**Review questions:**

3. Work = Fd, so the forces are the same. Using F=ma, 10kg weighs 100N and 5kg weighs 50N.

 100N x 2m = 200j 50N x 4m = 200j

4. W = Fd = 10N x 10m = 100j

6. The two main forms of mechanical energy are **potential energy** (stored energy) and **kinetic energy** (energy of motion)

7. Potential energy stored in an object equals the work done against gravity. So, if you do 100j of work to lift a bucket of water, you have stored 100j of PE in that bucket.

8. When PE is released (e.g. when a boulder is dropped), its potential energy turns into kinetic energy. When a boulder with 200j of PE is dropped, it will have 200j of KE just before it hits the ground.

10. If a bow stores 50j of PE, an arrow shot from the bow will have 50j of kinetic energy (assuming that no energy is lost; i.e., the bow is 100% efficient).

**Think and Explain:**

1. Two reasons a rock will fly farther when a slingshot is stretched an extra distance:

 a. The bands of the slingshot will push the rock with more force.

 b. The bands of the slingshot will push the rock for a longer distance before “letting go.”