# Objective

By the end of this lesson, the student will understand the basic principles of wheels and axles, how they work, and their importance in everyday life. The student will also engage in hands-on activities to reinforce learning and develop critical thinking skills.

## **Materials and Prep**

- Various toy cars or small wheeled objects (like a toy truck, bicycle, etc.)
- Cardboard or thick paper
- Scissors
- Markers or crayons
- Glue or tape
- Ruler
- · Access to a flat surface for rolling objects

Before the lesson, familiarize yourself with basic definitions of wheels and axles, and think about examples of where they are used in everyday life, such as bicycles, cars, or even rolling office chairs.

# Activities

#### • Wheels and Axles Exploration:

Start by examining various toy cars or wheeled objects. Discuss how the wheels and axles are connected and how they help the object move. Let the student roll the toys on a flat surface and observe how the wheels turn.

### • Build Your Own Wheel and Axle:

Using cardboard or thick paper, have the student design and create their own wheel and axle system. They can cut out circles for wheels and create a simple axle using a straw or stick. Encourage them to decorate their wheels with markers or crayons.

### • Race Your Creations:

Once the student has built their wheel and axle system, set up a small race track on a flat surface. Have them test how well their creation rolls and compare it with the toy cars. Discuss what makes one roll better than the other.

### **Talking Points**

- "What do you think happens when we push a toy car? Why does it move?"
- "Can you explain how a wheel and axle work together? Think about how the wheel spins around the axle."
- "Why do you think wheels are so important in our daily lives? Can you name some things that use wheels?"
- "What did you notice about the speed of your creation compared to the toy cars? What do you think makes a difference?"
- "How can we improve our wheel and axle design to make it roll faster or smoother? Let's brainstorm ideas!"