

I CAN BE ANY ANIMAL**CLASS****1 HOUR****KEY CONCEPTS:**

Basic science concepts, visualization, role-playing, categorizing

COLORADO ACADEMIC STANDARDS:

- *Drama and Theater Arts 1.1:* Demonstrate characters through dramatic play.
- *Physical Education 1.1:* Demonstrate body and spatial awareness through movement.

LOCATION:

Indoors

SUGGESTED TIME OF YEAR:

Fall or Spring

GOAL:

Students understand the different ways that people look at and explore nature.

LEARNING OBJECTIVES:

- Students will explore the difference between the scientific and creative ways to look at nature.
- Students will list three physical characteristics of animals.
- Students will visualize an animal based on the physical characteristics that are being read to them.

COMMON CORE:

- *Writing Standards #8:* With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- *Speaking and Listening Standards #2:* Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
- *Speaking and Listening Standards #3:* Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
- *Speaking and Listening Standards #4:* Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.
- *Speaking and Listening Standards #5:* Add drawings or other visual displays to descriptions as desired to provide additional detail.
- *Speaking and Listening Standards #6:* Speak audibly and express thoughts, feelings, and ideas clearly.
- *Language Standards #1:* Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- *Language Standards #6:* Use words and phrases acquired through conversations, reading and being read to, and responding to texts.

MATERIALS NEEDED:

- White board and marker
- “Chipmunk Song” by Joanne Ryder
- Fill in the Blank Story, attached
- Animal photos to role play
- Paper for each student
- Box of crayons

ACTIVITY:

1. Have everyone think of a nice place in the outdoors. Have the students give you short descriptions of what they did in the outdoors and write them up on the board. As you are writing them, separate them into two side-by-side columns

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CLASS



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COLORADO ACADEMIC

STANDARDS:

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LOCATION:

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SUGGESTED TIME OF YEAR:

Fall or Spring

ACTIVITY: (CONT.)

- (you will eventually label them as a “scientific” group, and a “creative” group).
2. After you have a good collection of things on the board, write the headings above the two columns (“Science” and “Creative”). You might need to add a couple of items to “science” such as naming things, counting things, measuring things, etc. You can define the headings and be sure they understand why things are put in each column.
 3. Explain that everyone has different ways of interacting with nature. Some are more scientific in that they study things; some are more creative in that they might be inspired by nature. The next three lessons will deal with both ways.
 4. Read “Chipmunk Song” and act out the characters of the book with the students. Ask the students after reading the book if they could visualize the animal and their surroundings.
 5. (If time permits) To get everyone moving, have a student come up and pick a photo of an animal from your collection. Show the class the photo and ask them to identify the animal, and describe it the best they can. Then play “Animal Charades.” For example: if the photo was of a black bear, say to the students “How would a black bear walk if it had a really full tummy of berries and bugs?” They would all act out the big bellied bear.
 6. Hand out a piece of paper and box of crayons as the students sit on the floor. Talk them through drawing their favorite animal on their paper. “In your mind, pick an animal you are very familiar with. It can be your dog or cat, or maybe a coyote or black bear.” It should be something the student can picture very clearly. Instruct them to draw the shape. Ask if it is bigger than the student or smaller. Ask them to draw the coat the animal has. Ask if it is fur or feathers, or maybe scales like a snake. Ask if it is soft and fluffy, or smooth, or rough. Ask what the color of the coat is. Ask them to draw the legs. Ask if they are long and skinny or short. Instruct them to draw the feet. Ask if they have furry feet, naked feet, or no feet. Ask if the student is the animal, what do they see when you look around them. Instruct them to draw what they see. (Examples: Are you in your house as a dog? Are you in the forest as a black bear? Do you see trees, meadows, water? Do you have enough water to drink? If it begins to rain or snow, can you see some shelter close by; maybe a house or under a tree?) Instruct them to draw the shelter for their animal.
 7. Using what they just drew, have the students give you words to fill in for each blank in the attached story (don’t show them what you are doing yet). After you have all the words filled in, turn the story facing them so they can follow you as you read and see where the words they supplied fit in the story. The final story will be silly because of mixing all the visualizations together.
 8. Finish by asking if we were using more scientific ways or more creative ways to look at nature today. Explain that at the field site we will be doing some scientific studies, but also some fun, creative things.



NATURE UP CLOSE



FIELD



1 HOUR

KEY CONCEPTS:

Scientific concepts, measuring, analyzing, visualization, drawing, comparing

COLORADO ACADEMIC STANDARDS:

- *Science 1.1: Physical Science:* Objects can be sorted by physical properties, which can be observed and measured.
- *Science 1.2: Physical Science:* Organisms can be described and sorted by their physical characteristics.
- *Math 4.2: Shape, Dimension and Geometric Relationships:* Measurement is used to compare and order objects.

LOCATION:

Field site

SUGGESTED TIME OF YEAR:

Fall or Spring

GOAL:

Students use scientific tools to explore their field site.

LEARNING OBJECTIVES:

- Students will name three different tools they could use to study nature.
- Students will measure three different sticks and place them in order of height.
- Students will draw a picture of a tree using a magnifying glass.
- Students will identify far away objects using binoculars.

COMMON CORE:

- *Speaking and Listening Standards #3:* Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
- *Speaking and Listening Standards #6:* Speak audibly and express thoughts, feelings, and ideas clearly.
- *Language Standards #1:* Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- *Mathematics Standards K.MD: Measurement and data:* Describe and compare measurable attributes.
- *Mathematics Standards K.CC: Counting and Cardinality:* Count to tell the number of objects

MATERIALS NEEDED:

- Binoculars, at least 2 pair, more are better
- Magnifying glasses, one per student
- Paper, two sheets per student
- Clipboard, one per student
- Crayons
- Rulers, one per student

Parent volunteers are recommended for the field session.

ACTIVITY:

1. Welcome to the field site! Orientation to the site for the students, then right into the activity.
2. Review that during the first lesson we introduced some ways of looking at the natural world. Show the students the list they created from the first lesson comparing creative and scientific things. Discuss what was done for that lesson. This should be a brief review.
3. Visualization is a creative process, and writing the story was a creative process. To begin with today we will look at several scientific ways of looking at and experiencing nature. Ask if anyone can think of something we might use to study nature. Binoculars, magnifying glasses, and rulers are a few items that we will be using. Start by learning how to measure things using a ruler.

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LOCATION:

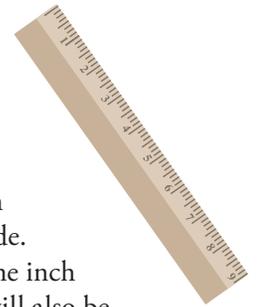
Field site

SUGGESTED TIME OF YEAR:

Fall or Spring

ACTIVITY: (CONT)

- The first scientific study will be using rulers to measure sticks. If it is a nice day this can be done outside, if not, bring the twigs inside. They will need a blank side of their paper and clipboard for this. Ask the students what the rulers measure. (How big or small things are. It can be in inches or centimeters.) We will be using inches for this session. Hand each student a ruler and ask them to find the side with inches on it. Have them hold up their rulers with their fingers on the inch side so you can see they have the correct side. Explain that each of the big lines is an inch. Have them point to one inch on their ruler. There is a line halfway between the inches that we will also be using that is a half inch. Have them point to a half inch line.
- Explain that the students will collect three different twigs from the ground (emphasize smaller sizes, show them a good sample size of 4-6 inches long). Make sure they understand they need to be all different sizes. Have them all gather their three twigs and place them on the ground in front of them. Have them arrange them from smallest to largest by just looking at them.
- Using their rulers they will measure each twig's length to the inch. Each time they measure a twig they will place it on their paper with the number by it. They should measure their three twigs and have them placed side by side on the paper with their measurements. Ask them, according to their measurements, if they organized their twigs from smallest to largest by eye. Discuss if using their eye is as accurate as using a ruler to measure.
- Next use magnifying glasses to examine nature. With binoculars we can clearly see things that are very far away. Ask if anyone knows what magnifying glasses do. They make tiny things bigger. Discuss when they should use magnifying glasses. Looking closer at flowers, insects, etc.
- First, look at what we are going to study in a bigger way. Hand out two sheets of paper on clip boards. Place a box of crayons on the ground. Explain that the big beautiful trees in the yard are full of amazing little things. The students should look first with just their eyes and then draw what they see. Then use their magnifying glasses and see if anything can be added to their drawings.
- Show them how to use the magnifying glasses by focusing on the lines in their hand. Move the glass up and down until the lines in their hands become sharp. Move the glass closer and farther away from their eye until they find a sharp area.
- Have them find a place on one of the trees, examine a small piece of the trunk, and draw what they see. Then use their magnifying glasses to draw any additional things on their paper that they see through magnification.
- Ask if they noticed more when they were looking through their magnifying glasses.
- Now take the other piece of paper and a crayon and create a bark rubbing of your tree. Ask if the textures on the paper look different than what their eyes see.
- Ask the students to step back from the tree and look all the way up and down. Direct them to look at how tall it is, how the branches go out. Ask them to notice how the trunk is so big and the branches at the very ends are so small. Ask them to hold



NATURE UP CLOSE



FIELD



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LOCATION:

Field site

SUGGESTED TIME OF YEAR:

Fall or Spring

ACTIVITY: (CONT.)

their arms out like the branches of a big tree. Pretend the leaves shake as a breeze rustles them in the summer. Pretend the branches sag under the weight of the snow in the winter. Pretend how the branches might tickle as the birds and squirrels perch and run over the branches.

14. Ask if anyone has used binoculars. Ask what they were looking at. Binoculars are used to look at birds and wildlife, and some people look at plants that they can't get to very easily. They make far away things look really close. So a coyote that was a tiny speck far away would look much bigger through the binoculars.
15. Tell the students that using them is actually really easy. Look at the item you want to focus on, look through the correct end, bring your binoculars up to your eyes, find the object and focus the dial.
16. Try it using just the students' hands. Direct them to make circles with their fingers, placing their hands side by side like binoculars. Tell them to pick an item to focus on without their hands. Now tell them to bring their hands up to their eyes and focus on the item. That is how they would also do it through binoculars. Practice.
17. Now that the students have the idea, try the real thing. Have them make as many lines as there are helpers. Each helper will have a pair of binoculars. Each student comes up and is assisted by the helper to look through the binoculars. Pick something out the window to focus on. Once each student has had a chance we will do the binocular relay. (Outside if weather is good).
18. Have the students line up in two lines at a starting line. Have two parent volunteers stand about 20 feet away with a number of cards with photos of common animals on them (Explain to the helpers that they will show each student the card for a short time then place the card behind their back so the student cannot see it as they are running toward them). Explain to the students that a student from each team will take a pair of binoculars and look at the picture being held up. They will focus on and identify the animal, or, if they cannot name the animal, describe it as best they can. They will run up to the helper and tell them what they saw. If they said the right animal or description their team gets a point, if they did not, the team receives no point. The helpers will need to tally points as they go along. Have every student run the course.
19. Wrap up the day by asking them if we were being scientific or creative today. Have them list the different things they did.

OUR CLASSROOM NATURE TRAIL



SERVICE-LEARNING 1 HOUR

KEY CONCEPTS:

examination, writing, independent study

COLORADO ACADEMIC STANDARDS:

- *Science 2.1: Physical Science:* Objects can be sorted by physical properties, which can be observed and measured.
- *Math 4.2: Shape, Dimension and Geometric Relationships:* Measurement is used to compare and order objects.

LOCATION:

Indoors or outdoors (weather dictating)

SUGGESTED TIME OF YEAR:

Fall or Spring

GOAL:

Using the skills they acquire during the field session, students create a nature trail around their school.

LEARNING OBJECTIVES:

- Students will review the difference between creative and scientific activities.
- Students will complete the “Nature Trail” booklet by participating in three different exploration stations in classroom or schoolyard.

COMMON CORE:

- *Speaking and Listening Standards #3:* Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
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MATERIALS NEEDED:

- Copy of “Your Classroom Nature Trail” booklet for each student, attached
- Binoculars, at least 5 pair
- Rulers, 3 or 4
- Magnifying glasses, 3 or 4

PRE-WORK:

Set up three stations in the classroom or outside if appropriate. At one station by a window or door looking outside place the binoculars, at another the magnifying glasses with items to look at, and at the third the rulers with items to measure.

This activity is written to do in the classroom, but works better outside on the school grounds. Weather will decide where you can do it.

ACTIVITY:

1. Review with the students the past two lessons. Ask them to describe a “creative” activity and a “scientific” activity. Ask them if there was one they particularly enjoyed doing and why. Keep this brief, as students this young have trouble with extended teaching at the board.
2. Ask the students if they have ever been on a Nature Trail. Discuss what they did on a Nature Trail. Discuss if a Nature Trail can be both creative and scientific. Ask the

OUR CLASSROOM NATURE TRAIL



SERVICE-LEARNING



1 HOUR

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LOCATION:

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SUGGESTED TIME OF YEAR:

Fall or Spring

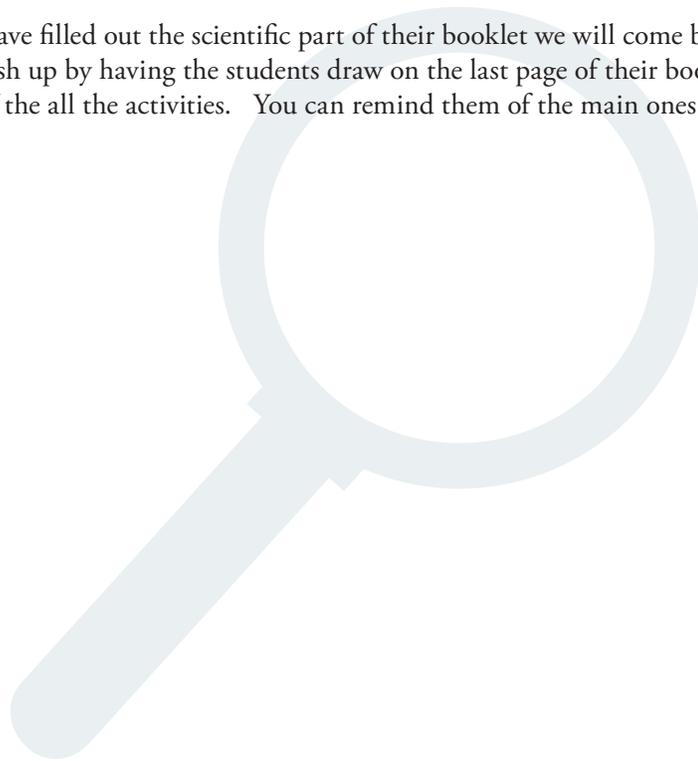
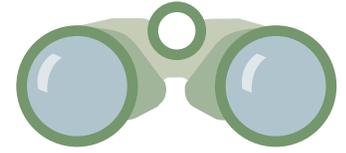
ACTIVITY: (CONT.)

students if they think they could go on a Nature Trail in their classroom or on their school grounds.

3. Show them the “Your Classroom Nature Trail” booklet and explain that you can go on a Nature Trail even in your classroom! Go through the booklet page by page explaining in detail what they will be doing on each page.

Explain that each student will get a booklet and will be going around the classroom to different stations to fill in their booklet. Point out the stations and explain the teacher and naturalist will help them. The stations are: binoculars by the window, magnifying glasses on a table with small assorted items and rulers on a desk with several different items.

4. After they have filled out the scientific part of their booklet we will come back together and finish up by having the students draw on the last page of their booklet their favorite part of the all the activities. You can remind them of the main ones we did.



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