

How to check your levels

Look under the bonnet and learn one of the basics of car maintenance: checking the radiator coolant

Suitable for Scouts

You will need

- access to water
- radiator coolant
- funnel
- cloth
- access to a car (with the correct manual)

Safety first

Before completing this activity make sure you have suitable personal protective equipment (PPE). This could include eye or ear protection, gloves, and anything else you need to protect yourself. You'll know what you need as a result of completing a risk assessment.

Chemicals

This task involves the use of potentially harmful fluids or chemicals. Make sure you follow all relevant safety guidance. Make sure you dispose of them appropriately too, in line with safety guidance.

Before you start

Make sure the engine's fully cooled. The vehicle should be parked on flat, stable ground with the parking brake applied. All vehicles will be different so always follow the manufacturer's guidelines.

Time needed
40 minutes

Badge



The British Army sponsors the Scout Mechanic Activity Badge

Partner



Outcomes

Young people will learn a useful life skill that will empower them to tackle the basics of car maintenance and could inspire them about a career in mechanics.

More information

For more badge resources and activities go to scouts.org.uk/supporters/the-british-army.





Instructions

1 Have a discussion with the young people about what radiator coolant is. Does anyone already know? Use the information on this page to explain why it's important.

2 Open the bonnet by releasing it from inside the car, then finding the second release catch underneath the bonnet. Once it's open, make sure it's locked in the open position – secure it with the bonnet strut if the vehicle has one.

3 Most vehicles have a coolant expansion tank with 'minimum' and 'maximum' lines. Look for this tank, and check the level of coolant using the lines as a guide.

4 If the coolant needs topping up, remove the cap and add coolant using a funnel. Try not to spill any – if you do, wipe it up straight away using the cloth, as it's poisonous to plants and animals and can corrode or damage paintwork and other vehicle parts.

5 After the activity, have a discussion about why it's useful to know the basics of vehicle maintenance. It helps keep people safe and can save you money. It's better for the environment to look after vehicles as it can make them more efficient and use fewer resources.



Keep your cool

Engines burn fuel at high temperatures, creating lots of heat. The radiator and cooling system cool the engine down – the coolant absorbs the heat and moves it away from the engine. It's important to keep the radiator topped up with coolant.

How does it work?

Coolant is a mix of water and anti-freeze. When a liquid freezes, the molecules bond together and can't flow around. It's important to stop the coolant from freezing for two reasons:

1 It needs to flow freely to move the heat away from the engine.

2 Liquids expand when they freeze – if the coolant expanded it could damage the engine and cooling system.

