

Pupil Textbook • Unit 4

3. As the distance between two objects increases, the force of gravity between them (becomes less, remains the same, becomes greater).
4. Which statement describes man's knowledge of gravity?
 - (a) Both the cause and effect of gravity are well known and understood.
 - (b) The cause of gravity is understood, but its effects have not yet been investigated.
 - (c) The cause of gravity is not known, but its effects are very well understood.
5. Write an answer to the questions God asked Job in Job 38:4,6.
6. In what ways is gravity nothing?
7. What force keeps the planets moving in curved paths around the sun? What would tend to make the planet move in a straight path?
8. Which principle of gravity is involved in each of the following?
 - (a) A 100-pound person on earth would weigh about 17 pounds on the moon and 260 pounds on Jupiter.
 - (b) The earth is slightly flattened at the poles; therefore, a person would weigh slightly more at the North Pole than on the equator.
 - (c) In an effort to keep the leaning tower of Pisa from falling over, an addition was built on the top of it with a heavy staircase on the side opposite the direction of tilt.
 - (d) Before Neptune was even discovered, its location was calculated from the observed irregular orbit of the planet Uranus.

A machine designed to use the force of gravity.



The Force of Gravity

From now on in our discussion of gravity we will think of the earth's gravity. But the principles of the earth's gravity would apply to other heavenly bodies as well. When thinking only of the earth, we could define gravity as the downward pull of the earth. What is down? The direction you point to indicate "down" depends on your location on the earth.