

PLANET MERCURY

TEXT MARKING DETECTIVE

MERCURY
The smallest of the eight planets in the solar system, Mercury is gray in color. It is the only planet in the solar system that does not have any known moons or rings. The first four planets (Mercury, Venus, Earth, and Mars) are known as the inner rocky planets, or terrestrials.

The first known record of Mercury is 4th century BCE by Aristotle. Experts understand that the Sumerians and Babylonians knew about Mercury. Yet, Galileo was the first to see Mercury through a telescope in the 1600s. Scientists believe that the ancient civilizations knew about Mercury because it is visible to the human eye on a dark night. The planet was named after the Roman god of travel and thievery.

Mercury is the closest planet to the sun, roughly 36 million miles away. Although it is the closest, it is not the hottest. The surface temperature can reach up to 800 degrees Fahrenheit during the day and drop to about -300 degrees Fahrenheit during the night when it is not receiving direct sunlight from the sun. Mercury doesn't have an atmosphere like Earth's, so it only has an exosphere with oxygen, sodium, helium, and hydrogen.

Mercury is solid, composed of rocks, making it a terrestrial planet. Similar to Earth's moon, the surface of Mercury is covered in craters of all sizes. The craters that have hit the planet are of various sizes. The largest crater, called the Caloris Basin, is about 1,350 miles across, is called the Caloris Basin. It is believed that about 600 million years ago, a comet or asteroid hit Mercury at about 450 miles across, creating the Caloris Basin. The impact was so powerful that it caused the planet to vibrate for days. The heat from the impact is believed to have melted the planet's interior. In the center of the planet, there is a large core of iron. The core is about 85% of the planet's radius.

CASE FILE
Cross off the images you use as an answer. What remains will solve the case!

SUSPECTS	LOCATION			

EVIDENCE	LOCATION			

EVIDENCE	LOCATION			

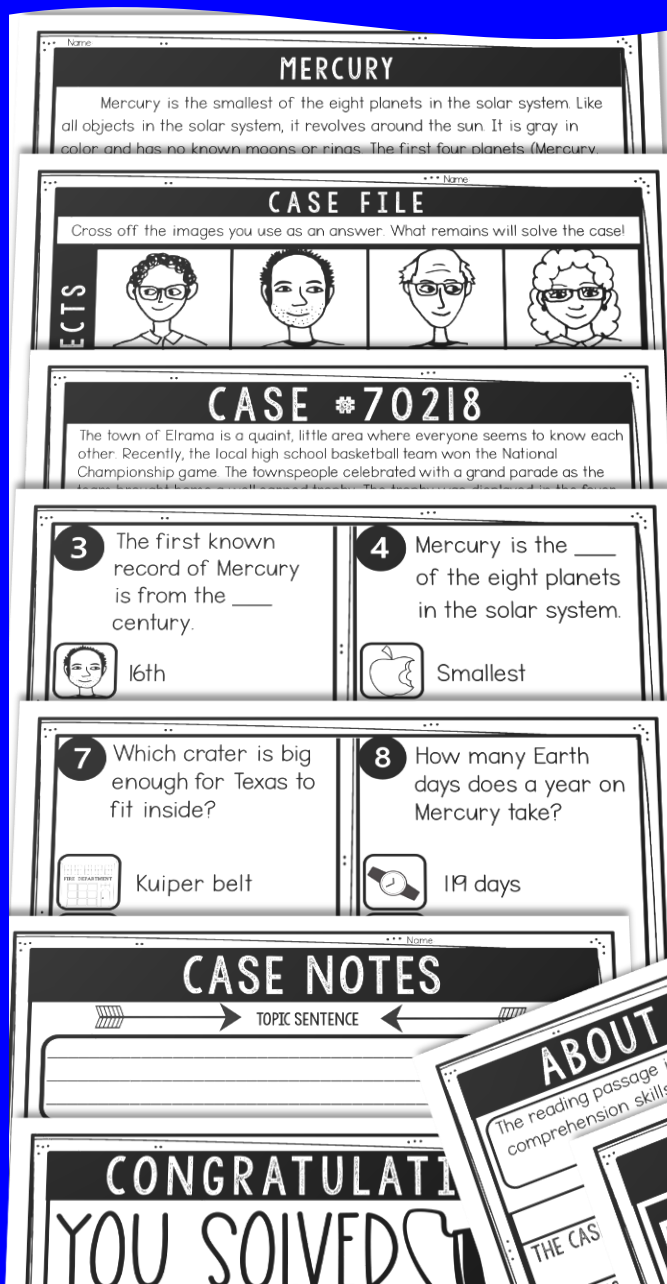
16 How many days does Mercury take to orbit the sun?
59
42
86
15

18 How many rings does Mercury have?
27

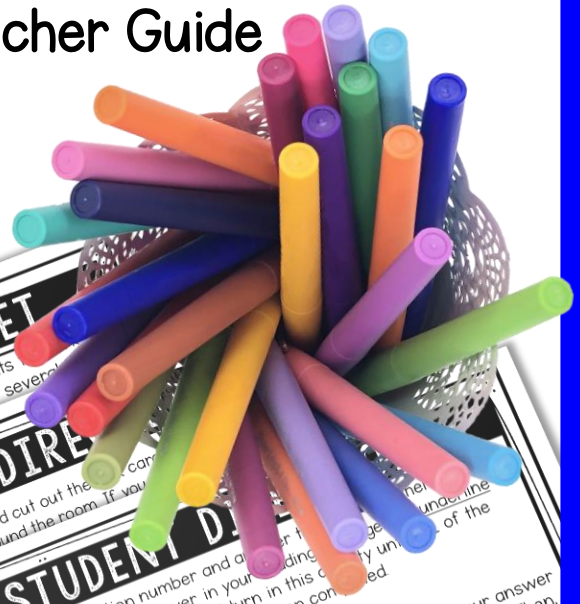
THINK TANK

© Think Tank Too

WHAT'S INCLUDED?

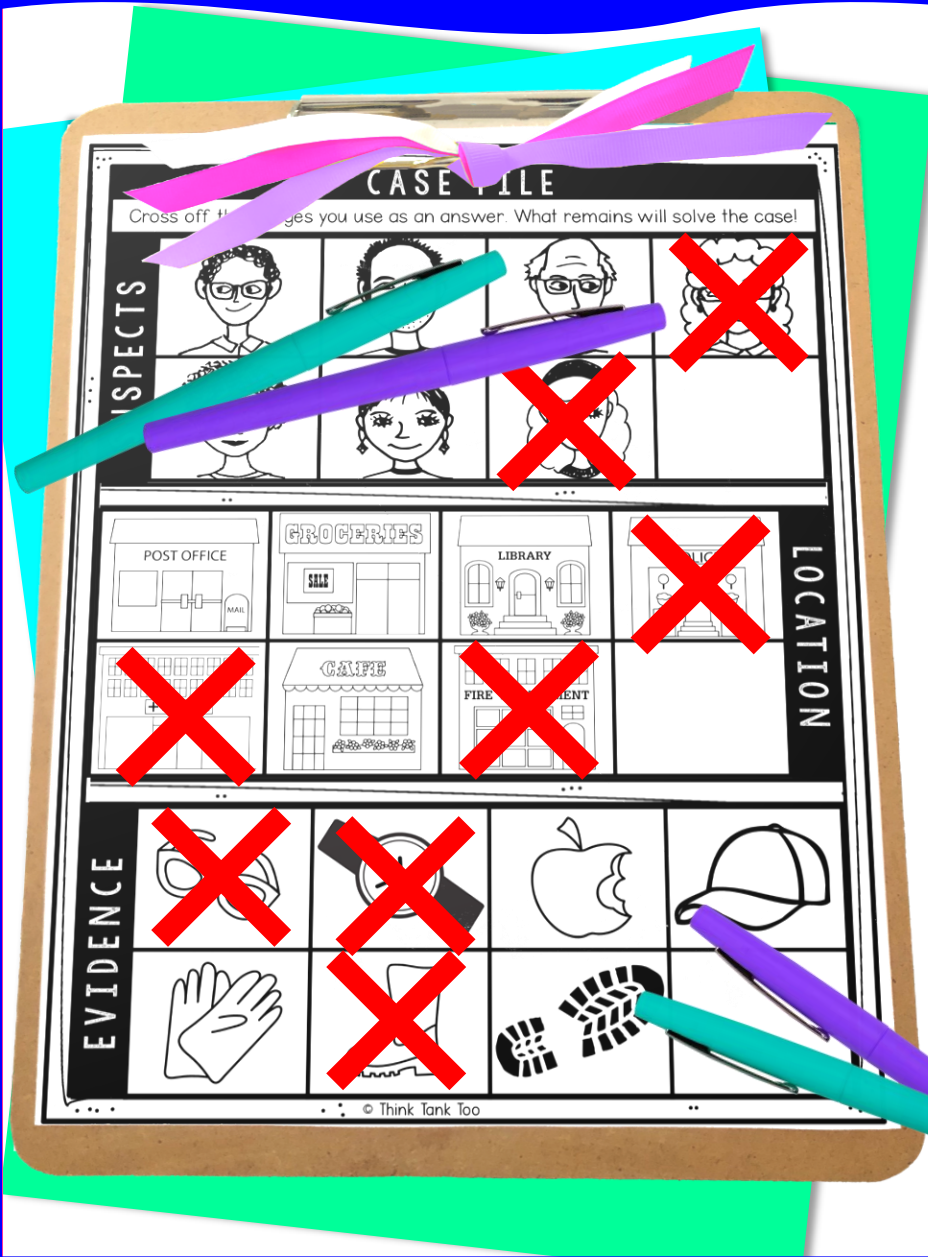


- ✓ Case File Dossier
- ✓ 16 Questions
- ✓ Graphic Organizer
- ✓ Reading Passage
- ✓ Completion Certificate
- ✓ Student Recording Sheet
- ✓ Student Directions
- ✓ Teacher Answer Key
- ✓ Teacher Guide



CASE DOSSIER





As students answer each question, they will eliminate suspects, locations, and evidence.







18 QUESTIONS

CONGRATULATIONS YOU SOLVED THE CASE!
DETECTIVE NAME: _____




3 The first known record of Mercury is from the ____ century.

 16th
 9th
 4th
 1st

4 Mercury is the _____ of the eight planets in the solar system.





 Smallest
 Largest
 Coldest
 None

5 What is Mercury's exosphere composed of?



 Sodium
 Hydrogen
 Oxygen

6 _____

7 Which crater is big enough for Texas to fit inside?





 Kuiper belt
 Oort cloud
 Olympus Mons
 Caloris Basin

9 How quickly does Mercury move around the sun?

 250 km
 108 days

10 Mercury _____ around the sun.

16 How many Earth days does one day on Mercury take?









 59
 42
 86
 15

18 How many rings does Mercury have?

Earth _____

CASE FILE
Cross off the images you use as an answer. What remains will solve the case!

SUSPECTS

GROceries **LIBRARY** **POLICE**

TEXT MARKING

After answering each question, students will find evidence in the text to support their answer.

MERCURY

Mercury is the smallest of the eight planets in the solar system. Like all objects in the solar system, it revolves around the sun. It is gray in color and has no known moons. The first four planets (Mercury, Venus, Earth, Mars) are called the inner rocky or terrestrial planets.

The first known record of Mercury is 4th century BCE by Assyrian astronomers. The Greeks understood that the Sumerians and Babylonians knew about Mercury. Yet, Galileo was the first to see Mercury through a telescope in the 1600s. Scientists believe the earliest human civilizations knew about Mercury because it can be seen in the sky on a dark night. The planet was named after the Roman god Mercury who was the god of travel and thievery.

Mercury is the closest planet to the sun, roughly 35 million miles away. Although it is the closest, it is not the hottest. Temperatures on the planet can reach up to 800 degrees Fahrenheit during the day and as low as -300 degrees Fahrenheit during the night when it is facing away from the sun. Mercury doesn't have an atmosphere like Earth. Instead, there is only an exosphere with oxygen, sodium, helium, hydrogen, and potassium.

Mercury is solid, composed of rocks, making it a terrestrial planet. Similar to Earth's moon, the surface of Mercury is covered with craters of all sizes. The surface is about 4 billion years old because of comet and asteroid impacts that have hit the planet. One of the largest craters, at 1,550 miles across, is called the Caloris Basin. It was a result of a collision. Scientists believe it was 60 miles wide. The largest crater is about the size of Texas to fit inside. In the center of the planet, there is a large iron core. It makes up about 85% of Mercury and makes the planet the densest terrestrial planet, even though the planet is small.

Mercurian craters are named after famous authors, musicians,