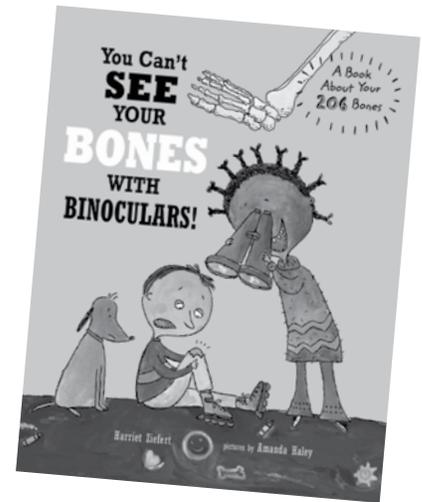




You Can't See Your BONES WITH BINOCULARS! Lesson Plan



OVERVIEW

In this activity, students study the human skeleton and how its 206 bones fit together. Students then draw and label a life-size version of their skeleton.

Can be used with *You Can't See Your Bones with Binoculars* by Harriet Ziefert and Illustrated by Amanda Haley (Blue Apple Books)

CONNECTIONS TO THE STANDARDS

NGSS/K-2-ETS1-1

Engineering Design: Asking Questions and Defining Problems. Ask questions based on observations to find out more information about the natural and/or designed world(s).

NGSS/K-2-ETS1-2

Engineering Design: Structure and Function. The shape and stability of structures of natural and designed objects are related to their function(s).

SECOND GRADE

CCSS/ELA

CCSS.ELA-Literacy.RI.2.4

Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

THIRD GRADE

CCSS/ELA

CCSS.ELA-Literacy.RI.3.7

Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

PREP

1. Locate a copy of *You Can't See Your Bones with Binoculars* by Harriet Ziefert and illustrated by Amanda Haley (Blue Apple Books).
2. Gather a large roll of kraft paper and cut a length of paper long enough to cover a student's body. Cut one for each student.
3. Gather a pencil and markers for each student.
4. Copy the handouts "Dem Bones" and "Glossary" for each student.

LESSON

1. As you read *You Can't See Your Bones with Binoculars* with your class, ask students to try to feel each bone you are describing.
2. Show students the picture of the complete skeleton. Discuss with students how our bones fit together and that inside of each person there is a skeleton!
3. Divide students into pairs. Give each pair two long lengths of kraft paper. One student will lie on a length of paper while the other traces around that student's body. Each student should have a tracing.
4. Using the Dem Bones handout as a reference, students will draw with a pencil the shapes of the bones inside the body tracing. Once the drawing is done, students can go over the pencil lines in marker and add details to the outside of the body (hair, the outline of clothes, etc.)
5. Students will use the Glossary handout to label the major bones with the correct scientific name. As students work, circulate the room to give guidance and feedback.



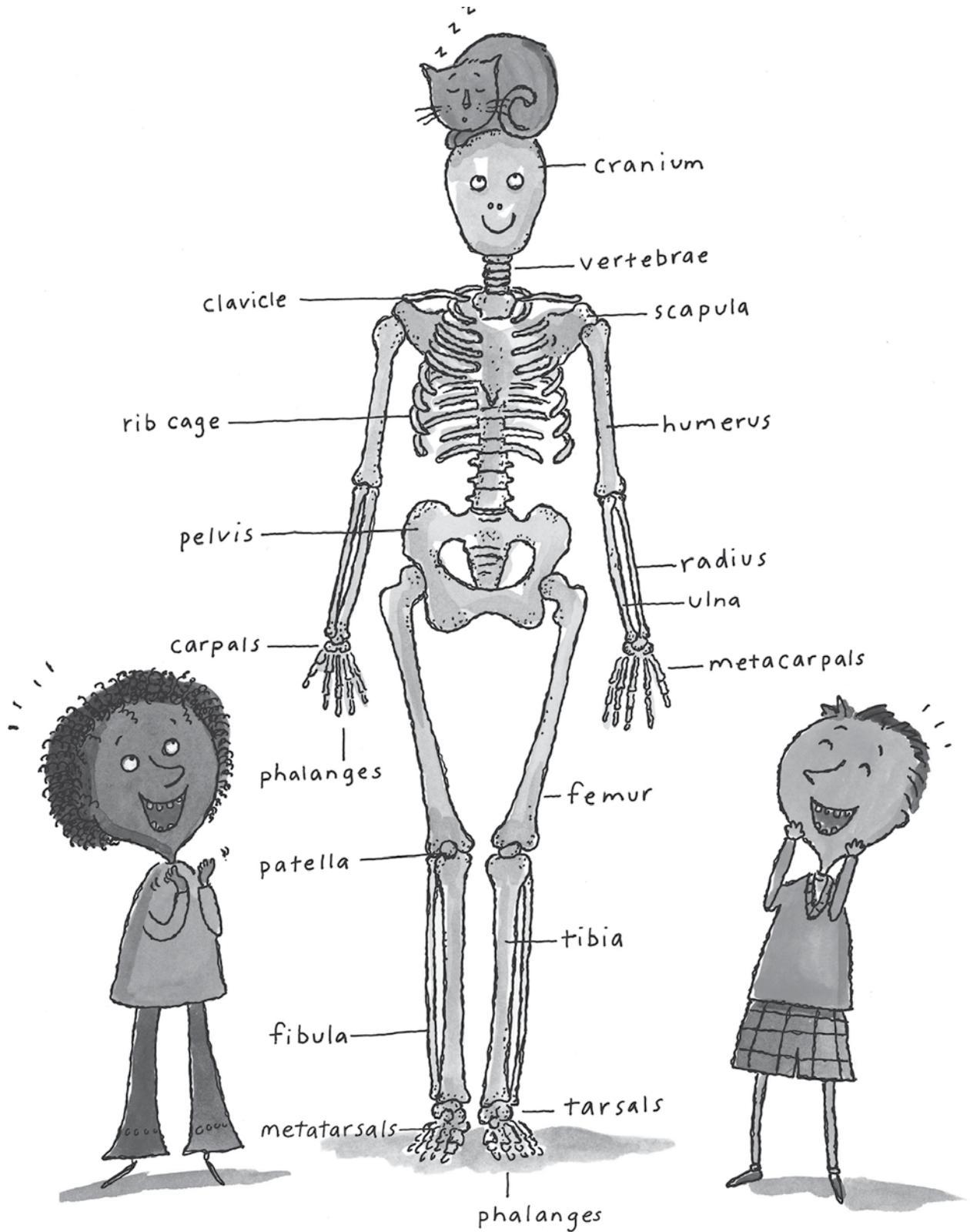
EXTENSIONS

- Students compare and contrast the "finger bones" and the "toe bones." Both are called phalanges. Write ways in which the bones are the same and how they are different.
- Students compare their human skeleton to the photo of the bat skeleton found in the book.

CURRICULUM CREATOR

Kristen Remenar is a children's librarian, teacher, and a national presenter on early literacy. Her picture book *Groundhog's Dilemma* will be published by Charlesbridge in 2015 and will be illustrated by her husband, author/illustrator Matt Faulkner.

Dem Bones



This activity and illustration come from *You Can't See Your Bones with Binoculars* by Harriet Ziefert and illustrated by Amanda Haley.

Look for more curriculum on the "Librarian & Educator" page at www.BlueAppleBooks.com.

Glossary



Carpals: wrist bones, 8 bones in each wrist

Clavicle: collar bone that connects your arm to your body

Cranium: skull bone that protects your brain

Femur: thigh bone, the bone that goes from your hip to your knee

Fibula: calf bone, the other leg bone below the knee

Humerus: arm bone from your shoulder to your elbow, also called your funny bone

Metacarpals: hand bones, 5 bones in each hand

Metatarsals: foot bones, 5 bones in each foot

Patella: kneecap

Pelvis: bony structure at the base of your spine with sockets for your leg bones

Phalanges: finger bones, 14 bones in each hand

Phalanges: toe bones, 14 bones in each foot

Radius: one of the bones in your forearm that connects your elbow to your wrist

Rib Cage: bones that surround your chest to protect your heart, lungs, and other organs

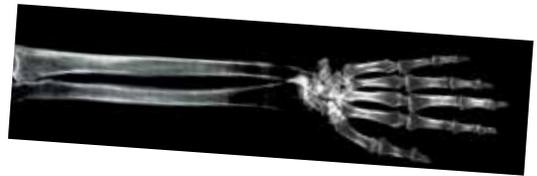
Scapula: shoulder blade that forms a socket with the clavicle

Tarsals: ankle bones

Tibia: shin bone, one of two leg bones below the knee

Ulna: the other bone in your forearm that connects your elbow to your wrist

Vertebrae: neck bones and back bones that make up your spine



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