Day 10
Read this article about creating something fun at school and answer the questions that follow.

Schoolyard Alive!
by Anna Mearns

How to bring nature to your school—in a big way!

1. Bluebirds peeking from nest boxes. Tadpoles swimming in a pond. Tiger swallowtails swooping around a butterfly bush. And over here, a class of students watching it all.
2. A field trip to a nature center? Nope, it’s a schoolyard. With some work on your part, it could even be your schoolyard.
3. Interested in building a schoolyard habitat? Here’s how to get started.

Gather a Team

4. Students can do a lot on their own, but you’ll need adults for a project this big. Get teachers, parents, and even the principal interested. Don’t forget the maintenance staff—they know more about your school’s yard than anyone else and can give you lots of help. Also, ask around your neighborhood for gardeners, naturalists, and others willing to give advice.

Map Your Site

5. Which part of the schoolyard can you turn into a habitat? Is there an unused corner of the playground? Part of a lawn or field you could let go wild? You’ll need to make a map of the area showing what’s there now. Then you can figure out how you want to change it. For that, you need a plan.

Plan a Habitat

6. Here’s what you’ll need to make your area attractive to wildlife.
7. **Food:** Plant flowers, shrubs, and trees. These provide seeds, berries, leaves, buds, and nectar. And all of these feed birds, insects, and small mammals. You can also add some feeders for squirrels and birds. Where possible, stick with native plants—wild plants that grow naturally in your area. They need less care, which means less work for you.
8. **Water:** A small pond, birdbath, or even a shallow dish of clean water in the ground will attract birds. Other small animals such as amphibians, reptiles, and insects may visit as well.
Shelter: Shrubs and trees make great escapes for birds. Tall grass and "weeds" are home to grasshoppers, garter snakes, and some ground-nesting birds. You can also add stone piles (good for chipmunks and lizards) and brush piles (rabbit hideouts).

Places to Raise Young: Butterflies need special plants to lay their eggs on. Frogs and toads lay eggs only in shallow water. Many birds use birdhouses; others nest in trees and shrubs. In fact, nearly all your shelters may become homes for wild young.

Put It on Paper
Using the map you made of your area, draw in the changes you want to make. Mark where the plants, nest boxes, and other items will go. Remember, this is a long-term plan—you don’t have to do everything this spring. Maybe you could put up a few birdhouses and plant some butterfly bushes now and save the trees and shrubs for next year. Even a small start is a big step for wildlife.

Reach for Resources
To make the habitat happen, you’ll need lots of plants, seeds, and other supplies. You’ll also need to buy or borrow tools and maybe even some heavy equipment. Now’s the time to reach out for donations. Start by asking your parent-teacher organization. Then go to garden clubs, garden stores (they might give you a discount), your state’s Agricultural Extension Services, local government agencies, and businesses. If they can’t donate supplies or money, ask if they can donate workers!

The workers can help build the habitat. You’ll also need people to help maintain it. Some schools ask their students’ families to take turns during the summer. Each family maintains the habitat for a couple of weeks.

Build Your Design
Now you can dig in. Set a date, and get growing!
67. What is this article mostly about?

A  how to start a wildlife habitat  
B  making a place where animals can hide  
C  how to gather food for a wildlife habitat  
D  creating places for people to plant gardens 

68. The section "Plan a Habitat" is mostly about

A  finding people to work on the habitat  
B  finding a place to use for the habitat  
C  how to attract wildlife to the habitat  
D  how to raise money for the habitat
69. Which step would you do under "Reach for Resources"?

A  find a location
B  ask for donations
C  plant flowers and trees
D  talk to maintenance staff

70. The main purpose for creating a nature habitat at school would be to

A  raise money for other school projects
B  teach students more about nature
C  convince people to work as volunteers
D  improve the school's appearance
71. A nature habitat can have many positive effects. Using details from the article, give two positive effects that a nature habitat could create.
Read this passage and answer the questions that follow.

A Spaghetti Tale
by Tedd Arnold

1. I visit schools often and talk with children about my job. Once in a while they’ll ask personal questions, such as “What’s your favorite food?” and “What are your hobbies?”

2. Spaghetti and meatballs is my favorite food. Why? Because it tastes good and because—admit it—spaghetti is funny food.

3. And reading is my favorite hobby. Reading, however, can be dangerous. When you are deeply absorbed in a book, you stop paying attention to what’s going on around you. People describe it as being “lost in a book.” It’s a wonderful feeling, but it can be hazardous.

4. One day, when I was a teenager, I was home alone doing two of my favorite things: I was eating a huge plate of spaghetti and meatballs, and I was reading.

5. At the time, my family had a pet bird—a big white cockatoo named Luke. He was free to leave his perch and fly around inside the house. Luke enjoyed “talking” to people, but he wasn’t trained to use real words. His talking often sounded like chuckling.

6. As I was reading and eating, Luke was chuckling away, talking to me, but I wasn’t paying attention to him. I was lost in my book.

7. So Luke decided to get closer. He flew from his perch, and before I knew it, he’d landed right on top of my spaghetti and meatballs!

8. I was so surprised—I didn’t even have time to think. My reaction was the same as yours would be: I shooed him off my food! This wouldn’t have been so bad except for one thing: When Luke had landed on my plate, he had grabbed my spaghetti with both feet. So when Luke took off again, the spaghetti—still tangled in his feet—went flying everywhere.

9. It landed on my shirt. It hit me in the face. Red sauce splattered up the wall and onto the ceiling.

10. As I pulled noodles out of my hair, Luke flew back to his perch, dripping spaghetti sauce all the way. He wasn’t hurt, except for his dignity—the sauce in his beautiful white feathers turned him splotchy orange for several weeks.

11. See how funny spaghetti can be? And see how dangerous reading can be? So go ahead and enjoy a good book. But if you like to read while you eat, you’d better keep one eye on your food. And if you find a spy novel at the library with
red, greasy spots on two pages near the middle, you'll know that I've read that book, too!
47. Luke most likely flew onto the author's plate because

A he was angry
B he was hungry
C he wanted some attention
D he wanted to make a mess

48. The author would most likely describe the whole event as

A amusing
B annoying
C frightening
D lucky
49. According to the passage, the author's favorite hobby is
   A  writing  C  training birds
   B  reading  D  eating spaghetti

50. The setting for the events of this passage is mostly
   A  in a library  C  in a school
   B  in a home  D  in a restaurant
51. Read this sentence from the passage.

He wasn’t hurt, except for his dignity—the sauce in his beautiful white feathers turned him splotchy orange for several weeks.

Which word means about the same as “dignity”?

A  appetite
B  chatter
C  motion
D  pride

52. The author says that reading can be dangerous. What does he mean by this statement? Use details from the passage to support your answer.
Lesson 26

Find Volume Using Formulas

Prerequisite: Find Volume with Unit Cubes

Study the example problem showing different ways to find the volume of a rectangular prism. Then solve problems 1–5.

Example

A gift box is 3 inches long, 2 inches wide, and 3 inches tall. What is the volume of the box?

You can fill the box with 1-inch cubes. Count the cubes. There are 18 cubes.

You can also count the cubes in 1 layer. There are 6 cubes in 1 layer. The box has 3 layers.

\[ 6 + 6 + 6 = 18 \text{ or } 6 \times 3 = 18 \]

The volume of the box is 18 cubic inches.

1 The rectangular prism at the right is made of centimeter cubes.

a. Fill in the blanks to show the number of centimeters on each edge.

b. Complete the following sentences.

The bottom layer has _______ cubes.

There are _______ layers.

c. What is the volume of the rectangular prism?

_____________________

d. Suppose you add another layer to the prism. What would the new volume be?

Vocabulary

volume the amount of space inside a solid figure.
Solve.

2 What is the volume of this rectangular prism?
   
   Show your work.

   Solution: ____________________________________________

3 Max fills this box with 1-inch cubes. Tell how many cubes are in 1 layer and how many layers there are. Then find the volume.

   ____________________________________________
   ____________________________________________
   ____________________________________________

4 A toy box has a volume of 60 cubic feet. The box is 5 feet long and 4 feet wide. What is the height of the toy box?
   
   Show your work.

   Solution: ____________________________________________

5 Jorge has 40 one-inch cubes. What are 2 different ways that he can stack the cubes to make a rectangular prism?

   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
Use a Formula to Find the Volume of a Rectangular Prism

Study the example problem showing how to use formulas to find the volume of a rectangular prism. Then solve problems 1-7.

Example

Gwen puts her leftover food in a rectangular container. The container is 6 inches long, 5 inches wide, and 4 inches tall. What is the volume of the container?

Use the formula \( \text{volume} = \text{length} \times \text{width} \times \text{height} \).

\[
\text{volume} = 6 \times 5 \times 4, \text{ or } 120 \text{ cubic inches}
\]

Or use the formula \( \text{volume} = \text{area of the base} \times \text{height} \).

The area of the base is the same as the length \( \times \) width.

\[
6 \times 5 = 30 \text{ and } 30 \times 4 = 120 \text{ cubic inches}
\]

1. Ted's box is 4 inches tall, 3 inches long, and 1 inch wide.
   a. Label the picture of the box with its dimensions.
   b. What is the volume of the box?
      
      \( \text{Show your work.} \)

   Solution: ____________________________

2. A rectangular prism has a square base with sides that are 2 feet long. The height of the prism is 5 feet. What is the volume of the prism?
   
   \( \text{Show your work.} \)

   Solution: ____________________________
Solve.

3 Greg's shed is 10 feet long, 6 feet wide, and 8 feet tall. What is the volume of the shed?

*Show your work.*

Solution: ________________________________

4 The base of a rectangular prism has sides that are 2 centimeters and 4 centimeters long. The height of the prism is 3 centimeters. What is the volume of the prism?

*Show your work.*

Solution: ________________________________

5 What is the volume of a box that is 8 inches long, 2 inches wide, and 6 inches tall?

*Show your work.*

Solution: ________________________________

6 The base of a rectangular prism is a rectangle with sides that are 7 inches and 5 inches long. Its height is 10 inches. Write two different equations that you can use to find the volume.

______________________________

7 Jin has two boxes. Box A has dimensions of 6 centimeters, 5 centimeters, and 9 centimeters. Box B has dimensions of 4 centimeters, 10 centimeters, and 7 centimeters. Which box holds more? Explain.

______________________________

______________________________
Use the Formula for Volume

Solve the problems.

1. Which of these rectangular prisms have the same volume? Circle the letter for all that apply.

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<tr>
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<td>B</td>
<td>5 ft</td>
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<td>E</td>
<td>6 ft</td>
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   Look for equal products.

2. The volume of a rectangular prism is 48 cubic meters. Its height is 2 meters and its length is 3 meters. What is its width?

   A  6 meters  
   B  8 meters  
   C  16 meters  
   D  24 meters

   Delia chose A as the correct answer. How did she get that answer?

   ____________________________
   ____________________________
   ____________________________
   ____________________________

   This looks like a two-step problem.

3. Tabia stores her hair bands in a cube-shaped container. The cube has a volume of 64 cubic inches. What is the length of the edges of the cube?

   Show your work.

   Solution: ____________________________
4. A gift shop sells rectangular glass dishes in different sizes. Some of the dimensions are given in the table. Fill in the missing dimensions.

<table>
<thead>
<tr>
<th>Volume in Cubic Inches</th>
<th>Length in Inches</th>
<th>Width in Inches</th>
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Use the volume formula and fill in the numbers that you know.

5. How can you make three different rectangular prisms using 18 one-centimeter cubes? Give the length, width, and height of each prism.

What are the factors of 18?

6. Jamie wants to use this container to make a block of ice that has a volume of 600 cubic centimeters. Draw a line that shows to what height she should fill the container with water.

Show your work.
Think of one major problem that is facing our world today. What steps could be taken to solve it? How long do you think it would take to solve the problem?
Lesson 2
Prepositions and Prepositional Phrases

Introduction A preposition is a word that shows how other words in a sentence are related. Words such as about, by, in, of, on, to, and under are prepositions.

- A prepositional phrase begins with a preposition and ends with a noun or a pronoun. The noun or pronoun is called the object of the preposition.

- A preposition tells about the relationship between the object of the preposition and another word in the sentence. Look at these sentences.

  Emperor penguins swim under the ice when they hunt.

  I recently saw a movie about these amazing penguins.

- In the first sentence, the preposition under tells about the relationship between ice and the verb swim. In the second sentence, the preposition about tells about the relationship between penguins and the noun movie.

- A prepositional phrase sometimes tells how, when, where, or what kind. In the sentences you just read, the prepositional phrase under the ice tells where the penguins swim. The prepositional phrase about these amazing penguins tells what kind of movie it was.

Guided Practice Underline the prepositional phrase in each sentence and circle the preposition. Then draw an arrow from the object of the preposition to the word it relates to.

HINT Most prepositional phrases come after the noun or verb they describe.

Example: I read a book about Emperor penguins.

1. Emperor penguins breed in the winter.

2. Female Emperor penguins lay eggs on the ice.

3. Males watch the eggs while the females travel to the sea.

4. The warmth of the males' feathers protects the eggs.

5. The females return and provide food for the little chicks.
Independent Practice

For numbers 1–3, choose the prepositional phrase in each sentence.

1 Emperor penguins can be found on only one continent.
   A found on only one continent
   B can be found
   C only one continent
   D on only one continent

2 Antarctica’s winter begins in late March.
   A winter begins
   B begins in
   C in late March
   D begins in late March

3 There are 17 types of penguins, and the Emperor penguin is the largest.
   A of penguins
   B and the Emperor penguin
   C is the largest
   D are 17 types of

For numbers 4 and 5, answer the question.

4 Read this sentence.
   Most animals move to a warmer place each winter, but Emperor penguins do not.
   What is the purpose of the underlined preposition?
   A to describe when animals move
   B to connect warmer with animals
   C to connect two phrases about winter
   D to show a relationship between move and place

5 Read this sentence.
   The feathers of the penguin keep out cold air and water.
   What is the purpose of the underlined preposition?
   A to connect feathers with cold
   B to show a relationship between feathers and penguin
   C to tell what a penguin’s feathers do
   D to show a relationship between penguin and cold
Friday: Science

Directions: Using the food chain diagram answer the questions below.

Sun → Grass → Cricket → Mouse → Snake → Hawk

1. Identify an organism that is BOTH a predator and a prey

_________________________________________________________________________

2. What is the role of the mushroom in this food chain?

_________________________________________________________________________

3. If the population of snakes decreased, explain what would happen to the population of hawks?

_________________________________________________________________________

_________________________________________________________________________
Mr. Gobourne did an experiment and recorded how the temperature of his hard-boiled egg changed over time. The thermometers show the temperature of his hard-boiled egg before and after the experiment.

![Thermometers showing temperature change](image)

How did the speed of the molecules in the egg change over time? How do you know? Make sure to include **specific evidence**.
Map Skills: Using Latitude and Longitude

Directions: Use this map to identify the latitude and longitude of each star.

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