

# WORMS' WORLD

They have no face, eyes or ears and live underground, and yet earthworms are crucial to the environment

**W**hy do earthworms live underground?

Earthworms don't have eyes; they sense light through their skin and their sensors tell them when they are getting too close to a bright light like the sun. They breathe through their skin, so they try to stay out of the sun as it can dry them out and make it difficult to breathe. If an earthworm spends too long in the sun it will die, which is why

they live in the ground.

A worm's job is to recycle soil, which they do by stirring up earth through digging tunnels. They also improve soil by eating dead matter and turning it into worm poo (yes, really), which actually makes great compost for plants. To see worms in action, your section can build their own wormery (we'll tell you how on the next page), but first they'll need to find some worms...



## TOP 5 WAYS TO FIND WORMS

**HUNTING** Worms live in darkness, so try looking under stones or dead wood.

**SOAKING** Use a watering can to soak an area of ground and then cover it with a sheet of black plastic (or old carpet) for 30 minutes to encourage worms to come to the surface.

**TWANGING** Put a garden fork into an area of grass and rock it backwards and forwards for 15 minutes.

The worms sense the vibrations and come to the surface to escape the predator they think is near.

**DIGGING** Dig over a small patch of earth and unearth some worms. The deeper you dig, the more varieties of earthworm you will find.

**SPYING** Worms come out at night to eat organic matter from the ground so take a torch and a trowel, move some earth around and lie in wait. Have a red bulb in your torch - white light will keep worms away but they can't sense red light.

## KNOW YOUR WORMS

**BRANDLING WORM** - The easiest kind to find, this earthworm has a distinctive stripy appearance - it's also known as the tiger worm. They are happiest when feasting on a heap of rotting vegetable peel and can be found in the compost bin.

**NIGHT CRAWLER** - Lighter in colour than the brandling worm, this shy garden worm likes to hide deep underground. Can be found on warm, wet nights on lawns when they come up for food.

**BLACK-HEAD** - Have you ever noticed fine squiggles of what looks like soil in your garden? They are in fact worm casts (that's worm poo!) left by our friend the black-head worm. These worms are easily identified because one of their ends is darker than the other.



## ACTIVITY

# Build a wormery

Create an artificial home for worms and watch these amazing digging machines at work

### SUITABLE FOR BEAVERS, CUBS AND SCOUTS

### YOU WILL NEED

- 2-litre plastic soft drink bottle
- Scissors
- Damp soil or compost
- Sand
- Dead leaves or vegetable peelings
- About 10 earthworms (allow an hour to find these)

### INSTRUCTIONS

**1** Get your section to take it in turns to do the following tasks so that they are all involved in making the wormery.

**2** Use scissors to carefully cut off the top of the bottle, then fill it with alternate layers of damp soil and sand – the soil layers should be about 3cm deep and the sand layers about ½cm.

**3** Put a layer of leaves (broken into small pieces), potato peelings and/or grass clippings on the surface.

**4** Put the earthworms on top and replace the top of the bottle without the cap.

**5** Put the wormery in a dark, cold place. Wrap the bottle in thick black card to make sure no light gets in.

**6** Check the wormery every few days and keep the soil on the top damp. After 4 or 5 days, lift it out to see what has happened.

**7** Cubs can record the changes by taking photographs or filling in the record sheet available at [scouts.org.uk/rollroyce](http://scouts.org.uk/rollroyce). After 3–4 weeks it is time to let the worms go and release them where they were found.

## ShAre.

Send us your wormery photos. Turn to page 3 for details

### TIME NEEDED

30 minutes

### BADGE



Rolls-Royce partners the Cub Scientist Activity Badge

### PARTNER



Rolls-Royce

### OUTCOMES

In their wormery, Cubs should see how the worms tunnel through the earth, mixing up the layers and increasing the amount of air, water and nutrients in the soil.

### TAKING IT FURTHER

Could your Cubs live like a worm in total darkness? Try wearing a blindfold for 5 minutes to find out! Or why not try indoor caving?

### MORE INFORMATION

Rolls-Royce partners the Cub Scout Scientist Activity Badge to inspire young people about science, technology, engineering and maths. Fun and educational activities like this aim to take the fear out of science for Cub Leaders and support Cubs in achieving their Scientist Activity Badge. See: [scouts.org.uk/rollroyce](http://scouts.org.uk/rollroyce).

## WOGGLEBOX

### James says

'I liked getting dirty with the soil, sand and worms of course! I kept the wormery watered and liked the patterns the worms made through the soil.'

