Super-Journal Week 3:5

Every night, you should be reading at least 30 minutes of whatever book you have checked out from your assigned reading list. Tape or glue (but do *not* staple) this sheet into your Super-Journal on the left-side page. Fill in the table below *every day* by recording the required data.

Day	Title	Start Pg.	End Pg.	Parent Sign.
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

On the right-side page of your Super-Journal, answer two of the questions below throughout the week. Be sure that the questions you choose to answer go with the appropriate type of book (Fiction or Nonfiction). The Super-Journal is due on the first day after the weekend (usually Monday). To earn credit for your journal entry, you *must* respond in at least five complete sentences per response and use **specific evidence from the text to support your claim** based on what you've read this week.
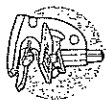
FICTION

1. Who is telling the story in the selection?

2. Is the selection/story written in the first or third person? How do you know?

NONFICTION

1. Who is providing the information?

2. Is the information provided from a firsthand or secondhand account? How do you know?

Science Standard: Knows the general structure and functions of cells in organisms

Benchmark: Knows that each plant or animal has different structures which serve different functions in growth, survival, and reproduction

Your Remarkable Body

Your body is an amazing machine. Just as a machine's many parts work together to make it run, your body systems work together to keep you going. These systems include the skeletal system and the muscle system.

All of the bones in your body make up your skeletal system. Bones meet at joints. Moveable joints, like those in the fingers, let the body move. Fixed joints, like those found in the skull, do not let the bones move. Your teeth are bones with a very specific job: chewing food. The other bones form a frame that supports your body and protects its internal organs. Bones do several other tasks, too. Some bone cells take calcium out of the blood and add it to the bone. Calcium makes the bones strong so that they will not break easily. The soft inner part of a bone, called bone marrow, makes and releases new blood cells. The most obvious job that bones do is work with your muscles to let you move.
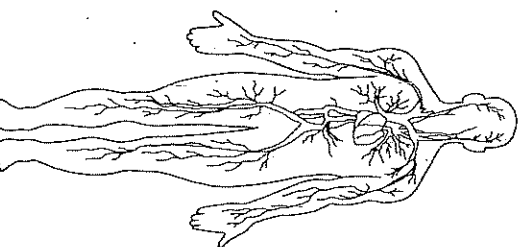
Your muscle system lets your body move and allows your internal organs to work. You have skeletal muscles and smooth muscles. Skeletal muscles move bones and are voluntary muscles that you can control. These muscles move by pulling. Each muscle can only pull in one direction. One end of each skeletal muscle connects to a bone. This bone does not move when the muscle pulls. The other end of that muscle attaches to another bone. This bone does move when the muscle pulls. One set of muscles pulls the bones in one direction; the other set pulls the bone in the other direction. This means that you use one set of muscles to lift your arm up and another set of muscles to move it back down.

Smooth muscles make up most of the body's internal organs. Smooth muscles move food through the digestive system, air through the lungs, and blood through veins and arteries. Since you cannot control these muscles, they're called involuntary muscles. Smooth muscles cannot move as fast as skeletal muscles, but they work continuously. Your heart is a smooth muscle. It beats about 75 times each minute, and it will never rest as long as you live.

Your Remarkable Body

Comprehension Questions

1. You have control of the movement of
   a. some of your body's muscles.
   b. all of your body's muscles.
   c. none of your body's muscles.
   d. just your arm and leg muscles.

2. While you are young, the part of the skeletal system that has its bones replaced by brand new bones is
   a. the skull.
   b. the feet.
   c. the teeth.
   d. the hands.

3. Which is an example of voluntary muscles?
   a. your lungs breathing
   b. your heart beating
   c. your legs walking
   d. your intestines digesting food

4. Another word for *continuously* is
   a. rarely.
   b. often.
   c. rapidly.
   d. constantly.

5. When you break an arm bone, which of these systems is affected?
   a. the voluntary muscle system
   b. the involuntary muscle system
   c. the respiratory system
   d. the digestive system

6. Picture a skeleton. Where do you see moveable joints?
   a. in the skull
   b. in the knee
   c. in the ribs
   d. in the teeth

7. Which body system do you find the most interesting? Explain.

_____

_____

It Circulates

Cross-Curricular Focus: Life Science

The **circulatory** system is the transport system of the human body. Your body is like a map filled with passageways of different sizes that are filled with blood. **Arteries** and **veins** are the body's largest blood vessels. Arteries carry oxygen-rich blood from the lungs and through the heart so it can be delivered to all the cells of the body. Veins carry carbon dioxide waste back to the heart and into the lungs so the carbon dioxide can be exhaled. **Capillaries** are the tiniest blood vessels. They are especially helpful in the lungs, where the gas exchanges take place in air sacs called alveoli. Under a microscope, alveoli look like grape clusters.

At the very center of the circulatory system is the **heart**. Your heart is about the same size as your fist, but it is made of muscle. Its job is to pump your blood through all those blood vessels. It never stops working, even when you are sleeping. It is the strongest muscle in your body. Your heart has four chambers, or spaces, inside it. They are the left and right **ventricles**, and the left and right atriums. Each chamber is separated by a valve that allows blood flow in only one direction. The opening and closing of the valves is what you can hear through a stethoscope when you visit the doctor. The blood being pushed through the valves is what you feel as your pulse.

Blood looks like a simple red liquid when you have a cut or a scrape. That's only because your eyes cannot see what is going on inside the blood at the microscopic level. The reason blood looks red to us is because it contains an iron-rich substance called hemoglobin. Hemoglobin allows blood to hold on to oxygen and carry it around the body. Hemoglobin is found in disc-shaped cells called red blood cells. There are also white blood cells in our blood. They are larger than red blood cells and are important because they help us fight disease. Platelets, another kind of cell found in our blood, help us form scabs when we are injured so we don't lose too much blood. All of these cells float in a liquid called plasma. Plasma also carries sugar to cells and waste products away from cells.

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) What is the function of the white blood cells?

_____

_____

2) How are arteries and veins alike?

_____

_____

3) Based on other information in the passage, what gases are being exchanged in the alveoli?

_____

_____

4) What is the main idea of this passage?

_____

_____

5) What does hemoglobin do?

_____

_____

Relate Fractions to Division

Name _____

Review

You can use a representation to help you relate fractions to division.

Consider $6 \div 4$. You are dividing 6 units equally among 4 containers.

To begin, each container gets 1 unit. $6 - 4 = 2$, so there are 2 units remaining to split among 4 containers, or 1 unit split among 2 containers. This means each container gets an additional $\frac{1}{2}$ unit.

$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
1	1	1	1

$$6 \div 4 = 1\frac{1}{2}$$

What equation is shown in the representation?

1. $10 \div$ _____ $=$ _____

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
1	1	1	1

$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
1	1	1	1

2. _____ $\div 9 =$ _____

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$
1	1	1	1	1

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$
1	1	1	1

What is the division equation? Fill in the missing values.

3. _____ $\div$ _____ $= \frac{13}{6}$

4. $3 \div 11 =$ _____

5. _____ $\div$ _____ $= \frac{2}{9}$

6. $15 \div 4 =$ _____

7. _____ $\div$ _____ $= \frac{8}{12}$

8. _____ $\times 12 = 12 \div 5$

9. $\frac{1}{8} \times 19 = 19 \div$ _____

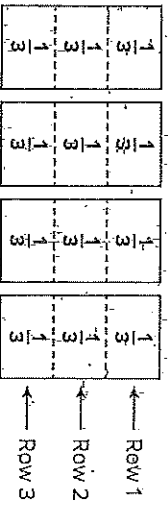**10.** $\frac{1}{3} \times$ _____ $= 14 \div 3$

Review

You can interpret a fraction as another way to write a division expression:

Tynisha cuts a wooden board that is 4 feet long into 3 equal sections. What is the length of each piece of wood?

To solve, find $4 \div 3$.

Draw 4 wholes and divide each into 3 equal pieces.

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	⟵ Row 1
$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	⟵ Row 2
$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	⟵ Row 3

The total for each row is the quotient. Since each row contains 4 one-thirds of a foot, the length of each piece is $\frac{4}{3}$ or $1\frac{1}{3}$ feet long.

$4 \div 3 = \frac{4}{3}$ or $1\frac{1}{3}$

What division expression is represented by the fraction?

1. $\frac{12}{5}$

2. $1\frac{1}{4}$

3. $\frac{3}{8}$

4. $\frac{9}{2}$

What fraction is represented by the division expression?

5. $7 \div 6 =$ _____

6. $12 \div 3 =$ _____

7. $2 \div 5 =$ _____

8. $6 \div 8 =$ _____

9. $10 \div 10 =$ _____

10. $1 \div 4 =$ _____

11. Giselle has 3 pounds of peanuts. She shares the peanuts by putting an equal amount into each of 5 bags. What is the weight of the peanuts in each bag?

12. Juan walks 8 miles. He divides the walk into 3 equal parts so he knows when to stop for water. How far does Juan walk between stops?

13. Aubrey draws a line that is 34 centimeters long. She divides the line into 6 equal parts. How long is each part of the line?

Math @ Home Activity

Provide opportunities for your child to explore how fractions and division are related. For example, ask him or her to determine how much each person would receive if a given amount, such as 2 pounds of granola was divided equally among each person in your family. Have your child write a division expression and a fraction for the situation.

An Efficient System

When you reach adulthood, your heart will beat more than 100,000 times each day!
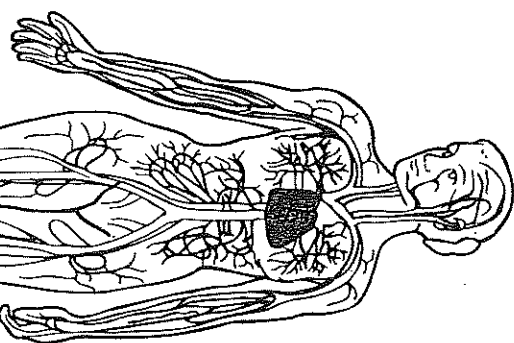
The *circulatory system* has two important jobs. It moves blood and regulates the temperature of your body. The circulatory system—which is made up of your heart, blood vessels, and blood—carries nutrients, oxygen, antibodies, and hormones to the cells of your body. The heart is the pump that keeps your blood moving through the blood vessels. On its journey, blood picks up oxygen from the lungs and nutrients from the digestive system.

Because you are a warm-blooded animal, your body has a fairly steady body temperature. Your circulatory system helps maintain this constant temperature. Warmer blood from the center of your body is brought to the surface to be cooled. The circulatory system does all of this work with about four to five quarts of blood.

Directions: Use words or short phrases to answer the questions.

1. Name the system that carries blood throughout the body. _____

2. List three things that make up the circulatory system. _____

3. Name two functions of the circulatory system. _____

An Efficient System

Directions: Use words or short phrases to answer the questions.

1. Name the body parts that carry blood. _____

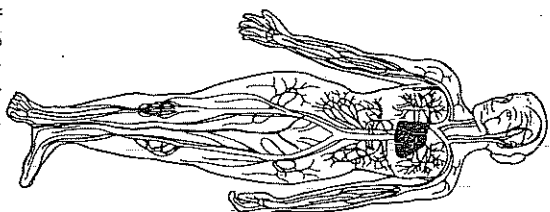2. The blood picks up oxygen from which body parts? _____

3. What does the blood pick up from the digestive system? _____

4. Where does the blood take oxygen and nutrients? _____

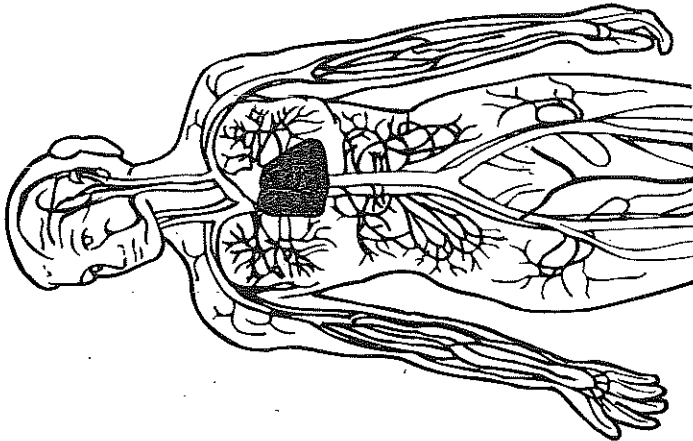5. How is warmer blood from the center of your body cooled? _____

Research: Who is Barney Clark? What courageous thing did he do that advanced medical study of the heart?

Bonus: To find out how many times per minute your heart beats, take your pulse. (Place two fingertips of your right hand on the underside of your left wrist just below the base of your thumb.) Sit quietly for one minute and count the pulse beats. Using this number, figure out approximately how many times your heart will beat in one hour and in 24 hours.

Tubes For Carrying Blood

If your blood vessels were laid end to end, they would stretch around the equator 2 1/2 times!

Blood is pushed through the circulatory system by the pumping action of your heart. It travels in tubes called *blood vessels*.

There are only three kinds of blood vessels: *arteries, veins,* and *capillaries*. The arteries carry blood, rich with oxygen and nutrients, away from the heart. Veins carry blood back to the heart for fresh oxygen from the lungs. Veins are thinner than arteries. Capillaries are even smaller. Capillaries are tiny blood vessels that carry blood between the smallest arteries and the smallest veins.

Directions: Write T for true or F for false before each statement.

____ 1. Blood is propelled through the body by the pumping action of the heart.

____ 2. There are three kinds of blood vessels: arteries, veins, and capillaries.

____ 3. Arteries carry blood that is rich with carbon dioxide away from the heart.

____ 4. Capillaries are the largest blood vessels.

____ 5. Veins are wider than arteries.

A Busy Pump

There are approximately nine pints of blood circulating through your body.

If your heart stopped beating, you would die. Why? Because your heart pumps blood full of oxygen and food to your body's cells. You cannot live without oxygen and food.

Your heart is a hollow muscle. It's about the size of your fist. It weighs about nine ounces. The heart consists of four chambers—two thin-walled *atria* (*auricles*) and two powerful, muscled *ventricles*.

The heart works like two pumps with alternating rhythms. The right side of the heart consists of the right atrium and ventricle. The right side receives blood from the great veins known as the *inferior* and *superior venae cavae* and pumps blood to the lungs. As the blood passes through the lungs, it takes on oxygen and gives up carbon dioxide. The left side of the heart receives blood full of oxygen from the lungs and pumps it through the *aorta* into the arteries.

Directions: Use words from the text to complete the statements.
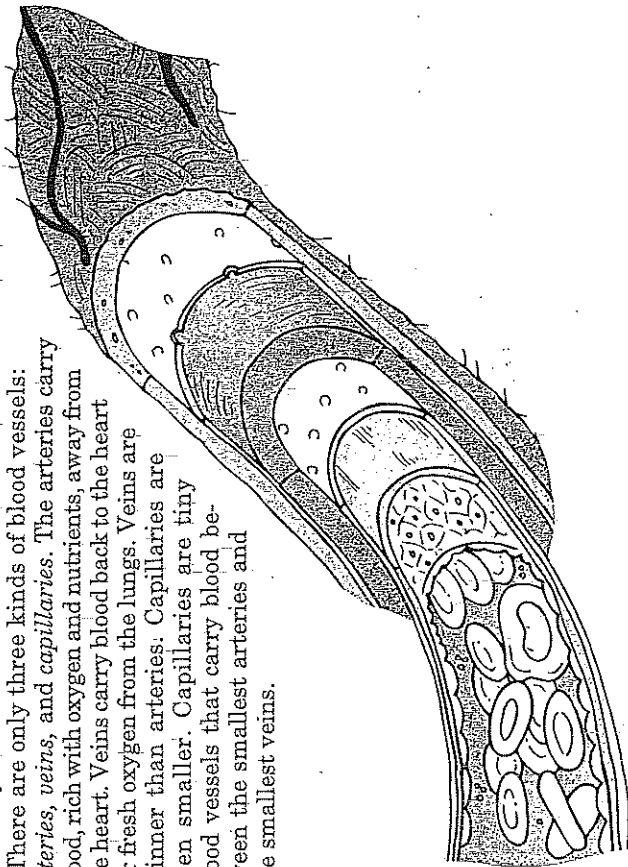
1. Your heart is a _____ muscle.

2. Your heart is about the size of your _____.

3. Your heart weighs about _____.

4. You have about _____ pints of blood circulating in your body.

5. Your heart pumps blood full of oxygen and _____ to the body's cells.

Lesson 11-2 • Reinforce Understanding

Solve Problems Involving Division

Name _____

> ## Review
>
> You can use context to determine whether to write a quotient with
> a remainder or as a mixed number.
>
> | | |
> |---|---|
> | Fiona has 30 paperback books. She gives each of her 4 friends the same number of books. How many books did she give each friend?

$30 \div 4 = 7$ with 2 remaining

Fiona gives each friend 7 books and has 2 books remaining. | Andy is dividing 30 pounds of flour equally among 4 bags. How many pounds of flour does he put in each bag?

$30 \div 4 = 7\frac{2}{4} = 7\frac{1}{2}$

Andy puts $7\frac{1}{2}$ pounds of flour in each bag. |

What is the quotient? Determine whether the answer should be written with a remainder or as a mixed number.

1. Gavin ran a total of 49 miles the last two weeks. He ran the same number of miles each day. How many miles did Gavin run each day?

2. Angela has 100 eggs to sell at the market. She packages the eggs in cartons which hold 12 eggs each. How many cartons does she have to sell at the market?

3. Chris has 50 pounds of deer sausage. He puts an equal amount into 18 bags. How much sausage will be in each bag?

4. Elyse made 72 bookmarks for her book club. She gave each of the 15 members the same number of bookmarks. How many bookmarks did each club member get?

Additional Practice

Name _____

Review

You can determine whether the quotient should be written with a remainder or as a mixed number.

A pitcher holds 42 fluid ounces of lemonade. Helene pours an equal amount into each of 5 glasses until the pitcher is empty. How much lemonade does Helene pour into each glass?

To solve, find $42 \div 5$.

With a remainder, $42 \div 5 = 8$ with 2 remaining.

As a mixed number, $42 \div 5 = 8\frac{2}{5}$.

Since fractional parts of fluid ounces can be poured, write the answer as a mixed number.

Helene pours $8\frac{2}{5}$ fluid ounces into each glass.

How would you write the quotient for the problem?

1. Callie walked a certain number of miles last week. She walked the same number of miles each day. How many miles did she walk each day?

A. as a mixed number

B. with a remainder

C. either way is appropriate

2. Debbie made some bracelets. She gave the same number of bracelets to each of her friends. How many bracelets did she give to each friend?

A. as a mixed number

B. with a remainder

C. either way is appropriate

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3. A 10-kilometer race is divided into 3 equal sections. How long is each section of the race?

4. A teacher orders a box of 100 pencils to give to the students. Each of the 18 students receives the same number of pencils. How many pencils does each student get?

5. A fence is 40 yards long. Fence posts are placed so that there are 6 equal sections. How far apart are the fence posts?

6. A grocer has 50 peaches to sell. He packages them in groups of 3. How many packages does the grocer make?

Math @ Home Activity

Provide opportunities for your child to explore how division might be represented with a remainder or with a mixed number. For example, if you make a 64-fluid ounce pitcher of a drink and you pour the same amount into each of 10 plastic cups, how many fluid ounces will be in each cup?

Gas Exchange

Cross-Curricular Focus: Life Science

Did you know that your body has its very own gas exchange program that runs 24 hours a day? It's called the respiratory system. It is one of your body's vital systems, which means you could not live without it. Every time you take a breath, oxygen enters your lungs and is carried around to all the body's cells by the circulatory system. Waste products, like carbon dioxide gas, are picked up by the circulatory system as well. Carbon dioxide is dropped off at the lungs so you can breathe it out.

The respiratory and circulatory systems need each other. The respiratory system brings in oxygen and pushes out carbon dioxide. The circulatory system transports these gases where they need to go. The two systems work together to make sure that your body gets what it needs to survive. That is why we say that the respiratory and circulatory systems are interdependent. They need each other.

The respiratory system is not just your lungs. It also includes your nose, mouth, and the air passageways that connect them to your lungs. After you inhale air through your nose and mouth, it enters a tube in your throat called the trachea. Right before the trachea gets to your lungs, it splits into two smaller tubes called the bronchi. The deeper you go into your lungs, the smaller and smaller the tubes become as they keep dividing in two. The very smallest tubes end with tiny sacs. These sacs look like grape clusters under the microscope. These are called alveoli. They diffuse oxygen into the blood and receive carbon dioxide being returned to the lungs from the blood. Carbon dioxide travels out of your body when you exhale.

Your body has a special way of making sure that you can get the oxygen that you need when you breathe. Your chest actually changes size when you inhale. You have muscles that are attached to your ribs. These muscles pull up when you inhale. Your diaphragm, a large muscle under your lungs, pulls down. This gives plenty of room so you can get the air you need.

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) What is the purpose of the circulatory system?

_____
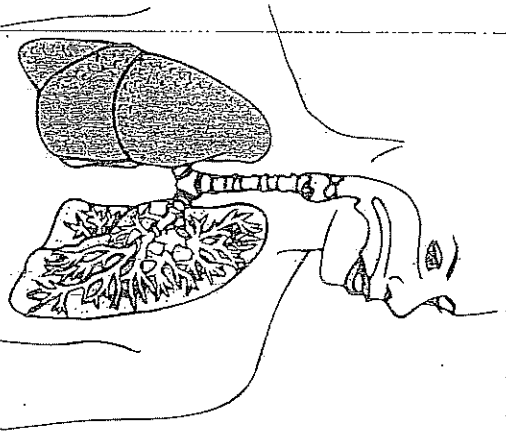
_____

2) Identify the parts of the respiratory system.

_____

_____

3) What is the function of the alveoli?

_____

_____

4) How does the body get rid of carbon dioxide?

_____

_____

5) How does your body make room for a deep breath? _____

_____

A Breathtaking System

An adult's lungs can hold five quarts of air! How large a balloon do you think it would take to hold that much air?

When you breathe in air through your nose and mouth, you get oxygen. You need oxygen to live. The air goes down your windpipe and into your lungs. Your lungs absorb oxygen from the air. The oxygen travels in the blood to every part of the body.

Your body uses oxygen to burn food and to give you energy. You make carbon dioxide when you do this. The blood carries the carbon dioxide back to the lungs. Then it is breathed out. This whole process is called respiration.

Directions: Use one word from the text to complete the statements.

1. You need _____ to live.
2. You take in air through the nose or the _____.
3. The air you breathe in goes down your _____.
4. The words in the text that mean "to inhale" are _____ and into your lungs.
5. The oxygen you breathe in travels in the _____ to every part of your body.
6. When you breathe in, you take in _____.
7. When you breathe out, you get rid of _____.
8. Your body uses oxygen to burn _____.
9. The blood carries the carbon dioxide back to the lungs, and it is _____ out.
10. The process of breathing in and out is called _____.

A Breathtaking System

Directions: Use the number code to label and color the diagram of the respiratory system.

1. You take in air through your nasal passage. Color it green.
2. The **pharynx** connects your mouth and nasal passages. Color it yellow.
3. The **epiglottis** is the flap of cartilage behind your tongue. It helps close the opening to your windpipe when you swallow. Color it red.
4. The **larynx** is made of muscle and cartilage. It is where your vocal cords are located. Color it brown.
5. The **trachea** is a tube that serves as the main passageway for air to and from the lungs. Color it purple.
6. The **alveoli** are tiny air sacs at the ends of the **bronchioles**. Color them red.
7. The **diaphragm** is a wall of muscle and connecting tissue. Color it gray.
8. The **lungs** absorb oxygen from the air you breathe. Color the left lung blue.
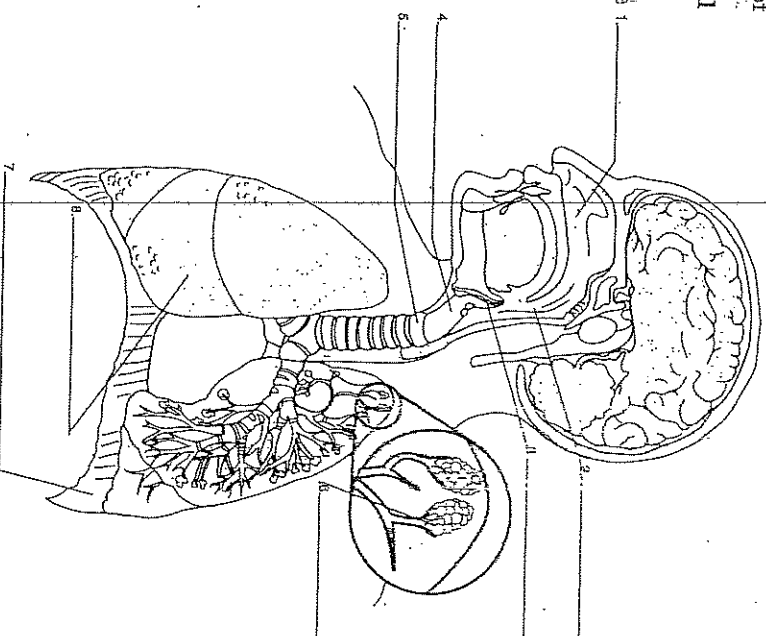
Research: Your right and left lungs are not identical. Find out how they are different.

Bonus: Sit quietly and listen to your breathing. Count how many times you breathe in and out each minute. Stand up and do 25 jumping jacks. Then count your breaths again. How does exercise affect breathing? Write a true statement about this.

# Explore Division of Whole Numbers by Unit Fractions

Name _____

Review

You can use a number line to help you solve division problems of whole numbers by unit fractions.
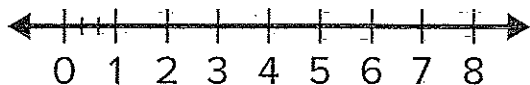
Consider $6 \div \frac{1}{4}$. Make a number line with tick marks from 0 to 6. Since you are dividing by $\frac{1}{4}$, start at 0 and draw four jumps from 0 to 1, four jumps from 1 to 2, and so on. Count the total number of jumps, which should be 24.
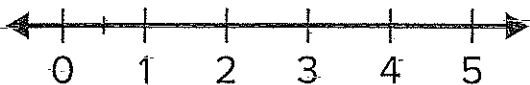
$$6 \div \frac{1}{4} = 24$$
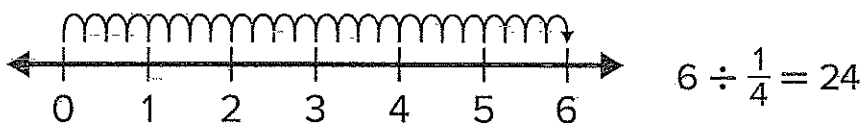
What is the quotient? Use the number line representation to help you solve.

1. $8 \div \frac{1}{3} =$ _____
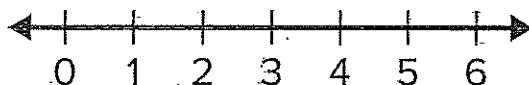
0 1 2 3 4 5 6 7 8

2. $5 \div \frac{1}{2} =$ _____

0 1 2 3 4 5

3. $2 \div \frac{1}{7} =$ _____

0 1 2

4. $3 \div \frac{1}{4} =$ _____

0 1 2 3

5. $6 \div \frac{1}{3} =$ _____

0 1 2 3 4 5 6

6. $4 \div \frac{1}{5} =$ _____

0 1 2 3 4

7. $7 \div \frac{1}{3} =$ _____

0 1 2 3 4 5 6 7

8. $9 \div \frac{1}{2} =$ _____

0 1 2 3 4 5 6 7 8 9

Additional Practice

Name _____

Review

You can use a representation to find the quotient of a whole number divided by a unit fraction.

Rosanna has 5 large pieces of fabric. To make a quilt, she needs to cut each large piece of fabric into 5 pieces or $\frac{1}{5}$s. How many smaller pieces of fabric will she have?

To solve, find $5 \div \frac{1}{5}$.

Use a representation to find the quotient. Draw 5 wholes. Divide each whole into $\frac{1}{5}$s.

There are 25 pieces that are $\frac{1}{5}$ of a whole.

Rosanna will have 25 smaller pieces of fabric.

What is the quotient? Use a representation to solve.

1. $3 \div \frac{1}{8} =$ _____

2. $8 \div \frac{1}{5} =$ _____

3. $4 \div \frac{1}{4} =$ _____

4. $2 \div \frac{1}{6} =$ _____
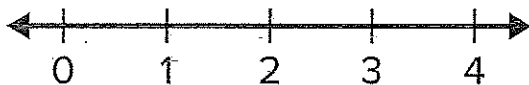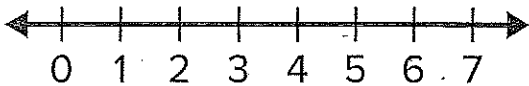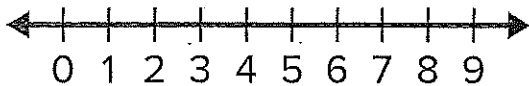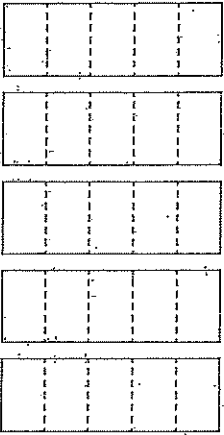
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5. Carl has a board that is 4 feet long. He makes shelves that are $\frac{1}{2}$ foot long. How many shelves can he cut from the board?

_____ shelves

6. A baker has 8 pounds of flour. Each cake needs $\frac{1}{3}$ pound of flour. How many cakes can be made with the available flour?

_____ cakes

7. A medium pizza is cut so that each slice is $\frac{1}{6}$ of the pizza. How many slices are there in 3 medium pizzas?

_____ slices

8. A caterer makes 6 pans of fruit salad. Each serving is to be $\frac{1}{10}$ the size of the pan. How many servings of fruit salad can be served?

_____ servings

Math @ Home Activity

-Give your child several sheets of paper. First, have your child fold one sheet of paper in half. Ask how many sections were created. Then have your child calculate how many sections there would be if a given number of sheets of paper, such as 5, 6, or 7, were folded the same way. Repeat the activity with different numbers of sections.

The Circulatory System

Use the words in the box to fill in the blanks.

veins	transport	circulatory	blood
arteries	oxygen	lungs	heart
nutrients	energy	carbon dioxide	pumped
capillaries	dark	bright	intestine
away	heat	to	atmosphere

All animals need to _____ materials around to the different parts of their body. This is the job of the _____ system. The circulatory system consists of a liquid called _____ a pump called the _____ and a series of vessels called _____ .

One thing that must be transported around is a gas called _____ . Oxygen enters the blood through the _____ . It is then _____ through the heart and around the body where it is used along with food to make _____ . The body produces another gas called _____ , which is a waste product. This gas is carried back to the heart and then to the lungs where it is released back into the _____ .

The vessels that transport blood _____ from the heart are called arteries. The blood in arteries is _____ red because it is rich in oxygen. The vessels that transport blood _____ the heart are called veins. The blood in veins is _____ red because it is low in oxygen. _____ are small vessels that join the arteries and veins.

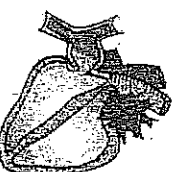_____ from food are also transported around the body by the circulatory system. They enter the blood from the small _____ . The circulatory system also helps to regulate temperature by transporting _____ around the body.

The Circulatory System

Find the circulatory system words below in the grid to the left.

```
H A S D A U N U T R I E N T S Y
O V G C A P I L L A R Y L R G I
Z A M R N R T R A N S P O R T L
S L R C H E K J W N R W V D D P
K V R A A V C R A I R H L E M N
A E E B R J I E R C I T U I Q
A D D X R T B F R D T P H M N
Y O B K I V J O K C U E L K N C
F R L J G O H U N L U B R K V F
O E O G H X X R O D I L S Y B J
O G O V T Y F C K L I O A T A H
A N D X R G X H N U M O J T T S
Z O C T E E I A V N F D X R E C
Y W E O D N R M D G U C A I D V
Q H L W R E G B O S U E V O D S
K E L C T B E E P V H L O M Q E
G X S A F A O R T A E L O D D K
Q S W B F H G S V O B S U U D N
```

aorta	carbon dioxide	lungs	transport
artery	circulate	nutrients	valve
blood	dark red	oxygen	vein
bright red	four chambers	pump	water
capillary	heart	red blood cells	white blood cells

Divide Whole Numbers by Unit Fractions

Name _____

Review

To divide whole numbers by unit fractions, you can check your work using a related multiplication equation.

Consider $13 \div \frac{1}{3}$.

There are 3 thirds in 1 unit. $$\boxed{\begin{array}{c\|c\|c} \frac{1}{3} & \frac{1}{3} & \frac{1}{3} \end{array}}$$ This means there are $13 \times 3 = 39$ thirds in 13.	To check your work, use the equation $39 \times \frac{1}{3}$. $$39 \times \frac{1}{3} = 13$$ Therefore, $13 \div \frac{1}{3} = 39$.

What is the quotient? Use a related multiplication equation to check your answer. Show your work.

1. $10 \div \frac{1}{8} =$ _____

2. $5 \div \frac{1}{3} =$ _____

3. $7 \div \frac{1}{4} =$ _____

4. $9 \div \frac{1}{10} =$ _____

5. $15 \div \frac{1}{5} =$ _____

6. $12 \div \frac{1}{7} =$ _____

7. How many quarter-cups are in 1 cup of flour?

8. How many slices are in 3 pies, if each slice is $\frac{1}{8}$ of a pie?
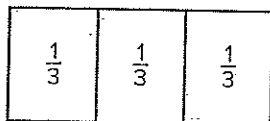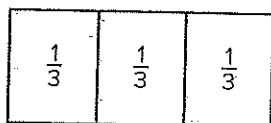
Divide Whole Numbers by Unit Fractions

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Review

To divide whole numbers by unit fractions, you can check your work using a related multiplication equation.

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Down the Hatch

Cross-Curricular Focus: Life Science

A car needs energy to get where it's going. Your body must have fuel to do all the things it needs to do so you can grow up healthy and stong. The **digestive** system takes care of the body's need for fuel. It is made up of a group of organs that work together. They pass fuel in the form of food from one organ to the next until the entire process is complete. Waste products then pass out of the body.

The digestive system goes to work the moment you put food into your mouth. Immediately, the salivary glands in your mouth moisten the food. The saliva begins breaking down the food into smaller and smaller pieces. Your teeth also get involved, biting and grinding the large pieces. Finally, the pieces are small enough to swallow. Your tongue is kind of like a traffic director, pushing food around in your mouth to make the most of your saliva and teeth. Then, your tongue pushes your food to the back of your mouth so you can swallow.

As your food leaves your mouth, it enters a tube called the **esophagus**. Gravity and muscles push your food down to the **stomach**. In the stomach it is greeted by strong acids. During the next couple of hours, acids and enzymes break your food into a soupy liquid.

Believe it or not, your body has still not received energy from your food. Your liquefied food finally passes into the small **intestine**. This is a long tube that is coiled back and forth inside your body. The food will remain there for up to six hours. During that time, special chemicals digest the liquid even further. Nutrients your body needs are pulled from it. The nutrients enter your blood through tiny little finger-like projections called villi that line the insides of your small intestine.

What happens to the leftovers? The things your body does not need pass into your large intestine. Water and minerals are absorbed out of the food and into your blood over the next 10-36 hours. After most of the liquid is removed, the rest of the leftover material passes out of your body as solid waste.

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) Explain what happens to food while it is still in your mouth. _____

_____

_____

_____

_____

2) What is the name for the tube from the mouth to the stomach? _____

3) What are villi?

_____

_____

4) At what point during the digestive process does your body begin to receive energy from the food?

_____

_____

5) Where is your food likely to be two hours after you eat?

_____

_____

Dealing With Digestion

Did you know that digestion begins before you even begin to eat? Digestion begins when you think about eating. In anticipation, your body begins to prepare itself by producing saliva. Your mouth makes more than a quart of saliva a day.
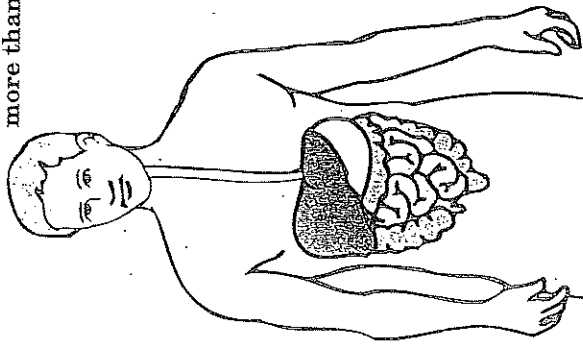
Your digestive system processes food, which provides your body with the energy it needs for maintenance and repair. When you put food into your mouth, your teeth cut, grind, crush, mash, and shred the food while mixing it with saliva. Then the food moves down a tube called the *esophagus* to the stomach. There are three bands of strong muscles churn, squeeze, and break the food up into smaller pieces. An acid produced in the stomach dissolves meat and other foods.

After the food leaves the stomach, it travels through the small and large intestines, where particles of food pass through the linings of the intestines and into the blood. Powerful body chemicals called *enzymes* digest the carbohydrates, proteins, and fats that make up your diet.

Directions: Use words or short phrases to complete the sentences.

1. What is the function of the digestive system?

_____

_____

2. Name two reasons your body needs food.

_____

_____

3. Name four body parts involved in the digestive process.

_____

_____

Dealing With Digestion

Directions: Hidden in the word-search puzzle are 20 words from the text. The words are written vertically, horizontally, and diagonally. How many of them can you find? There are other words in the puzzle that are not in the text, but they don't count. Find and circle only words from the text.

```
e s o p h a g u s c k h
d t i n t e s t i n e s
i o r g a n s f n e e z
g m s y s t e m o u r b
e a p b o d i e s o r r
s c r e p a i r p d e r
t h o n m o u t h i a a
i f c e b b r p n o o t
v a e r l a l o r i e c
e t s g o n o t o n n o
c s s y o d o e t g z n
d i e t d k b i e s y e
r i s f e t s n i m m s
m a i n t e n a n c e p
p a r t i c l e s q s e
```

Research: Find out what saliva does. Write a paragraph about it.

Bonus: What happens when your food goes down the wrong way? If someone were choking on a piece of food stuck in his windpipe, what would you do? What is the Heimlich maneuver? Draw a picture to show how it can save a life.