Title: Introduction to Motion
Motion is the change in position of an object with respect to time. In physics, we study different types of motion to understand how objects move.
Types of Motion:

1. **Linear Motion**: Objects moving in a straight line
2. **Circular Motion**: Objects moving in a circular path
3. **Oscillatory Motion**: Objects moving back and forth repeatedly

Key Concepts:

- **Distance**: Total path length traveled by an object
- **Displacement**: Shortest distance between initial and final positions
- **Speed**: How fast an object moves (distance/time)
- **Velocity**: Speed with direction
- **Acceleration**: Rate of change of velocity

Newton's First Law of Motion:
An object at rest stays at rest, and an object in motion stays in motion with the same speed and in the same direction unless acted upon by an unbalanced force. This is also called the law of inertia.
Example:
When a car suddenly stops, passengers continue moving forward due to inertia. Seat belts provide the unbalanced force that stops this motion.
Importance:
Understanding motion helps us design vehicles, predict weather patterns, and explore space. It forms the foundation for more advanced physics concepts.