

Core Skills Analysis

Science

- The 11-year-old student learned about physics principles such as velocity and acceleration while observing the motion of the RC car through the obstacle course.
- They gained insight into the concept of energy transfer as they witnessed how the car's battery powered its movement through the different obstacles.
- By experimenting with different angles and heights of the obstacles, the student grasped the basics of potential and kinetic energy conversion.
- Through trial and error, the student understood the importance of friction and its impact on the speed and stability of the RC car.

Tips

To further enhance learning from building the RC obstacle course, encourage the student to explore aerodynamics by designing obstacles that require the car to overcome air resistance. Additionally, introduce the concept of circuitry by incorporating sensors or remote control modifications to the course for a more interactive experience. Finally, encourage the student to document their process and findings in a science journal to track progress and spark new ideas for future projects.

Book Recommendations

- [The Big Book of Makerspace Projects: Inspiring Makers to Experiment, Create, and Learn](#) by Colleen Graves: This book provides a range of creative projects that inspire young makers to experiment and learn through hands-on activities, perfect for further exploring building RC obstacle courses.
- [Howtoons: Tools of Mass Construction](#) by Nick Dragotta, Saul Griffith, Ingrid Dragotta, Joost Bensen: A graphic novel that combines instructions on creating real projects with engaging storytelling, making it an ideal read for young builders interested in constructing obstacle courses and learning related concepts.
- [Cool Cars and Trucks](#) by Sean Kenney: Featuring step-by-step instructions for building various vehicles using LEGO bricks, this book sparks creativity and imagination while aligning with the theme of building RC obstacle courses.