# Danny's Little Worm is an Earthworm!



Earthworms are the gardener's friend. Earthworms live in **burrows** under the soil. As they travel through the earth, they create tunnels that allow air and water to move more easily underground. Earthworms pull decaying leaves and plant parts into their burrows to eat them. Their food travels through their long soft bodies and comes out as droppings called worm **castings**. An earthworm's castings are very nutritious for growing plants.

Earthworms have a head with a mouth, but they don't have eyes, ears, or a nose. An earthworm's body is made up of many rings called **segments**. The segments have tiny bristles that help the worm travel through the soil. At the end of their body, they have a tail. That is where the castings come out. Earthworms have a larger ring toward their head, called a **saddle**. The saddle is used for having baby worms.

## Go on a Worm Hunt

Earthworms can be found across the United States in areas that have damp, but not swampy, earth. Nightcrawlers, a type of earthworm, are often used by fishermen as bait to catch fish. Fishermen catch the worms when the nightcrawlers come out of their burrows in the evening to hunt for food. You can find a nightcrawler's burrow during spring and summer mornings by looking for a hole with castings around it in shady, damp earth. If you dig around that hole, you can find the worm.

It is also easy to find earthworms after a heavy rain. Worms breathe through their soft, damp skin. When rainwater fills up the worm's burrow, worms will surface to avoid drowning. Look on sidewalks and driveways for washed-out worms after a good rain.

## When you catch a worm:

- 1. Put the worm in a clean jar that is at least six inches tall. Put four inches of soil into the jar for the worm to live in.
- 2. Keep the jar away from direct sunlight. The sunshine will dry out the soil and the worm.
- Cover the outside of the jar with dark paper and keep the soil damp, but not too wet. The jar does not need a lid.
- 4. Put a few old leaves with some lettuce leaves in the jar to feed the worm.
- 5. After a few days, remove the dark paper to look for tunnels along the glass.
- 6. After you are done observing the worm, return it to where you found it. It has a lot of important work to do!



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## Make an Earthworm Print

Materials: one sponge, scissors, red or pink paint, paper or plastic plate, paper, pen or pencil

- 1. Cut the sponge in half. Set aside one of these pieces. It will be used to make the saddle.
- 2. Take the other half and cut that piece in half again. Set aside one of these pieces. It will be used to make the segments. Take the last of the small halves and cut two corners off to create a half moon shape. This piece will be used to make both the head and the tail.
- 3. Spread some paint onto a paper or washable plastic plate and spread it around a little.
- 4. Begin printing by taking the small head piece and dipping it into the paint. Wipe it around a little to make sure the entire bottom has paint on it. Then gently press the head-shaped sponge onto the paper.
- 5. Do the same to make the segments, saddle, more segments, and then the tail.
- 6. When the paint dries, add bristles and label the painting.



## Make Your Own Paint

Materials: salt, flour, water, clean plastic cups, food coloring, craft stick or plastic knife, zip top bag

- 1. In a bowl, mix together 1/2 cup salt and 1/2 cup flour.
- 2. Add 3/4 cup warm water and stir well.
- 3. Divide paint mixture equally into three to five repurposed cups.
- 4. Add three to four drops of food coloring to each cup to make different colors of paint. Try mixing new colors by adding two or more colors together. Stir with a craft stick or plastic knife.
- 5. Store in a zip top bag.
- 6. Homemade paint is a little puffier and jelly-like than store bought paint, but it's still fun!



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## April showers bring May flowers...

Everything about a flower is meant to be attractive. A flower's color, shape, scent and the nectar inside attract helpers such as bees, butterflies and hummingbirds. These helpers are called <u>pollinators.</u> To find out why flowers need pollinators, we need to take a closer look inside the flower.

#### Materials needed

- \* Flowers like daffodils or store-bought alstroemeria, aka Peruvian lily
- Print outs of <u>The Power of Flowers</u> sheet (included in this project)
- \* Tape, contact paper or glue

#### Observe, like a scientist

Brainstorm a list of different types of flowers. How are these flowers alike (color, smell, stems, petals, "stuff" in the center, etc.)?



\* Look at a real flower. How is it like the flowers you'd put on the list? Describe how the real flower looks, smells and feels. Draw a picture of the real flower on the right hand side of <u>The Power of Flowers</u> science sheet.

#### A look inside

1. The petals on the flower protect the inside of the flower, but also attract pollinators with their bright colors, shapes and patterns. Gently touch the petals of the flower. How do they feel? Count the petals. Carefully remove them, one by one, and set them aside.



2. Look at the long slender tube in the center of the inside of the flower. This is the "girl" part of the flower, called the <u>pistil</u>. She is surrounded by several shorter stalks that have oval-shaped balls on their ends. These are the <u>stamen</u>, or the "boy" parts of the flower. Can you see a yellowish dust on the stamen? It is <u>pollen</u>!



3. Some flowers make <u>nectar</u>, a sweet tasting liquid, inside the flower. Pollinators enter the flower to get nectar and become covered with pollen. The pollen rubs off onto the sticky top of the pistils (called the <u>stigma</u>) of this, and other flowers. The pollen travels down the pistil tube (called the <u>style</u>) toward the bottom of the flower.

4. Find the wide part at the base of the pistil. This is the <u>ovary</u> Carefully

use scissors to cut part of the base away and look inside. You will find teeny, tiny eggs. These are called <u>ovules</u>. If the pollen travels all the way down to these ovules, a <u>seed</u> will grow. Seeds are baby

plants! The ovary will swell up to protect the growing baby seeds, creating a fruit. <u>Fruits</u> are the swollen ovaries of flowers.

5. Arrange the parts from your flower on the left hand side of <u>The Power of Flowers</u> paper. Secure them with glue, tape or contact paper.





#### Extension

Plants provide us with oxygen, food and medicine. Botanists are scientists



who study plants and their

importance. All kinds of plants are studied by botanists, including flowers, trees, grasses, cacti and even seaweed. Read **Botanist Danny** to learn more about what it would be like to be a botanist.

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# **Observations:**

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The Power of Flowers

