

Name \_\_\_\_\_ Date \_\_\_\_\_

## Weekly Test Lesson 7

Read the passage. Then answer the questions.

### Making Cheese

Cheese is one of Americans' favorite foods. We find cheese on pizza, hamburgers, tacos, sandwiches, burritos, nachos, crackers, and many more popular food items. Cheese is even eaten all by itself as string cheese or small cubes. While many people eat cheese, very few people know exactly how it is made.

No matter what kind of cheese or how it is used, all cheese starts out with the same ingredient—milk. Many cheese factories get their milk from family farms or other farms nearby. The milk must be fresh because old milk does not make good cheese. Then the milk is tested for quality. Anything that does not belong in the milk is taken out. After that, the milk is pasteurized. Pasteurizing means heating the milk to a high temperature and then cooling it back down. This process takes out any bad bacteria. Now, the milk is ready to be made into cheese. It takes just over a gallon of whole milk to make a one-pound block of cheddar cheese. This means cheese factories need a lot of milk.

Next, good bacteria is added to the milk. This bacteria helps to make the cheese flavor. After the good bacteria grows, the milk needs a coagulant. The coagulant used to make the cheese is called a rennet. Once the rennet is added, the milk thickens and separates into curds, a solid, and whey, a liquid.

The curds are the beginnings of cheese. The curds are cut. Next, both the curds and whey are cooked. Then the curds are taken out of the whey. After that, salt is added. The salt gives flavor. It also helps the cheese last longer. Finally, the curds are pressed into blocks or round forms.

Up until this point, all block cheese is made pretty much the same. After this step, some cheese has flavors added. Spices, herbs, vegetables, and bacon are just a few of the flavors. Some cheese is stretched. Some cheese even has color added. All cheese is naturally white, but some cheese has yellow food coloring added to it. Adding food coloring is rather silly since it does not change the flavor. After adding these things, the cheese ages in a temperature-controlled warehouse. This aging gives the cheese better flavor.

Name \_\_\_\_\_ Date \_\_\_\_\_

Finally, the cheese is cut into smaller blocks, or shredded, cubed, or otherwise cut to be ready to ship to stores. Once the cheese reaches the stores, it is ready to be eaten as a snack. You can also use it to make your favorite recipe. If you make your favorite cheese-filled food, take a photograph. But you better take the picture quickly because it tastes even better!

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- 1 This question has two parts. First, answer part A. Then, answer part B.

**Part A**

What is the author's opinion about Americans and cheese?

- (A) Americans know a lot about cheese.
- (B) Americans prefer yellow cheese.
- (C) Americans do not enjoy cheese.
- (D) Americans love to eat cheese.

**Part B**

How does the author support the opinion in part A?

- (A) The author writes about how cheese is made.
- (B) The author lists all the places people eat cheese.
- (C) The author writes about the many different types of cheese.
- (D) The author lists many favorite foods that have cheese in them.

- 2 What is rennet?

- (A) a coagulant that thickens milk
- (B) a bacteria that grows in milk
- (C) a flavoring added to cheese
- (D) a bowl of curds and whey

Name \_\_\_\_\_ Date \_\_\_\_\_

- 3 Mark the boxes to show the main concept of each paragraph.

|   | Paragraph<br>2 | Paragraph<br>3 | Paragraph<br>4 |
|---|----------------|----------------|----------------|
| All cheese starts with milk.                              |                |                |                |
| Curds are the first sign of cheese.                       |                |                |                |
| Milk needs bacteria for flavor and coagulants to thicken. |                |                |                |

- 4 Why does the author think that adding food coloring to cheese is silly?

- (A) because it is a waste of money
- (B) because white cheese looks better
- (C) because it takes too much time to do
- (D) because it does not change the flavor of the cheese

- 5 Read the sentences from the passage.

You can also use it to make your favorite recipe. If you make your favorite cheese-filled food, take a photograph. But you better take the picture quickly because it tastes even better!

What does the word photograph mean?

- (A) a sound from far away
- (B) a recorded image
- (C) a type of light
- (D) a drawing

Name \_\_\_\_\_ Date \_\_\_\_\_

- ⑥ What is the main idea of the passage? Use evidence from the passage to support your answer.

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Name \_\_\_\_\_

## Write Fractions as Sums

A unit fraction tells the part of the whole that 1 piece represents. A unit fraction always has a numerator of 1.

Bryan has  $\frac{4}{10}$  pound of clay for making clay figures. He wants to use  $\frac{1}{10}$  pound of clay for each figure. How many clay figures can he make?

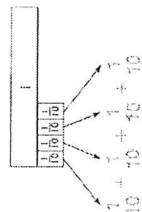
Use fraction strips to write  $\frac{4}{10}$  as a sum of unit fractions.

**Step 1** Represent  $\frac{4}{10}$  with fraction strips.

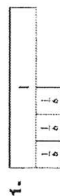
**Step 2** Each  $\frac{1}{10}$  is a unit fraction. Write a  $\frac{1}{10}$  addend for each  $\frac{1}{10}$ -strip you used to show  $\frac{4}{10}$ .

**Step 3** Count the number of addends. The number of addends represents the number of clay figures Bryan can make.

So, Bryan can make 4 clay figures.

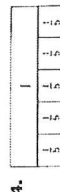
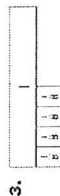


Write the fraction as the sum of unit fractions.



$$\frac{3}{6} = \frac{1}{2} + \frac{1}{2} = 1$$

$$\frac{2}{4} = \frac{1}{2} + \frac{1}{2} = 1$$



$$\frac{4}{8} = \frac{1}{2} + \frac{1}{2} = 1$$

$$\frac{5}{5} = 1$$

Name \_\_\_\_\_

## Mixed-Up Sums

Match each fraction on the left with an addition problem on the right.

1.  $\frac{7}{8}$        $\frac{3}{8} + 1\frac{2}{8} + 1\frac{1}{8}$

2.  $\frac{6}{10}$        $\frac{2}{10} + 1\frac{2}{10} + 1\frac{2}{10}$

3.  $\frac{4}{8}$        $\frac{1}{10} + 1\frac{3}{10} + 1\frac{2}{10} + 1\frac{3}{10}$

4.  $\frac{9}{10}$        $1 + 1\frac{5}{8} + 1\frac{1}{8}$

5.  $\frac{6}{8}$        $\frac{1}{10} + 1\frac{3}{10} + 1\frac{2}{10} + 1\frac{1}{10}$

6.  $\frac{7}{10}$        $\frac{1}{8} + 1\frac{1}{8} + 1\frac{2}{8}$

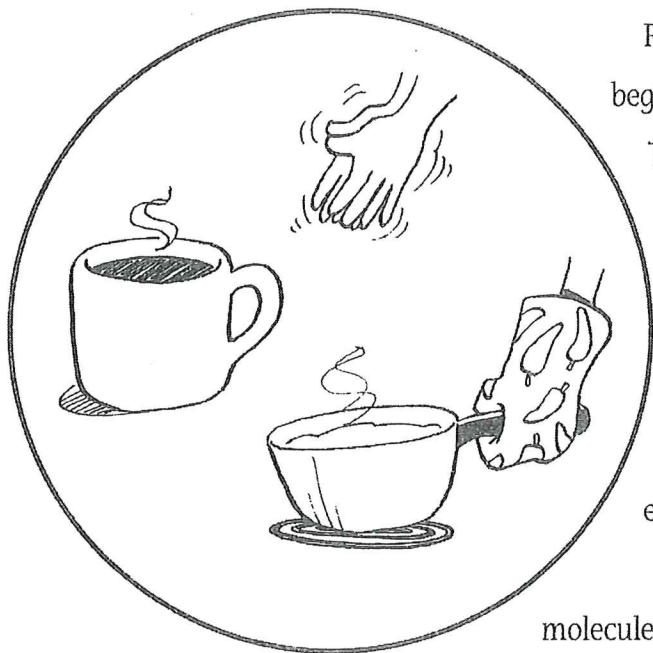
7. **Stretch Your Thinking** Write another possible sum for Exercise 4.

8. **Stretch Your Thinking** Write another possible sum for Exercise 5. Use  $\frac{1}{4}$  for one of the addends. Explain how you found your answer.



# Heat Energy

Lesson 7



Rub your hands together very quickly. Are they beginning to feel hot? You just created heat energy!

The more you rubbed your hands against each other, the more heat energy you created. When you think of energy, you probably think of whether or not you are tired or full of energy.

Energy is what makes things happen. It makes grass grow, cars move, computers work, and stars explode.

All materials are made of tiny particles called molecules. These molecules are always moving. The movement of these molecules creates heat. The amount of heat created depends on how fast the molecules move. The faster they move, the hotter it will get. Usually, as molecules move faster, they take up more space and make objects expand.

Heat can be transferred from one object to another. It can be transferred in three different ways: conduction, convection, or radiation. The type of material something is made of makes a difference in how heat is transferred. You see this when a cup of hot chocolate cools off. Your cup gets warmer and your hot chocolate gets cooler. This is called conduction. Solids transfer heat through conduction. Imagine that you and four friends are standing next to each other in a line, with your elbows touching. The first person bumps the person next to him. Then, that person bumps the person next in line, and so on. You have "conducted" this movement down the line. This is how heat would travel if you and your friends were molecules in a metal bar. Molecules bump into other molecules, which makes them move faster. An object gets hotter from the movement of the molecules. The heat energy has been passed, or conducted, from molecule to molecule within the metal bar. The metal bar itself did not move. It just got hotter. All solid objects conduct heat, although some are better conductors than others. Good heat conductors are usually made out of metal. Some pots and pans have metal handles that become hot. That is why hot pads are so popular! Other pots and pans have

handles made out of poor conductors like wood or plastic. They keep the heat from traveling through the handle and to your hand.

Liquids and gases transfer heat better through convection. Convection is when heat makes the molecules in an object spread out. Convection occurs when hot air rises above cooler air. The movement of the air molecules creates air currents. Warm air rises and cooler air sinks. These convection currents also occur in water. Have you ever been swimming in a lake or in the ocean and felt the water at your feet was colder than the water near your shoulders? This is because of convection.

Radiation is a means of heat travel that is very different from conduction and convection. Radiation is the release of invisible heat rays from a fire or from the sun. It does not rely on moving molecules to transfer heat. Heat waves can travel, or radiate, through outer space where there are no air molecules. For example, when the radiant energy from the sun hits a solid object like the earth, the earth soaks up the energy and changes it into heat. This is how the sun heats the earth even though the sun is 93 million miles (150 million km) away.

Whenever a hot object is placed near a cold object, the hot object will transfer heat to the cold object until they reach a state of balance. A balance happens when their temperatures are the same. The fast moving molecules mix with the slow moving molecules until they are all mixed and balanced. Imagine putting an ice cube into a cup of hot chocolate. The hot chocolate has molecules that are moving around very quickly. The heat energy from the hot chocolate will transfer to the ice cube. That will make the ice cube melt. Then, your hot chocolate will not be hot anymore. The water in the ice and the hot chocolate achieved a state of heat balance.

Heat energy is a form of energy that usually involves molecules in motion. It can be changed or transferred through conduction, convection, or radiation. Everything on earth relies on heat energy.





Heat energy can be transferred in three ways.

- Compare & contrast the 3 ways that heat can be transferred.
- List 1 example of each of the ways.

[illegible]



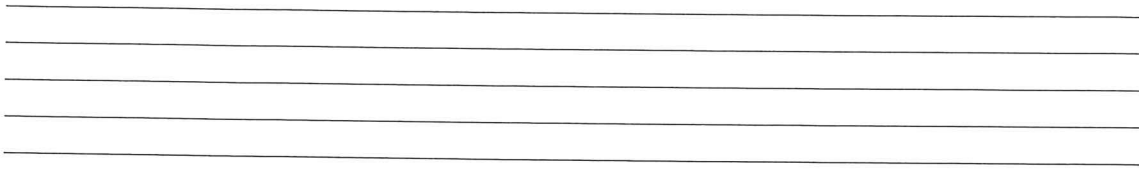
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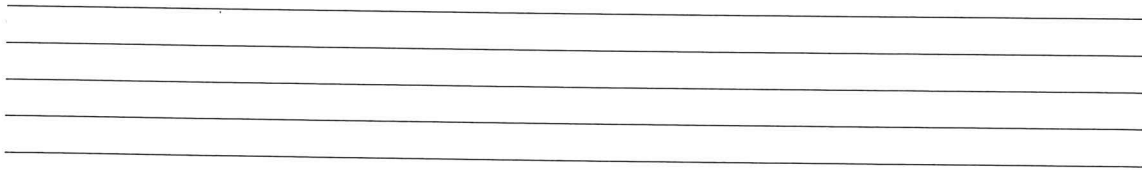
### Music Open Response

Musicians perform music written by famous composers that lived hundreds of years ago. They are able to perform the music because they read the notes on the music staff. Before the musician can read the notes on the staff, they must know the names of the lines and spaces on the music staff.

A. On the music staff below, label each line with the letter name of the line.



B. On the music staff below, label each space with the letter name of the space.



C. On the music staff below, write a series of pitches that move from low to high.

