# PhyzJob: Newton III Force Pairs

**identifying agents of force**

Draw a diagram of each situation described below. Identify each force acting (in terms of the objects that are interacting). Some might refer to these as “action” and “reaction” forces, but they happen simultaneously. The two forces are considered Newton’s Third Law force pair. Be sure to draw the forces in your diagram.

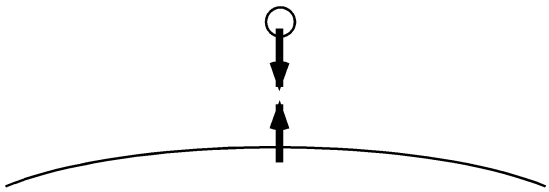
INTERACTION AND FORCES

DIAGRAM

**1. Apple falls to the ground.**

ONE FORCE: *Earth pulls apple down.*

OTHER FORCE: *Apple pulls earth up.*



**2. You walk forward.**

ONE FORCE:

OTHER FORCE:

**3. Thrown ball moves from thrower to catcher (neglect air resistance).**

ONE FORCE:

OTHER FORCE:

**4. Thrown ball is caught by catcher.**

ONE FORCE:

OTHER FORCE:

**5. Book rests on table.**

ONE FORCE:

OTHER FORCE:

**6. Book sliding across table slows to a stop.**

ONE FORCE:

OTHER FORCE:

**7. Sailboat sails forward.**

ONE FORCE:

OTHER FORCE:

**8. Rocket accelerates in space.**

ONE FORCE:

OTHER FORCE:

**9. Bowling ball hits pin.**

ONE FORCE:

OTHER FORCE:

In which case(s) is the “ONE FORCE” greater or lesser than the “OTHER FORCE”? Explain.