Objective

By the end of this lesson, Andrea will understand the basic components and mechanics of a remote control car, as well as how to operate it safely and effectively. She will also learn about the principles of motion and control in relation to remote vehicles.

Materials and Prep

- One remote control car
- Open outdoor space or a large indoor area free of obstacles
- Safety goggles (optional but recommended)
- Notebook and pen for observations

Before the lesson, ensure that the remote control car is fully charged and operational. Familiarize yourself with its controls and features to guide Andrea effectively. It may also be helpful to have an area marked out for the activities.

Activities

- **Introduction to Remote Control Cars**

  Start with a brief discussion about what a remote control car is and how it works. Show Andrea the different parts of the car, such as the wheels, motor, and remote control, explaining their functions.

- **Obstacle Course Challenge**

  Set up a simple obstacle course using cones, boxes, or other safe items. Have Andrea navigate the remote control car through the course, focusing on steering and control. This will help her practice fine motor skills and learn how to maneuver the car effectively.

- **Speed and Distance Measurement**

  Using a stopwatch, have Andrea race the car over a set distance. Measure the time it takes to complete the distance and discuss how speed is calculated. This activity introduces basic concepts of physics and measurement.

- **Creative Design Challenge**

  Encourage Andrea to think about how she might improve or customize her remote control car. She can sketch out ideas for modifications or enhancements, fostering creativity and problem-solving skills.

Talking Points

- "A remote control car operates using a transmitter and a receiver. The transmitter is what you hold, and it sends signals to the car to control its movements."
- "When we drive the car, we are using our hand-eye coordination to navigate it through obstacles. This is similar to how we learn to ride a bike!"
- "Speed is calculated by the distance traveled divided by the time it takes to travel that distance. Let's see how fast your car can go!"
- "What modifications do you think could make your car go faster or handle better? This is a great way to think like an engineer!"