**Wiser.me Gravity** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

**What is Gravity https://app.wizer.me/preview/FUPUUF**

Who is credited with discovering gravity? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The size of the object has an effect on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Explain why the planets in our solar system orbit the Sun and not Earth?

What causes high and low tides in the Earth’s oceans? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dr. Bionics says that the paper falls slower than the rock because of gravity. This is false! What other force could cause the paper to fall at a slower rate? (this is not directly stated in the video)

What causes a person to be able to jump higher on the Moon than on Earth?

For gravity, the \_\_\_\_\_\_\_\_\_ of the pull depends on the \_\_\_\_\_\_\_\_\_\_ of the objects. Because of \_\_\_\_\_\_\_\_\_\_\_ , the \_\_\_\_\_\_\_\_\_\_\_\_ orbit around the sun and the \_\_\_\_\_\_\_\_\_ orbits around the earth.

( Word choices: size; planets; mass; moon; gravity)

**Mass and Distance**

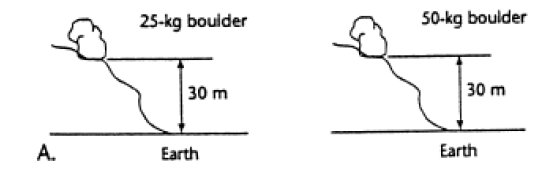
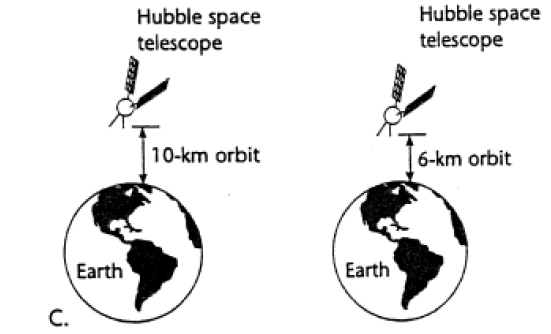
Sketch the pictures and labels below.

Which object would experience the greatest gravitational pull from the Earth and explain why?

Apple Bowling Ball Ping Pong Ball Science Teacher

If you had a bag of taki’s in one hand and a Gatorade in the other hand, how could you increase the gravity between the two objects?

Circle the picture in example A and example C showing the greatest gravitational attraction. Explain why the picture you circled shows more gravitational attraction.

**Planets and Motion (Read the article link!! You do not need to watch the video.)**

Gravity gets \_\_\_\_\_\_\_ for bigger objects, and \_\_\_\_\_\_\_\_ the farther away they are from each other.

What two forces keep the planets in their orbits around the sun? \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Gravity wants to pull everything together. What **force** prevents the Earth from crashing into the Sun? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| Object in Motion |  | The more mass an object has |
| Object at Rest | Stays at motion |
| An object’s resistance to change | Stays at rest |
| The more inertia an object has | Inertia |

**Formation of our solar system**

What force caused all the particles to pull back together after the explosion? \_\_\_\_\_\_\_\_

What is a solar nebula?

What do you think caused the particles stuck together to form planets and moons?

**Orbits**

What is the shape that celestial bodies orbit around other celestial bodies? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How long is one of Earth’s orbits? \_\_\_\_\_\_\_\_\_\_\_\_

**Moons and Tides**

The Earth’s coastlines experience \_\_\_\_\_\_ high tides each day and \_\_\_\_\_\_ low tides each day.

Gravity from which celestial body causes high and low tides? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Explain the position of the Sun, Earth, and Moon during a spring tide.

The moon's \_\_\_\_\_\_\_\_\_\_\_ pull generates something called the \_\_\_\_\_\_\_\_\_\_\_ . On the side of \_\_\_\_\_\_\_\_\_\_\_ that is directly facing the moon, the moon's gravitational pull is the \_\_\_\_\_\_\_\_\_\_\_\_ . The water on that side is pulled strongly in the direction of the \_\_\_\_\_\_\_\_\_\_\_\_. (Word choices: moon; strongest; Earth; tidal force; gravitational)

In the space below sketch a picture of Earth’s tides. Be sure to include the Earth, Moon and Sun.