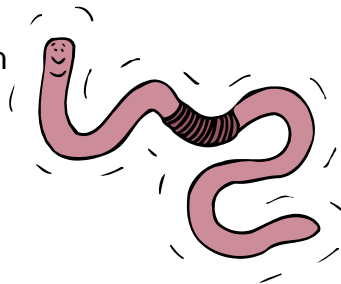


Earthworms 1

God is Creator

- In the beginning, God created the heavens and the **earth**, (Genesis 1:1). God made a very special little creature to look after the soil.
- The earthworm turns useless material into good soil that can be used by plants. God creates plant food through the earthworm.
- When God created the world He said that it was **good**. (Genesis 1:31)
- God has created everything for a purpose, even the earthworm.
- An earthworm is only a small creature but is it very important. All of God's creatures play a vital role in the balance of nature.
- God has made sure that there will always be plenty of earthworms. God also made each earthworm to be both male and female. More baby worms are born that way. Their job is so important that we need them all!

- How do earthworms help plants?
- What are some plant foods that an earthworm might eat?
- How does God ensure that many baby earthworms are born?



Earthworms 2

How earthworms help us

Worms that live in the ground are some of our most useful helpers. You know how important it is to loosen-up the soil before planting? Earthworms help us by loosening up the soil for us.

First the earthworm burrows down into the soil, and then he eats large quantities of it. He eats pieces of decaying leaves and plant material that are useful to him as food. The soil and decaying matter pass through the earthworm and comes out as fine crumbly material called 'castings'.

When an earthworm burrows into the earth making little tunnels, the earth walls don't cave in. This is because the earthworm has special glands that give off a special cement. As he chews his way through the soil the cement sticks to the walls of his tunnel. An earthworm can dig and gobble two and a half metres in four days! The tunnels important to plants because air can get into the roots, gases can escape from the soil and rainwater can drain away.

1. What very important job does the earthworm do for us?
2. How does an earthworm loosen up the soil?
3. Draw and name some of the decaying (dying) matter in the soil that would be good food for an earthworm. Think of a compost heap.
4. How does the soil look when it comes out of the earthworm?



Earthworms 3

How an earthworm moves

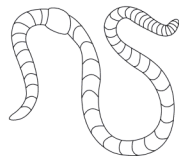
An earthworm can be reddish brown or grey. The job of the red earthworm is to bring good soil to the top of the ground. The job of the grey earthworm is to release his soil underground.

Let's look at the earthworm. He is a moist slippery tube, without legs, feet, eyes, ears, feelers or wings. He can sense vibrations in the earth. At night when he comes out looking for food, he will quickly disappear into his burrow again at the feeling of an approaching footstep.

The wetness of his skin moistens the earth around him and makes it easier to work through. He also has rows of tiny bristles covering the length of his entire body. He can draw in or project these bristles whenever he wants to. When they are out, he can grip the soil firmly, and when they are in he can slide forward easily.

His body is made up of hundreds of rings, which he stretches and then contracts (drawn in) as a means of moving around. If you watch an earthworm move along you will see him stretching himself out long and thin, then drawing himself up short and fat.

1. What amazing thing can an earthworm do even though he has no eyes, ears, feelers or wings?
2. How does an earthworm's wet skin help him in his job?
3. What can an earthworm do when his bristles are out?
4. What do the rings help the earthworm to do?
5. Draw an earthworm with his rings stretched out.
6. Draw an earthworm with his rings contracted (drawn in).



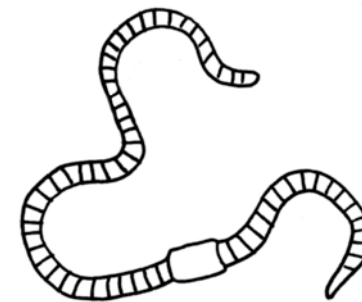
Earthworms 4

Earthworm babies

An earthworm has a bulging part called a girdle. This is where the eggs are laid. When the eggs are laid the girdle is cast off and left in the earth. It is sealed at both ends so that the eggs are safe. This is now called an egg cocoon. Usually only one of the eggs hatches out into a baby worm. It stays inside the cocoon for a while, and then when it is ready it wriggles out into the open soil.

Earthworms have five hearts. These are found in sections 7 to 11 of its 16 sections. Please treat earthworms carefully, because God has asked us to be caretakers of his wonderful creation.

1. What is the girdle used for?
2. Draw an earthworm showing the girdle. Label it.
3. What does the girdle become when the worm casts it off?
4. How many babies will usually hatch from a cocoon?
5. Why should we treat earthworms with respect?



Earthworms 5

Earthworm questions

Work with a partner and ask each other these riddles.

1. What animal is both male and female, has five hearts, and enjoys being buried alive?

Answer: an earthworm

2. Where would you find an earthworm's hearts?

Answer: in the middle (sections 7, 8,9,10, 11)

3. If an earthworm weighs 2 grams and eats as much food as his own weight in a day, how much would he eat in a week?

Answer: 14 grams

4. Name three things an earthworm would eat:

Answers: dead grass, dead leaves, soil, dead flower petals

5. Why did God make each earthworm to be both male and female?

Answer: More baby worms are born that way. Their job is so important that we need them all!

6. When an earthworm burrows into the earth making little tunnels, why don't the earth walls cave in?

Answer: The earthworm has special glands that give off a special cement. As he chews his way through the soil the cement sticks to the walls of his tunnel.

Earthworms 6

Earthworm questions

1. How far can an earthworm dig and gobble in four days?

Answer: two and a half metres

2. Why are the tunnels important to plants?

Answer: air can get into the roots, gases can escape from the soil and rainwater can drain away.

3. What are the two colours that earthworms can be?

Answer: reddish brown or grey

4. What is the job of the red earthworm?

Answer: to bring good soil to the top of the ground.

5. What is the job of the grey earthworm?

Answer: To release his soil underground.

6. Where would you find a lot of worms together?

Answer: In a compost heap or where there is lots of dead plant material

