Self-propelled car

Did you know?

Inventors and engineers are often inspired by everyday concepts and objects. The Wright brothers started thinking about flying machines when they saw a toy helicopter powered by an elastic band. Now, engineers are developing and testing different ways to power all the machines we use.

Science scene-setter

Everyday household objects can be great stores of energy. The energy from a stretched rubber band is converted to kinetic energy as the rubber band returns to its original size and shape. Stretched balloons also store energy – which is released when the air rushes out of the neck of the balloon.

Put it to the test

Using objects you find in the recycling bin, bedrooms or kitchen drawer, ask your child(ren) to build their very own self-propelled vehicle.

Make sure the junk is unbreakable and doesn't have any sharp edges – we don't want anyone to suffer any design injuries.

7-11

Energise Anything!

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Key activity steps

1 Research

Watch our animation Generations of power: eonenergy.com/primaryathome

- Think about the objects you have at home. Gather together parts for the car
- Decide with your child(ren) whether you're going to give an existing toy a new engine (Lego cars work well) or build a vehicle from scratch
- Search on the internet for inspiration of designs other people have created for self-propelled cars.

2 Design

Challenge your children to design and build their own self-propelled vehicle. For building from scratch, they'll need:

- Wheels
- Axles – anything long and thin should work
- Axle holders – axles need a tube-like structure to hold them in place while allowing them to move freely. Make sure the car can roll along happily before adding any propulsion
- Vehicle body – the vehicle needs a sturdy frame or solid structure to attach the axle holders and engine to
- Now for the fun bit, propulsion – elastic bands, fans or balloons are all tried and tested methods of propelling self-built cars.

3 Test

Put the vehicle to the test.

- How well does it work?
- How can it be made better?
- They shouldn't worry if the car doesn't work first time. Science and engineering is all about trying out a theory – then testing and improving until you've got it right.

Equipment and resources

- ☑ Elastic bands, fan, balloon (propulsion)
- ☑ Cotton reels, bottle lids or CDs (wheels)
- ☑ Pencils, sticks or straws (axles)
- ☑ Straws or tubes (axle holder)
- ☑ Lids, tubs, boxes, lolly sticks, plastic drink bottles (vehicle body)
- ☑ Other items: plasticine, matchsticks, paperclips, cardboard, glue or sellotape, scissors

E.ON's Energise Anything has already engaged over 25,000 young people. We asked some of their teachers to describe it in three words. Here's what they said most often!