

Objective

By the end of this lesson, you will be able to understand the basic principles of building an electric go cart.

Materials and Prep

- Electric motor
- Battery
- Wheels
- Chassis
- Wires
- Screws
- Screwdriver
- Safety goggles
- Parental supervision

Before starting the lesson, make sure you have a basic understanding of electricity and know how to handle tools safely.

Activities

1. Research and design: Look up different electric go cart designs online and sketch your own design on paper.
2. Assemble the chassis: Use the screws and screwdriver to attach the wheels and motor mount to the chassis.
3. Install the motor: Connect the electric motor to the motor mount using the appropriate wires.
4. Connect the battery: Attach the battery to the motor using wires, ensuring the positive and negative terminals are correctly connected.
5. Test and troubleshoot: Turn on the electric go cart and see if it moves. If not, troubleshoot any issues and make necessary adjustments.

Fourth Grade Talking Points

- "Electricity is the flow of tiny particles called electrons. It can power machines like our go cart."
- "The electric motor converts electrical energy into mechanical energy, which makes the wheels turn."
- "The battery stores electrical energy and provides power to the motor."
- "Safety goggles are important to protect our eyes while working with tools and electricity."
- "Always ask for parental supervision when working with tools and electricity to stay safe."