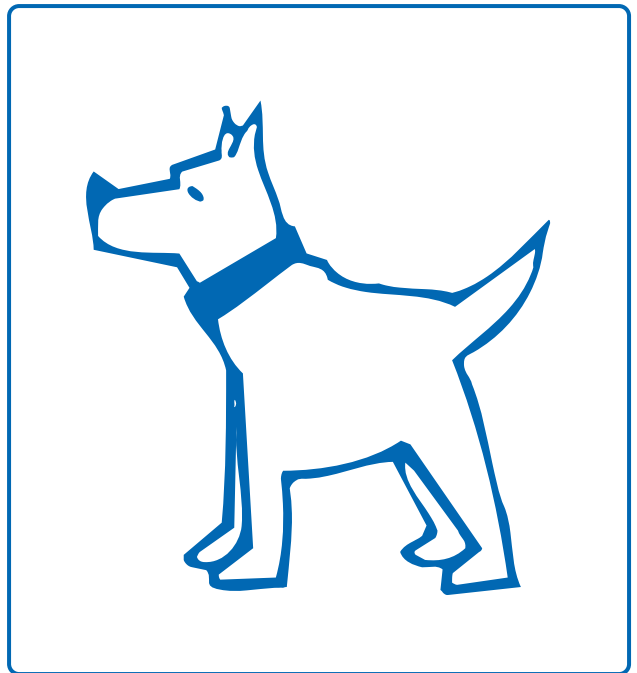
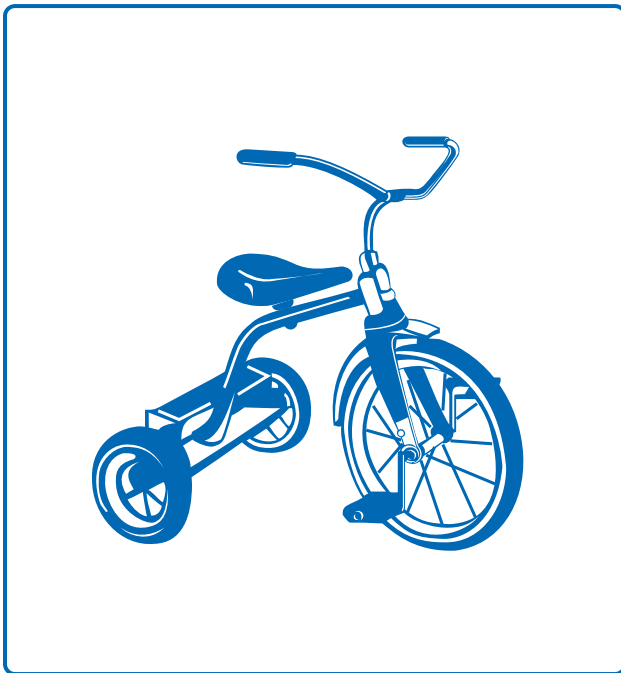
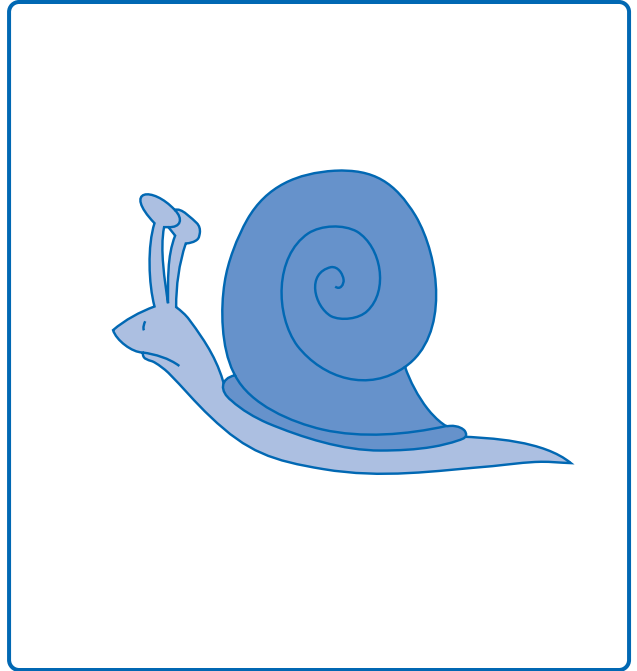
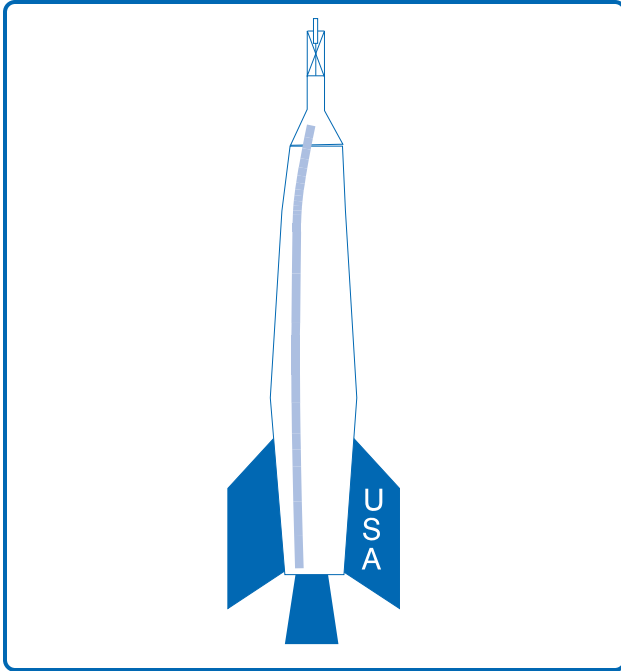


How Things Move

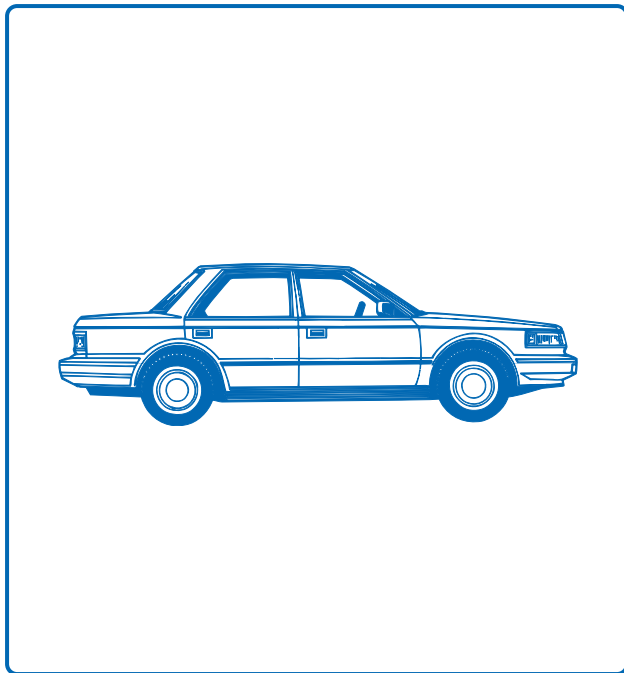
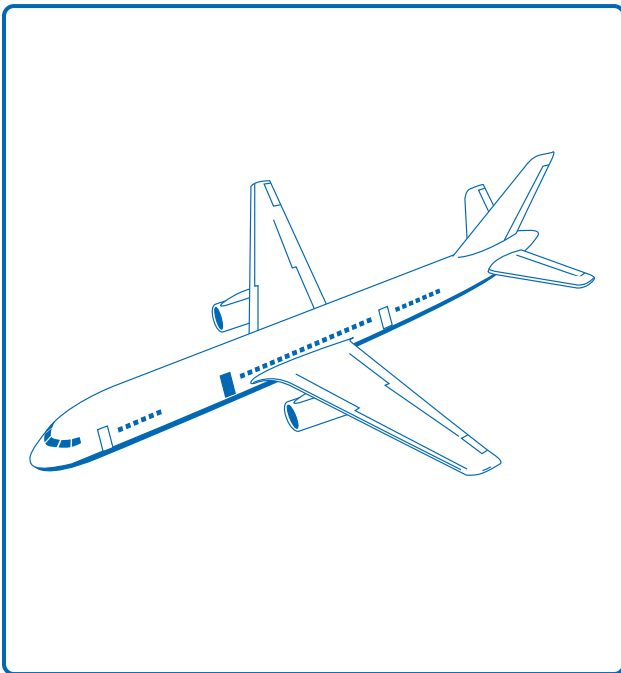
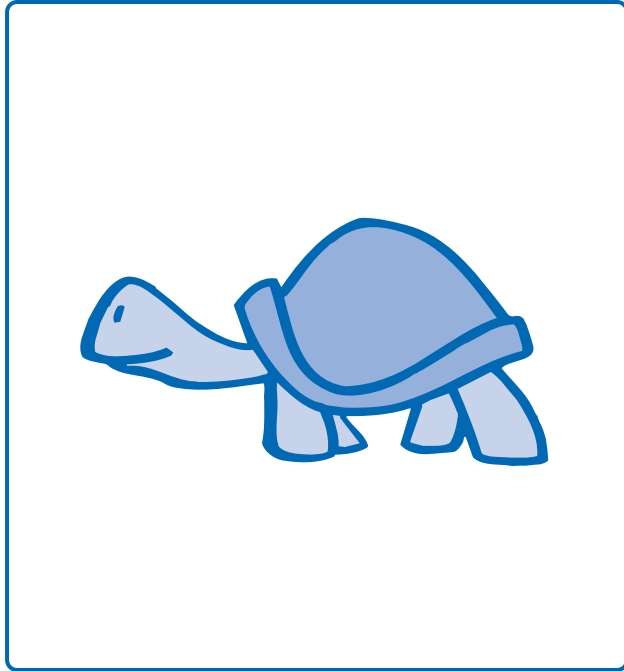
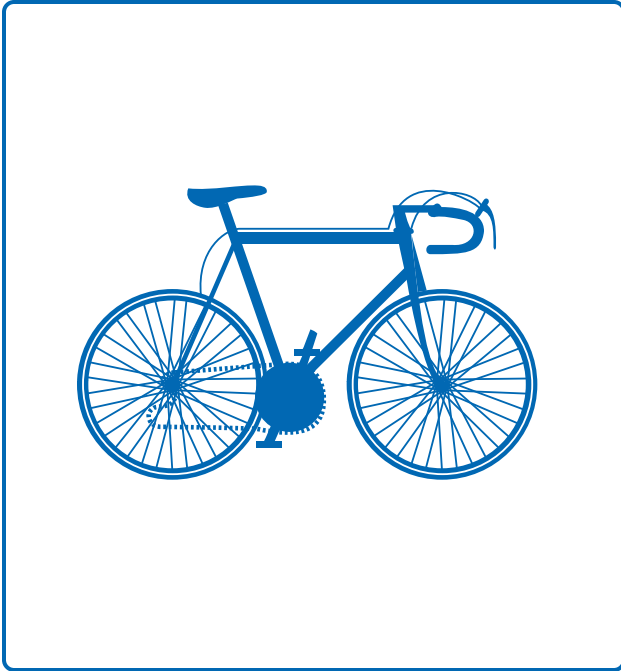
Cut out the four cards.



Name _____

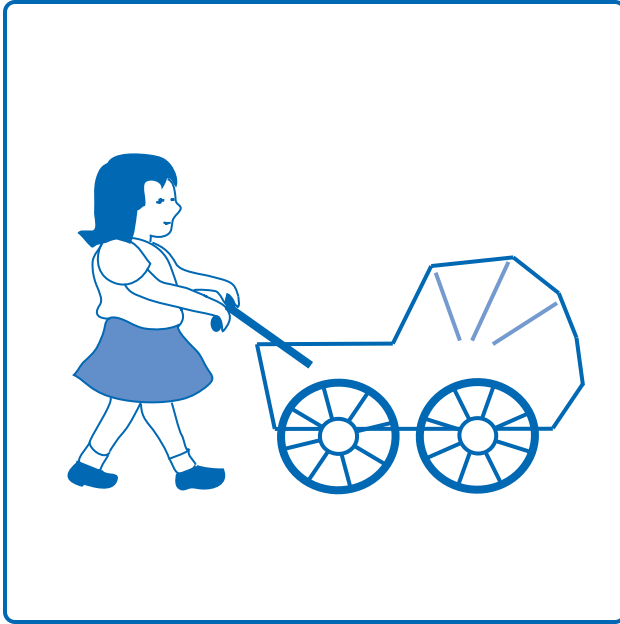
How Things Move

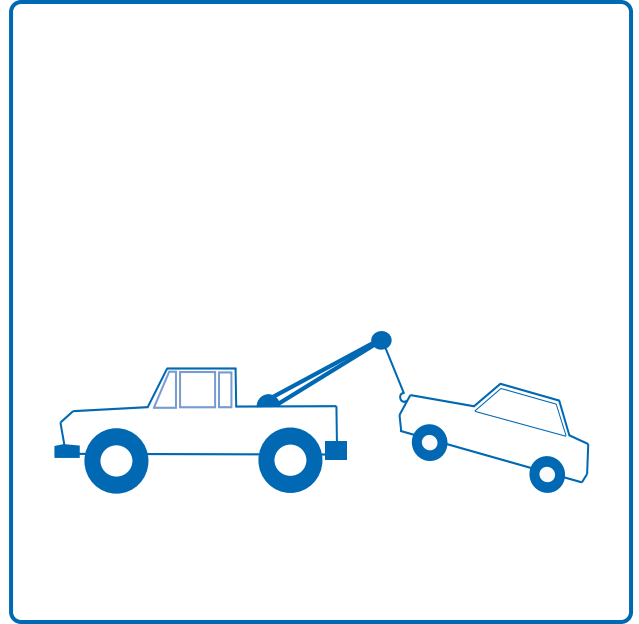
Cut out the four cards.

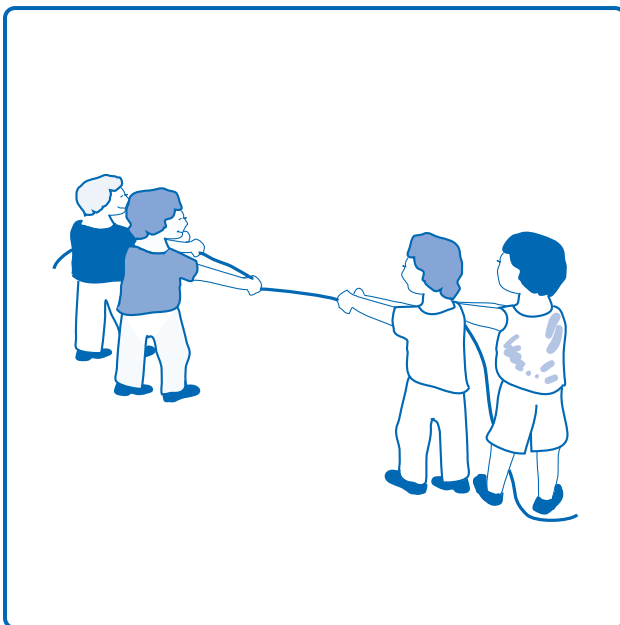


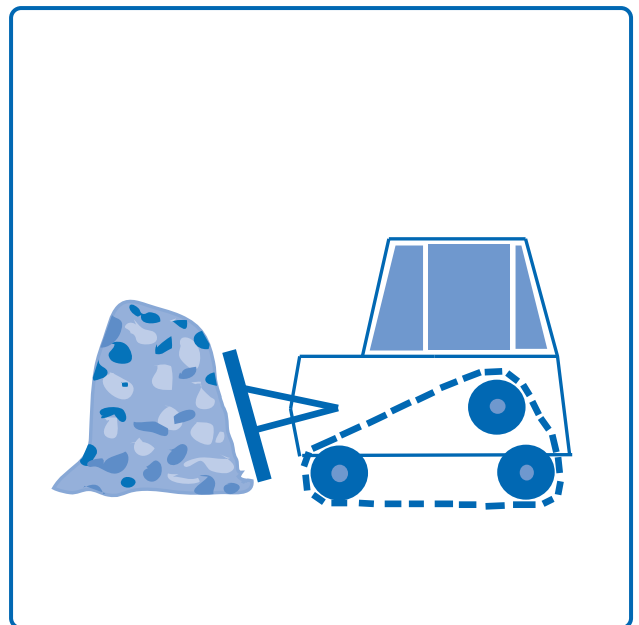
Why Things Move

Look at each picture. If it shows a push, write *push* on the line below the picture. If it shows a pull, write *pull* on the line.



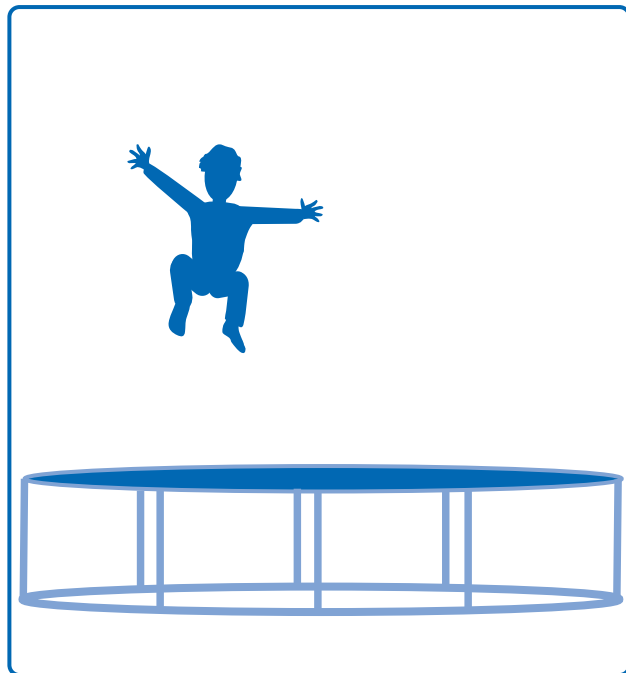
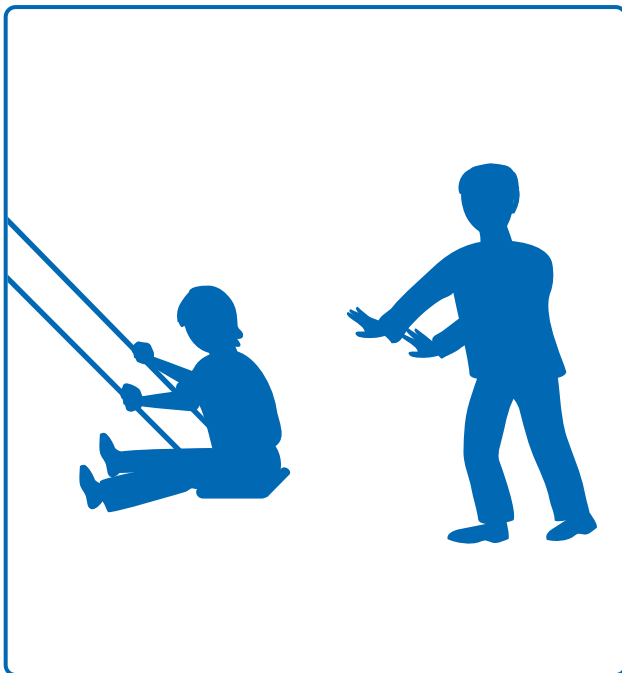
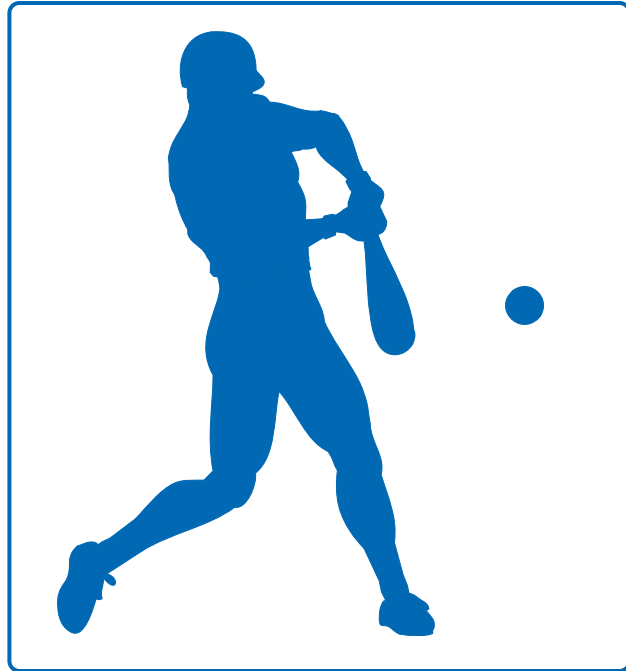






Changing Direction

Look at each picture. Decide which direction the object is moving before the force is applied. Draw an arrow to show that direction. Then decide which direction the object will move after the force is applied. Draw another arrow to show how the object changes direction.



Friction

1. Make a ramp one-book high. Stick the washer stack on the square to be tested. Put it at the top of the ramp. If it does not start to slide, add another book to make the ramp steeper. Keep adding books until the washer stack starts to slide. Write the number of books needed in the data chart. Repeat with the other two squares.

Surface	Number of Books Needed to Make the Washers Slide
Aluminum foil	
Waxed paper	
Sandpaper	

2. Which surface caused the most friction? How do you know?

3. Which surface caused the least friction? How do you know?

Magnets Push and Pull

1. Look at each pair of magnets. Write *push* or *pull* on the line between the magnets to show the force between them.



2. How many paper clips could you hang at the north pole?

3. How many paper clips could you hang at the south pole?

4. How many paper clips could you hang in the middle?

Magnetic Force

1. Where does the magnetic force become too weak to attract the paper clip? Measure the distance between the magnet and the paper clip.

_____ in.

2. Count the number of paper clips that stick to a bare magnet. Then count the number of paper clips that stick to the magnet with each material between the magnet and the paper clips.

Material	Number of paper clips that stick to bare magnet	Number of paper clips that stick to magnet through material
Plastic cup		
Paper		
Waxed paper		
Aluminum foil		
Cloth		
Wood		
Skillet		

Name _____

How Do Sounds Vary?

Object that Made Sound	Description of Sound
comb	
wooden board	
plastic bottle	
rubber bands	
straw	
wooden stick	
paper	
plastic cup	

How Do Sounds Vary?

Describe the sound produced by each box.

1 _____	2 _____	3 _____	4 _____
5 _____	6 _____	7 _____	8 _____
9 _____	10 _____	11 _____	12 _____
13 _____	14 _____	15 _____	16 _____

Which boxes do you think contain the same objects?

Pair A: Box _____ and Box _____

Pair B: Box _____ and Box _____

Pair C: Box _____ and Box _____

Pair D: Box _____ and Box _____

Pair E: Box _____ and Box _____

Pair F: Box _____ and Box _____

Pair G: Box _____ and Box _____

Pair H: Box _____ and Box _____

Good Vibrations

Object	Action	Observed Results
Tuning Fork	Striking against desk and holding it close to ear	I hear: _____ _____
Tuning Fork	Striking against desk and touching palm of hand	I hear: _____ _____
Tuning Fork	Striking against desk and then touching it to surface of water	I see: _____ _____
Vocal Cords	Touching neck with fingers and humming	I hear: _____ _____ I feel: _____ _____
Waxed Paper over a Comb	Blowing a stream of air onto it while humming	I hear: _____ _____ I feel: _____ _____
Strip of Plastic	Blowing it while it is held between thumbs	I hear: _____ _____
Strip of Plastic	Watching it while another student blows on it	I see: _____ _____

Loud or Soft?

Decide whether each picture shows a loud sound or a soft sound. Write *loud* or *soft* on the line.

