

Bones Standards Correlation

Life Sciences, Health, and Physical Education Florida State Standards for Elementary Students

Standard 1: Core Concepts - Comprehend concepts related to health promotion and disease prevention to enhance health.

HE.1.C.1.5: Identify the correct names of human body parts.

HE.K.B.5: Decision Making - Demonstrate the ability to use decision-making skills to enhance health.

HE.K.B.5.In.b, HE.1.B.1.In.b, HE.2.B.2.In.b, HE.3.B.3.In.b, HE.4.B.4.In.b, HE.5.B.5.In.b.: Describe healthy options to health-related issues or problems,

PE.K.C.2, PE.1.C.2, PE.2.C.2, PE.3.C.2, PE.4.C.2, PE.5.C.2: Identify, analyze and evaluate movement concepts, mechanical principles, safety considerations and strategies/tactics regarding movement performance in a variety of physical activities.
PE.5.R.6.2: Explain the benefits of physical activity.

Standard 2: Identify, analyze and evaluate movement concepts, mechanical principles, safety considerations and strategies/tactics regarding movement performance in a variety of physical activities.

SC.5.L.14.1: Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs.

SC.5.L.14.In.1: Distinguish major external and internal body parts, including skin, brain, heart, lungs, stomach, muscles and skeleton, reproductive organs, and sensory organs.

SC.5.L.14.Pa.1: Recognize body parts related to movement and the five senses.

National Science Education Standards

National Committee on Science Education Standards and Assessment, National Research Council

TABLE 6.3. LIFE SCIENCE STANDARDS

LEVELS K-4

Characteristics of organisms Life cycles of organisms Organisms and environments

LEVELS 5-8

Structure and function in living systems

Bones Quiz

Mark True or False

- ___ 1. Teeth are not really bones.
- ___ 2. All of the joints in the body work the same way.
- ___ 3. The cranium is part of the foot.
- ___ 4. You don't have to wear a helmet when you ride your bike because you will never fall on your head.
- ___ 5. The marrow is found inside the bones.

Circle the correct answer.

- 1. There are about (200) (500) (1000) bones in the human body.
- 2. Hinge joints move (one way) (two ways) (in circles).
- 3. An example of a hinge joint would be (where the neck meets the head) (the shoulder) (the knee).
- 4. The hip is a (hinge joint) (ball and socket joint) (pivot joint).
- 5. If *osteocyte* means *bone cell* and *cyte* means *cell*, then *osteo* probably means (muscle) (bone) (blood).

FOR THE TEACHER

The quiz can be used before the show to let children test their knowledge. It can be used as a "listening guide" for the show, with each child or group of children listening for the answer to one of more items. It can be used after the show as a test of recall.

Bones Quiz Answer Key

Mark True or False

- T 1. Teeth are not really bones.
- F 2. All of the joints in the body work the same way.
- F 3. The cranium is part of the foot.
- F 4. You don't have to wear a helmet when you ride your bike because you will never fall on your head.
- T 5. The marrow is found inside the bones.

Circle the correct answer.

- 1. There are about (200) (500) (1000) bones in the human body.
- 2. Hinge joints move (back and forth only) (two ways) (in circles).
- 3. An example of a pivot joint would be (where the neck meets the head)
(the shoulder) (the knee).
- 4. The hip is a (hinge joint) (ball and socket joint) (pivot joint).
- 5. If *osteocyte* means *bone cell* and *cyte* means *cell*, then *osteo* must mean
(muscle) (bone) (blood).

THE LIST

It's the
cranium mandible clavicle scapula sternum and ribs
it goes like this
humerus vertebrae radius sacrum ulna and carpals
there's more so don't miss
metacarpals phalanges the femur patella
tibia fibula tarsals how fun

top to the bottom you name 'em you got 'em
the major bones in order each one

FOR THE TEACHER

WORKSHEET 1: Name The Bones. Sing or recite the lyrics and have the children point to each on themselves or on a picture or model as they listen to the song.

WORKSHEET 2: Cut out and assemble the skeleton.

CREATE and label a 3D skeleton using construction paper and straws



NAME THE BONES

THE LIST

It's the:

cranium mandible clavicle scapula sternum and ribs

it goes like this

humerus vertebrae radius sacrum ulna and carpals

there's more so don't miss

metacarpals phalanges the femur patella

tibia fibula tarsals how fun

top to the bottom you name 'em you got 'em

the major bones in order each one

MARROW: A LOVE SONG

Chorus

Marrow
I love what you do
Love what you do for me
Making my blood for me
Love what you do for me
Marrow

Verse One

You, you're so good to me
A cell factory
Where would I be without you Marrow
Cause you're there
Deep in my bones
And now I know
That you're working to repair the cells in me

I couldn't make it without you
All that you do
I want to thank you thank you thank you

Bridge

'Cause the stem cells you provide
They keep this kid alive
And I couldn't live without you

FOR THE TEACHER

Main Idea: Bone marrow makes all kinds of blood cells: red blood cells that carry oxygen, white blood cells that fight infections, stem cells that develop into various other specialized cells, and platelets that help blood clot.

WORKSHEET: SO WHAT IN THE WORLD IS MARROW?

Answers: 1. Infection. 2. Marrow. 3. Clot. 4. Stem cell. 5. Platelet. 6. White blood cells.
7. Oxygen.

SO WHAT IN THE WORLD IS MARROW?

marrow: a soft fatty substance in the bones, in which blood cells are produced

platelet: a small colorless disk-shaped cell fragment, found in large numbers in blood and involved in clotting

clot: a thick mass of coagulated liquid, especially blood, or of material stuck together

infection: the process of bacteria or viruses invading the body or making someone ill or diseased.

stem cell: a simple cell in the body that is able to develop into any one of various kinds of cells (such as blood cells, skin cells, etc.)

oxygen: a chemical element found in the air as a colorless odorless tasteless gas that is necessary for life

white blood cells: cells in the blood that fight infection

RIDDLES: WHO AM I?

1. I'm the Bad Guy.
2. I may be fat and soft, but I work really hard!
3. Stick with me, and I'll make a scab for you.
4. I can be almost anything I want to be.
5. I sound like something on your table, but you wouldn't want to put lunch on me!
6. I might be a Superhero, because I defeat the Bad Guy.
7. I might be your best friend, because you couldn't live without me.

JOINT EFFORT

Verse One

Now bones would have a problem
If dere were no joints
Cause joints dey work like hinges
Which brings me to da point
Dat bones can't move wid out dem
Some bend and some protect
So stand up for the joint my friend and give it some respect

Chorus

It's a joint effort
connecting and grooving
movement improving
joint effort
hingin' and flexin
several directions
joint effort
cause bones don't work alone

Verse Two

Now hinge joints move just one way
And pivot joints move two
Dey rotate and they twist some
But some things dey can't do
So den you need the third type
the ball and socket kind
it moves around in circles so you should keep in mind

FOR THE TEACHER:

Hinge joints act much like the hinges on doors. They permit back and forth movement, but not side-to-side or lateral movement. (elbows, the knees, and the middle and end joints of the fingers)
Pivot joints allow rotation of one bone around another. (where the neck meets the head)
A ball-and-socket joint is found where the large, round head of a bone fits into the cup of another bone. Ball-and-socket joints allow for the greatest range of motion in the body. (the hip bone, the shoulder)

ACTIVITY

ASK: What would happen if we didn't have joints? Can you show the class a way to move without joints?

Note: This is impossible (except for using outside action, as when a child lies stiff and another child rolls him on the floor). As children attempt to show movement, let the others tell them what kind of joints they are using.

Play it Safe

Verse One

I have a friend who's rather strange
Scaredy Bones, yes that's his name
He has a song that he likes to sing
He hums it as he brings me things
Like helmets, knee pads, safety stuff
I tell him "Scaredy, that's enough"
He shakes his head "oh no siree"
You buckle up and sing with me

Chorus

it's a scary skeleton that doesn't think smart
no helmet and no seatbelt can make you fall apart
it's creepy it's spooky and would be a disgrace
so for the sake of Scaredy bones—always play it safe

Verse two

Now some say he's just paranoid
Stuck in the mud, a real kill joy
But others sing a different tune
They've broken bones and know it's true
What Scaredy says is common sense
And though he gets a bit intense
As experts go he's number one
'cause Scaredy is a skeleton

Bridge

So sing with me this little tune
Commit to safety through and through
Join with me in this last chorus
(Your) scaredy bones will thank you for it

FOR THE TEACHER

Suggested books for primary grades:

The Bear's Bicycle by Emilie Warren McLeod (Author), David McPhail (Illustrator)

The Bike Lesson by Stan and Jan Berenstain (Beginner Books)

Franklin Rides a Bike by Paulette Bourgeois

For all grades:

Bike Safety Poster Contest

Writing prompt: I forgot my helmet when I went bike-riding today. Everything was fine until...