Spark Science Lesson: How to Build a Rocket?

ENGINEERING&TECHNOLOGY

Get ready

Prepare the materials that will be needed to test the rockets (see instruction photos)
1. Heat the cork in a microwave for approximately 1 minute so that it expands. Alternately, wrap apply several layers of grey adhesive tape around the cork. The cork must be made bigger so that it can get inside the mineral water bottle and remain stuck in the bottle neck.
2. Drill an 8 mm thick hole in the cork vertically with a drill.
3. Insert a valve into the cork.
4. Insert pump needle adaptor into valve
(See what rocket testing looks like: https://www.youtube.com/watch?v=Vskl8qGrY7g)

Part of the class, i.e. rocket firing, will take place outside.

GET GOING

Experiment: Inflated but untied balloon released into the air

- [ ] a balloon - at least one for each group

Constructing: The students construct a model rocket

Materials – for one team (to prepare 1 rocket)

- [ ] a 1.5 l plastic bottle (e.g. a mineral water bottle)
- [ ] a tennis bowl
- [ ] foam from, e.g., a foam mat
- [ ] construction paper
- [ ] colored paper
- [ ] sticky tape
- [ ] scissors
- [ ] marker

Experiment: An aerodynamic test

- [ ] a pedestal fan
- [ ] a rubber band
- [ ] string

Presenting results: See whether your rocket shoots up into the air!

- [ ] air hand pump
- [ ] a valve
- [ ] a cork from a bottle
- [ ] a funnel
- [ ] water – approx. 1.5 l

- [ ] the model of a rocket prepared in class