

PRACTICE

Activity 2: Mechanical Interactions and Motion Energy

Name _____

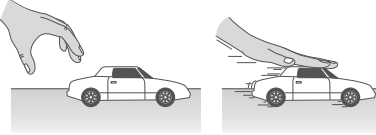
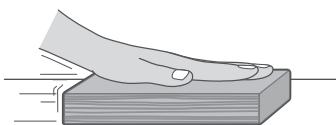

Date _____

Class _____

Part 1



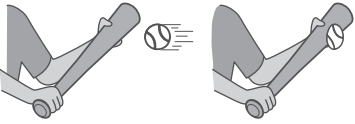
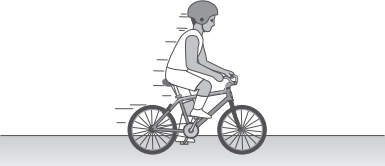
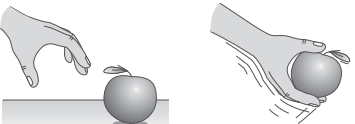
Use *How To Identify Mechanical Interactions* to complete the mechanical interactions chart for the 11 events described below. Refer to the example completed for you.

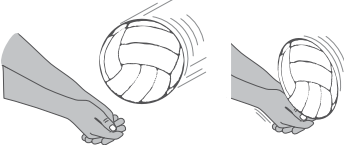
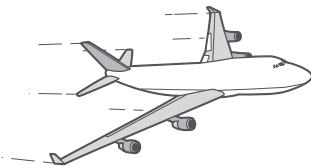
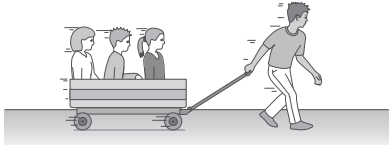

Mechanical Interactions Chart

The Event	What are the interacting objects?	What is the type of mechanical interaction?	What changes in speed occur?	What changes in motion energy occur?
<p><i>Example:</i> A child pushes a toy car that was sitting on the floor.</p> 	<i>Child, car</i>	<i>Applied</i>	<i>The car speeds up from rest when it is pushed.</i>	<i>The car's motion energy increases.</i>
<p>1. A person pushes a book on a table.</p> 				
<p>2. A person lands on a trampoline and slows down.</p> 				

© It's About Time

PRACTICE Activity 2: **Mechanical Interactions and Motion Energy**

The Event	What are the interacting objects?	What is the type of mechanical interaction?	What changes in speed occur?	What changes in motion energy occur?
<p>3. A box of cookies slows down as it slides across the table.</p> 				
<p>4. A kayak slows down after the kayaker stops paddling.</p> 				
<p>5. A bat is used to bunt a baseball.</p> 				
<p>6. A bicyclist stops pedaling and the bike slows down.</p> 				
<p>7. A person tosses an apple to a friend.</p> 				

The Event	What are the interacting objects?	What is the type of mechanical interaction?	What changes in speed occur?	What changes in motion energy occur?
<p>8. A player "bumps" a volleyball.</p> 				
<p>9. A jet zooms through the atmosphere.</p> 				
<p>10. A person pulls a wagon full of friends, making it go faster and faster.</p> 				
<p>11. A slingshot launches a beanbag.</p> 				

12. Not all of the interactions you have learned about in this activity can move you faster. Which one(s) cannot?

Part 2

1. What happens to the shape of a stretchy object when it is no longer interacting with anything?

2. Think of an *applied*, *friction*, *drag*, and *elastic* interaction from your everyday life, and complete the chart as you did for Questions 1-11 (in Part 1).

Describe and/or sketch the interaction	What are the interacting objects?	What is the type of mechanical interaction?	What changes in speed occur?	What changes in motion energy occur?
		<i>Applied</i>		
		<i>Friction</i>		
		<i>Drag</i>		
		<i>Elastic</i>		