



Introduction (10 minutes)

Welcome to the world of simple machines and mechanisms! In this exciting lesson, we will embark on a journey to explore the incredible inventions that have shaped our world. From the earliest steam engines to the most advanced robots, we will discover how famous inventors have used simple machines and mechanisms to make things move.

What are Simple Machines? (15 minutes)

Simple machines are devices that make work easier by changing the direction or amount of force needed to perform a task. There are six types of simple machines: levers, pulleys, wheels and axles, inclined planes, wedges, and screws. Each type of simple machine has its own unique characteristics and applications.

Historic Engines and Mechanisms (20 minutes)

Group Task:

Research and present information about a famous inventor who used simple machines and mechanisms in their work.

Inventor	Invention	Simple Machine Used
	Page 1 of 4	

The Learning CIRCLE (15 minutes)

The Learning CIRCLE is a framework that guides our lesson, ensuring that students Connect with the topic, Investigate the concepts, Create their own simple machines, Reflect on their learning, and Link their understanding to real-world applications.

Lesson Objectives (10 minutes)

By the end of this lesson, students will be able to:

1. Identify and explain the basic principles of simple machines and mechanisms
2. Describe the contributions of famous inventors to the field of simple machines and mechanisms
3. Design and create their own simple machine using everyday materials
4. Explain how simple machines and mechanisms are used in everyday life

Activities (30 minutes)

Group Task:

Complete the following activities:

1. Simple Machine Scavenger Hunt: Find and identify simple machines in the classroom or school environment.
2. Design a Simple Machine: Design and create a simple machine using everyday materials.
3. Famous Inventor Research: Research and present information about a famous inventor who used simple machines and mechanisms in their work.

[Space for activities]

Assessment (15 minutes)

Assessment will be based on:

1. Observation of student participation and engagement during activities
2. Review of student designs and creations
3. Assessment of student understanding through quizzes and class discussions

Conclusion (10 minutes)

Individual Reflection:

1. What was the most surprising thing you learned today?

2. How will this learning change your actions in the future?

3. What questions do you still have about environmental impact?

Extension Activities (20 minutes)

Group Task:

Complete one of the following extension activities:

1. Building a Bridge with Simple Machines: Design and build a bridge using simple machines and everyday materials.
2. Creating a Rube Goldberg Machine: Design and create a Rube Goldberg machine using simple machines and everyday materials.
3. Designing a Simple Machine for a Disability: Design and create a simple machine that could help someone with a disability.

[Space for extension activities]

Glossary (10 minutes)

Define the following terms:

1. Simple machine: a device that makes work easier by changing the direction or amount of force needed to perform a task
2. Mechanism: a system of parts that work together to achieve a specific task
3. Inventor: a person who creates new devices, machines, or processes
4. Engine: a machine that converts energy into motion

Worksheets (20 minutes)

Group Task:

Complete the following worksheets:

1. Simple Machine Identification: Identify and label the different types of simple machines.
2. Famous Inventor Research: Research and present information about a famous inventor who used simple machines and mechanisms in their work.
3. Simple Machine Design: Design and create a simple machine using everyday materials.

[Space for worksheets]

