

Chapter 6- Force is an INTERACTION BETWEEN TWO OBJECTS!
Newton's Third Law

For every force or action, there is an equal but opposite force or reaction.

The action and reaction act on *different objects*.

Action = Reaction

I stand on the ground.
The force which I exert on the ground is equal and opposite in direction to the force which the ground exerts on me

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Many people would say that the force on the cannon ball is greater than the force on the cannon itself.
What observation would make them say that?

How would you explain that they are wrong?

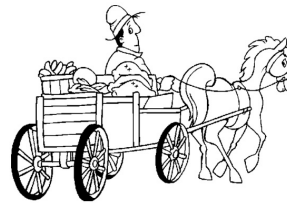
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Explain what you have to do in order to run.
(This may not be as easy as you think!)



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Do action and reaction forces cancel?

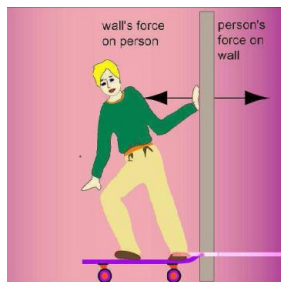
Read page 78.

Read the comic on page 81

Explain.

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While driving down the road, a firefly strikes the windshield of a bus and makes a quite obvious mess in front of the face of the driver. This is a clear case of Newton's third law of motion. The firefly hit the bus and the bus hits the firefly. Which of the two forces is greater: the force on the firefly or the force on the bus?

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P84 # 19

Your weight is the result of the gravitational force of Earth on your body. What is the corresponding reaction force?

20

Consider the two forces acting on a person who stands still, namely the downward pull of gravity and the upward support of the floor. Are these forces equal and opposite? Do they comprise an action-reaction pair?

21

If you walk on a log that is floating in the water, the log moves backward. Why?

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