

**BIG QUESTION 4**

# How do we measure time?

## UNIT 7

### Words

#### A Read and number.

1 second

5 year

8 orbit



2 minute

6 noon

9 time zone

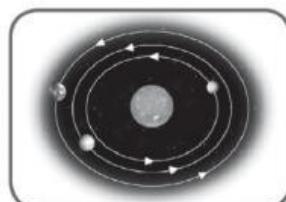
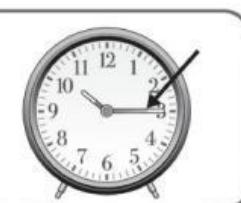


3 hour

7 spin

10 multiply

4 month



**B** Circle the correct answers.

1 July is my favorite \_\_\_\_\_ of the year.



- a minute
- b second
- c month

2 The planets \_\_\_\_\_ around the sun.



- a multiply
- b orbit
- c spin

3 Sydney is in a different \_\_\_\_\_ from Perth.



- a time zone
- b year
- c hour

4 There are 60 \_\_\_\_\_ in an hour.



- a months
- b seconds
- c minutes

**C** Complete the text with the correct form of the words in the box.

noon hour minute year multiply second month time zone

**Math Class**

There are 60 1 minutes in an hour. How many 2 are there in

a minute? Correct. There are 60. How can we calculate the number of seconds in an hour?

We 3 60 times 60 to get the answer. So there are 3,600 seconds

in an 4.

There are 30 or 31 days in most 5. How many months are there in a

6? Yes, there are 12. Does anyone know how many time zones there are?

There are 24 7, one for each hour of the day. When it's 8

in New York, what time is it in California? Yes, it's 9:00 a.m. Time for math class!

# Read

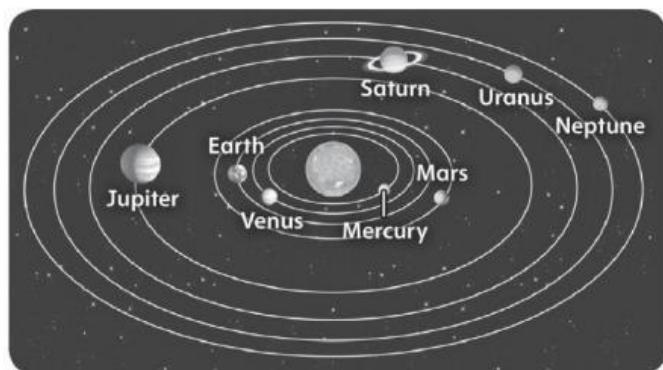
**A** Read the article. What is in Earth's solar system?

**B** Read the article again. What can you learn from the diagram of the planets? Remember, a picture or a diagram in a text can help you understand important ideas.

## Our Solar System

Earth's solar system consists of the sun and the bodies that **orbit** it. The largest bodies are planets, and there are eight in our solar system.

Each planet **spins** on its axis. An axis is an imaginary stick that goes through the center of the planet. It takes one day for a planet to spin around completely. Each planet is a different size, so the time it takes to spin around is different, too. Not all days have the same length.



**Think** Point to the fifth planet from the sun. What is it called?

Let's take a look at our planet, Earth. It is the third planet from the sun. It takes 23 **hours** and 56 **minutes** for Earth to spin around. So that is the length of each day here on Earth. It will take 365 days for Earth to orbit around the sun.

Now let's take a look at Mercury. It is much closer to the sun than Earth. And it is smaller, too. So it will take less time to orbit around the sun: just 88 days. Each day on Mercury is 58 days and 16 hours long.

How about Jupiter? It is farther away from the sun than Earth. And it is much bigger. It will take 12 **years** for Jupiter to orbit the sun. Each day on Jupiter is 9 hours and 50 minutes long.

There are five more planets in our solar system: Venus, Mars, Saturn, Uranus, and Neptune. Read the chart to find out the length of one day on some of these planets.

Planet	Diameter	Distance from Sun	Time to Orbit Sun	Length of One Day
Mercury	4,880 km	57,910,000 km	88 days	58 days, 16 hours
Earth	12,756 km	149,600,000 km	365 days	23 hours, 56 minutes
Jupiter	142,984 km	778,330,000 km	12 years	9 hours, 50 minutes

# Understand

## Comprehension

**A** Look at the diagram of our solar system. Will it take Uranus more or less time than Jupiter to orbit around the sun? Why?

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**B** Answer the questions.

1 How long is one day on Earth? What does the Earth do in that time?

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2 How do the planets spin? What is an axis?

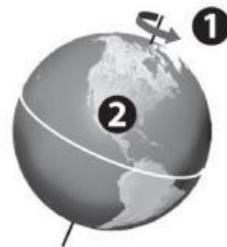
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**C** **Words in Context** Label the diagram. Then complete the sentences. Use the words in the box.

opposite axis planet accurate

1 \_\_\_\_\_



2 \_\_\_\_\_

3 When it's midnight where you live, it's noon on the \_\_\_\_\_ side of the world.

4 The numbers in the chart are not exact; they could be more \_\_\_\_\_.

**D** **About You** Answer the questions.

1 What is your favorite thing about the solar system?

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2 What do you think is the most interesting fact about the solar system?

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# Grammar in Use



## A Study the grammar.

### Learn Grammar

### Future Facts with *Will*

In two hours, it **will be** 4:00.

She'll **go** to bed tonight at 10:00.

**Will** you **have** a birthday party?

Yes, I **will**. No, I **won't**.

Where **will** you **be** at 4:00 this afternoon?

I'll **be** at school.

### Contractions with *Will*

I will = **I'll**

she will = **she'll**

he will = **he'll**

you will = **you'll**

they will = **they'll**

we will = **we'll**

## B Look at the pictures. Complete the sentences to make future facts with *will*.

Now



Two hours



1 Now it's 11:00 a.m.

In two hours, it                            **won't be**  
3:00 p.m. (be)

2                                    at soccer  
practice this afternoon? (you / be)

Yes, I                                   .



3 Where                            at  
6:00 p.m.? (you / be)

I                                    at home,  
eating dinner.



4 When                            your  
homework? (you / do)

I                                    it after dinner.

**C** Unscramble the sentences and questions to make a dialogue.

- 1 Earth / will it take / around the sun /  
How long / to orbit
- 2 365 days / Earth / around the sun /  
to orbit / It will take
- 3 Mercury / How long / to orbit /  
will it take / around the sun
- 4 Mercury / around the sun / It will take /  
to orbit / less time

A: \_\_\_\_\_

B: \_\_\_\_\_

A: \_\_\_\_\_

B: \_\_\_\_\_

**D** Look, read, and check (✓).

1 Will your sister be 6 years old on her next birthday?



a Yes, she will.  
 b Yes, I will.

2 How will you go to school tomorrow?



a I'll ride my bicycle.  
 b He'll ride his bicycle.

3 Where will she be at 11:00 a.m.?



a She'll be in English class.  
 b She'll be in math class.

4 When will the sun come up tomorrow?



a The sun won't come up at 6:30 a.m. tomorrow.  
 b The sun will come up at 6:30 a.m. tomorrow.

**E** Rewrite the sentences to tell what will happen tomorrow.

1 The sun sets every day.

The sun will set tomorrow.

3 The sun rises every day.

\_\_\_\_\_

2 I go to school every day.

\_\_\_\_\_

4 The planets orbit the sun.

\_\_\_\_\_

# Communicate

## Word Study

prepare celebrate suggest preparation celebration suggestion

A Z

### A Match and write.

1 celebrate

2 prepare

3 suggest

a



b



c



celebration

### B Complete the sentences with words from the box above. Then write noun or verb.



1 I always celebrate holidays with my family.

verb

2 What a fantastic celebration! I love the fireworks.

noun



3 Let me make a celebration.

celebration

4 My grandmother and I always prepare for our trips.

preparation

## Writing Study

**A** Look at the chart. Read the sentences. Write *the* if the country name needs it. Then match the sentence parts.

United Kingdom	France	Saudi Arabia	United Arab Emirates
noon	1:00 p.m.	3:00 p.m.	4:00 p.m.
1:00 p.m.	2:00 p.m.	4:00 p.m.	5:00 p.m.
2:00 p.m.	3:00 p.m.	5:00 p.m.	6:00 p.m.
3:00 p.m.	4:00 p.m.	6:00 p.m.	7:00 p.m.

1 When it's noon in \_\_\_\_\_ •      • a it will be 2:00 p.m. in \_\_\_\_\_ United Kingdom.

2 When it's 2:00 p.m. in \_\_\_\_\_ •      • b it will be 1:00 p.m. in \_\_\_\_\_ France.

3 When it's 5:00 p.m. in \_\_\_\_\_ •      • c it will be 6:00 p.m. in \_\_\_\_\_ Saudi Arabia.

4 When it's 7:00 p.m. in \_\_\_\_\_ •      • d it will be 5:00 p.m. in \_\_\_\_\_ United Arab Emirates.

**B** Write about a trip from your city to a place in a different time zone.

Read the example. Use the future with **will** in your writing. Remember to use the article **the** for country names that need it.

My family lives in **the United Arab Emirates**. We are going to **the United Kingdom**. The flight from Abu Dhabi to London **will take** about eight hours. These cities are in different time zones. They are four hours apart. So if we leave Abu Dhabi at noon, we **will be** in London at 4:00 p.m.