Cross-Curricular Activities Connected to Life Science, Grade 2

The following activities from ***Ecosystem Diversity,*** integrate math, social studies, English Language Arts (ELA), art, and more into life science topics. These cross-curricular connections help students see how science is related to their lives, and the world they live in. These activities reinforce and extend ideas about the variety of habitats on Earth and observing the life within them and are perfect for learning-from-home lesson plans. Permission is granted to incorporate these activities into teacher and parent lesson plans.

Puzzling Shapes (Art)

Bring in old magazines, and have students look for pictures of various habitats. Direct students to cut the pictures into pieces of a puzzle by making various shapes (triangle, quadrilateral, pentagon, hexagon, etc.). Ask them to describe each shape by identifying how many angles, lines, and sides it has.

It All Depends (ELA)

Write the word “depend” on the board. Explain that this is a verb that means “based on something else happening.” Write the word “dependent” on the board. Point out that the root word is the same but that adding the suffix, or ending -ent, changes the word to something else. Explain that “dependent” is an adjective that means “determined by something else.”

Hot and Cold Climates (Science and Geography)

Climate is directly related to the location of a place on Earth. Because Earth is a sphere, the climate varies depending on where on the sphere a given region is. Position a clamp lamp so that the light shines directly on the equator of a globe. Turn the globe to show students the parts of Earth that have the warmest climates, or those locations on the equator. Then show the class the North and the South Poles and ask them to determine whether the light shines as brightly on those regions as it does on the equator. Turn the globe to show students which parts of Earth have the coldest climates and explain why this is so.

Counting Two by Two (Math)

Provide students with up to 20 dry seeds. Have them determine whether the number of seeds is odd or even by counting by twos. Have students write an equation to show that adding even numbers will result in a sum with an even number. (For example, 4 + 2 = 6)

From Seed to Plant (Literacy and Art)

Read Seed to Plant (Rookie Read-About Science/ Scholastic) by Lisa M. Herrington and Seed to Plant (Rookie Read-About Science/Children's Press) by Allan Fowler aloud to the class. Next, draw a Venn diagram on the board and have the class work together to compare the two books.

Leaf Art (Art)

Take students outside to collect different types of leaves from the schoolyard. Have them place their leaves under a clean sheet of white paper and rub a crayon over the leaf beneath the paper. Students will watch the shape of the leaf appear.

Clap Sticks (Music)

Clap sticks are a type of percussion instrument made of two sticks that are clapped together to make a sound. Collect sticks from the schoolyard and have students use them to make music.

Sorting and Graphing Insects (Science, Art, and Math)

Have students draw the different types of insects they have seen on index cards. You may want to have a variety of insect field guides available for students to reference. Have students sort the insect cards into at least two categories of their own choosing. Ask them how many insects are in each category and which category has more insects.

Challenge students to create a two-dimensional picture graph by arranging their cards in columns to show how many insects are in each category. Have students create an addition or subtraction problem for the bar graph.

Morphing Words (ELA)

Write the word “metamorphosis” on the board. Have students say the word out loud and count the syllables (5). Rewrite the word as three separate sections: meta, morpho, and sis. Explain that these root words come from Greek words. Meta means “change,” morpho means “form,” and sis means “act.” Have students use this information to define the word “metamorphosis” (the act of changing shape or form). Ask students to write the word in their science notebooks and draw a picture of what the word means to them.

Bee Dancing (Movement Education)

Bees communicate using body language by dancing. Find an online a video of bees dancing and share it with the class. Then invite the class to create and perform a similar dance. You might use the classical song The Flight of the Bumblebee by Rimsky-Korsakov.

Earth, Air, and Water Animals and People—The Art of Giuseppe Arcimboldo (Art History and ELA)

Giuseppe Arcimboldo, an Italian 16th-century Renaissance painter, was known for painting human faces made up of fruits, vegetables, or animals. These "riddle paintings" were very popular at the time. In small groups at a computer or as a class using an interactive whiteboard, have students explore the artist's following paintings:

- Air
- Earth
- The Water

Be sure students note that the human profiles are created by compiling many different animals. Ask:

- Why do you think the painting has this title? (Air consists of birds, Earth is made of land animals, and The Water is composed of water creatures.)

Name as many animals as you can find that are hidden in the painting. (Create a list on the board for each painting, labeling them "Air Animals," "Earth Animals," and "Water Animals.")

After students have reviewed all the paintings, ask:

- Can you see the outline of the person in the painting?
- Under which category in the list would you put people? Why?

Allow students to create their own riddle paintings of animals. Provide a variety of paints and brushes, large paper, and photos and images of animals. When students are finished, display their paintings.

Bringing Children Back to Nature (Movement Education and Community Connections)

Take the class outside for an activity that engages students with nature. You may choose to play a game, organize a scavenger hunt, collect plant or insect specimens, create art or a map, or simply lead a nature walk and instruct students to observe their surroundings. No matter what you choose to do with the class, the activity should review newly learned concepts while exposing students to nature firsthand.

Inch by Inch (Literacy and Math)

Read Inch by Inch by Leo Lionni aloud to the class, and then discuss the different animals in the habitats that the inchworm explores and measures.

Provide each pair of students with a ruler that has both inches and centimeters. Lead pairs to identify on the ruler one inch and then one centimeter. Ask students to find how many centimeters there are in one inch. (Approximately 2.5 cm.)

Have pairs record in their science notebooks the estimated dimensions of a classroom object such as a plant, a resident animal, or a classroom aquarium, or, if weather permits, a plant or decomposing object from the schoolyard. Have students measure the item in inches and in centimeters and record these measurements as well. Allow pairs to do this with several items. Then facilitate a class discussion about how students' estimating became more accurate with more practice.

Campus Beautification Day (Community Connections)

Schedule a campus beautification day. Invite other students, teachers, parents, and community members to campus to pull weeds, plant a tree, plant flowers, create a garden, or start an on-campus composting project. Ask for donations from local businesses.

Recycled Art (Art)

Challenge students to create an art project using only "used" materials. You may even decide to collect materials for the project in your recycling bin in the classroom. Explain to the class that these items were thrown away, but you will be giving them new life.