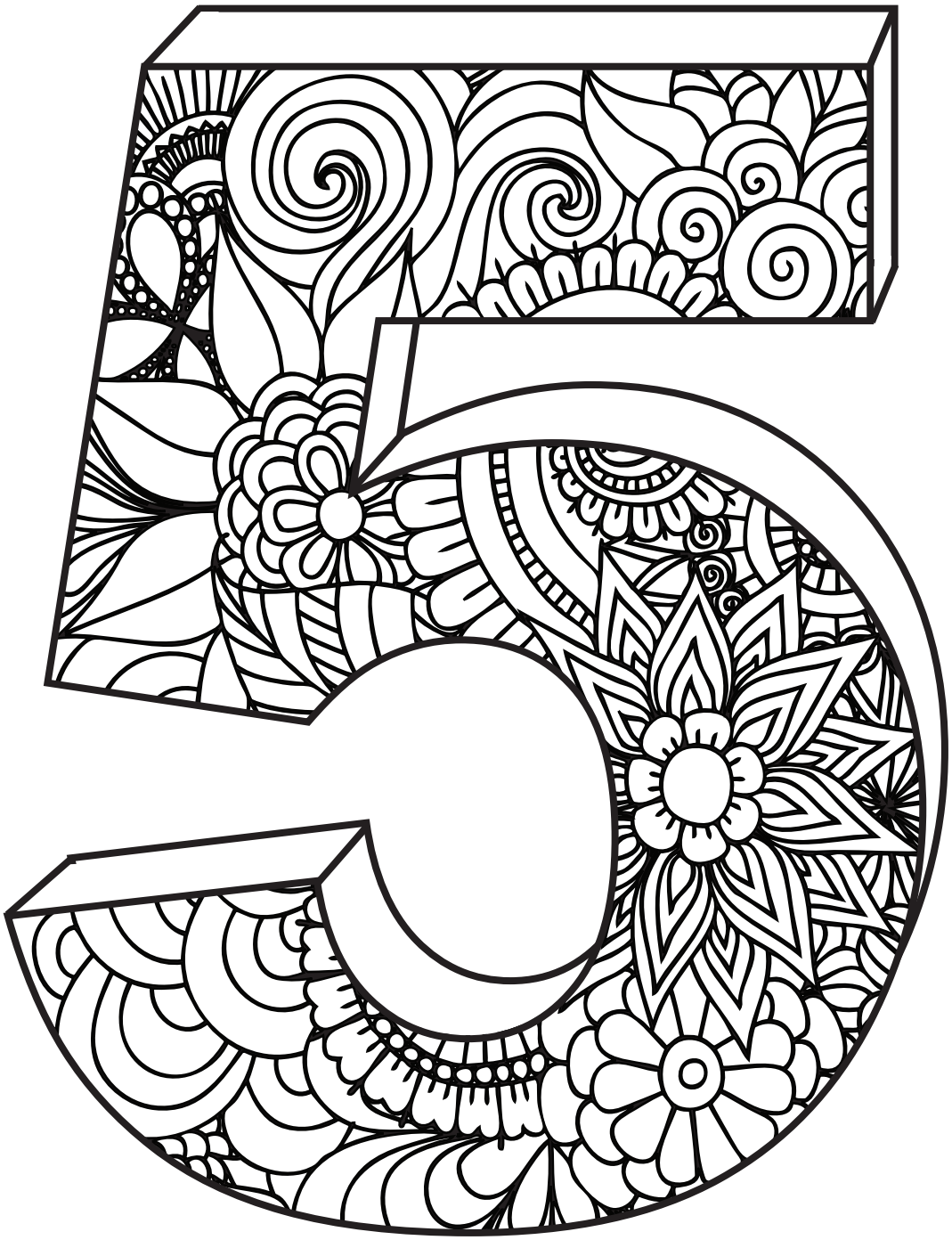
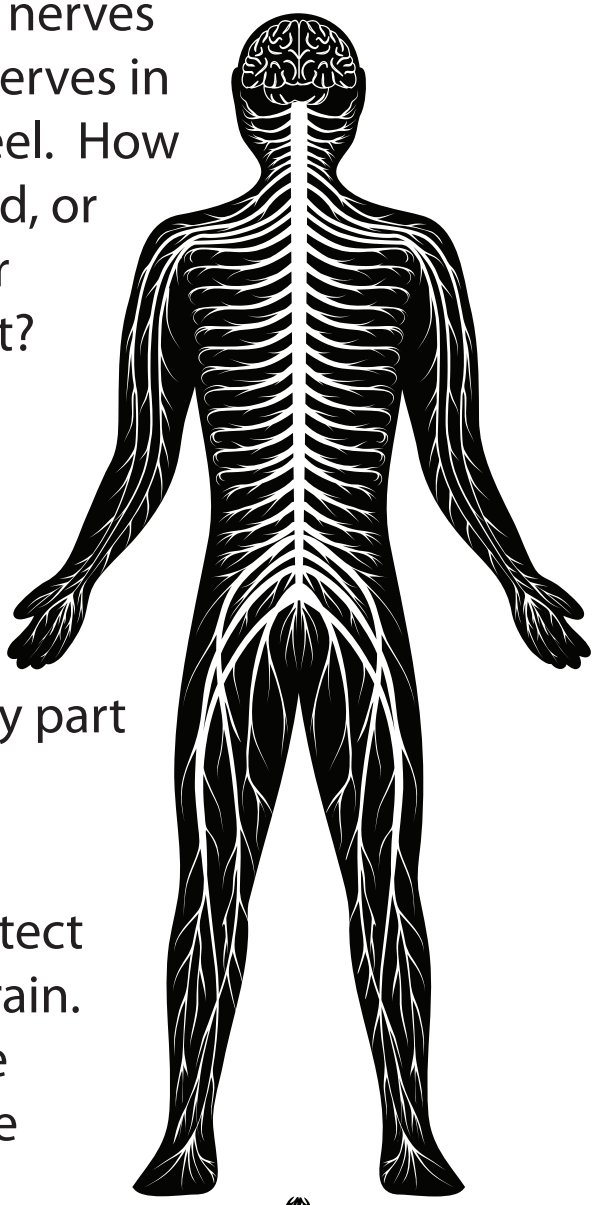
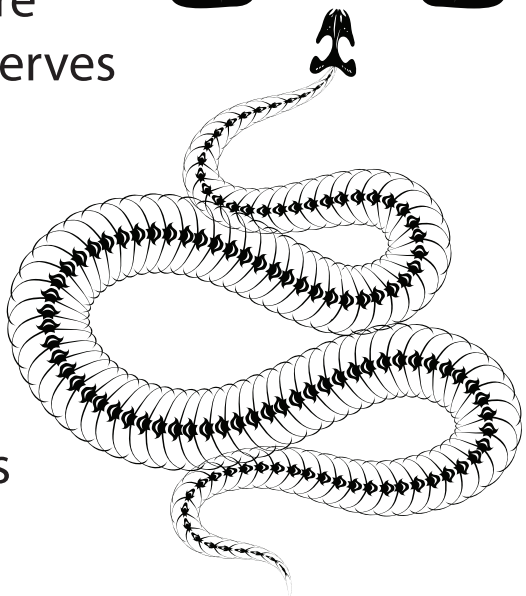


Nerves are what we feel with. Our skin has nerves through every single part of it, and those nerves in our skin tell our brains what and how we feel. How do you feel right now? Do you feel hot, cold, or just right? Can you feel the clothes on your body? How about the floor under your feet?



Nerves start from the brain stem, and go all the way down through our hollow spine to all parts of our body. If you could somehow touch your nerves, they would feel like soft spaghetti noodles. Is there any part of your body that you can't feel?

The bones of our spine (or VERTEBRAE) protect the nerves just like the skull protects the brain. The brain is connected to the nerves by the BRAIN STEM. Can you feel the bones on the back of your necks? Those spine bones are protecting the nerves inside them. The nerves all together inside the spine is called our SPINAL CORD.



A snake is pretty much just a spine with nerves and a skull with sharp teeth! He can feel sound through the earth with his skin! Weird, right?

Unit 1 Lesson 5 – NERVES

Date:

Objectives

By the end of the lesson, the children should be able to:

- Know what nerves are
- Know what nerves do
- Know that the VERTEBRAE protect the nerves
- Know that nerves go through the spine to all parts of the body
- Know that our spinne is hollow and what hollow means
- Identify and palpate the neck and spine
- Identify the separate bones of the spine as VERTEBRAE
- Know that our brain connects to our spine via the BRAIN STEM

Materials

- BRAIN STEM and VERTEBRAE page
- Yellow yarn
- Twine
- 1 empty toilet paper (or 1/2 empty paper towel) roll per child

Lesson Prep

- Cut out BRAIN STEM and VERTEBRAE
- Cut yellow yarn into several pieces long enough to reach down the length of a child's arm from their skull (My Body Project)
- Cue up a "Kid's Dance Party" play list
- Cut twine a few inches longer than the paper roll
- Cut out "Vertebrae" from HOLLOW SPINE POJECT

Greeting Routine

(for more than 2 children) Free play until everyone arrives.

Mat Time

"SNAKE DANCE PARTY"

Cue up a fun kid's dance party playlist. Ask kids if they remember which animal is mostly just a spine and ribs. Take turns leading snake dance moves. You can use your arms as snakes, do the cobra yoga pose, do the fish yoga pose (but pretend you're a snake), and make fangs out of your fingers and place them at your mouth. Pretend you are going to bite something with your "fangs." Once you run out ideas, move onto other animals and throw in some freestyle moves to get the wiggles out.

Reading Time

MEXICAN BONES & "BRAIN POEM" WITH ACTIONNS

Review what an ENVIRONMENT is and have children describe changes in the Bones Family's environment as the story progresses. Ask children to describe what the Bones Family is seeing, hearing, feeling, and smelling as they travel

Activity in Motion HOLLOW SPINE PROJECT

Have children tape VERTEBRAE from “HOLLOW SPINE PROJECT” around their empty paper roll. (If there aren’t enough empty TP rolls, tape ends of the image together so that it forms a cylinder. Explain to them that their spines are hollow like straws, or like paper rolls and that hollow means something has a shape, but is empty inside. Ask them to name some hollow objects. (Straws, balls with air inside etc...) Dance around with the paper rolls and look through them, stick fingers through them and shout “HOLLOW SPINE! HOLLOW SPINE! Our nerves go through our hollow spine!” As you bring out the pieces of twine, tell kids that the twine is like our nerves and that they “go through our hollow spine.” Give a small handfull to each child. Tell them to put the nerves THROUGH the spine. (Caution them to be very careful with the nerves, as they are sensitive!) Tape twine to the inside of the paper roll.

Lesson

“Does anyone remember what their sense organs are?” (Have them name the sense organs.) “ Well, our skin is the largest of our sense organs and probably the most important. We feel things with our nerves and our skin has nerves through every single part of it. Those nerves in our skin are connected to our brains and our brains tell us how and what we feel. How do you feel right now? Do you feel hot, cold, or just right? Can you feel the clothes on your body? How about the floor under your feet?

Nerves actually start at the brain stem, and go all the way down through our hollow spine to all the parts of our body.” (If you could somehow touch your nerves, they would feel like soft spaghetti noodles.) Show kids the image of the nervous system. "Is there any part of your body that you can’t feel?” Discuss how our hair does not have nerves but that our scalp does. “How about your back bone? Can you feel the bones of your spine?”

The bones of our spine (or VERTEBRAE) protect our nerves just like our skull protects our brain, and our brain is connected to our nerves by our BRAIN STEMS. Can you feel the bones on the backs of your necks? Those spiny bones are protecting the nerves inside of them. All of the nerves together inside the spine is called our SPINAL CORD.

Chant ECHO GAME

I’m going to say the name of a bone, and you all are going to be my echo! If I say it LOUD you say it LOUD. If I say it SOFT, you say it SOFT. Okay? “ Touch your spine and say: ”VERTEBRAE, VERTEBRAE, VERTEBRAE!” Have them repeat it back to you. Experiment with a silly tone, a growly tone etc. Say it in as many different ways as you can. (While you are chanting, review the “HUMERUS, RADIUS and ULNA” , “CRANIUM” and “CARPALS, METACARPALS, PHALANGEES” chants too.)

My Body Project

Have each child identify and paste the BRAIN STEM to the bottom of the brain on the organs side. Cut a few long pieces of yellow yarn to represent nerves and glue them from the brain stem down the back and out the arms to the fingertips. Paste neck VERTEBRAE and the rest of the spine on the bones side of the contractor paper.

Activity in Motion "SHAKE THEM BONES"

“Your BRAIN is connected to your BRAIN STEM, your BRAIN STEM’S connected to your SPINAL CORD, your SPINAL CORD’S connected to you NERVE ENDS, so shake those VERTEBRAE bones!”

Optional Activity PASTA SPINAL CORD PROJECT

See optional activities page "Pasta Spine Project" for instructions and materials.

Optional Activity TEXTURE OF NERVES SPAGHETTI PROJECT

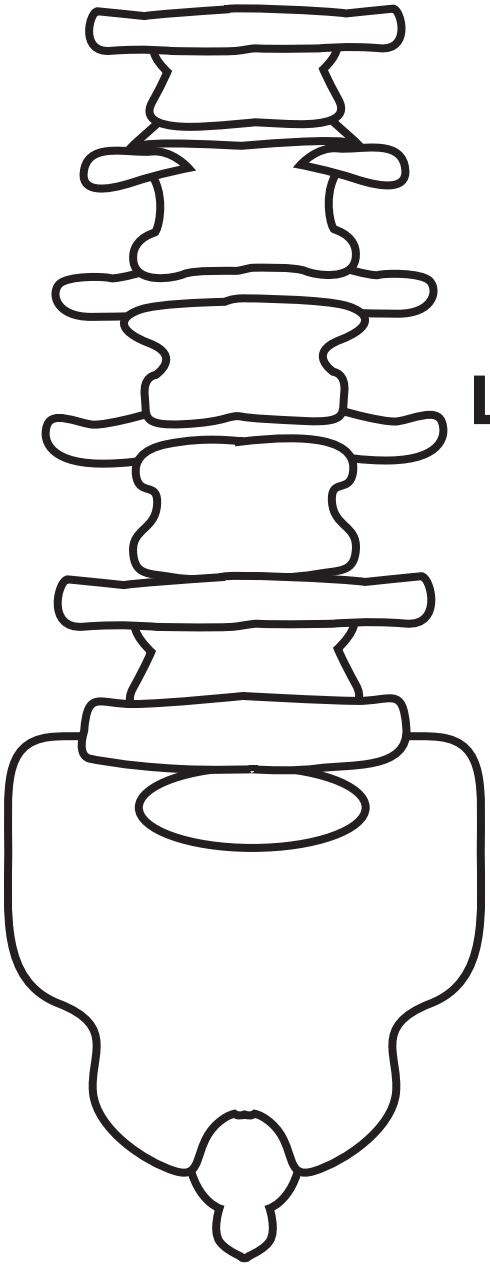
Cook some spaghetti with plenty of oil. Let the kids arrange a few of the strands together to form the spinal column.

Lesson Review

“What part of your brain connects it to the rest of your body? The BRAIN STE.... (wait for it) yes! The BRAIN STEM. Do you all remember the parts of your backbone or spine? These are our neck bones and our back bones together. All those smaller bones together make up your VERTEBRAE. Our VERTEBRAE make up our SPINE, and our spines are hollow. Name something hollow...” What goes through our hollow spines? Our nerves, that’s right. Our nerves FEEL for us through our skin, and our brains tell us what it is we are feeling."

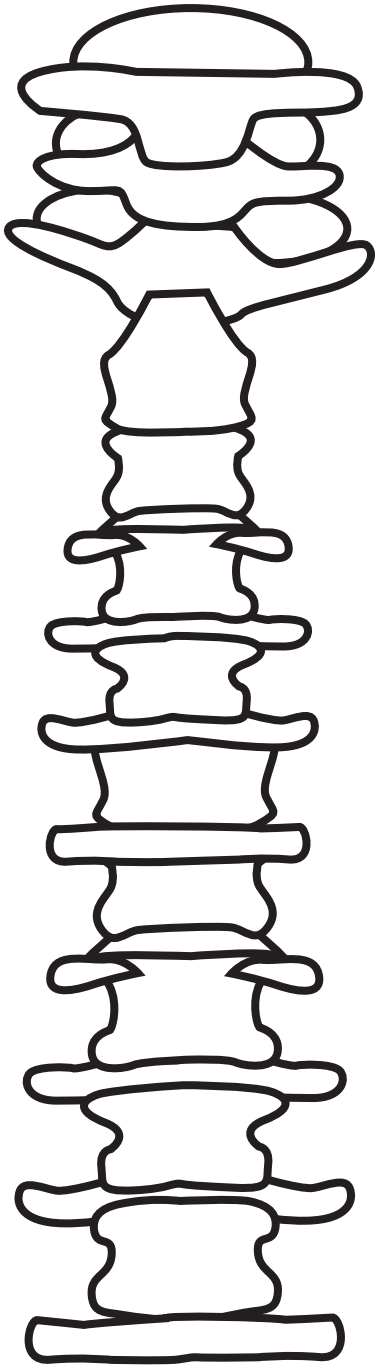
Notes

MY BODY PROJECT SPINE



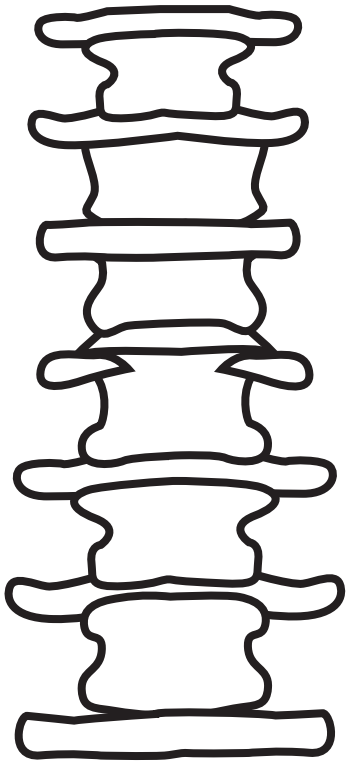
LUMBAR

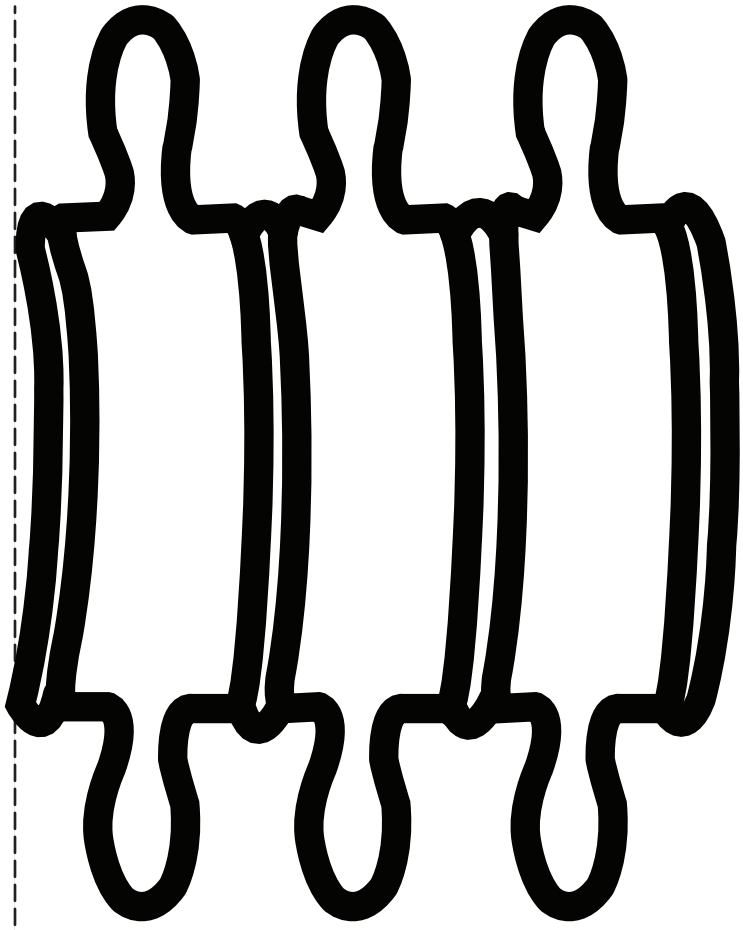
CERVICAL

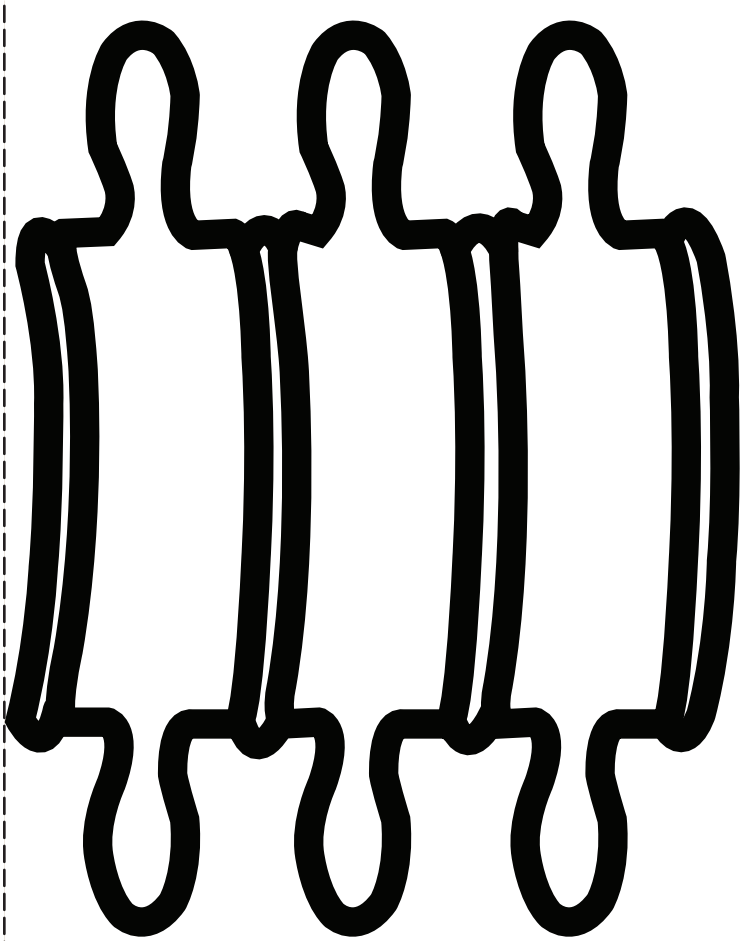


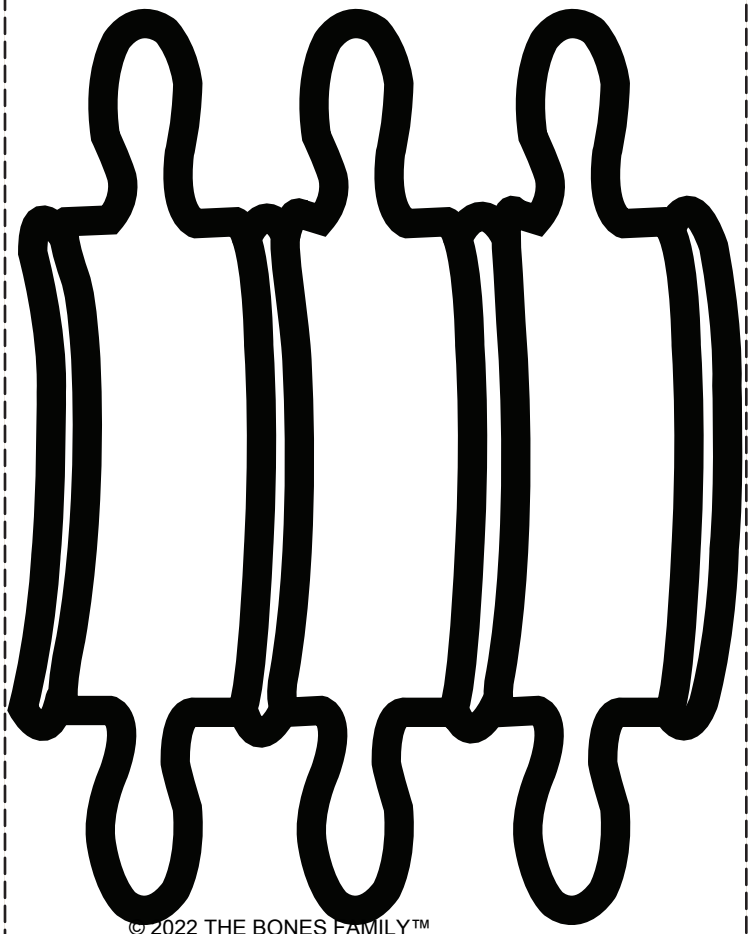
THORACIC

EXTRA









HOLLOW SPINE ACTIVITY

COLOR THE DISCS YELLOW

Have children tape VERTEBRAE around their empty paper roll. (If there aren't enough empty TP rolls, tape ends of the image together so that it forms a cylinder. Explain that their spines are hollow like straws, or like paper rollsand that hollow means something has a shape, but is empty inside. Dance around with the toilet paper rolls and look through them, stick fingers through them and shout "HOLLOW SPINE! HOLLOW SPINE! Our nerves go through our hollow spine!" Tell kids that the twine is like our nerves and that they"go through our hollow spine." Give a small handfull to each child. Tell them to put the nerves THROUGH the spine. (Caution them to be very careful with the nerves, as they are sensitive!) Tape twine to the inside of the paper roll.

Materials Needed:

Twine, Paper Rolls, Tape

PASTA SPINE PROJECT

MATERIALS:

- Pasta tubes. Ziti, Rigatoni or Cannelloni work the best
- Either lifesavers or other "donut shaped" food that fitsin between the pasta tubes
- Stiff spool of twine
- Masking tape
- Large bead for BRAIN STEM (optional)

INSTRUCTIONS:

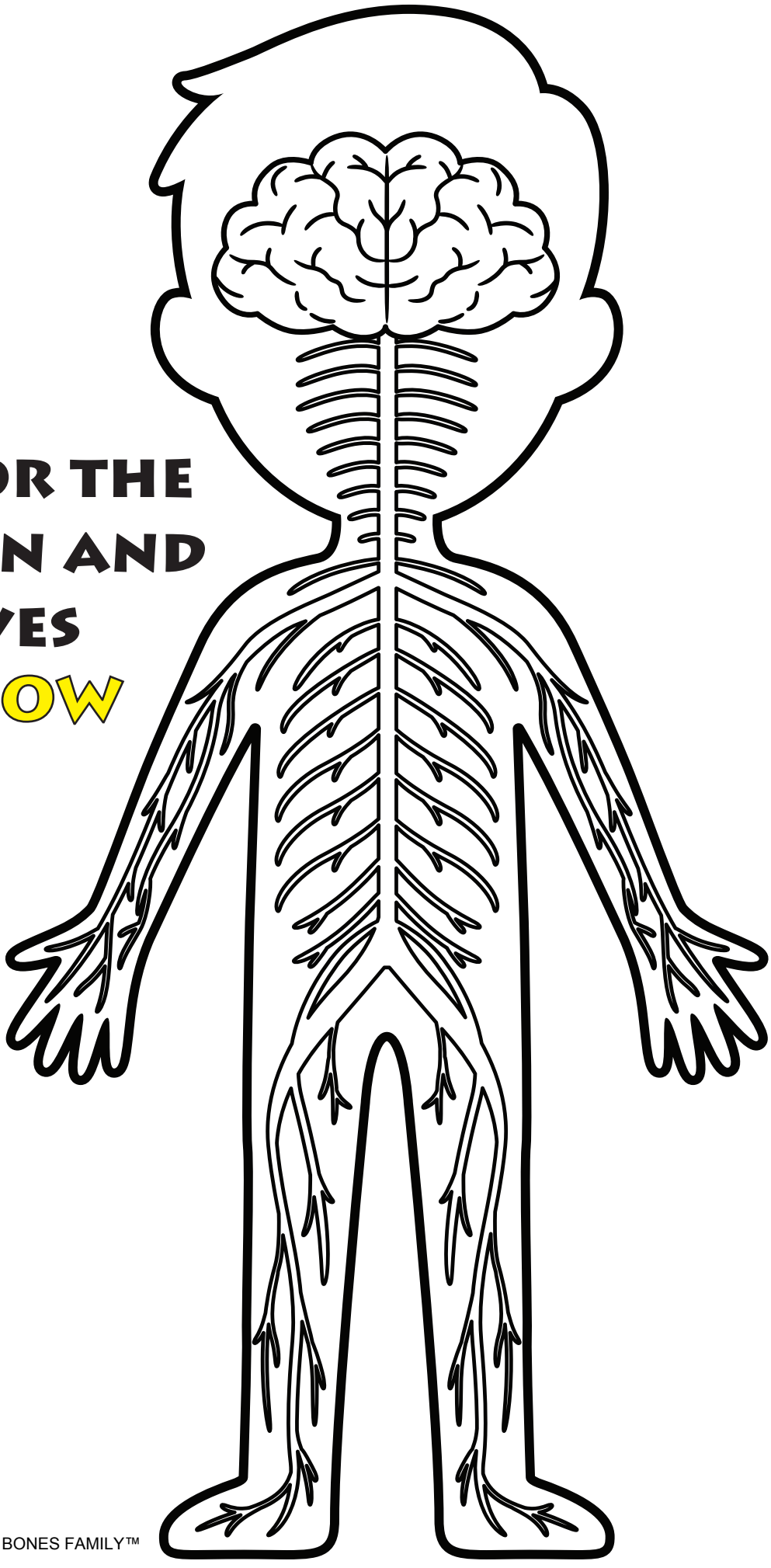
Measure and cut 3 or 4 pieces of twine to the length of the child's spine. Tape the threading ends together with masking tape. This will help the little ones so much! (Working with a stiff twine is nice too.)

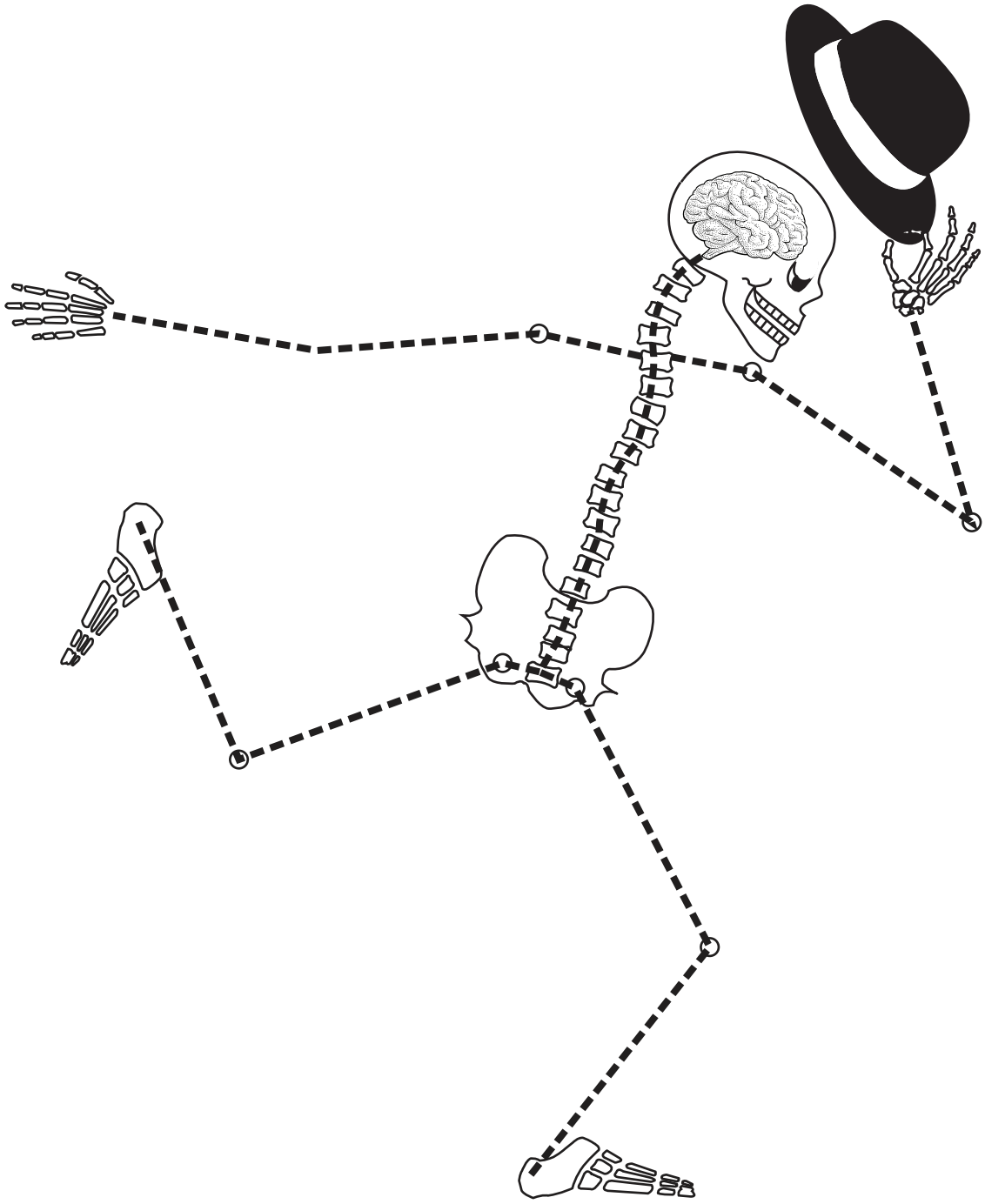
Tie non-threading end securely with a knot and start sewing!

Alternate gummy ringswith ziti.

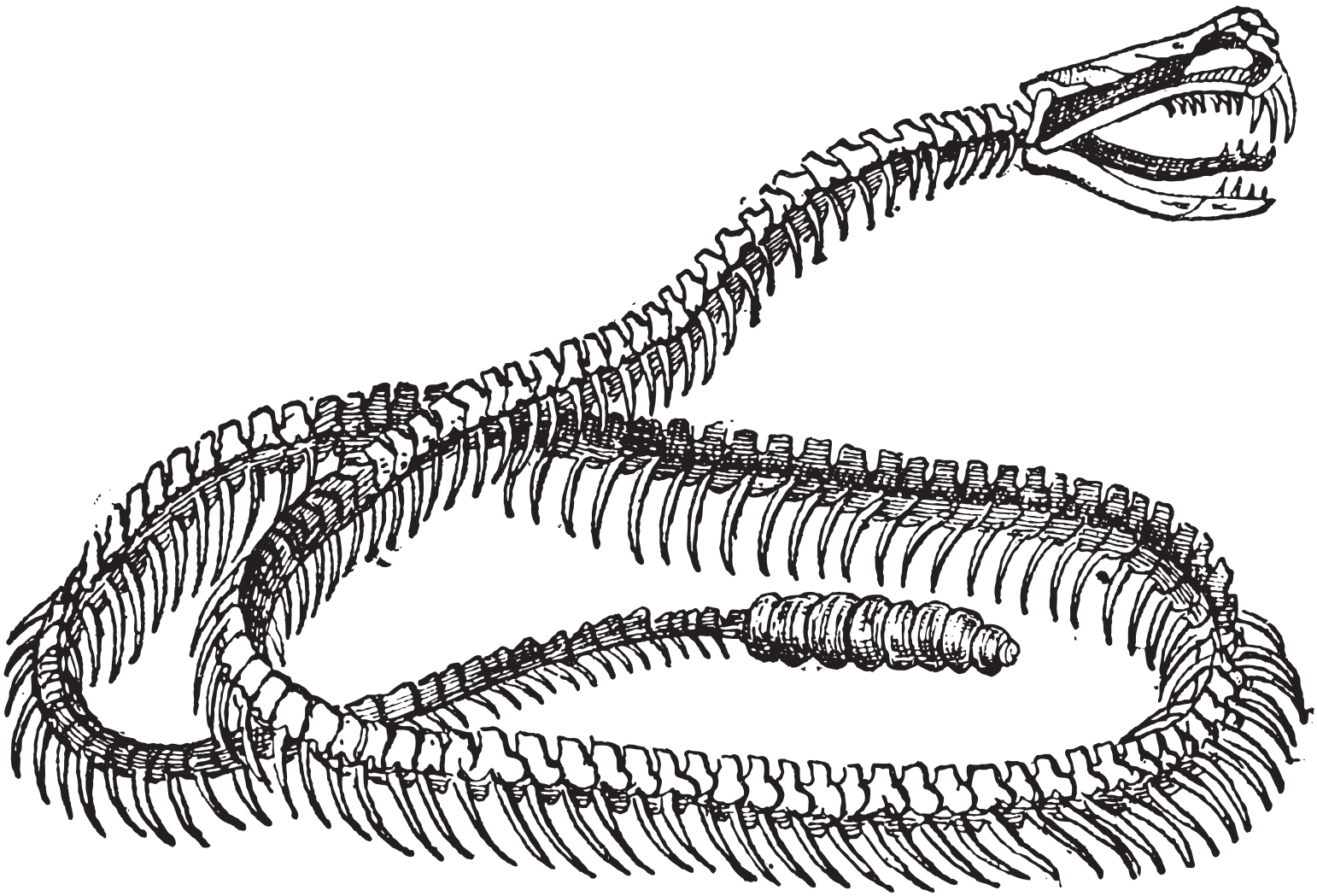
Younger children can simpy use pasta for a sugar free activity.

COLOR THE BRAIN AND NERVES YELLOW





Color the brain and spine YELLOW, then trace the dotted lines to follow the path that nerves take through our bodies.



Color the snake's back bone RED

The snake has a lot of ribs, but where are it's hips?