

# PhyzJob: Newton III Force Pairs

identifying agents of force



On the back of this sheet, draw a diagram of each situation described below. Identify the force acting (in terms of the objects that are interacting), and the Newton's third law force pair. Be sure to draw the forces in your diagram.

## INTERACTION AND FORCES

1. Apple falls to the ground.

ACTION FORCE: *Earth pulls apple down.*

REACTION FORCE: *Apple pulls earth up.*

2. You walk forward.

ACTION FORCE:

REACTION FORCE:

3. Thrown ball travels through air.

ACTION FORCE:

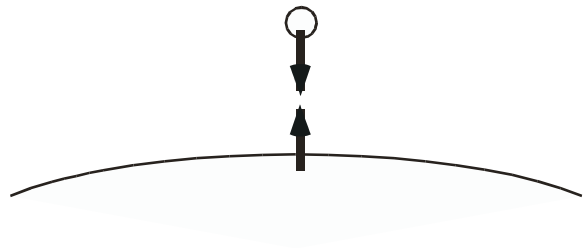
REACTION FORCE:

4. Thrown ball is caught by catcher.

ACTION FORCE:

REACTION FORCE:

## DIAGRAM



5. Book rests on table.

ACTION FORCE:

REACTION FORCE:

6. Book sliding across table slows to a stop.

ACTION FORCE:

REACTION FORCE:

7. Sailboat sails forward.

ACTION FORCE:

REACTION FORCE:

8. Rocket accelerates in space.

ACTION FORCE:

REACTION FORCE:

9. Bowling ball hits pin.

ACTION FORCE:

REACTION FORCE:

In which cases are the forces in the first column greater than those in the second column? Explain.