# Visaura

**Engaging Question:** What are the forces that shape our world?

## Key Knowledge

**Types of Forces:**
- **Gravity:** The force that attracts objects towards the center of the Earth.
- **Friction:** The resistance that one surface or object encounters when moving over another.
- **Magnetism:** The force of attraction or repulsion between objects due to their magnetic fields.
- **Electromagnetic Force:** The force between charged particles.

**Effects of Forces:**
- **Motion:** Forces can cause objects to start moving, stop moving, or change direction.
- **Shape:** Forces can change the shape of objects (e.g., stretching, compressing).
- **Energy:** Forces can transfer energy from one object to another.

**Newton's Laws of Motion:**
- **First Law:** An object at rest stays at rest, and an object in motion stays in motion unless acted upon by an external force.
- **Second Law:** The acceleration of an object is directly proportional to the net force acting on it and inversely proportional to its mass.
- **Third Law:** For every action, there is an equal and opposite reaction.

## Learning Activity

**Objective:** Explore the different types of forces and their effects on objects.

**Instructions:**
- **Study** the different types of forces and their effects.
- **Identify** examples of forces in everyday life.
- **Take notes** on how forces affect the motion, shape, and energy of objects.

**Resources Needed:**
- Internet access or library resources
- Notebook and pen

## Challenge

**Challenge Description:** Create a simple machine or a demonstration that illustrates a specific force in action.

**Instructions:**
- **Choose** a type of force to focus on (e.g., gravity, friction, magnetism).
- **Design** a simple machine or demonstration that shows how the force works.
- **Create** the machine or demonstration and explain how it illustrates the chosen force.

**Submission Requirements:**
- Simple machine or demonstration
- Include a brief written explanation (1-2 paragraphs)

**Helpful Tips**
- Use everyday materials to create your machine or demonstration.
- Be clear in explaining how the force is acting on the objects.
- Be creative and think about how to make your demonstration engaging.