SCIENCE

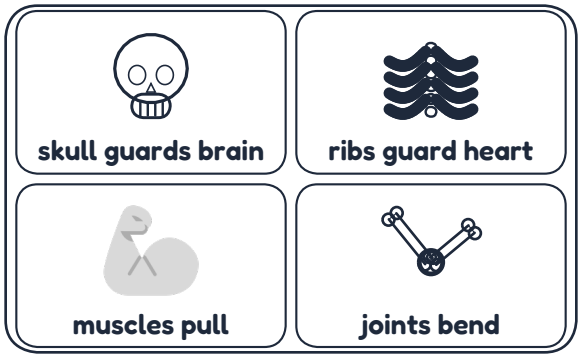
Bones and muscles

Name _____ Date _____

I can explain how bones and muscles help the body move.

1 How it works

Your skeleton is made of more than 200 bones. Bones hold you up, give your body its shape and protect soft parts: the skull protects the brain and the ribs protect the heart and lungs. Muscles pull on bones to move them, and joints, like elbows and knees, are where bones meet and bend.



2 Does it have bones inside? Circle yes or no.



a bird

yes no



a fish

yes no



a dog

yes no



an octopus

yes no



a worm

yes no



a snake

yes no



a snail

yes no



a jellyfish

yes no

How did I do? ☆ ☆ ☆

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Bones on the job

Name _____ Date _____

I can tell what bones, muscles and joints do.

1 What is its job? Draw a line.

 skull	protects the brain
 ribs	let the body bend
 spine	pull on bones to move them
 muscles	protect the heart and lungs
 joints	holds your body up straight

2 Does it bend? Circle one.

1. your elbow	bends	does not bend
2. the middle of your arm bone	bends	does not bend
3. your knee	bends	does not bend
4. the top of your skull	bends	does not bend
5. your fingers	bends	does not bend

How did I do? ☆ ☆ ☆

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Think like a scientist

Name _____ Date _____

I can explain how bones, muscles and joints work together.

1 Think about it

1. Why do we need a skull? _____
2. How do muscles move bones? _____
3. What would happen with no joints? _____
4. How can you keep bones strong? _____

2 True or false? Circle it.

1. Bones give the body its shape.	true	false
2. Your knee is a joint.	true	false
3. The skull protects the heart.	true	false
4. Bones are soft like jelly.	true	false
5. Muscles pull on bones to move them.	true	false

3 Draw your arm bending. Label a bone, a muscle and a joint.

How did I do? ☆ ☆ ☆

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Try it: the thumb test

Name _____ Date _____

I can test how a joint helps me move.

1 You need

-  soft tape
-  a pencil
-  a book
-  a timer
-  a partner

2 What to do

1. Time how long it takes to pick up a pencil, turn a page and write your name.
2. Gently tape your thumb to the side of your hand.
3. Time the same 3 jobs again.
4. Take the tape off. Compare your times.

3 I predict

Will the jobs be easier or harder with your thumb taped?

_____

_____

4 What I see

Job	Thumb free	Thumb taped
pencil		
page		
name		

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: bones and muscles

1 Page 1

Answers: 1) a bird: yes; 2) a fish: yes; 3) a dog: yes; 4) an octopus: no; 5) a worm: no; 6) a snake: yes; 7) a snail: no; 8) a jellyfish: no.

Animals with a backbone have a skeleton of bones inside. Worms, jellyfish, octopuses and snails have no bones.

2 Page 2

Jobs: 1) skull: protects the brain; 2) ribs: protect the heart and lungs; 3) spine: holds your body up straight; 4) muscles: pull on bones to move them; 5) joints: let the body bend.

Bends: 1) bends; 2) does not bend; 3) bends; 4) does not bend; 5) bends.

3 Page 3

Think: 1) It protects the brain; 2) They pull on them; 3) We could not bend; 4) Exercise and eat foods with calcium, like milk.

True or false: 1) true; 2) true; 3) false; 4) false; 5) true.

Drawing: answers will vary. Look for the elbow labeled as the joint and a muscle on the upper arm.

4 Page 4: Try it!

Every job is harder and slower with the thumb taped. The thumb has joints that let it bend and reach across to the fingers, so we can grip and pinch. Joints are where bones meet, and they let our bodies move in many ways.

5 Teaching tip

Have children hold their upper arm while they bend and straighten the elbow. They can feel the muscle get short and hard as it pulls.

Safety: tape gently on the outside of the hand only, and take it off right after.

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