Instructions

Read through the information below and answer the questions that follow. Make sure to write your answers clearly in the spaces provided.

Friction

Friction is a force that opposes the movement of objects. It occurs when two surfaces come into contact with each other. Friction can be helpful, such as when you rub your hands together to keep warm, but it can also slow things down, like when you try to slide a book across a table.

Types of Friction

1. **Static Friction:** The friction that keeps objects at rest. For example, a parked car does not roll down a hill because of static friction.
2. **Kinetic Friction:** The friction that acts on moving objects. For example, when you slide a toy car across the floor.

Air Resistance

Air resistance is a type of friction that acts on objects as they move through the air. It opposes the motion and is often felt as a drag. The faster an object moves, the more air resistance it encounters. This is why a parachute slows down a fall—the large surface area creates a lot of air resistance.

Questions

1. What is friction and how can it be both helpful and unhelpful?
2. Explain the difference between static friction and kinetic friction.
3. What role does air resistance play when an object is moving?
4. Can you name a real-life example where friction is helpful and one where it is unhelpful?
5. How does the speed of an object affect air resistance?

Draw and Label

Draw a diagram to show how friction and air resistance affect the movement of an object (e.g., a toy

car and a parachute). Label the forces acting on the objects.