

Dear Families,

As part of our science program, our class will be studying our class pet.

Like many other pre-K and kindergarten classrooms, it's not by mere chance that our classroom is home to a class pet. For young children, a pet provides comfort and the opportunity to be caretakers themselves.

Children's interactions with our class pet also provide an ideal opportunity for introducing the concept of scientific inquiry. Children will develop and utilize a scientific perspective as they learn about a pet and compare it to other animals. The children will learn a bit about how scientists study animals by carefully observing our pet, documenting their observations, weighing and measuring it, and conducting simple experiments to test their assumptions about our pet. As the children get to know our pet, they will come up with many questions. By learning to articulate their own questions and pursue the answers, children learn an important aspect of thinking like scientists.

Over the next few weeks, I will invite children to bring a pet from home for the class to observe and compare to our class pet. If you and your child would like to have your pet visit the class, please send a note to me describing the pet. If your pet is in a cage or aquarium, we'd love to have it visit our classroom for several days, if possible. Pets that aren't confined to a cage but that would be comfortable and calm for a short class visit need to be accompanied by a parent so the pet can return home after the visit. I will arrange a schedule of class visits when I know which children would like to bring their pet to class. Children who can't bring their pet to school can bring a picture and some information about their pet. Children who don't have a pet can bring a picture and some information about a pet they'd like to have or learn more about.

I hope to arrange a visit to a veterinarian's office or a pet store so the children can talk to experts about our class pet and other animals. In addition, it would be great to have a visit from any parent who is knowledgeable about our type of pet. If you have any to donate or loan, books about our type of pet and old nature magazines or calendars with pictures of all types of animals would be very useful for this unit of study.

Thank you very much for your help.

Sincerely,

Dear Families,

As part of our science curriculum, our class is preparing to build a class collection and conduct an in-depth study of _____.

The natural world holds great fascination for young children. Objects from nature are treasures that always seem to find their way into the classroom. This study will channel and deepen children's natural impulses to explore and collect as they learn how scientists approach the study of objects in nature.

The children will explore many ways to examine and compare the properties of objects in our class collection. They will weigh and measure objects, closely observe form and texture, and make simple classifications through sorting activities. The children will also learn various ways of acquiring information about the collection, including observation, experimentation, research, and communication with an "expert." Over the course of the study, the children will become "experts" themselves about the items in the class collection.

Throughout the study there will be time for children to share items they add to the class collection. They can present information they have about the item, including where they got it, what kind it is (if they know), and any other pertinent details. Children can keep special objects that they do not want to lose separate from the class collection. For very special objects, children can share them during a class meeting, put them out for observation at choice time, and take them home at the end of the day.

We welcome visits from you or anyone you know with a special interest in or knowledge about _____. Books on this subject, including field guides, are also appreciated if you are able to loan any to the class.

Thank you for your interest and support.

Sincerely,

Dear Families,

Our class is about to start a study of construction. As they learn about different aspects of building, children will have opportunities to develop scientific habits of mind. The activities in this study will encourage children to explore, experiment, share results, modify their ideas, and work together to try different solutions to different problems.

The activities are varied. Free exploration in the block corner gives children an opportunity to create different structures and to experiment with ways to solve problems in creative and thoughtful ways. It has often been said that young children's play is their natural work, and much of their learning takes place during play as they carry out their ideas and adjust them through trial and error experiments, just as adult scientists do in their laboratories.

Children will also learn some basic information about building a house and a bridge, experiment with building with many different materials, notice and consider various architectural features, learn about simple machines such as the lever and the pulley, and experiment with what makes structures weak or strong.

We would appreciate donations of some of your clean recyclables, such as toilet paper or paper towel tubes, cardboard from boxes, shoe boxes, corks, string, scrap paper, egg cartons, and plastic bottles with lids. Other welcome donations include PVC tubing, glue, staples, brad fasteners, or various kinds of tape.

Family members with architectural or building experience would be welcome visitors to our classroom, so that the children can pose construction questions to an expert. We would also like to take a trip to an active construction site, so please contact me if you know of a site we might visit.

Thank you for your help and support.

Sincerely,

Dear Families,

As part of our science program, our class will be studying dirt, sand, and water. In these seemingly ordinary materials, children find an unlimited playground for exploration and discovery. They can learn a great deal through play and experimentation with these familiar and much-loved materials.

As children pack and pour and dig and squirt, they explore the properties of dirt, sand, and water and investigate states of matter (solids and liquids, in particular). The activities validate and build upon children's urge to cook and concoct, while leading them to discoveries about interactions between materials, as well as the nature of change. A closer examination of dirt, sand, and water will increase children's awareness of the complexity of our natural world and the science possibilities in their own backyards.

You can support our study by providing opportunities for your child to play with dirt, sand, and water at home. Familiar household objects such as measuring cups, funnels, small watering cans, spray bottles, food coloring, and ice cubes lend themselves to many interesting explorations in the sandbox, kitchen sink, or during a bath. Talk to your children about their investigations and discoveries and suggest that they share their observations with their classmates.

We will have some old shirts, plastic smocks, or aprons available for children when they work with dirt, sand, and water. Please send in a change of clothes and shoes in case children get very dirty or wet as they explore.

If you have any tools the class could borrow to support our explorations during the study, please send them to school. Sifters, sieves, colanders, shovels, buckets, funnels, pourers (such as plastic bottles, jugs and measuring cups), squirters (such as basters, medicine syringes, and water bottles), and spray bottles would all be appreciated. Please label items that you would like returned with your name in permanent marker.

Thank you.

Sincerely,

Dear Families,

As part of our science curriculum, our class is preparing to study the human body. By the time they reach pre-K and kindergarten, children are eager to learn more about the workings of their own bodies. They want to know what happens when they get sick, how they get well again, where their food goes, what a heart really looks like, and why they feel out of breath when they run around the playground. While young children cannot understand the intricacies of the human body, they are able to make use of the focused inquiry that a scientific approach provides to begin to learn about how their bodies function. Children feel empowered by knowing even a bit about the unseen, inner workings of their bodies.

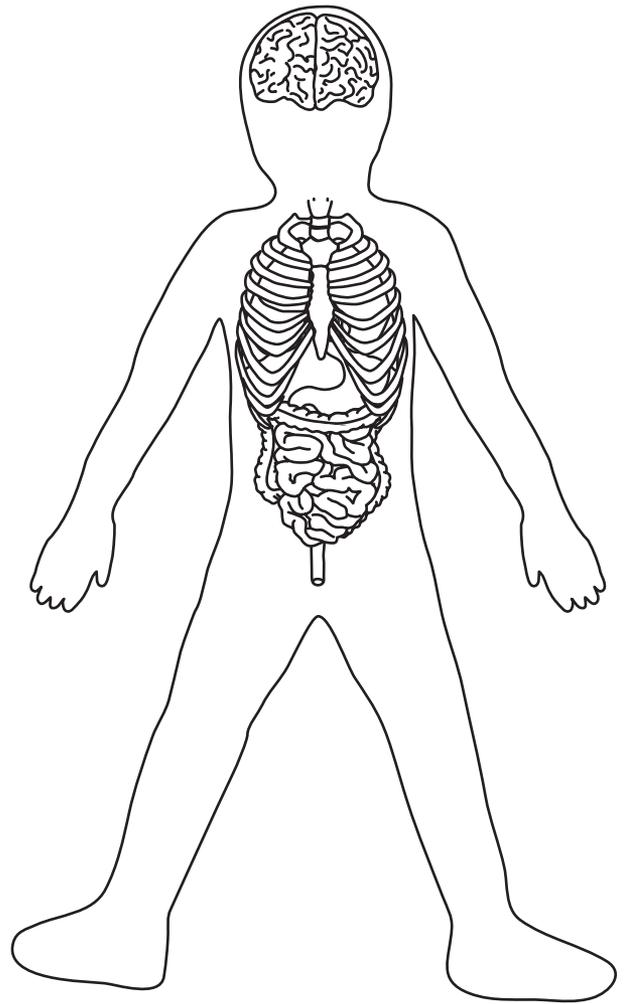
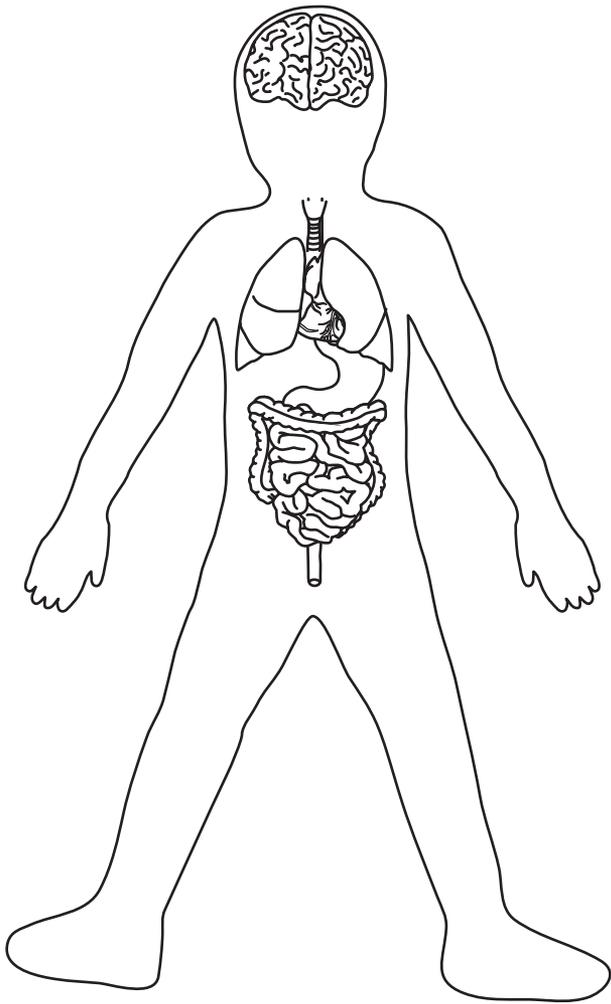
To help understand these inner workings, the class will construct a class model of the human body, including body parts related to the circulatory, respiratory, digestive, skeletal, and muscular systems. To make our class model, we will need the following items: **thick yarn, thin string, plastic bags, a long stocking or pair of nylon hose, balloons, wide rubber bands, a cardboard tube (toilet paper roll), and corrugated cardboard or tagboard**. If you can donate any of these items, please send them to school with your child. If anyone can lend the class a **stethoscope** or **x-rays**, those would be very useful as well.

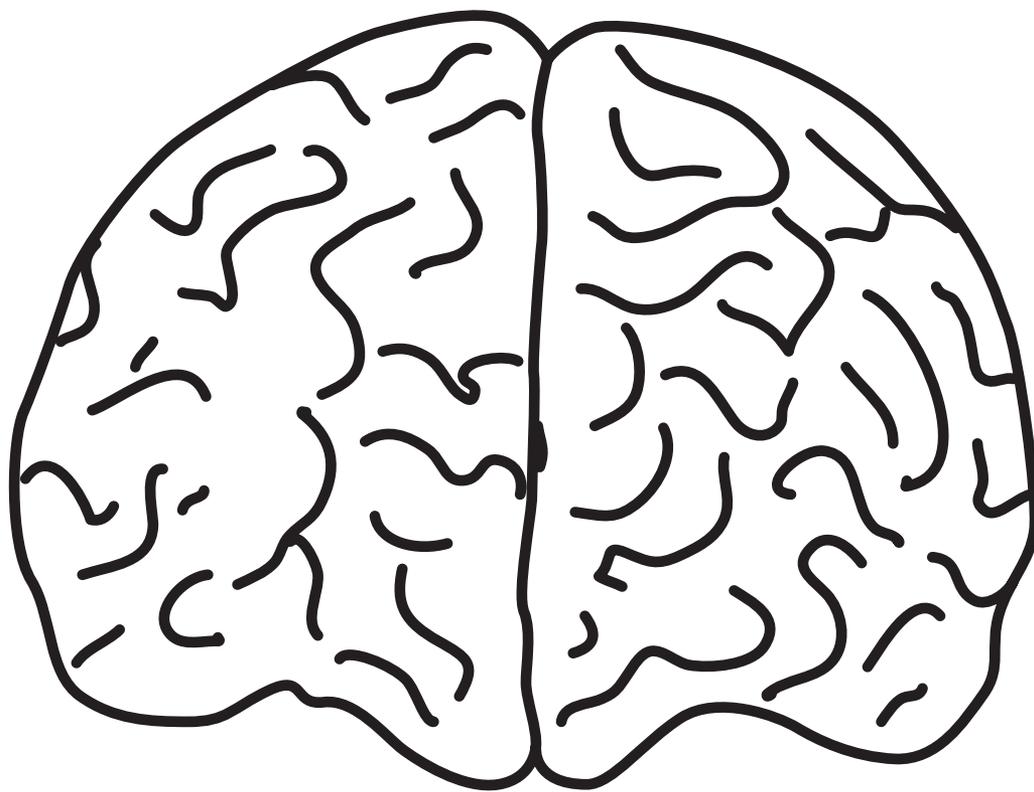
Please let me know if you work in a medical profession or otherwise have special interest or knowledge of the body and could visit our class to talk with the children. I would also like to arrange a field trip to a doctor's office, hospital, or medical laboratory, so please contact me if you might be able to help arrange such a visit.

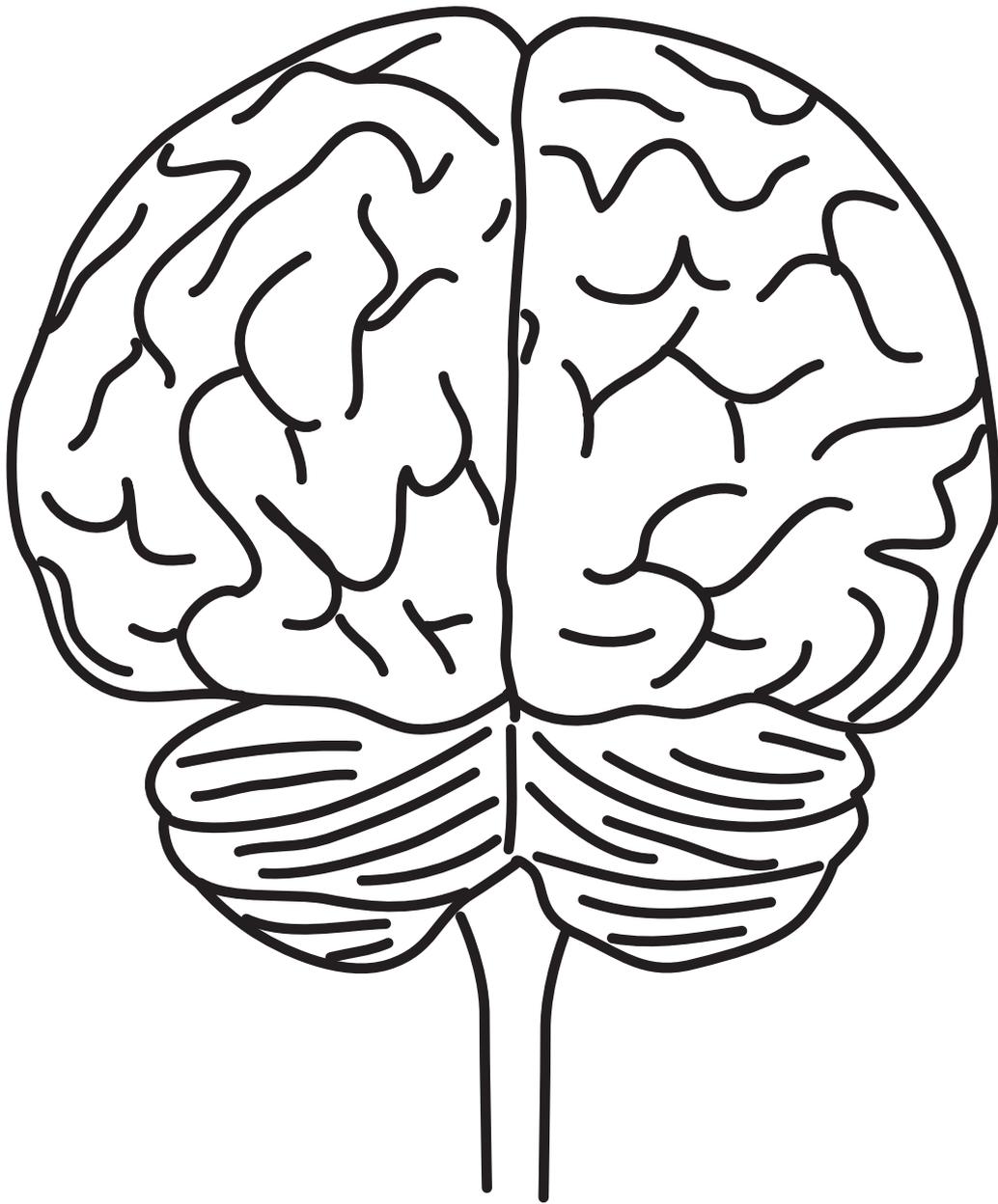
Finally, if you have a baby at home, we'd love to have you bring the baby for a visit so the children can observe, first hand, the early stages of their own development.

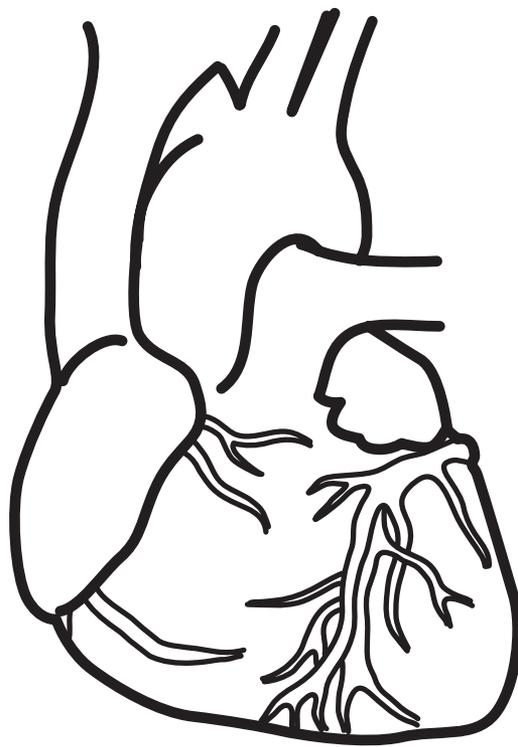
Thank you for your interest and help.

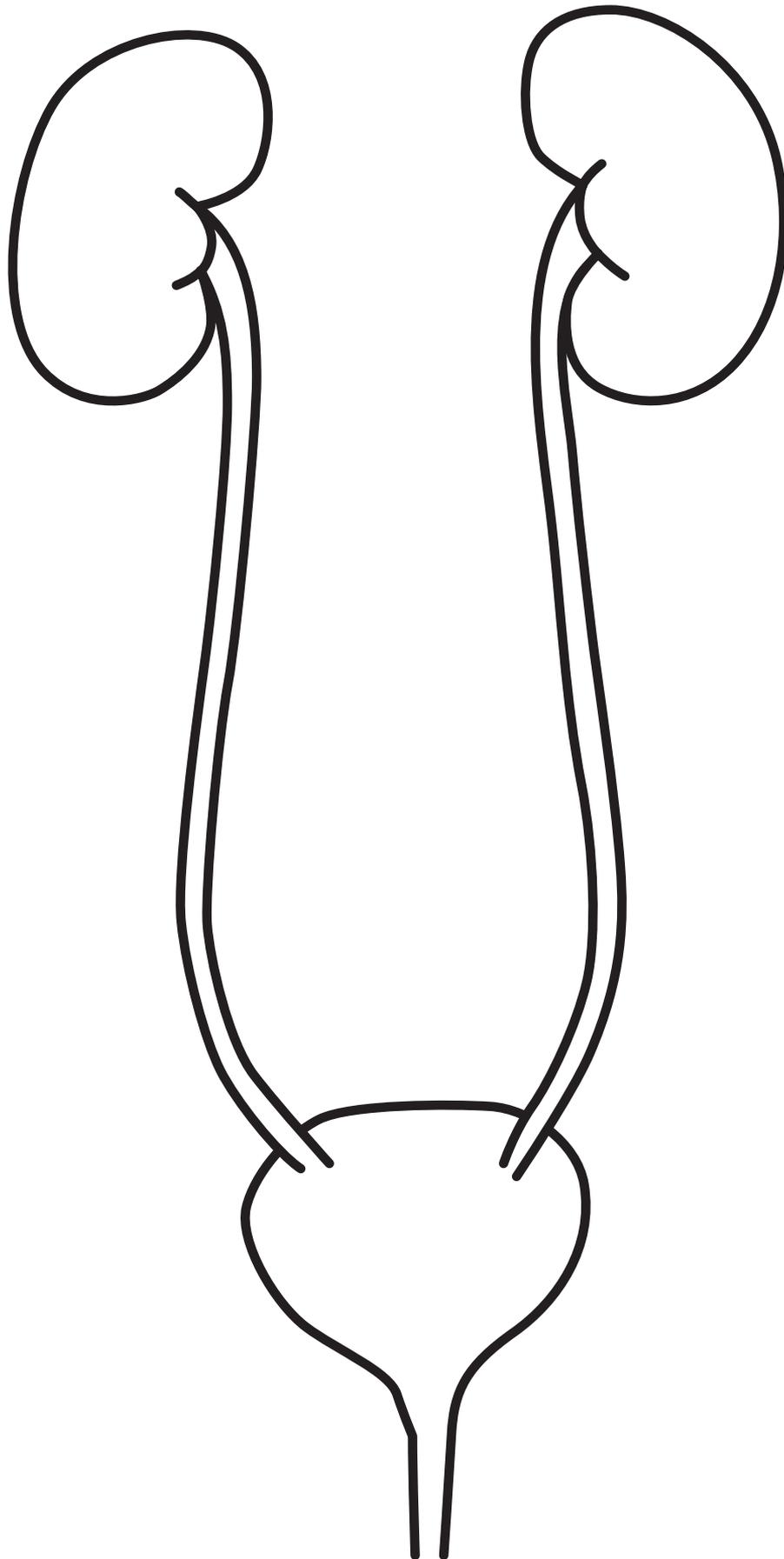
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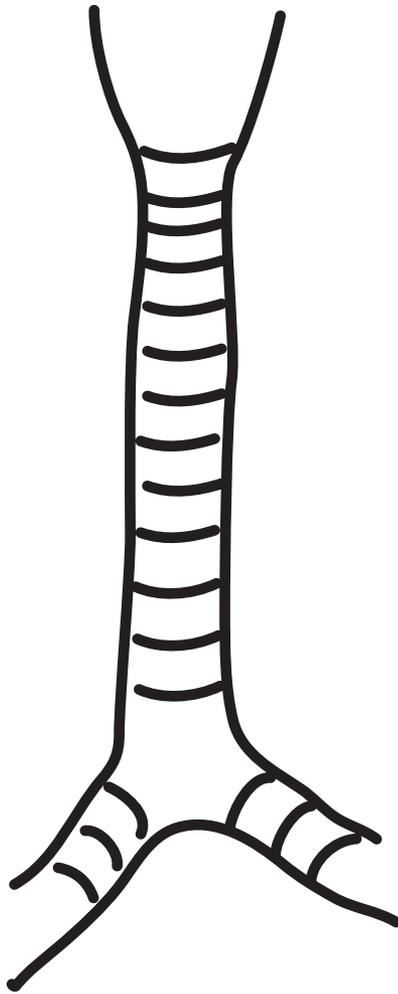


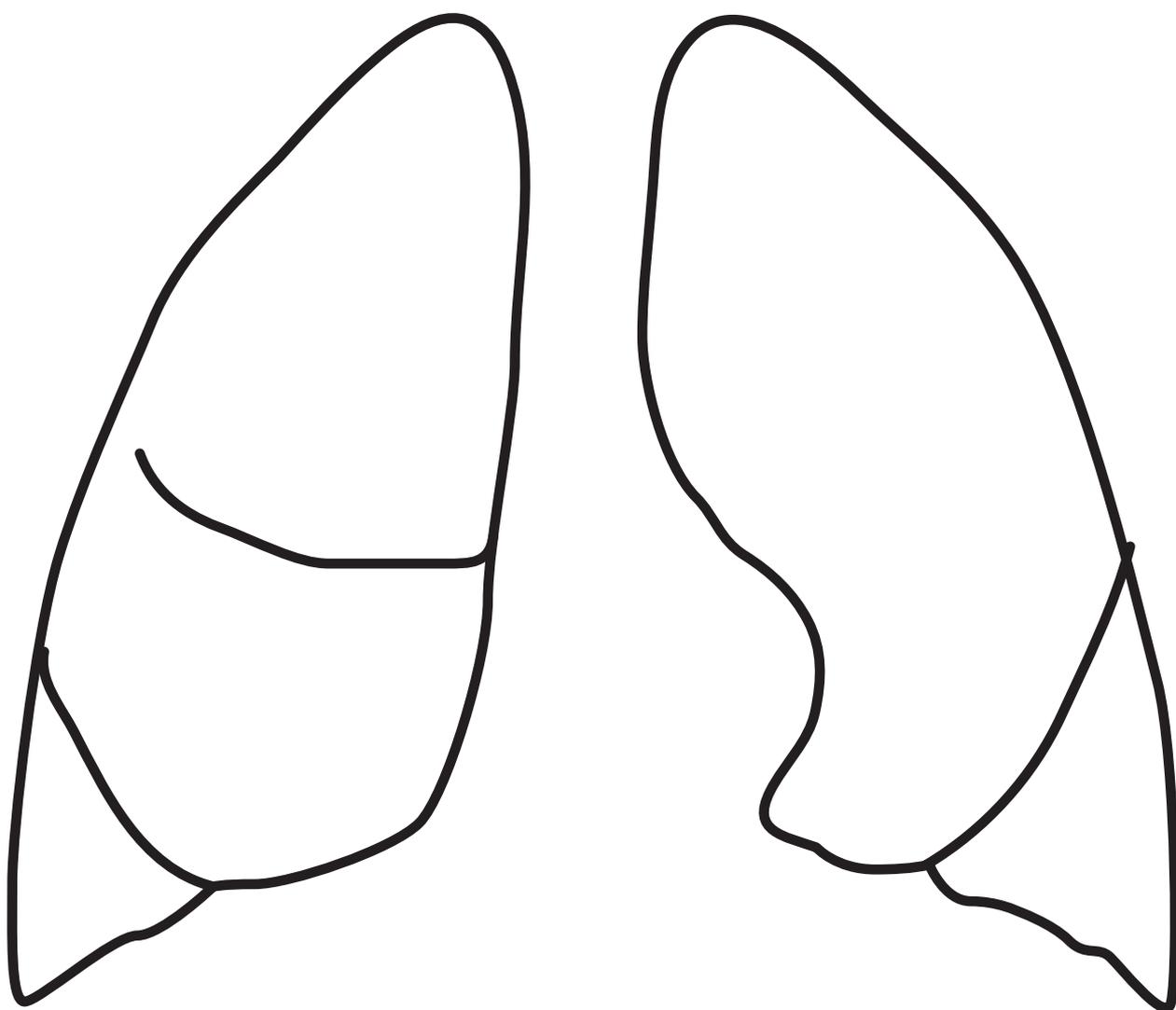


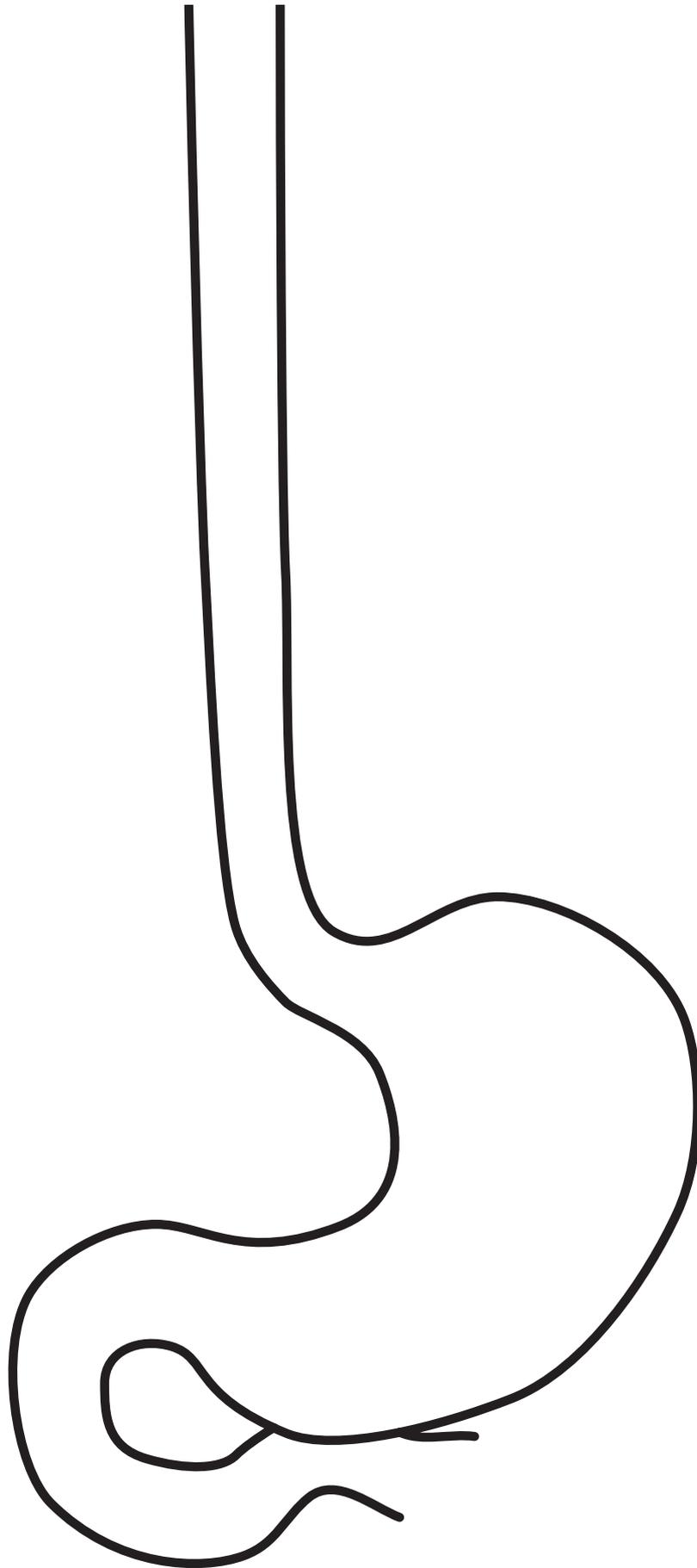


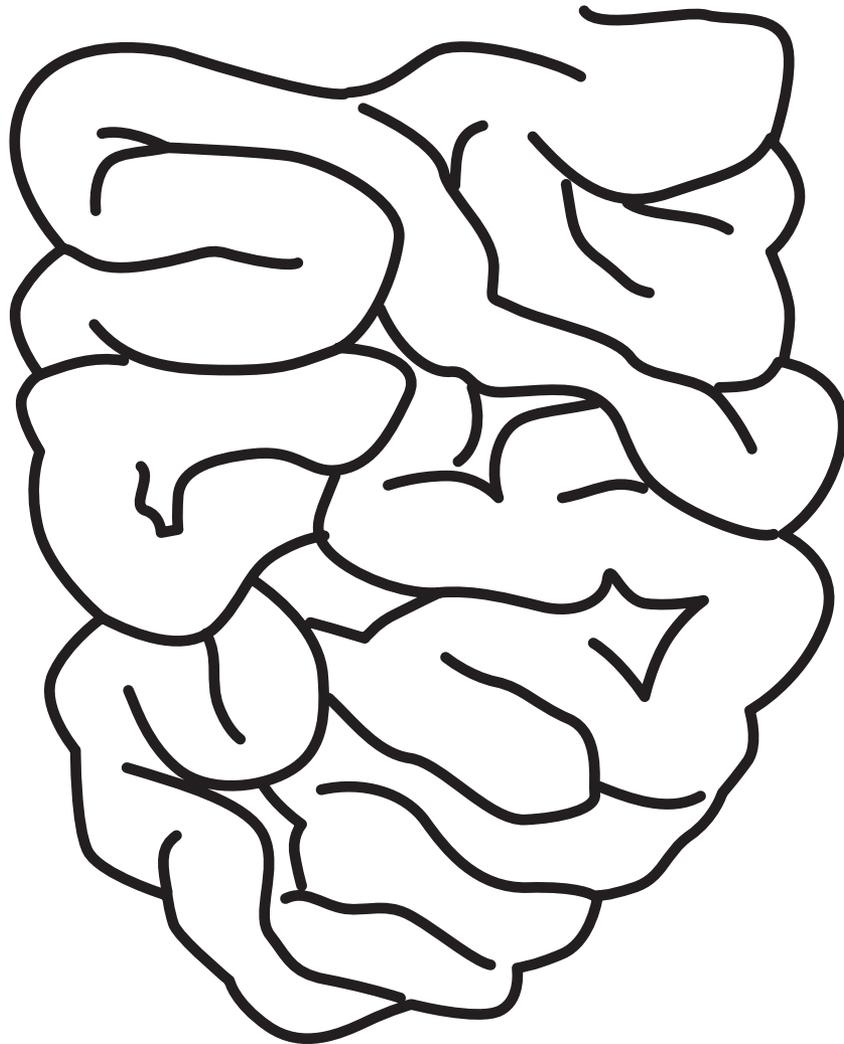


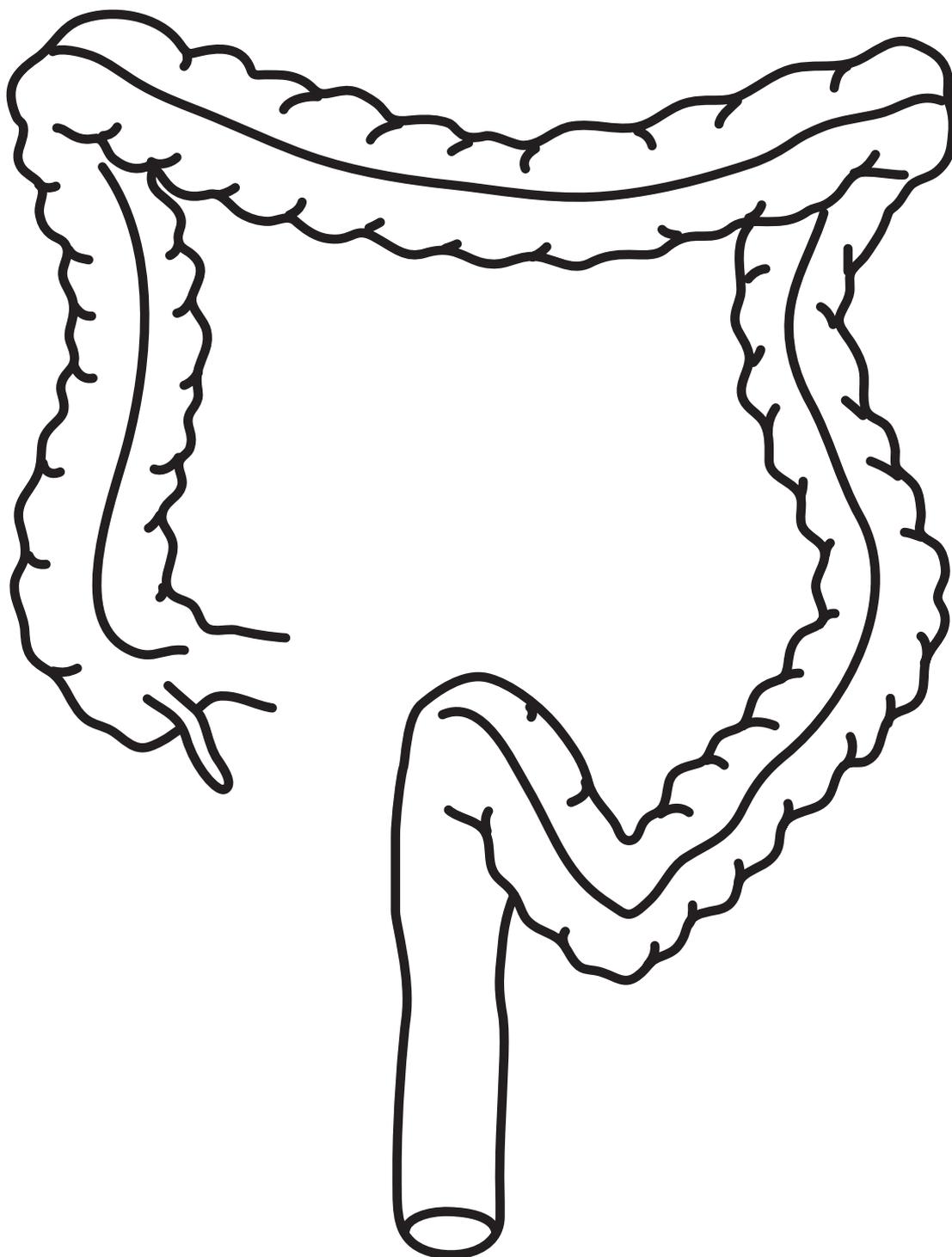


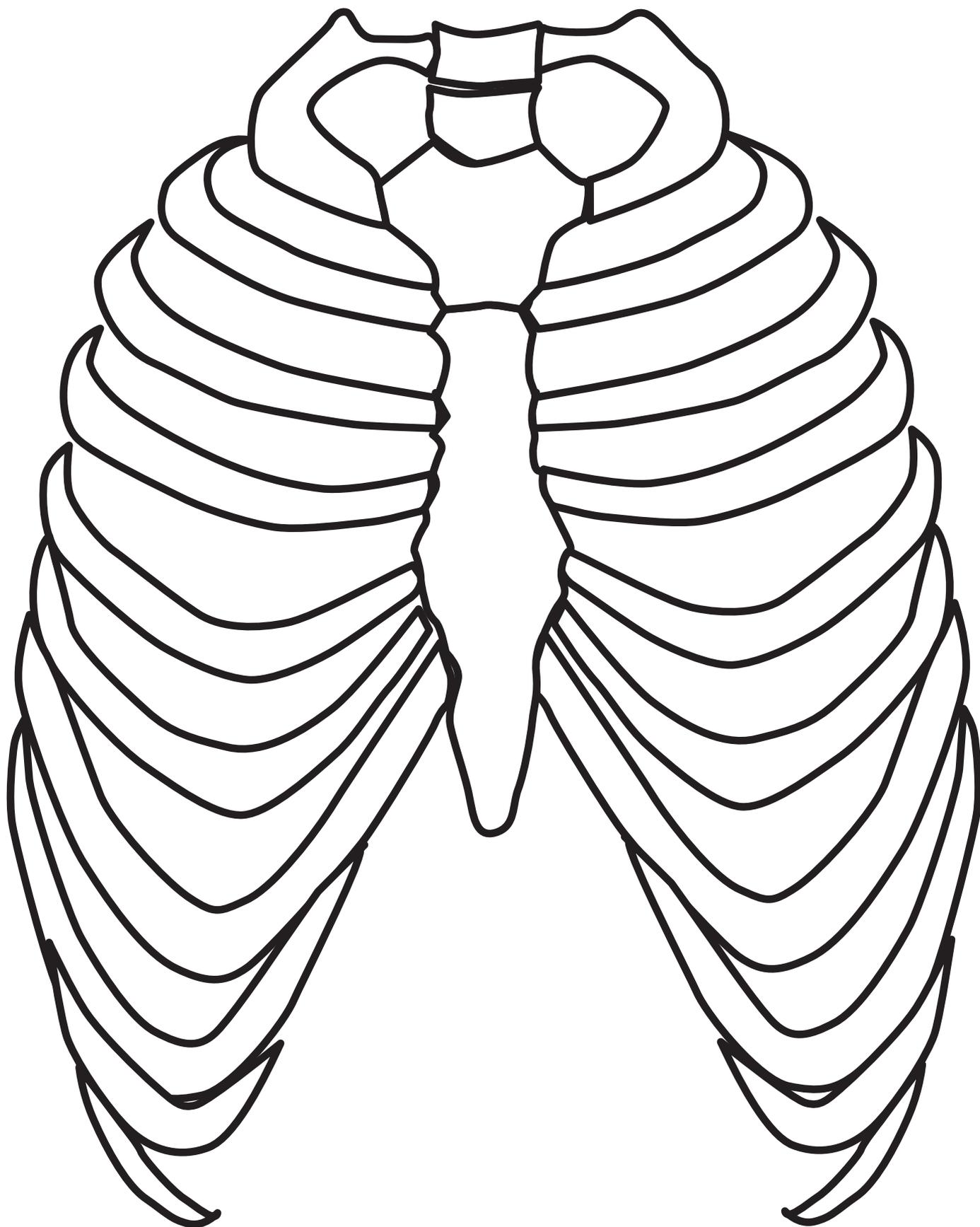




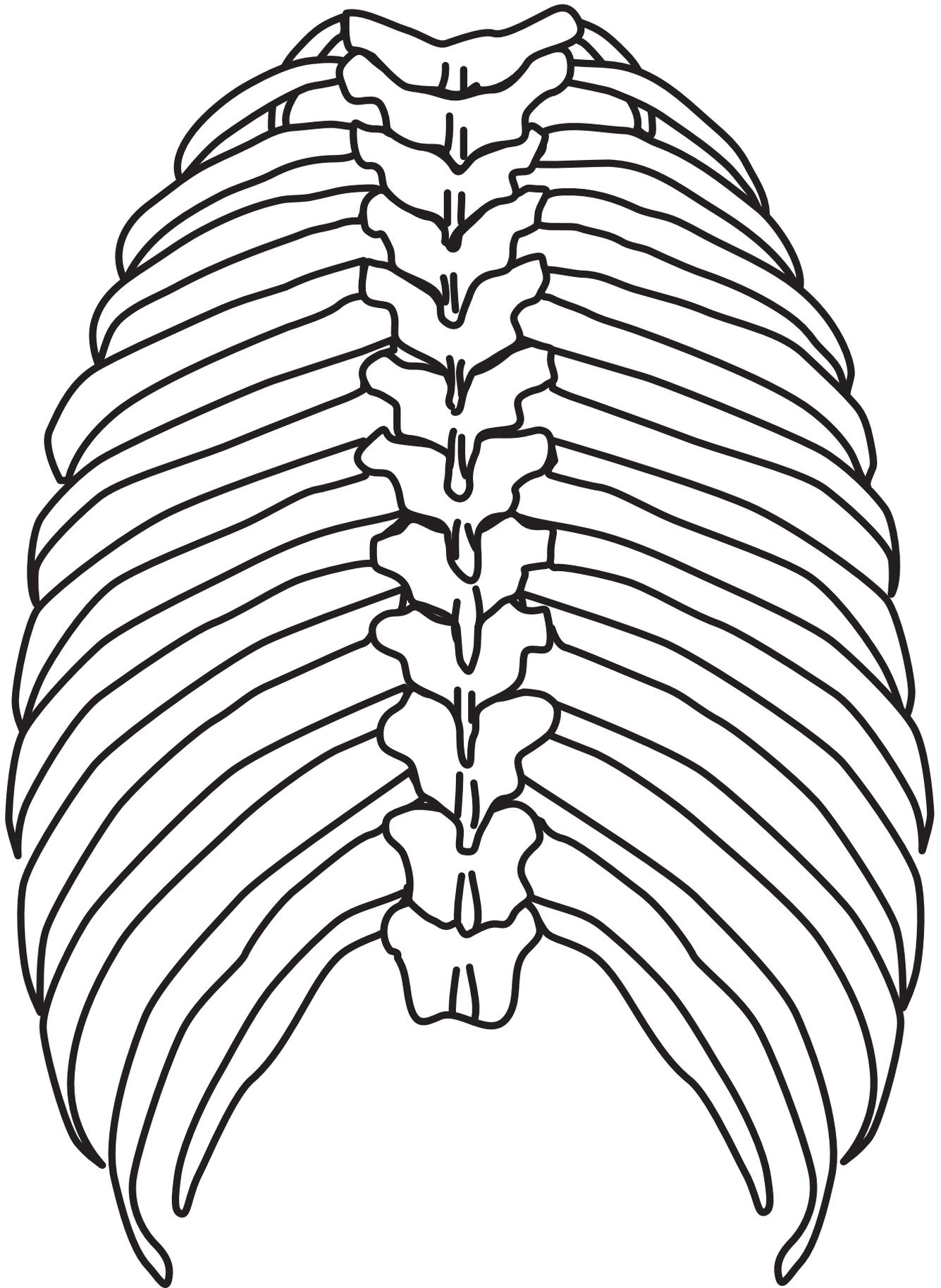








My Body: Rib Cage, Front View (Built of Bones: The Skeletal System)
Early Science Explorations Teacher Master 17



My Body: Rib Cage, Back View (Built of Bones: The Skeletal System)
Early Science Explorations Teacher Master 18

Dear Families,

As part of our science program, our class is beginning a study of the sky and weather. The children begin by talking about objects in the sky. They may note relatively close items like birds and insects, farther objects like clouds, and very far away objects—the moon, sun, and stars. Children will observe the moon both in daytime and at nighttime. They'll be asked to make evening and nighttime observations of the setting sun, the moon, and stars. Evening and nighttime observations from home provide good opportunities for you and your child to talk about which objects can be seen only in the day (the sun), only at night (the stars), or in the day or night (clouds and the moon).

To study sky and weather changes, children will record what they wear in different weather conditions; how clouds, precipitation, and wind change from day to day; and what an outdoor scene looks like each season. They'll make class books of these records to compare day-to-day and seasonal changes in the weather. If you wish to supplement the weather activities from home, when you come upon a news report of a nearby "big weather event," send the article or web link to school with your child. The class may add reports of these events to the class weather books.

Children will also conduct a series of activities to explore sunlight and shadows. They'll investigate the light and warmth of sunlight, as well as how sunbeams and shadows change as a day passes.

To enrich all the activities at home, you may wish to check out library books about the sun, moon, and stars; about weather and the seasons; and about sunlight and shadows. Be prepared to accompany your child to see nighttime views of the sky. Help your child be on the lookout for weather changes. Offer to play some of the shadow games your child has learned at school. Young children's curiosity makes them natural scientists, so it won't take much to encourage their explorations at home.

The phenomena behind the sun, moon and stars, weather changes, changing seasons, and shifting shadows are complex—too complex for young children to fully understand. However, the children's exploration, wondering, and thinking about these topics puts them in the role of scientists and will lay the groundwork for deeper understanding in future years.

Thank you very much for your help.

Sincerely,



Dear Families,

Over the next week, if the sky is clear, please help your child view these things:

- A sunset
- The moon and stars in the night sky
- Anything else you can see in the night sky (clouds, insects or other living things, etc.)

In school we'll be discussing when the sun is visible (only in the daytime), when the moon is visible (sometimes in the daytime, sometimes at nighttime), and when stars are visible (only at nighttime).

Thank you for your help.

Sincerely,



Dear Families,

Over the next week, if the sky is clear, please help your child view these things:

- A sunset
- The moon and stars in the night sky
- Anything else you can see in the night sky (clouds, insects or other living things, etc.)

In school we'll be discussing when the sun is visible (only in the daytime), when the moon is visible (sometimes in the daytime, sometimes at nighttime), and when stars are visible (only at nighttime).

Thank you for your help.

Sincerely,

Name: _____

Date _____

Measuring Wind

Draw the wind sticks today.

