- 3. What did you learn from the group?

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)





Component	Theme
Grade Level:	K-5
Lesson Title:	If I Lived In A Pond
Focus:	Animal Habitats

Materials:

- Writing paper or If I Lived In A Pond Handouts (1 per student)
- Drawing paper, white or lightly colored
- Drawing materials- crayons, markers
- Large sheets of construction paper for mounting
- Glue sticks

Opening

State the objective

Today we will:

- Practice creative thinking skills
- Create a decorated pond poem

Gain prior knowledge by asking students the following questions

You may want to make a list of student's ideas to refer back to during the project.

- Review what students know about pond habitats.
- What animals can be found in or near a pond? What plants and trees?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Poems

- Explain that students will be writing a poem about living in a pond and drawing a
 picture to visually represent the poem. Both the poem and the picture will be glued
 on to construction paper as a type of frame.
- Give students the If I Lived In A Pond handout OR rewrite the poem on the board for students to copy onto writing paper, filling in the blanks as they go.
- Remind students to be creative and use nice penmanship.
- Once students have completed the poem, give students drawing paper and materials. Students should draw a picture that illustrates what they wrote in their poems.
- Students can cut the margins off of the poem, if you choose.
- Glue the poem and the corresponding drawing to a piece of construction paper.
- Students can add a title to the construction paper and further decorate it, if desired.

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.
Check in about what is happening and what they are

Take advantage of any teachable moments.

thinking.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.



Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)



Yesterday I was walking and I had a crazy dream.

What if I could live in a pond near a bubbling stream? If I lived in a pond, I would be a ______. I could _____ and _____. I'd eat _____ and I'd make friends with the _____ and play each day with the _____. It would be so peaceful to be living this way. No _____ or _____. And surely no _____ each day. I'd _____ each morning and enjoy the _____ and the sun. At night I'd sleep _____ because the day was done. But, I can't and I'm not,

so I'll just enjoy being me!



Sample Pond Poem:

Yesterday I was walking and I had a crazy dream.

What if I could live in a pond near a bubbling stream?

If I lived in a pond, I would be a fish.

I could swim and be free.

I'd eat plants and pond weed.

I'd make friends with the ducks and play each day with the other fishes.

It would be so peaceful to be living this way.

No parents or cleaning up.

And surely no thinking each day.

I'd play with my friends each morning and enjoy the water and the sun.

At night I'd sleep floating down because the day was done.

If I lived in a pond, I would be a fish.

But, I can't and I'm not, so I'll just enjoy being me!

-Bryson B. {1st grade}



Component	Theme
Grade Level:	K-5
Lesson Title:	Pond Plants- Water Lilies
Focus:	Animal Habitats

Materials:

- 8 ½ x 11 sheets of colored construction paper (1 per student)
- (1) 11x17 sheet of green construction paper, per student
- (1) 8 ½ x 11 sheet of brown tissue paper or construction paper, per student
- (1) 11x17 sheet of white construction paper, per student
- Scissors
- Colored markers
- Glue

Opening

State the objective

Today we will:

- Learn about the a pond plant called a water lily
- Create a paper water lily to better understand how it lives and provides in the pond habitat

Gain prior knowledge by asking students the following questions

Have you ever seen a water lily? Describe it.

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Activate Prior Knowledge

- Write the word WATER LILY on the board.
- Ask students to draw a picture of a water lily (or what they think it looks like).
- Ask students to turn to a partner and share their drawing, making sure to describe the
 picture and explain why they drew it that way.
- Share the following with students.

Water lilies grow in ponds. They have roots that grow at the bottom of the pond. They have a long stem that grows up through the water and large flat leaves that collect sunlight (food). The flower sits at the base of the stem and the leaves. The water lily provides protection for small animals underneath the water and food for animals on top!

Ask students add to or redraw their pictures based on the information they just heard.

Water Lily

Pass out supplies to students. Demonstrate each step building your own water lily. Allow

*Activity → Teachable Moment(s) *throughout*

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn"



students time in between each step to create their own.

- 1. Pond Water- Set your construction paper sheet in front of you so that it is tall, not wide. (the 17 inches makes up the height, not the width). On your sheet of construction paper, determine where your pond water level will be. You want it about ¾ of the way up the paper. Use a blue marker to draw the pond water level.
- Use the brown tissue paper (or brown construction paper) and cut strips of paper that you can arrange at the bottom of the construction paper to create roots. Glue on to the bottom of the page.
- 3. Using a piece of green construction paper, cut a 4 inch strip off of the side (making a 4inch wide and 17 inch long strip. Roll the strip long ways and crunch it slightly to create a long green, stem. Place one end of your stem on the roots and glue down to the construction paper. The stem should end 1 inch above the water. Cut the rest off.
- 4. Using the rest of your green construction paper, cut 2 wide, flat leaves. Glue on top of the water to the sides of the stem.
- 5. Choose a color for your water lily flower. Look at the Water lily template attached. Cut out thin oval shapes and glue them together in the center like shown. Create 3- 4 layers of these, glue n top of one another and curl upwards using your fingers. See the picture of a water lily next to the template to get an idea of what you are trying to create.
- 6. Glue your water lily on to your stem, right on top of the water line.

Once students have completed, remind them that the lily offers shade and protection under the water and food on top. Encourage them to draw pictures of animals they may find under a water lily and on top for those reasons!

opportunity and have the student become the teacher.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

WHI?

Ask the following three questions:

- 1. What were some of the questions that came up in your group?
- 2. How did you go about including everyone?
- 3. If you were to try this again, what might you do differently?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way
 which was new to them. (Tweak)

Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)



Water Lily Example:



Component	Theme
Grade Level:	K-5
Lesson Title:	Pond Animals- Crayfish
Focus:	Animal Habitats

Materials:

- "The Crayfish" Handout (1 per student or one per pair).
- Topic/Detail Story Map (1 per student)
- · Crayons or markers

Opening

State the objective

Today we will:

- Learn fun facts about a pond animal called a crayfish
- Complete a drawn story map about the crayfish

Gain prior knowledge by asking students the following questions

• What is a crayfish? Have you ever seen one? What did it look like?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Roadrunner Fun Facts

- Give a students "The Crayfish" handout. Allow students to read the Fun Facts individually or with a partner.
- When students have completed the reading, ask "right there" questions to ensure comprehension. ("Right there" questions are questions to which the answers can literally be found right in the text. They generally begin with what, where, when, why, or how.)
- Give students the Topic/Detail handout or recreate it on the board for students to draw on blank paper.
- Allow time for students to fill in the boxes with pictures using the topic (the crayfish) and supporting detail they learned about the crayfish (the information surrounding the crayfish).
- Allow students to share their drawn story maps with others.

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the

student become the teacher.



Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

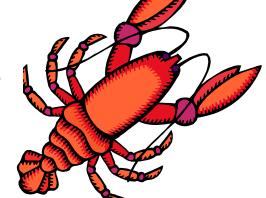
- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)



The Crayfish

Where do I live?

There are 500 different types of crayfish. 350 of them live in the United States of America!



A Crayfish Expert?

The humans that study me are called hydrogeologists. They study other types of fish too.

What do I eat?

I eat all most anything. Shrimp, dead animals and plants. I even eat my own shell when I molt! I'll eat hot dogs and cat food if you have them handy.

How big am I?

The most common types of crayfish are between three and four inches long. There is one type of crayfish called dwarf crayfish that are really small.

What is my habitat/home?

There are a lot of us crayfish, and most of us live in streams and ponds.





lopic	1	Details



Component	Theme
Grade Level:	K-5
Lesson Title:	Desert and Pond Habitats Bingo
Focus:	Animal Habitats

Materials:

- Bingo Cards (Print for students or allow students to make their own).
- Bingo Questions
- Markers (coins, beans, paper scraps, etc)

Opening

State the objective

Today we will:

Review the habitats we are learning about by playing a game.

Gain prior knowledge by asking students the following questions

Explain to students that they will be playing a memory game to review the concepts we learned about desert and ponds habitats.

- Has anyone ever played Bingo?
- What are the rules of the game?
- What are some ways that we can behave so that everyone can learn at their best and have fun?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Instructions for Desert and Pond Bingo- Review with Students!

Set Up

- Each player needs one Bingo Card and a handful of markers.
- Write the word list on the board. Instruct students to choose one word for each box to write on their Bingo card.

To Play

- Randomly choose a question from the Questions sheet. Read aloud to students.
- Students place a marker over the answer to the question, IF the answer is on their card.
- Continue choosing questions and asking students until someone gets a BINGO.
 (They should shout out BINGO if this occurs).
- * A BINGO consists of a player marking off 5 boxes in a straight line ACROSS, VERTICALLY or DIAGONALLY. (10 boxes for Xtreme Bingo). To Extend Play:

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn"



- Students can use or create their own Xtreme Bingo Cards.
- Students can create the more questions and answers.
- Students can trade cards with one another after each round.

Students can play multiple times, as time allows.

opportunity and have the student become the teacher.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Modification:

You may want to have cards pre-populated prior to student arrival for younger students.



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Desert and Pond Questions and Answers

1. A habitat that has a hot and dry climate is called a
2. What is a small body of water called?
3. The is an example of a desert in the United States.
4. How many species of crayfish live in the United States?
5. Roadrunners can grow to about the size of a human
6. What do crayfish eat?
7. I eat lizards, spiders, snakes, fruit and seeds. I live in the desert. Who am I?
8. How long is a normal crayfish?
9. The cactus is what type of plant?
10. What are humans that study fish called?
11. The plural of cactus is
12. What part of the water lily grows at the bottom of the pond?
13. I live in the desert and my stem stores my water for me. What am I?
14. What part of the water lily grows up through the water?
15. Cacti have are covered with a skin that helps it retain water. What is it described as?
16. What part of the water lily collects sunlight for food?
17. I am an environment where plants and animals live. What am I?
18. What sits at the base of the water lily's stem and leaves?
19. Where do roadrunners live in the United States?
20. The water lily provides for animals under the water.

Word Bank & Answers

- Desert
- 2. Pond
- 3. Mojave
- 4. 350
- 5. Baby
- 6. Anything
- 7. Roadrunner
- 8. 3-4 inches
- 9. Succulent
- 10. Hydrogeologists
- 11. Cacti
- 12. Roots
- 13. Cactus
- 14. Stem
- 15. Waxy
- 16. Leaves
- 17. Habitat
- 18. Flower
- 19. Southwest
- 20. Protection



Component	Theme
Grade Level:	K-5
Lesson Title:	Introducing- The Rainforest
Focus:	Animal Habitats

Materials:

- Rainforest Habitat Field Guide (1 per student) (copies per student are optional)
- Scratch paper and pencils
- Various research materials, depending on grade level. Examples include books or magazines about rainforests, printouts from the Internet, access to computers, etc.

Opening

State the objective

Today we will:

- Learn about animal habitats
- Find out what we know about rainforest habitats

Gain prior knowledge by asking students the following questions

- What is a habitat? (Simply put, a habitat is an environment where plants and animals live. A habitat provides the plants and animals the food, water and shelter it needs to survive).
- What is a rainforest?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Activate Prior Knowledge

This activity will give you an idea of what youth already know about a particular habitat and develop interest in learning more.

- Write the word RAINFOREST on the board.
- Ask students to briefly write or draw what they know about the rainforest habitat.
- Ask several students to share what they wrote.
- Read the following to the students;

Rainforests are forests made up of tall trees, warm weather and a lot of rain. In some rainforests, it rains every day! There are rainforests on Africa, Asia, Australia, and central and South America. Many plants and animals make the rainforest their home. The tall trees protect the plants and animals on the ground from the rain. More than 2/3 of the entire world's plant species are found in the rainforest. Many of them are used to make medicines.

Ask students to review their original statements and add anything they learned from

*Activity → Teachable Moment(s) *throughout*

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the



the reading.

Ask for volunteers to share their additions with the large group.

student become the teacher.

Research

- Give each student a copy of the "Rainforest Habitat Field Guide" or recreate it on the board for students to copy onto blank paper.
- Allow students to access the research materials you have provided to fill in the boxes on the paper.
- Students can work independently, in pairs, or in small groups.
- When students have completed their Field Guides, come together as a large group to fill out a Field Guide with everyone's new information.

Closing
Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

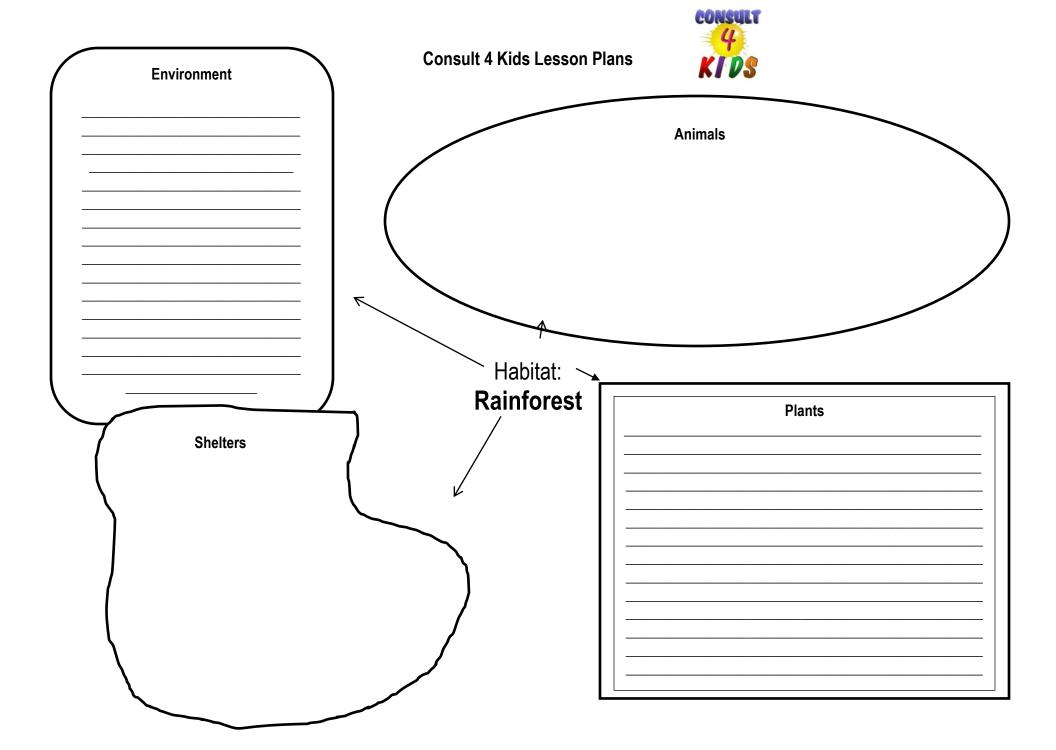
Debrief

Three Whats

Ask the following three "what" questions:

- 1. What did you enjoy most about this activity?
- 2. What was the biggest challenge with this activity?
- 3. What did you learn from the group?

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way
 which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)





Component	Theme
Grade Level:	K-5
Lesson Title:	Rainforest Diorama
Focus:	Animal Habitats

Materials:

- Shoeboxes, without lids (1 per student or 1 per small group of students)
- Various art materials- colored paper, felts, fabrics, pipe cleaners, cotton balls, toothpicks, etc
- Drawing materials- crayons, markers, etc
- Scissors
- Glue, tape
- Pictures of rainforests (optional)

Opening

State the objective

Today we will:

Create 3D art dioramas inspired by a rainforest habitat

Gain prior knowledge by asking students the following questions

You may want to make a list of student's ideas to refer back to during the project.

- Review what students know about the rainforest.
- What animals can be found in the rainforest? What plants and trees?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Rainforest Dioramas

- Show students the pictures of the rainforests, if available.
- Using a shoebox and the various supplies, students will create a 3D representation
 of a rainforest habitat including a setting and the various animals and plants they
 would like to include.
- Before you hand out student supplies, show students how to choose the background 2D setting and cover the insides with paper. The shoebox will set on its side so viewers can look it. You may choose to cover the side that represents the ground with brown paper and the side that represents the top with blue paper as they sky. The actual bottom of the shoebox becomes the background in the diorama so you may choose to cover it with green paper, as well as the 2 other sides of the shoebox.
- Show students how to fill in the rainforest shoebox with 3D items. Roll up pieces of

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage



brown paper to act as tree trunks and top with green-colored cotton balls for trees, perhaps. You can choose any item with any materials you have available, just be sure to demonstrate for students how to both cover the insides of the shoebox and how to create the 3D items.

students in a "teach to learn" opportunity and have the student become the teacher.

- Allow students to gather their supplies and begin. Students can work independently, if you have enough shoeboxes or in small groups. (Working in small groups may ensure that they complete the project in the time frame allowed.)
- When dioramas are completed, set them up around a table or desk and allow students to walk around viewing all of the dioramas.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)



The Roadrunner

Where do I live?

I live primarily in the deserts of the Southwestern United States from Arkansas to California. You can also find me in Mexico.



What is my full name?

I am called the Greater Roadrunner. My scientific name is <u>Geococcyx</u> <u>californianus.</u>

What do I eat?

I think insects, lizards, spiders, snakes fruit and seeds are yummy. Every now and again, I will snack on a small rodent.

What is my habitat/home?

I build a nest out of twigs and sticks. I make sure that I build it in a bush or a cactus several feet off the ground, so that predators cannot get me while I'm sleeping.

How big am I?



I am not the same size, but I weigh as much and am as long as a newborn human baby. I am anywhere from 8-12 ounces and between 18-22 inches from the tip of my beak to the tip of my tail!



lopic	1	Details



Component	Theme
Grade Level:	K-5
Lesson Title:	Rainforest Habitats- Memory
Focus:	Animal Habitats

Materials:

- "Rainforest" Memory Sets (printed on heavy paper, such as cardstock); 1 per every pair or small group of students.
- Scissors (if students will be cutting out games cards)

Opening

State the objective

Today we will:

Review the habitats we are learning about by playing a game.

Gain prior knowledge by asking students the following questions

Explain to students that they will be playing a memory game to review the concepts we learned about rainforest habitats.

- Has anyone ever played Memory?
- What are the rules of the game?
- What are some ways that we can behave so that everyone can learn at their best and have fun?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Instructions for Rainforest Memory- Review with Students!

Each game set consists of picture cards (Set #1) and fact cards (Set #2). Group students into groups of 2-4 players. Each group will cut out all cards in the game set. To play:

- 1. Turn all cards face down in a 5 x 4 grid.
- 2. One at a time, players will choose two cards to turn face up so that all players can see.
- 3. A player gets a match if the question card matches the answer card. The pictures match for correct matches, as well. They keep the match and turn over two new cards.
- 4. If a player doesn't get a match, it is the next players turn.
- 5. Continue until all cards have been matched. Player with the most matches wins.

Demonstration

Choose a student to come to the front with you. Show students how to lay out cards and how to play. Play a few rounds with your volunteer so students can see how the game is played.

Students can play multiple times, as time allows.

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.



Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
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- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Modification:

You may want to have cards cut prior to student arrival for younger students.



I am a habitat. I get lots and lots of rain. Many plants and animals call me home.



I am a rainforest.



There are rainforests on these four continents in the world.

Asia, Australia, Africa, and South America



The name chameleon comes from an old Latin term meaning _____?



"Ground lion"



I am the second layer. You'll find a lot of insects in this layer!



The Understory

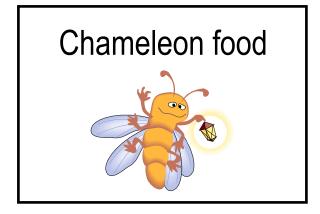


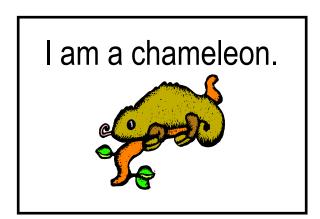
Bugs and Worms













I am the tallest and last layer of the rainforest.



I am the emergent layer.



I am an animal that lives in the rainforest habitat. I can be many colors.



I am the canopy.



I am the 3rd layer of the rainforest. I am made of many leafy, green trees.



I am the forest floor.



I am the first layer of the rainforest. I am very hot and humid.



An environment where plants and animals live.



Component	Theme
Grade Level:	K-5
Lesson Title:	Layers of the Rainforest
Focus:	Animal Habitats

Materials:

- 4 large strips of butcher paper
- Drawing materials-crayons, markers, etc
- Art supplies- colored paper, etc
- Glue
- Scissors
- Tape

Opening

State the objective

Today we will:

Create a team mural showing the different layers of the rainforest habitat

Gain prior knowledge by asking students the following questions

You may want to make a list of student's ideas to refer back to during the project.

- Review what students know about rainforest habitats.
- What animals and plants live in this habitat?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Rainforest Layers Mural

Explain the following to students. You may want to draw the layers on the board or
on chart paper as you go. Label each layer as you talk about it and write the
various examples in the appropriate layers. (Use a student volunteer to write as
you talk, if they are able).

There are four layers of growth in the rainforest.

- The first is the bottom layer called the forest floor. It is 0 feet off of the ground because it is the ground. This layer gets very little sunlight because all of the other layers cover it very well. The forest floor is hot, humid and dark. Because there is so little sunlight, it is hard for plants to grow. You'd most likely find the ground covered in fallen leaves, roots of trees, fallen branches and twigs here, along with bugs that crawl.
- The second layer is called the understory. More light is able to reach here. It is between 0-60 feet high. You would find small trees like the dwarf palm here, as well, as other smaller trees, some that have fruit. You will find a lot of insects in

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the



this layer, along with a variety of snakes and frogs.

- The third layer is the canopy. The canopy is a dense roof of trees and is always
 green and leafy. It shields the understory and the forest floor from rain and
 sunlight. It is the area that is 60-130 feet off the ground. Here, some of the animals
 you will find are monkeys and butterflies.
- The final layer, the one on the very top, is called the emergent layer. This is where a few tall, wide trees have grown up above all of the others. It is very dry because it gets the most sun. This is the area 130-160 feet above the ground. In this layer you will find a variety of birds and a few monkeys.

To make the mural:

- Divide the group in to 4 small groups.
- Give each group a strip of butcher paper and access to the art and drawing materials.
- Assign each group a different layer. As a group, they should create their layer of the rainforest on the paper using the information that was discussed. Only put appropriate plants and animals in the layer assigned. Cover as much of the paper as possible.
- When the layers are complete, stack them in the appropriate order and tape together.
- Allow each group to present the layer they created.

student become the teacher.

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Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

WHI?

Ask the following three guestions:

- 1. What were some of the questions that came up in your group?
- 2. How did you go about including everyone?
- 3. If you were to try this again, what might you do differently?

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)



Component	Theme	
Grade Level:	K-5	
Lesson Title:	Introducing- Underground Habitats	
Focus:	Animal Habitats	

Materials:

- Underground Habitat Field Guide (1 per student) (copies per student are optional)
- Scratch paper and pencils
- Various research materials, depending on grade level. Examples include books or magazines about underground habitats, printouts from the Internet, access to computers, etc.

Opening

State the objective

Today we will:

- Learn about animal habitats
- Find out what we know about underground habitats

Gain prior knowledge by asking students the following questions

- What is a habitat? (Simply put, a habitat is an environment where plants and animals live. A habitat provides the plants and animals the food, water and shelter it needs to survive).
- When have you had an opportunity to see under the surface of the earth? What did you see?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Activate Prior Knowledge

This activity will give you an idea of what youth already know about a particular habitat and develop interest in learning more.

- Write the word UNDERGROUND HABITAT on the board.
- Ask students to briefly write or draw what they know about the underground habitat.
- Ask several students to share what they wrote.
- Read the following to the students;

An underground habitat is an environment underneath the surface of the earth, where some plants and animals live all or most of the time. Animals live underground for a variety of reasons. Living underground protects them from predators and from the heat or cold. Many of the animals that live underground do so because the food that they eat lives under the earth as well! Some animals live under the ground for their entire lives. Others only live under ground until they reach a certain stage. Others, like the prairie dog, live under ground, but they spend time above the ground too.

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the



 Ask students to review their original statements and add anything they learned from the reading.

student become the teacher.

Ask for volunteers to share their additions with the large group.

Research

- Give each student a copy of the "Underground Habitat Field Guide" or recreate it on the board for students to copy onto blank paper.
- Allow students to access the research materials you have provided to fill in the boxes on the paper.
- Students can work independently, in pairs, or in small groups.
- When students have completed their Field Guides, come together as a large group to fill out a Field Guide with everyone's new information.

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Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

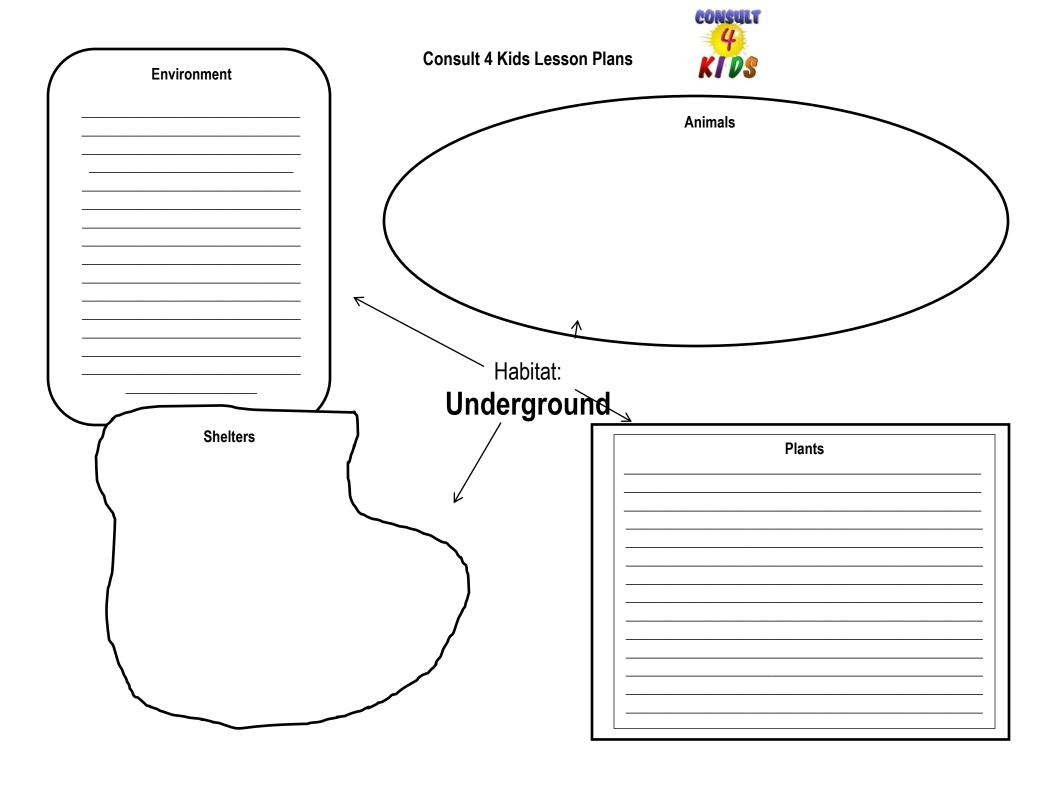
Debrief

Three Whats

Ask the following three "what" questions:

- 1. What did you enjoy most about this activity?
- 2. What was the biggest challenge with this activity?
- 3. What did you learn from the group?

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)





Component	Theme
Grade Level:	K-5
Lesson Title:	Underground Animals- The Prairie Dog
Focus:	Animal Habitats

Materials:

- "The Prairie Dog" Handout (1 per student or one per pair).
- Topic/Detail Story Map (1 per student)
- Crayons or markers

Opening

State the objective

Today we will:

- Learn fun facts about a rainforest animal called a prairie dog
- Complete a drawn story map about the prairie dog

Gain prior knowledge by asking students the following questions

What is a prairie dog? Have you ever seen one? What did it look like?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Roadrunner Fun Facts

- Give students "The Prairie Dog" handout. Allow students to read the Fun Facts individually or with a partner.
- When students have completed the reading, ask "right there" questions to ensure comprehension. ("Right there" questions are questions to which the answers can literally be found right in the text. They generally begin with what, where, when, why, or how.)
- Give students the Topic/Detail handout or recreate it on the board for students to draw on blank paper.
- Allow time for students to fill in the boxes with pictures using the topic (the prairie dog) and supporting detail they learned about the prairie dog (the information surrounding the prairie dog).
- Allow students to share their drawn story maps with others.

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.



Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

KIDS

The Prairie Dog

Where do I live?

We live underground on North America's prairies and grasslands. There are not many of us left.

What do I eat?

We are herbivores. We do not eat meat. Just plants and nuts and seeds.



What am I?

I am a mammal. I give birth to live young.

How big am I?

I am about 2-4 pounds. I am 12-15 inches tall from my head to the start of my tail. My tail is about 3-4 inches long. If you stood me next to a tall man, I wouldn't even reach his knees.

What is my habitat/home?

We live underground in burrows. Our burrows are very sophisticated and we spend a lot of time on them. There are certain areas in our burrows where we keep our babies, store our food, and go to the restroom. Much like the humans have nurseries, kitchens and toilet rooms.

Fun Fact

We work together as a family. In a group, we are called a prairie dog town. We even give each other prairie dog kisses!



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Component	Theme
Grade Level:	K-5
Lesson Title:	Underground Art
Focus:	Animal Habitats

Materials:

- Large, white sheets of construction paper (1 per student)
- Drawing materials- crayons, markers, etc
- Google Image Search Results for "Ant Farms" -Optional

Opening

State the objective

Today we will:

Create an "Underground Art" piece

Gain prior knowledge by asking students the following questions

- Review the animals that live underground.
- What do you know about ants and their movement underground?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

Underground Art

- Show students the pictures of the ant farms or underground ant pathways.
- Explain to students that an ant colony is an underground home for a colony of ants.
 The ants hollow out chambers, or small "rooms" which are connected by tunnels.
 The chambers are designated areas for caring for young and storing food. The colonies that are built by ants underground have several similarities to our homes above ground.
- Draw a Venn diagram on the board or a piece of chart paper. Label one circle Ant Colonies and the other Our Homes. Discuss and chart the similarities and differences within the Venn diagram.
- Ask students to imagine that they were the size of ants and lived underground.
 What chambers (rooms) would they created in their colony?
- Explain to students that they will be using the drawing materials and construction paper to create their miniature underground homes.
- The goal is to cover the entire paper and to create a view of their colony as if one
 were looking at it from the side, much like the pictures of the ant farms. Once they
 have drawn their chambers and connected them with tunnels, they can place

*Activity → Teachable Moment(s) *throughout*

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.



- people and items in them. The chambers should be identifiable (kitchen, game room, etc) by what is drawn inside.
- Allow students time to complete their work, covering as much of the paper as possible.
- When all students are complete ask ½ of the students to form a circle, with their artwork, and face outward. Ask the other ½ of students to form another circle around the first circle facing inwards. Each student should be facing another student, inside circle to outside circle.
- Allow 2 minutes for students who are facing one another to share their
 Underground Art with each other. At the end of the allotted time, ask the inside circle to stand still, and the outside circle to move over 1 (or 2) people to their right.
- Repeat the sharing of art with the new partner.
- Repeat as many times as you wish.

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Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)



Component	Theme
Grade Level:	K-5
Lesson Title:	Rainforest and Underground Habitats Bingo
Focus:	Animal Habitats

Materials:

- Bingo Cards (Print for students or allow students to make their own).
- Bingo Questions
- Markers (coins, beans, paper scraps, etc)

Opening

State the objective

Today we will:

Review the habitats we are learning about by playing a game.

Gain prior knowledge by asking students the following questions

Explain to students that they will be playing a memory game to review the concepts we learned about desert and ponds habitats.

- Has anyone ever played Bingo?
- What are the rules of the game?
- What are some ways that we can behave so that everyone can learn at their best and have fun?

Content (the "Meat")

Instruction/Demonstration ("I do" – "We do")

Instructions for Rainforest and Underground Bingo- Review with Students!

Set Up

- Each player needs one Bingo Card and a handful of markers.
- Write the word list on the board. Instruct students to choose one word for each box to write on their Bingo card.

To Play

- Randomly choose a question from the Questions sheet. Read aloud to students.
- Students place a marker over the answer to the question, IF the answer is on their card.
- Continue choosing questions and asking students until someone gets a BINGO. (They should shout out BINGO if this occurs).

* A BINGO consists of a player marking off 5 boxes in a straight line ACROSS, VERTICALLY or DIAGONALLY. (10 boxes for Xtreme Bingo).

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn"



To Extend Play:

- Students can use or create their own Xtreme Bingo Cards.
- Students can create the more questions and answers.
- Students can trade cards with one another after each round.

Students can play multiple times, as time allows.

opportunity and have the student become the teacher.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Liked Best, Next Time (LBNT): In this simple debrief, students talk about the activity or the day and share what they enjoyed most and/or what else they would have liked to have done, or what they would have liked to have spent more time on.

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Modification:

You may want to have cards pre-populated prior to student arrival for younger students.



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				Free				

- 1. I am a habitat for many plant and animals. I get a lot of rain.
- 2. I am the first layer of soil. I am the farthest down and am very hard. I'm made of compressed rock.
- 3. Rainforests are located on four continents. This is one of them.
- 4. I am the 2nd layer of soil. I am chunky and have pieces of clay and other minerals.
- 5. The chameleon was named after an old Latin word meaning this.
- 6. I am the 1st layer of soil. This is the layer that is made of air, water, crushed rock, and organic matter.
- 7. I am the 2nd layer of the rainforest. You will find a lot of insects here.
- 8. What is the habitat where many plants and animals live under the surface of the Earth?
- 9. I am chameleon food.
- 10. What does living underground protect animals from?
- 11. I am an animal that lives in the rainforest and can be many colors.
- 12. On what continent do prairie dogs live?
- 13. This is the tallest and last layer of the rainforest.
- 14. Is the prairie dog and herbivore or a carnivore?
- 15. This is the 3rd layer in the rainforest. It is full of leafy, green treetops.
- 16. What type of animal is the prairie dog?
- 17. This is the first layer of the rainforest. It is at ground level and is hot and humid.
- 18. Prairie dogs live in large groups. What are they called?
- 19. What is an environment where plants and animals live called?
- 20. Prairie dogs live underground in shelters called ______.



Word Bank & Answers

- Rainforest
- 2. Bedrock
- 3. Asia
- 4. Subsoil
- 5. Ground lion
- 6. Topsoil
- 7. Understory
- 8. Underground
- 9. Bugs
- 10. Predators
- 11. Chameleon
- 12. North America
- 13. Emergent
- 14. Herbivore
- 15. Canopy
- 16. Mammal
- 17. Forest floor
- 18. Prairie dog towns
- 19. Habitat
- 20. Burrows



Component	Theme
Grade Level:	K-5
Lesson Title:	Habitats Posters
Focus:	Animal Habitats

Materials:

- 5 white poster boards
- Drawing Supplies- crayons, markers, etc

Opening

State the objective

Today we will:

Reinforce the learning around habitats by making posters to show understanding.

Gain prior knowledge by asking students the following questions

- Review what students know about desert, pond, rainforest, underground and backyard habitats.
- What animals and plants live in these habitats? What are the climates like?

Content (the "Meat")

Instruction/Demonstration ("I do" - "We do")

- Divide students into 5 small groups.
- Assign each group a habitat (desert, pond, rainforest, underground, and backyard).
- Students will create a poster using the poster boards and the drawing supplies to
 create a poster featuring their assigned habitat. The habitat should be clearly
 written. Students can draw, write, make diagrams, or anything else they can think
 of to put on the poster to demonstrate their learning and understanding of the
 habitat.
- Allow students to share their completed posters with the large group and display.

*Activity → Teachable Moment(s) throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.



Closing	
Review	
Say:	
Please recap what we did today.	
Did we achieve our objectives?	

Debrief

WHI?

Ask the following three questions:

- 1. What were some of the questions that came up in your group?
- 2. How did you go about including everyone?
- 3. If you were to try this again, what might you do differently?

- Ask students to think about what they did today.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)