

Comparing Moons

Engage

Watch the video Jupiter's Moons from www.missdoctorbailer.com.

What do you notice?

What do you wonder?

Share with a partner. Write down anything they noticed and wondered that you didn't think about.

Explore

Materials: Play-dough (about 3 pounds), plastic knife, wax paper, labels for Phobos, Deimos, Earth, Moon, Mars, Phobos, Deimos, Phobos, Deimos, Io, Europa, Ganymede, and Callisto *found at the end of the lesson.*

What To Do: This is a Teacher Demonstration

1. Lay out the labels on the demonstration area.
2. Combine the playdough together and roll it into a long hotdog shape.
3. Use the plastic knife to divide the playdough into 10 equal parts.
4. Take 9 parts and roll them together. Place them on the Jupiter label.
5. Roll out the 10th part into a hotdog shape and divide it into 10 equal parts.
6. Take 9 parts and combine them with the Jupiter ball.
7. Roll out the 10th part and cut into 10 equal parts.
8. Place 4 parts on the Earth label.
9. Place 1 part on the Mars label.
10. Take the 4 parts and combine them with the Jupiter ball.
11. Cut the remaining part into 10 equal parts.
12. Put 1 part on the Io label.
13. Put 1 part on the Moon label.
14. Put 1 part on the Europa label.
15. Take 2 parts and combine them and place on the Callisto label.
16. Take 3 parts and combine them and place them on the Ganymede label.
17. Take 2 parts and combine them with the large Jupiter ball.
18. Take the last two specks (about the size of a grain of salt) and place them on the Phobos and Deimos box.
19. Observe the positions and sizes of the planets compared to the moons.
20. On the next page, have students draw the moons in relation to the planets pictured.

Explore page 2



earth



mars



jupiter

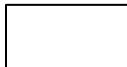
Explain

COMPARING MOONS

PHYSICAL PROPERTIES

LOCATION

MOVEMENT



Elaborate

What To Do:

1. Watch the video Our World: Moons in Our Solar System found at https://www.youtube.com/watch?v=vU5_aYlaXa8
2. Use the Word Bank to fill in the blanks below.

WORD BANK

water craters all bigger diameter
methane telescopes Earth ice moons

1. There are over 300 _____ in our solar system.
2. _____ planets except Mercury and Venus have moons.
3. As astronomers use better _____ and send out space probes they continue to find even more moons.
4. Jupiter's moon Ganymede is _____ than the planet Mercury.
5. Mars's moon, Deimos, is only 12 Km in _____.
6. The surface of Europa is made of _____.
7. There is more water on Europa than on the _____.
8. Jupiter's moon Callisto has many _____.
9. Saturn's moon, Titan, has liquid made of _____ and ethane.
9. Enceladus has huge geysers of _____.

Evaluate

Name _____ period _____

EXIT TICKET

Comparing Moons

1. All moons –

- A. orbit a planet
- B. are dry and rocky
- C. have water
- D. have methane and ethane

2. The planets in our solar system that do not have moons are –

- A. Earth and Mars
- B. Mars and Jupiter
- C. Mercury and Venus
- D. Venus and Mars

3. The planet in our solar system that has only one moon is –

- A. Jupiter
- B. Saturn
- C. Mars
- D. Earth

4. Another movement of moons is –

- A. spinning on an axis
- B. going in and out of the atmosphere of the planet
- C. moving toward the Sun
- D. moving out toward open space

5. Astronomers find moons by –

- A. sending astronauts to take pictures
- B. looking through telescopes and space probes
- C. looking through microscopes
- D. asking aliens what they saw

Labels for Explore Print only 1 of each

Earth

Moon

CUT

Mars

Phobos

Deimos

Jupiter

Io

Europa

Ganymede

Callisto