

# The Mystery Planet

Read each source below. Then complete the activities on pages 20–21.

## Source 1

Mr. Quark smiled and said, “For today’s science riddle, I am thinking of a planet.”

“Earth!” shouted Shane.

Mr. Quark’s smile turned to a frown, and he stared at Shane before continuing. “As I was saying, I am thinking of a planet. After hearing *all* of the clues, you may raise your hand. *If* I call your name, then you may give me your answer. Now,” said Mr. Quark, “all planets are large, of course, but this giant ball of gas is enormous. In fact, its mass equals about 2.5 times the mass of all the other planets in our solar system *combined*! This planet is named after the king of Roman gods, and it has also been given the nickname ‘The King of the Planets.’ This massive planet is the fifth planet from the Sun, and so it is one of the Outer Planets.”

Mr. Quark then looked directly at Shane and said, “By contrast, Earth is the third planet from the Sun, and it is one of

the Inner Planets. It takes our mystery planet 12 times longer to go around the Sun than Earth does. This means that one year on this planet equals about 12 years on Earth. Since none of you are 12 years old yet, that means that if you lived on this planet, you would not have had your first birthday yet! I would have just had my 3rd birthday. Okay, so now that I have given you many clues, who can guess the name of this mystery planet?”

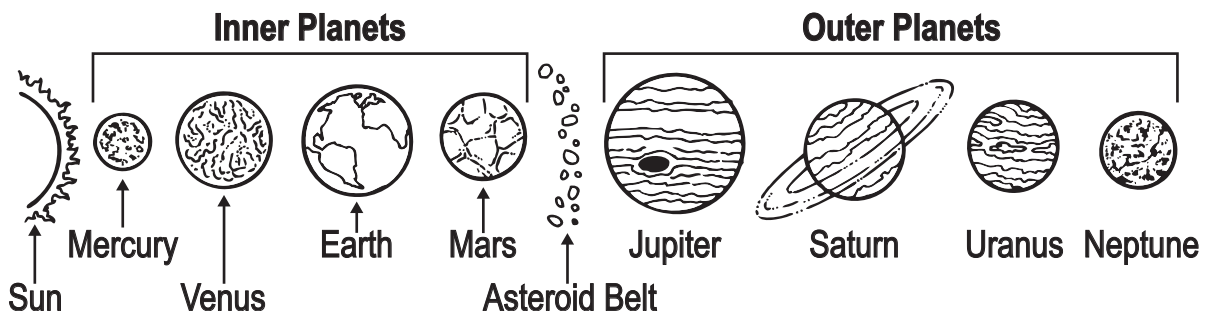
## Source 2

### **Notable Roman Gods** (listed in alphabetical order)

- Apollo** → god of music
- Juno** → queen of the gods
- Jupiter** → ruler of the gods
- Mars** → god of war
- Mercury** → god of travelers
- Neptune** → god of the sea
- Saturn** → god of agriculture
- Venus** → goddess of love and beauty

## Source 3

### Planets of Our Solar System



# The Mystery Planet *(cont.)*

Name: \_\_\_\_\_

**Part 1:** Read each idea. Which source gives you this information? Fill in the correct bubble for each source. (Note: More than one bubble may be filled in for each idea.)

Information	Sources ➡	1	2	3
1. Earth is the third planet from the Sun.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Earth is one of the Inner Planets.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Neptune was the Roman god of the sea.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Neptune is a planet in our solar system.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Part 2:** Fill in the bubble next to the best answer to each question.

5. What can be found between the Inner and Outer Planets?

- (A) Mars
- (B) Jupiter
- (C) the Sun
- (D) an asteroid belt

6. In paragraph 3 of Source 1, what is the most likely reason why Mr. Quark’s smile turned into a frown?

- (A) He doesn’t like riddles.
- (B) A student interrupted him.
- (C) A student gave the wrong answer.
- (D) He wanted a different student to answer.

7. Based on the information given, how old might Mr. Quark be?

- (A) 30
- (B) 33
- (C) 37
- (D) 47

8. If you put the names of the planets in alphabetical order, which one would be third?

- (A) Mars
- (B) Mercury
- (C) Earth
- (D) Jupiter

**Part 3:** Search “The Mystery Planet” to find one example of each of the following. Then write the number of the source in which you located this information.

9. a synonym for the word *large* \_\_\_\_\_ Source #: \_\_\_\_\_

10. a planet **not** named for a Roman god \_\_\_\_\_ Source #: \_\_\_\_\_

# The Mystery Planet *(cont.)*

Name: \_\_\_\_\_

**Part 4:** Refer back to the sources, and use complete sentences to answer these questions.

**11.** What is the mystery planet from Source 1? Give its name and explain how you came up with this answer.

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**12.** Choose another planet from our solar system. Without naming the planet, give at least three clues that would help someone guess the planet you chose. Use the information given in Sources 2 and 3 to create your clues.

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**13.** What would it be like to only have a birthday once every 12 years? Would birthday parties be any different? Write your thoughts here.

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# Answer Key *(cont.)*

13. Based on the sources, steel coasters go much faster and can be built to be much higher than wooden coasters. This can be determined from the chart in Source 3, which shows that the fastest steel coasters are much faster (and taller) than the fastest wooden coasters. Also, according to Seth in Source 2, wooden coasters don't have the huge drops and vertical loops that steel coasters do.

## Unit 5. The Mystery Planet (page 19)

### Part 1

1. Sources 1 and 3                      3. Source 2  
2. Sources 1 and 3                      4. Source 3

### Part 2

5. D                      6. B                      7. C                      8. A

### Part 3

*The source number is given in parentheses.*

9. giant (1), enormous (1), massive (1)  
10. Uranus (3), Earth (1, 3)

### Part 4

11. The mystery planet is Jupiter. From Source 1, we learn that the planet is named after the king of the Roman gods, and Source 2 tells us that Jupiter was the ruler of the gods. We also learn that this planet is larger than all of the other planets combined. Source 3 illustrates that Jupiter is the largest of the planets. Finally, we learn that the mystery planet is an Outer Planet and it is the fifth from the Sun. Source 3 confirms that this would have to describe Jupiter.
12. Accept appropriate responses. Students could give clues about for whom the planet is named, if it is an Outer or Inner Planet, which planets are its nearest neighbors, how large the planet is in relation to other planets, and the order of the planet from the Sun.
13. Accept appropriate responses.

## Unit 6. The Dinner Party (page 22)

### Part 1

1. Sources 1 and 2                      3. Sources 1 and 4  
2. Source 2                                4. Sources 2 and 3

### Part 2

5. A                      6. B                      7. B                      8. B and D

### Part 3

*The source number is given in parentheses.*

9. thyme (4), oregano (4), basil (4)  
10. salad fork (3), dinner fork (1, 3), dinner knife (3),  
teaspoon (3), soup spoon (3)

### Part 4

11. Portmanteau: Crustard  
Words Combined: *crunchy* and *mustard*
12. Accept reasonable responses. Adam should begin cooking the chicken at about 7:00 or 7:05, because it takes about 25 minutes to cook. He should begin preparing the meal about 10 minutes prior to that.
13. Accept responses that meet the criteria mentioned in the question (i.e., two paragraphs, main reason why each person is nervous, use of transitional word or phrase).

## Unit 7. Summer in the Winter? (page 26)

### Part 1

1. Sources 1 and 3                      3. Source 1  
2. Source 3                                4. Source 3

### Part 2

5. C                      6. C                      7. C                      8. B

### Part 3

*The source number is given in parentheses.*

9. halves (1)  
10. swimsuit (1), outside (1)

### Part 4

11. Accept reasonable responses. Students should name articles of clothing that are appropriate for warm, summer weather.
12. Accept reasonable responses that paraphrase the explanation of seasons given by Sam's dad in Source 1.
13. Only in Northern Hemisphere: Asia, Europe, North America  
In Both Northern and Southern Hemisphere: Africa, South America  
Only in Southern Hemisphere: Antarctica, Australia

## Unit 8. Apples to Oranges (page 29)

### Part 1

1. Sources 2 and 4                      3. Source 4  
2. Source 3                                4. Source 1

### Part 2

5. C                      6. A                      7. A                      8. D

### Part 3

*The source number is given in parentheses.*

9. parentheses (1)                      10. greater than (3)

### Part 4

11. This is not the first time they have argued about something. Students should quote the first line of Source 3: "Amy's uncles disagree often."