



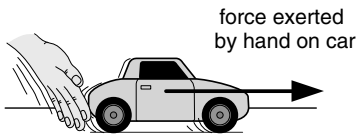
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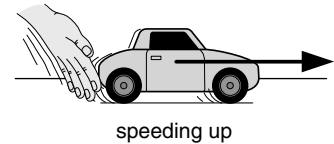
(Unit 3 Chapter 1, Activities 2–8)

**Forces and Motion**



1. A force is a *push* or *pull*, and has both *strength* and *direction*. A force arrow represents this idea. (Activity 2)

2. A constant forward force exerted on an object causes an object to speed up. (Activity 2)



*What evidence supports this idea?*

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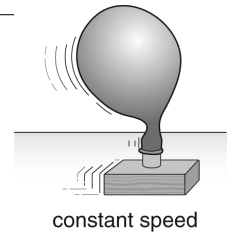


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3. If there are no interactions affecting an object's motion, then the object has constant speed. (Activity 3)



*What evidence supports this idea?*

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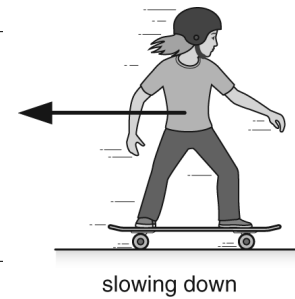


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4. A constant backward force exerted on an object causes an object to slow down. (Activity 4)



*What evidence supports this idea?*

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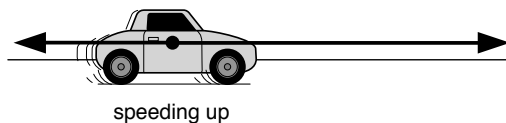


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5. When multiple forces are exerted on an object, if the forces are unbalanced in the direction of motion the object speeds up. (Activity 7)



*What evidence supports this idea?*

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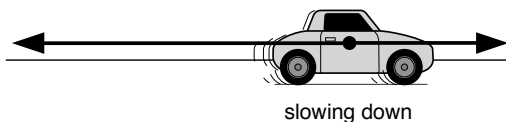


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6. When multiple forces are exerted on an object, if the forces are unbalanced in the direction opposite the motion, the object slows down. (Activity 7)



*What evidence supports this idea?*

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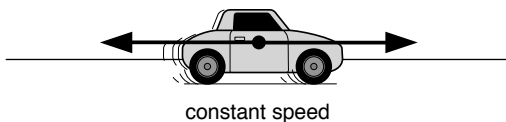


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7. When multiple forces are exerted on an object, if the forces are balanced the object has either zero speed or constant speed. (Activity 7)



*What evidence supports this idea?*

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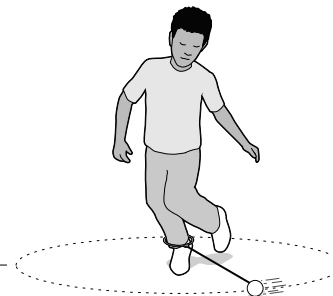
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8. A force can change the direction that an object moves. When a constant inward force is exerted on an object, the object moves in a circle. (Activity 8)

*What evidence supports this idea?*




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**Other Ideas about Forces**

9. Force is not transferred from one object to another. In mechanical interactions (friction, drag, elastic, and applied interactions), objects touch each other while pushing or pulling each other during the interaction. For these four mechanical interactions, forces are applied *only* while the interacting objects are *touching*. (Activity 5)

*What evidence supports this idea?*

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10. During any interaction, energy is transferred from one object to another. (Activity 5)

*What evidence supports this idea?*

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