

Introduction

This small device demonstrates movement in a low friction environment, allowing greater intuitive understanding of Newton's laws.

Running the activity

Make the speeder devices as a class activity, using spare CD ROMs brought into school by pupils. There are often spare ones given away for publicity, which are now surplus to requirements, or badly damaged CDs that no longer play.

Safety

Not applicable.

More ideas

Pupils enjoy decorating their personal speeder. Brainstorm possible investigations which pupils could use the speeders for, as a prediction and planning activity.

Learning outcomes

Factors affecting friction, balanced forces and air resistance.

Where the activity fits in

Speed, friction and balanced forces
QCA Unit 9K

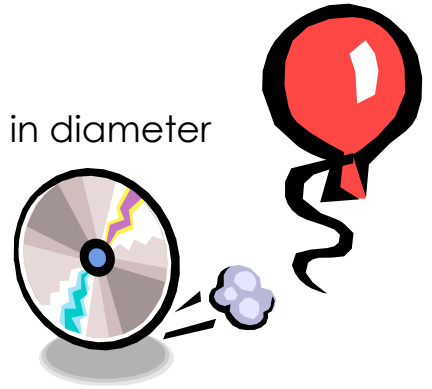
Skills

Vocabulary, numeracy.

Luke Skywalker's Space Speeder

What you need

- An old or damaged CD
- A cork with one hole in the middle about 15mm in diameter
- A normal balloon
- Glue



To make your speeder

- Glue the cork onto the CD. The hole in the cork should be over the hole on the CD.
- Let the glue dry.
- Blow up the balloon and hold the neck tightly. Put the blown up balloon over the cork, without letting the air out.
- Put the CD face down on a smooth surface, like a tabletop.
- Let the your speeder go.

Some questions to think about

1. Explain how the speeder works.
2. Why is this an example of low friction movement?
3. What happens if you push your speeder gently?
4. What happens if you stop pushing your speeder?
5. One example of high friction movement is pushing a toy car on a carpet. How is the movement of your speeder different?