

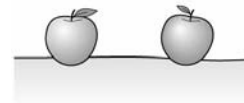
***InterActions* Unit 3 Chapter 2 Sample Quiz**

REMEMBER exams are given for the last chapter in a unit. They are comprehensive. So practice taking the Unit 3 Chapter 1 quiz again along with this practice exam. This practice exam only asks questions about Unit 3 Chapter 2.

Use your Scientists' Consensus Ideas sheets for assistance.

1. The gravitational interaction is caused by
 - a. Earth's magnetic field.
 - b. Earth's rotation
 - c. Earth's atmosphere.
 - d. The interaction between two masses.

2. Two apples are sitting near each other on the ground. There is a gravitational interaction



- a. between the two apples that keeps them apart.
- b. between the two apples that causes them to move toward each other.
- c. between the two apples, but you don't notice it because it is so small.
- d. only between the earth and each apple. The apples do not have a gravitational interaction between them.

3. Earth orbits the Sun because there is a
- a. gravitational pull from the Sun on the Earth. The Earth is pulled toward the Sun, rather than going off in a straight line.
 - b. gravitational pull from the Sun on the Earth. The Sun pulls the Earth in the direction of the Earth's orbital path.
 - c. gravitational push from the Sun on the Earth. The Sun pushes the Earth away so it does not crash into the Sun.
 - d. strong magnetic interaction between the Sun and the Earth. The gravitational interaction between the Sun and the Earth is small.

4. Weight is another word for
- a. the force exerted by a planet on an object
 - b. the mass of an object
 - c. the density of an object
 - d. the interaction between an object and the a planet's rotation.

5. Imagine you throw a ball up in the air. Assume there is no drag interaction. As the ball moves upward there

- a. is a downward force exerted on the ball by the Earth.
- b. is an upward force exerted on the ball by the Earth.
- c. is the upward force from the hand even though are no longer touching.
- d. are no forces acting on the ball.



6. Imagine you throw a ball up in the air. Assume there is no drag interaction. As the ball moves upward
- it speeds up.
 - it slows down.
 - it moves with a constant speed.
 - its speed cannot be described without more information.
7. The variables that affect the gravitational interaction between two objects are:
- masses and directions of motions of the objects
 - masses and speeds of the objects
 - masses and distance between the objects
 - distance between and directions of motions of the objects
 - distance between and speeds of the objects
8. As a space ship of constant mass moves farther away from Earth, the strength of the gravitational interaction between the Earth and the space craft
- increases.
 - decreases
 - stays the same.
 - there is not enough information to answer.

9. A flat sheet of paper is dropped from the top of a building. Assume the force exerted on the paper by the Earth is the same strength as the force from the drag interaction. The paper
- a. slows down.
 - b. speeds up.
 - c. starts slowing to a stop.
 - d. moves at a constant speed.
10. You throw a ball up in the air. Neglect the drag interaction. As the ball is coming down it
- a. slows down.
 - b. speeds up.
 - c. starts slowing to a stop.
 - d. moves at a constant speed.
11. A light year is
- a. the amount of light that strikes Earth in a year .
 - b. the amount of light the sun gives off in a year.
 - c. the distance light travels in a year.

12. You put a block in a tank of water. The density of the block is greater than the density of water. The block will

- a. float .
- b. sink.
- c. Remain where you put it.

13. During class, the teacher stood up on the table and began to sing. What force balances the teacher's weight and prevents the teacher from crashing through the table?

- a. Gravitational force.
- b. Compression force.
- c. Buoyant force.
- d. Friction force.

14. Consider three cubes made of ironwood (a reddish hardwood with density = 1.22 g/cm^3), coal (density = 1.35 g/cm^3), and ebony (a black hardwood with density = 1.10 g/cm^3). In which liquid would all three cubes sink to the bottom?

- a. Corn syrup (density = 1.38 g/cm^3).
- b. Milk (density = 1.03 g/cm^3).
- c. Salt water (density = 1.20 g/cm^3).
- d. Ethyl alcohol (density = 0.79 g/cm^3).

15. Bob places a box of his favorite coins on the middle shelf of his book shelf. How could Bob increase the potential energy of his box of coins?

- a. By putting more coins in the box or moving it to a higher shelf.
- b. By taking coins out of the box or moving it to a higher shelf.
- c. By putting coins in the box or moving it to a lower shelf.
- d. By taking coins out of the box or moving it to a lower shelf

16. What type of object can be described as an icy rocky body found mainly beyond the orbit of Neptune?

- a. Satellite
- b. Meteor
- c. Kuiper Belt Object
- d. Asteroid