



May-June 2017

YUCKY EARTHWORM?

by Lanny and Marilyn Johnson

It was a warm pleasant spring day. Mrs. Jones, with her daughter Mary and son Billy were out in the family garden preparing the soil for planting. Billy was digging in the dirt when he suddenly giggled and spun around with a large earthworm hanging out of his mouth!

Horrified, Mary jumped back and squealed, "Yuck! That's so gross, Billy!"

Laughing, Billy plucked the writhing worm out of his mouth and said, "Here Mary, hold my worm for me!"

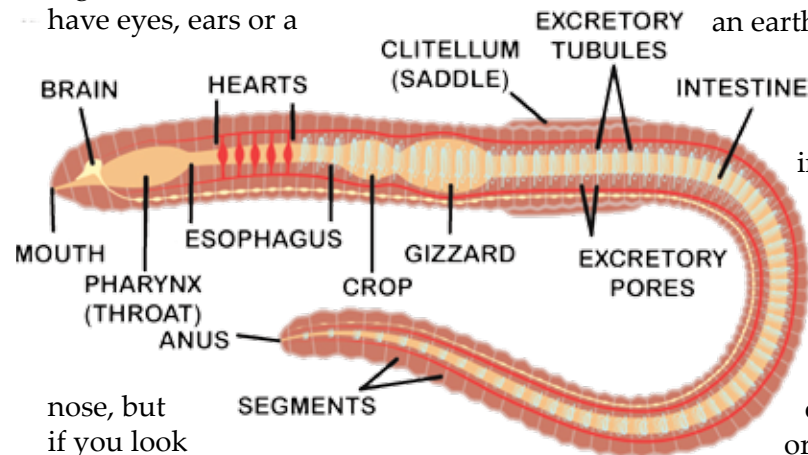
"Get that ugly, slimy beast away from me! Oh, worms are so disgusting!" cried out Mary. Mrs. Jones smilingly said, "Well, I'll agree that they're not very pretty, Mary." Then probing the dirt with her hand, Mrs. Jones pulled out a wiggling worm. "Mary, I know you don't like worms, but I would like for you to be brave and hold this worm. Go ahead, it won't hurt you. I would like to point out some surprising designs in the earthworm."

Somewhat frightened but trusting, Mary obeyed her mother and timidly, with her eyes closed tightly and a scowl on her face, held the worm at arm's length. "Eeeeewwww! It's slimy," she squealed.

"You're doing great, Mary. Now open your eyes and take a careful look at your worm," Mrs. Jones instructed. "That slimy feel comes from a special fluid that the earthworm oozes out. Not only does it keep the skin moist, but it helps them to crawl through the dirt.

"See how the earthworm can bend and twist its tube-like body around? That's because they do not have bones or skeletons. The earthworm's body is a 'tube within a tube'. The outer tube is the muscular body which surrounds the inner tube of a digestive tract.¹ Earthworms don't

have eyes, ears or a



nose, but if you look closely at the pointed end of the worm you will see a small *mouth*. As soil (dirt with food) enters the mouth, it travels along a tunnel called an *esophagus* and into a pouch (called a *crop*) where it is stored. The soil then goes into the *gizzard* where powerful muscles grind it up before traveling through the *intestines*, which take out the food. Everything left over is then passed out of the worm through the *anus*.²

"The earthworm's body is made up of ring-like segments (*annuli*). Some adult earthworms can have as many as 170 of these segments," continued Mrs. Jones.³ "Several of the organs, such as those that get rid of waste (*excretory tubules and pores*), are repeated in

every segment of the worm. Some earthworms can grow new segments or body parts if they get cut off.⁴ Each segment has 4 pairs of tiny hairs called bristles or *setae* (see-tee).⁵ The bristles help the earthworm wiggle through the dirt as two different kinds of muscles either stretch or shorten the worm's tubular body. The bristles also help the worm to feel things.⁶

"The fat, smooth section about the middle of your worm is called a saddle (*clitellum*).⁷ That is where the earthworm lays its cocoons or eggs. Earthworms have no respiratory organs like our nose and lungs, but soak up oxygen through their skin.⁸ Another interesting design is that an earthworm has 5 hearts which pump blood (which is red just like ours) throughout its body."⁹

"Well, I guess I do see lots of design in worms," Mary stated. "But, ugh! What good are they?"

Mrs. Jones bent down and took up a handful of dirt. "Did you know that earthworms are very important for this soil? As earthworms burrow through the ground, they are actually eating the dirt. They get their food from organic (animal and plant) matter in

the soil. After digesting the dirt, they leave behind their waste which is natural fertilizer. The earthworm's tunnels loosen the soil, letting water, oxygen and nitrogen reach plant roots and other living things that live in the dirt. So earthworms are great for gardens."

"And don't forget, they're good for catching fish!" exclaimed Billy.

Smiling, Mrs. Jones answered, "You are right Billy. They are a food source for animals such as birds, slugs, snails, beetles, snakes, foxes, bears, moles and many others. So you see Mary, you might be grossed out by earthworms, but like all things God has made, they have a purpose."

REFERENCES

Earthworm picture on front page:
comparative anatomy: earthworm. Art. Britannica Online
for Kids. Web. 24 Apr. 2017. <<http://kids.britannica.com/comptons/art-52904>>.

¹<http://kids.nationalgeographic.com/animals/earthworm>

²<http://sciencewithme.com/learn-about-earthworms>

³Ibid

⁴<https://www.apologeticspress.org/apPubPage.aspx?pub=2&issue=947&article=1433>

⁵<http://sciencewithme.com/learn-about-earthworms>

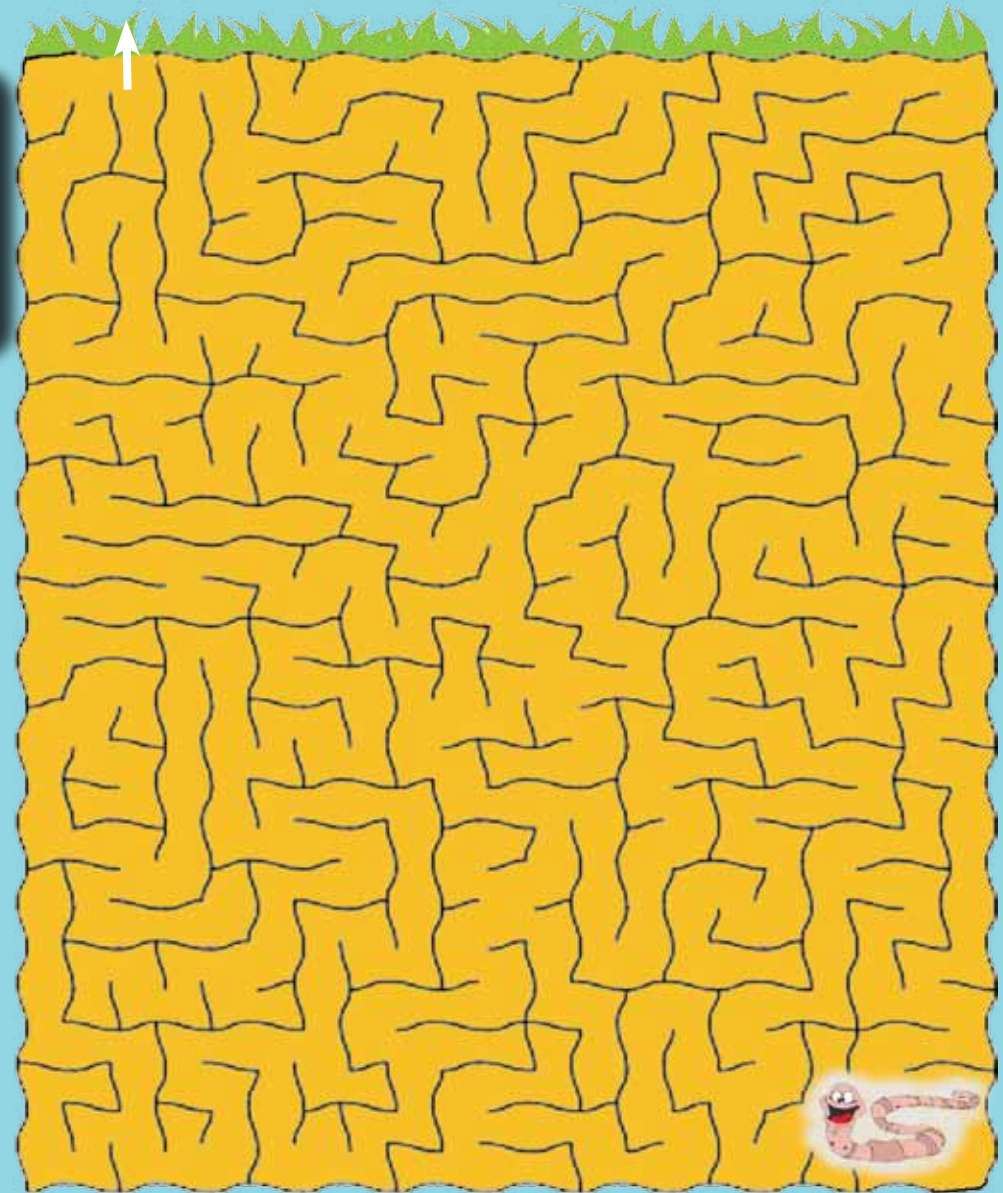
⁶<http://navajocodetalkers.org/38-earthworm-facts-for-kids>

⁷<http://wiki.kidzsearch.com/wiki/Earthworm>

⁸<http://sciencewithme.com/learn-about-earthworms>

⁹Ibid

Help the worm
on bottom right find
its way through the
maze and out the top
at white arrow so it
can get a little fresh
air.



Adapted from
<https://krazydad.com/mazes>

FOR ANSWERS GO TO: <http://www.discovercreation.org/kids/NewsletterAnswers.htm>

S	K	J	C	L	I	T	E	L	L	U	M	T
I	E	S	P	V	A	A	G	G	B	E	R	P
E	N	G	O	L	I	H	Z	Q	G	I	L	S
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P	G	I	Z	Z	A	R	D	H	N	P	U	M
J	D	Z	K	U	B	R	I	S	T	L	E	S

WORDSEARCH

Look for the words from the WORD LIST below. The hidden word might be up, down, sideways or slanted, but not backwards.

Word List

BRISTLES CLITELLUM CROP DESIGN DIRT EARTHWORM
EGGS ESOPHAGUS GIZZARD INTESTINES MOUTH PORES
SADDLE SEGMENTS SOIL TUBULES

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