

Wonderful World of Worms - Exploration Activities

Observe a worm

- Children will observe worm anatomy and worm movement using hand lenses and microscopes.

Sculpt a worm

- Children will explore worm anatomy through modeling clay. Each child may take home the sculpted worm.

Build a worm bin

- Children will help to build a community worm bin using moist, shredded newspaper.
- Children will build their own miniature worm bins (from yogurt cups) to transport their adopted worms home.

Harvest a worm and worm castings

- Children will harvest worms from worm castings. Place harvested worms in the community bin; 10-15 worms may go home with each child.

Feed a worm

- Children will help sort pictures of appropriate and inappropriate foods for their worms.

Who's in the Worm Bin?

- Children will match pictures of decomposers that they may find living in their worm bins.

Adopt-a-worm

- Children will answer a few questions about worm care and fill out the adoption certificates for their new worms.

Observe a worm

Children will observe worm anatomy and worm movement using hand lenses and microscopes.

Set up for each station:

- 1 microscope (childproof 10x recommended)
- 1 hand lens
- Toothpick
- 2 worms in each Petri dish

Method:

Allow children to explore worms using microscope and hand lenses. Be prepared to ask questions like:

- How do you know which is the front end of the worm?
- Can you tell which end is the tail?
- Which side is the tummy? Which side is the back?
- How do you know?
- What happens when you gently touch your worm?
- What happens when two worms meet?
- What happens when you roll a worm over?

Checklist

	Microscopes
	Hand lenses
	Petri dishes
	Toothpicks
	Small flashlights
	Spray bottle with water for wetting worms
	Plastic table cloths

NOTES:



Sculpt a worm

Children will explore worm anatomy through modeling clay.

Set up for each station:

- 1 small ball of clay
- Toothpick
- Texture tools
- Paper towel, cardboard scrap or small paper plate
- Felt-tipped marker (for adults)

Method:

Allow children to play and experiment with the clay. These do not have to be realistic worms if the children would prefer them to be more fantasy-like.

Be prepared to help the children explore the different sculpting tools. You may also need to write the child's first name on the paper towel, cardboard or paper plate so that the sculpted worm can be taken home.

Checklist

	Modeling clay (pre-rolled into small balls)
	Toothpicks and other sculpting or texturing tools
	Worm models
	Plastic table cloths
	Paper towels or cardboard scraps
	Felt-tipped marker
	Wet wipes for cleaning hands (optional)

NOTES:

Build a worm bin

Children will help to build a community worm bin using moist, shredded newspaper.

Children will build their own miniature worm bins (from yogurt cups) to transport their adopted worms home.

Set up for shared station:

Newspapers

Bins half-filled with water

Plastic tablecloth on the table or ground

Method:

Show the children how to tear the newspaper into thin strips.

Dunk the strips into the water.

Squeeze well to remove water and shake out to fluff strips.

Place in empty 10-gallon plastic bin or into yogurt cup.

Remember to keep the bedding fluffed up.

Check corners occasionally for excess water.

Be prepared to talk about what a worm needs to be happy – a dark, moist environment with a comfortable temperature (55 – 85 degrees) away from vibrations; a steady supply of food; fresh bedding.

Checklist

	Newspapers (No slick, color inserts)
	1 – 5 gallon container for water
	Empty 10-gallon lidded plastic bin
	2 Plastic table cloths
	Used plastic containers (yogurt, cottage cheese, etc.)
	Towels for wiping up spilled water
	Sponge or turkey baster for excess water (optional)

NOTES:

Harvest a worm and worm castings

Children will harvest worms from worm castings.

Set up for each station:

Newspaper for each work area

Scoop of fresh worm castings

Toothpicks

Plastic snack bag (with instruction tag on using castings)

Method:

Place the castings in mounds on the newspaper at least 15 min before children arrive. Encourage children to explore the mounds. Worms will have crawled to the bottom. Other creatures may be visible. Use the toothpicks or fingers to extract the worms.

Place harvested worms in the community bin; 10-15 worms may go home with each child. Send small amount of harvested castings home in plastic snack bags with each child or place in large empty container for use in community garden.

Checklist

	Unharvested worm bins with castings and worms
	Newspapers (for workstations)
	Toothpicks
	Scoop, ladle or spoon
	Plastic snack or sandwich bags with instruction labels
	Plastic table cloths
	Used plastic containers (yogurt, cottage cheese, etc.)
	Wet wipes for cleaning hands (optional)

NOTES:

Feed a worm

Children will sort pictures of appropriate and inappropriate foods for their worms.

Set up:

Worm Eat / Don't Eat mats

Laminated food cards for sorting

Method:

Ask the children to sort the food cards into two piles – foods that worms like and foods that worms don't like. Use the second deck (the one with the happy/sad faces on the photos) to check their guesses.

For younger children, use only the second deck.

Be prepared to re-set the sorting game and to answer questions about what worms can and cannot eat. (Basic rule: If it was an animal or came out of an animal, it's not good for the worms. There are exceptions but kids can usually visualize this.)

Checklist

	Worms Eat – Worms Don't Eat game

NOTES:

Who's in the Worm Bin?

Children will match pictures of decomposers that they may find living in their worm bins.

Set up:

9 pairs of matching photo cards of decomposers*

Method:

Shuffle the matching cards and place them face down on the table. Ask the children to turn over two cards at a time. If the cards match, set them to the side. If the cards don't match, help the children turn them face down and try two new cards. For younger children, use only 4 or 5 pairs.

Be prepared to re-set the matching game and to answer questions about the decomposers often found in worm bins.

Sow bug (roly poly)	Decomposer. Eats decaying vegetation. Needs moisture. Rolls into ball when threatened.
Ear Wig	Decomposer. Eats organic matter. Can pinch. Does not crawl into people's ears. Nocturnal.
Springtail	Decomposer. Eats decaying matter and microbes. Sensitive to dryness. Uses its tail-like appendage to jump when threatened.
Mold	Type of fungus. Grows on dead organic matter.
Red worms	Eisenia foetida (eye-SEE-nee-ah foTEE dah). Eats decaying vegetation, fungi and bacteria. Most efficient composter. Capable of excreting pungent liquid when threatened.
Worm cocoons	About the size of a grain of rice. Each contains 2-5 baby worms. Hatch in 3 weeks to five months, depending on the species of earthworms.
Mites	

Checklist

	Who's in the Worm Bin? game
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NOTES:

*We used prepared cards from Life Lab's Worm Bin Bingo set that we downloaded from <http://www.lifelab.org/wp-content/uploads/2010/12/wormbinbingo.pdf>

Adopt-a-worm

Children will answer a few questions about worm care and fill out the adoption certificates for their new worms.

Set up:

- Clipboard with worm care questions
- Exit survey for children/adults
- Pencils or pens
- Bookmark
- Adopt-a-worm certificate/Care instructions

Method:

Be sure that children and their adults can answer these questions:

- Where will your worms live in your home? *In a plastic bin, under the sink, in the closet, where it is cool and dark, etc.*
- How often will you feed them? *Once a week for the first six months. Check that they have eaten what you have them last time.*
- What three things do worms like to eat? *Fruits, vegetables, cooked grains, etc.*
- What is one thing worms must have once a month in order to eat? *Grit: soil, used coffee grounds, ground eggshells, etc.*
- What should you use for worm bedding? *Moist, shredded newspaper*
- Where can you go for help on taking care of your worms? *The library, the LiveGreeninPlano.com website, etc.*

Give each child a survey to complete. When the children return the surveys, give them a bookmark and an adoption certificate/care instructions.

Checklist

	Care questions
	Exit survey
	Pencils or pens
	Bookmark
	Adopt-a-worm certificate / Care instructions