

## **Balloon Cars**

### ***Consumables***

Thick cardboard (from old cardboard boxes)

Straws

Kebab sticks

Wheels (cotton reels, polystyrene balls, plastic cups, bottle tops etc)

Cotton wool

Sellotape

Balloons

Rubber bands

Paper

### ***Equipment***

Pencils

Scissors

### ***The activity***

Teams (of 3-4 students) are told to design and build a car using only the equipment and materials given. At the end of the activity the balloon cars will be raced: the winner will be the car that goes furthest in a forwards direction. (This works best on a smooth surface rather than on a carpet – if the room's carpeted try pushing desks together to form a racetrack.) The car must be powered by a balloon and go from a standing start (it can't be pushed!). Tell them to think about what materials they choose, what factors they have to consider (power, mass, friction) etc. Before the race each team should present their car and explain why they chose their particular design (1 minute max.). You can have repeat races, vote on which car people think will win, discuss why the winning car was the best.

This can be linked to the apprentices' project of building a go-kart: the materials and power system are very different, but the factors that need to be considered are very similar.