

# HUMAN LOCOMOTOR SYSTEM

CHALLENGE KIT RESOURCES



**E-Patches & Crests**  
A Division of 1497202 Alberta Ltd.

# Games and Activities

## MAD LIBS

Fill in the list of words, and then use those words to fill in the blanks in the story. Read the story aloud and enjoy the humour of the results. Remember, a noun is a person place or thing; a verb is an action word; an adjective is a describing word and an adverb is an adjective with "ly" on the end. Have fun!

**Adverb:**

**Girl's name:**

**Adjective:**

**Verb:**

**Noun:**

**Noun:**

**Noun:**

**Boy's name:**

**Verb:**

**Girl's name:**

**Verb:**

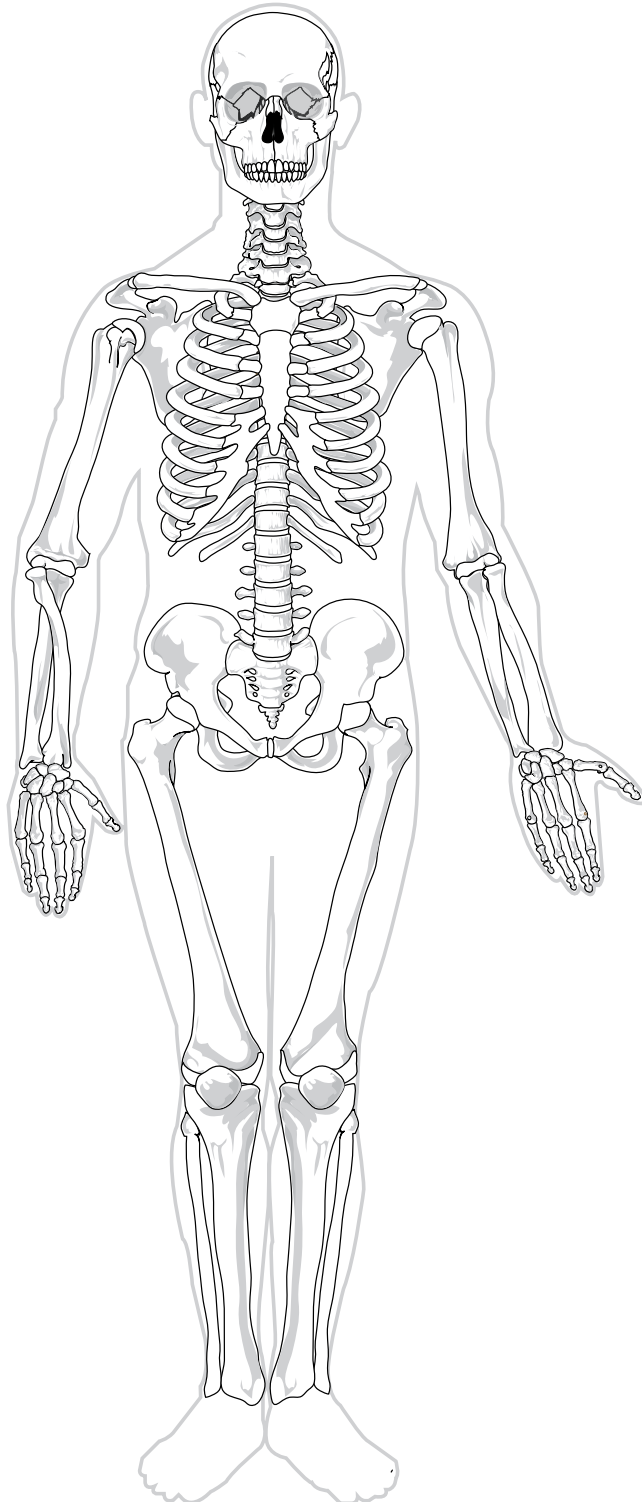
**Verb:**

**Verb:**

The Rogers family was a very \_\_\_\_\_ and clumsy bunch. On the day of \_\_\_\_\_ Roger's tenth birthday she received a/an \_\_\_\_\_ pogo stick. She was so excited to try it out that she couldn't even \_\_\_\_\_. Unfortunately, she accidentally hopped on a \_\_\_\_\_ and fell off the pogo stick onto her wrist, breaking it. The first two things she drew on her cast were pictures of a \_\_\_\_\_ and a \_\_\_\_\_. The nurse at the hospital emergency room recognized Mrs. Rogers from the week before when she had brought in \_\_\_\_\_ Rogers for medical attention too. He had been \_\_\_\_\_ing when he suddenly rolled over on his ankle and twisted the joint. Ouch, sprains hurt! Similarly, \_\_\_\_\_ Rogers had overstretched and torn one of her muscles by \_\_\_\_\_ing too much. The pulled muscle required lots of ice, compression, rest to get better before she could go back to \_\_\_\_\_ing. The doctor was always reminding the Rogers children to \_\_\_\_\_, slow down, be more careful and eat healthy foods so that they would not be so injury prone.

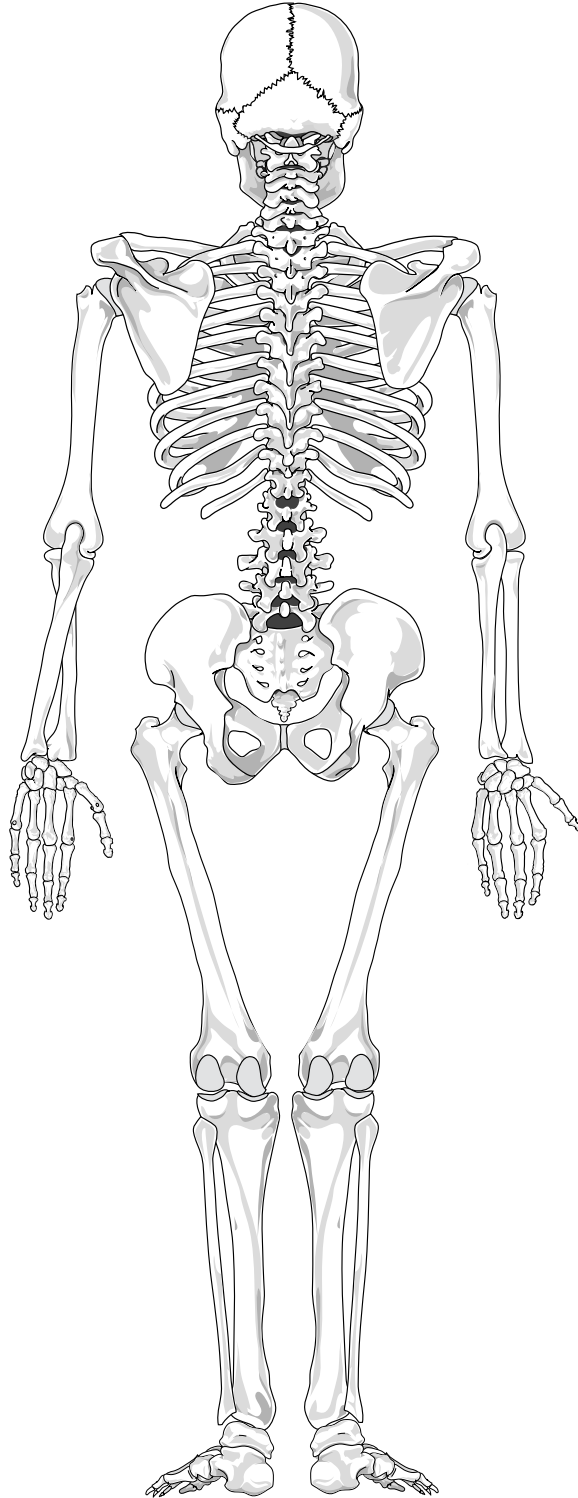
# Games and Activities

## COLOURING PAGES: SKELETON (Front View)



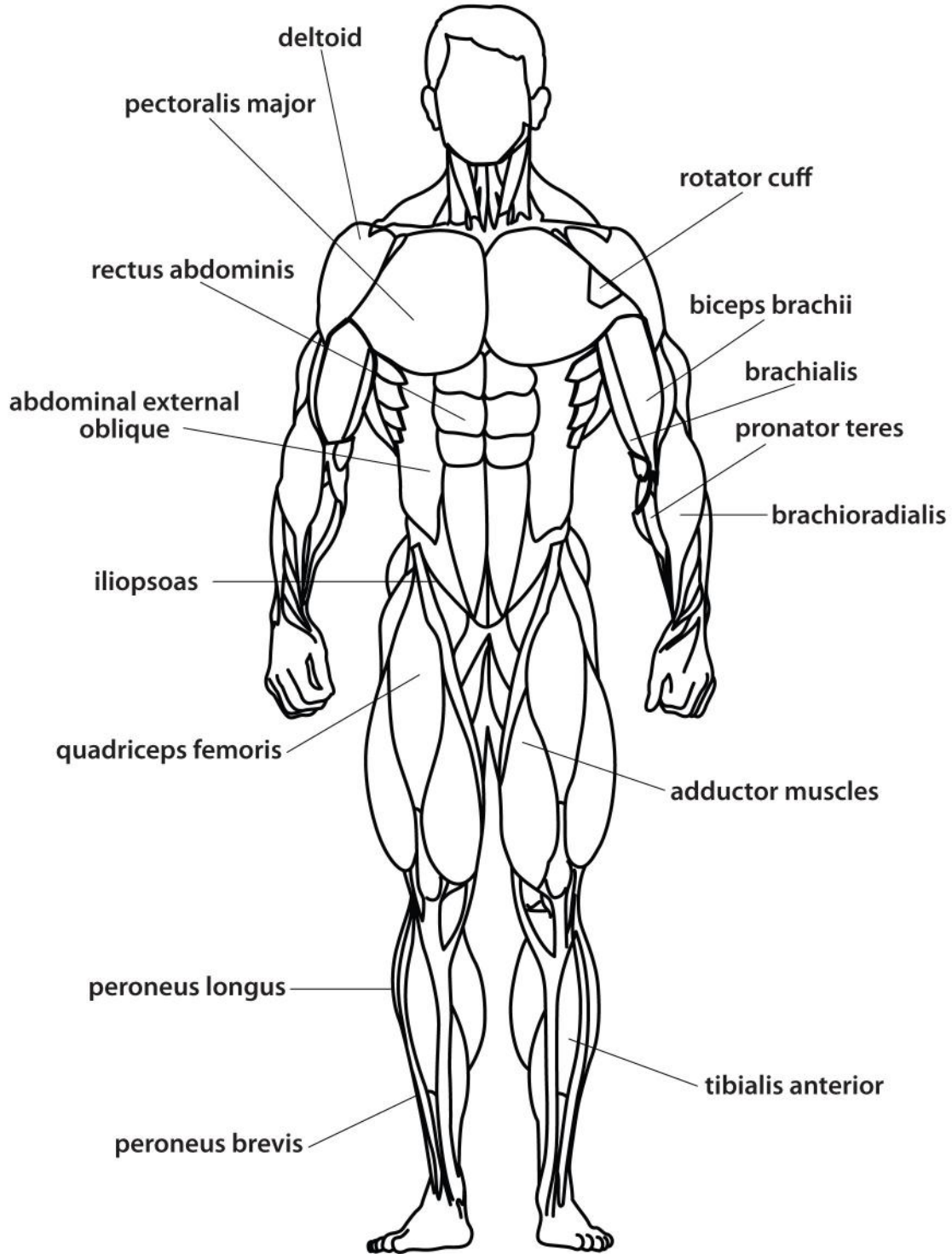
## Games and Activities

### COLOURING PAGES: SKELETON (Dorsal View)



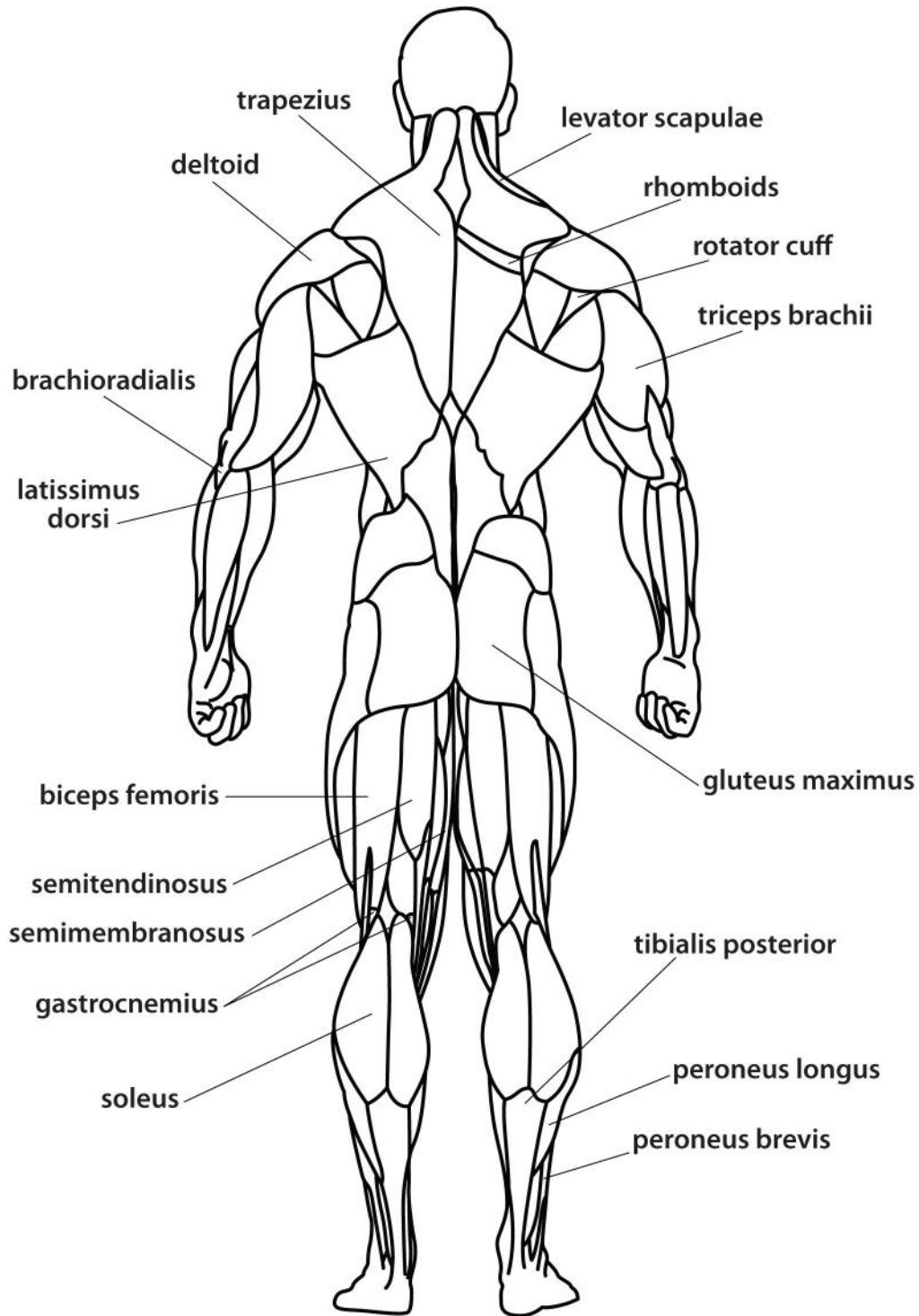
# Games and Activities

## COLOURING PAGES: THE MUSCLES OF THE BODY (Anterior View)



# Games and Activities

## COLOURING PAGES: THE MUSCLES OF THE BODY (Posterior View)



# Puzzles

## DEFINITION MATCH UP

Match the key terms in the box to their correct definitions.

<b>A strong but flexible tissue in the joints that covers the surface of the ends of bones to protect and cushion them from rubbing against each other.</b>	
<b>A hard framework made of bones and covered by muscles that gives the body its shape and protects the internal organs.</b>	
<b>A part of the body where two or more bones meet and the body can move or bend.</b>	
<b>The spongy layer of bone which looks like a honeycomb and is very light in weight.</b>	
<b>The type of joint that allows a rotating or twisting motion, like that of the head moving from side to side.</b>	
<b>A tough cord of fibrous tissue that joins a muscle to a bone or a muscle to another muscle.</b>	
<b>Tough bands of fibrous tissue that stretch across or around a joint and strap bones together where they meet.</b>	
<b>An important dietary mineral that gives hardness and strength to bones and teeth.</b>	
<b>A mass of tough, elastic tissue that contracts to pull on the bones and produce movement.</b>	
<b>The most moveable of all types of joints in which one bone rotates like a ball inside a cuplike shaped bone.</b>	
<b>The dense, hard outside layer of the bone.</b>	
<b>The type of joint that moves backwards and forwards in one direction.</b>	

COMPACT BONE  
 CARTILAGE  
 SKELETON  
 JOINT

TENDON  
 LIGAMENT  
 CALCIUM  
 MUSCLE

BALL AND SOCKET JOINT  
 CANCELLOUS BONE  
 HINGE JOINT  
 PIVOT JOINT

# Puzzles

## LITTLE WORDS OUT OF BIG WORDS

Use the letters of each key word to make new words. The new words must be at least two letters long and each letter may only appear in the little word as often as it did in the big word. Proper nouns and abbreviations are not allowed.

For more of a challenge, set a time limit of 3 to 5 minutes for each puzzle.

### FRAMEWORK

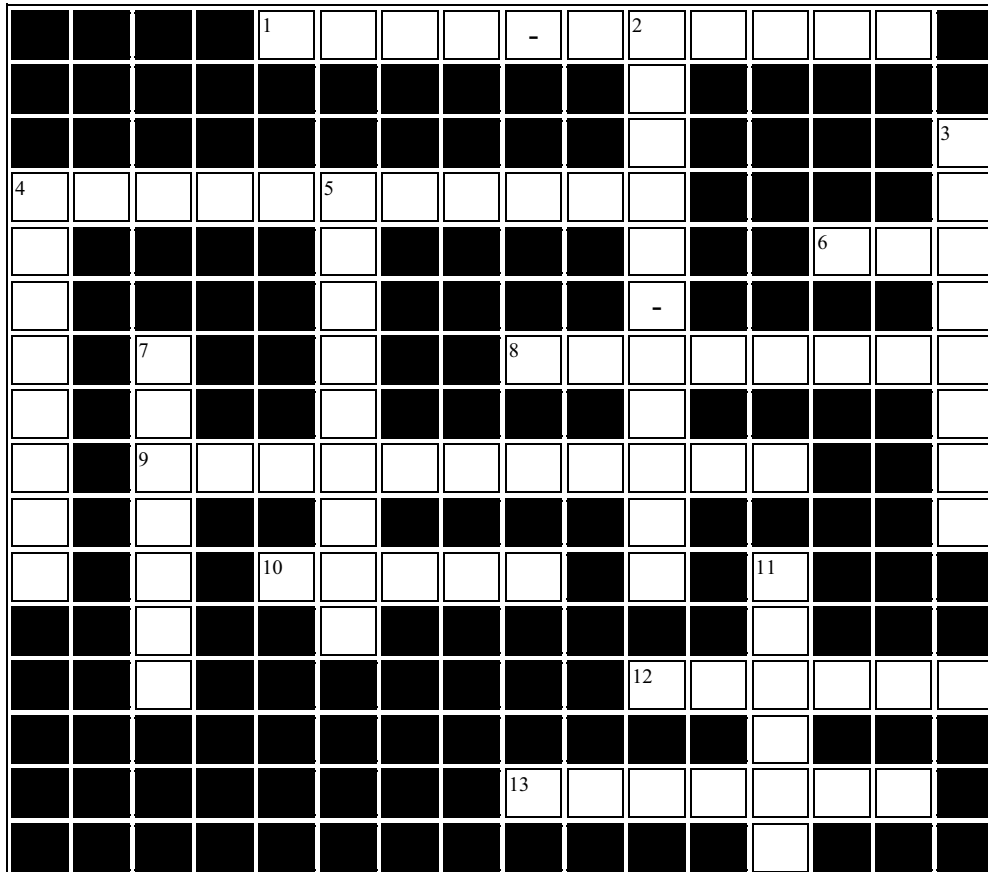

### MUSCULOSKELETAL




# Puzzles

## CROSSWORD

Use the definitions as clues to the words that go into the corresponding blank spaces.



### ACROSS

- 1 Fills the centre of bones and looks like jelly
- 4 The shortening of a muscle from its resting length
- 6 The number of directions each muscle can move in
- 8 A broken bone
- 9 A joint that can permit only slight, limited movement
- 10 The type of joint that does not move whatsoever
- 12 An over-stretched muscle
- 13 A mineral stored in the bones (and also found in milk)

### DOWN

- 2 The building blocks of protein required for healthy muscles
- 3 The internal framework of bones and connective tissue that supports the human body and provides its structure
- 4 The main component in the makeup of connective tissue
- 5 Joint swelling and inflammation
- 7 Fleшы bundles of fibrous tissues responsible for the movements of the body
- 11 An over-stretched, twisted or torn ligament

# Puzzles

## MOVEMENT WORD SEARCH

Different kinds of exercises have different benefits. The key words in this puzzle are all actions that promote healthy bones, muscles and joints. Find the words hidden horizontally, vertically and diagonally (forwards and back-to-front).

B	Y	N	J	J	K	Z	S	K	H	O	P
H	K	D	K	I	U	S	C	Z	D	G	S
R	K	R	M	W	I	M	L	Q	Q	K	F
N	C	N	W	L	F	I	P	G	I	H	P
T	I	O	S	Q	F	K	T	P	W	C	V
B	K	S	T	T	R	C	A	J	W	R	J
C	V	U	R	H	U	S	T	L	E	A	H
I	B	Q	E	Y	L	A	W	X	E	M	Q
C	S	E	T	W	I	G	I	Z	C	A	K
J	S	T	C	D	K	P	S	U	N	F	J
L	E	Y	H	L	Z	W	T	F	A	O	U
K	R	U	N	J	W	R	V	L	D	S	M
N	P	I	V	E	E	X	G	V	E	D	P

DANCE  
MARCH  
HOP  
PRESS

HUSTLE  
RUN  
JUMP  
SKIP

KICK  
STRETCH  
LIFT  
TWIST

# Puzzles

## SKELETAL SCRAMBLE

Unscramble the letters below to form words for the different kinds of skeletal bones and the makeup of their layers.

TORSH            \_ \_ \_ \_ \_

SOULCLANCE    \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

PAMCOAT        \_ \_ \_ \_ \_ \_ \_

TALF            \_ \_ \_ \_

NOLG            \_ \_ \_ \_

# Puzzles

## CHEESE-Y JOKES

**Q: What do you call a grumpy cow?**

A: Moo-dy

**Q: What bow can you never untie?**

A: Your elbow

**Q: Why didn't the skeleton cross the road?**

A: Because he didn't have the guts

**Q: How does a dairy farmer count his herd?**

A: With a cowculator

**Q: What do you call a dairy cow who won't give milk?**

A: A milk dud

**Q: Why is milk so delicious?**

A: Because it contains calci-y-um

**Q: What helmet can you never take off?**

A: Your skull

**Q: What do you call cheese that isn't yours?**

A: Nacho cheese



# Puzzles

## DEFINITION MATCH UP ANSWER KEY

Match the key terms in the box to their correct definitions.

<b>A strong but flexible tissue in the joints that covers the surface of the ends of bones to protect and cushion them from rubbing against each other.</b>	CARTILAGE
<b>A hard framework made of bones and covered by muscles that gives the body its shape and protects the internal organs.</b>	SKELETON
<b>A part of the body where two or more bones meet and the body can move or bend.</b>	JOINT
<b>The spongy layer of bone which looks like a honeycomb and is very light in weight.</b>	CANCELLOUS BONE
<b>The type of joint that allows a rotating or twisting motion, like that of the head moving from side to side.</b>	PIVOT JOINT
<b>A tough cord of fibrous tissue that joins a muscle to a bone or a muscle to another muscle.</b>	TENDON
<b>Tough bands of fibrous tissue that stretch across or around a joint and strap bones together where they meet.</b>	LIGAMENT
<b>An important dietary mineral that gives hardness and strength to bones and teeth.</b>	CALCIUM
<b>A mass of tough, elastic tissue that contracts to pull on the bones and produce movement.</b>	MUSCLE
<b>The most moveable of all types of joints in which one bone rotates like a ball inside a cuplike shaped bone.</b>	BALL AND SOCKET JOINT
<b>The dense, hard outside layer of the bone.</b>	COMPACT BONE
<b>The type of joint that moves backwards and forwards in one direction.</b>	HINGE JOINT

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Use the letters of each key word to make new words. The new words must be at least two letters long and each letter may only appear in the little word as often as it did in the big word. Proper nouns and abbreviations are not allowed. For more of a challenge, set a time limit of 3 to 5 minutes for each puzzle.

### FRAMEWORK

frame	fake	fame
far	for	foam
form	fork	fore
farm	fare	wok
wreak	warm	worm
work	wake	make
more	mar	mew
meow	me	mare
row	ram	rake
are	awe	ore
or		

### MUSCULOSKELETAL

muscle	mucus	mall
make	muck	male
meet	meat	meal
musk	metal	me
mess	mat	mate
skeletal	same	sale
skate	suck	seam
seem	soak	sock
lake	late	lame
luck	lock	locket
loom	lost	teal
tall	tack	take

# Puzzles

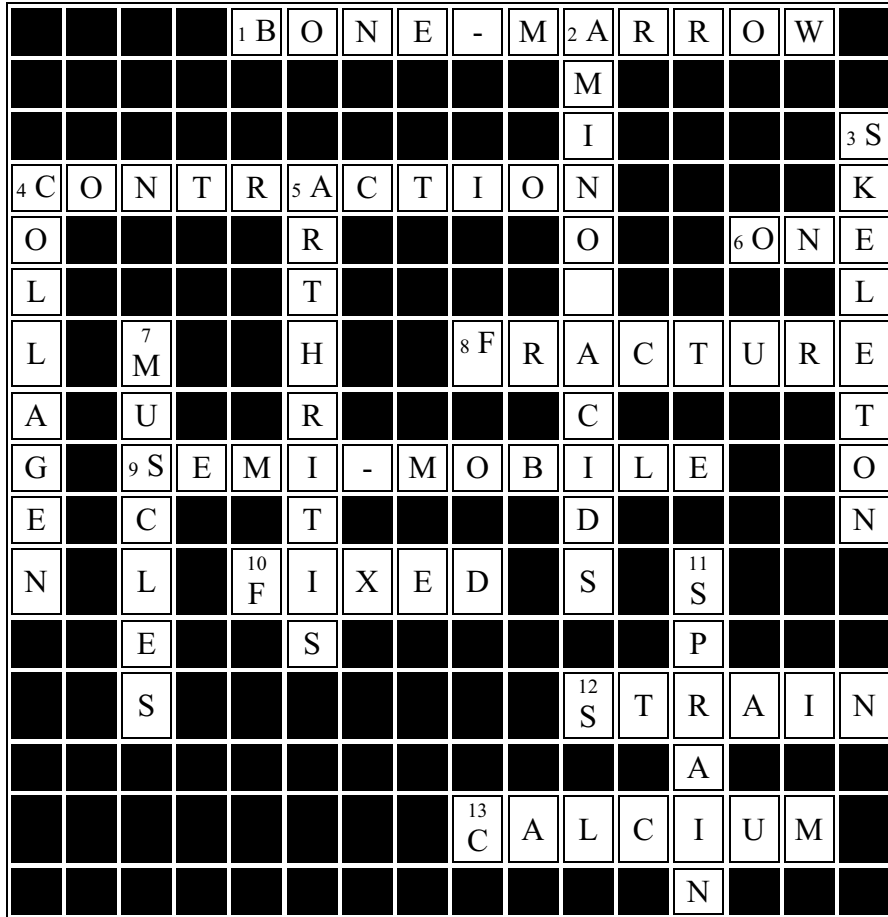
## LITTLE WORDS OUT OF BIG WORDS ANSWER KEY

muscle	mucus	mall
make	muck	male
meet	meat	meal
musk	metal	me
mess	mat	mate
skeletal	same	sale
skate	suck	seam
seem	soak	sock
lake	late	lame
luck	lock	locket
loom	lost	teal
tall	tack	take
tuck	tale	teem
team	taste	tusk
talk	tock	toss
to	came	cake
cleat	cloak	case
custom	cuss	call
kale	keel	ale
eel	oak	

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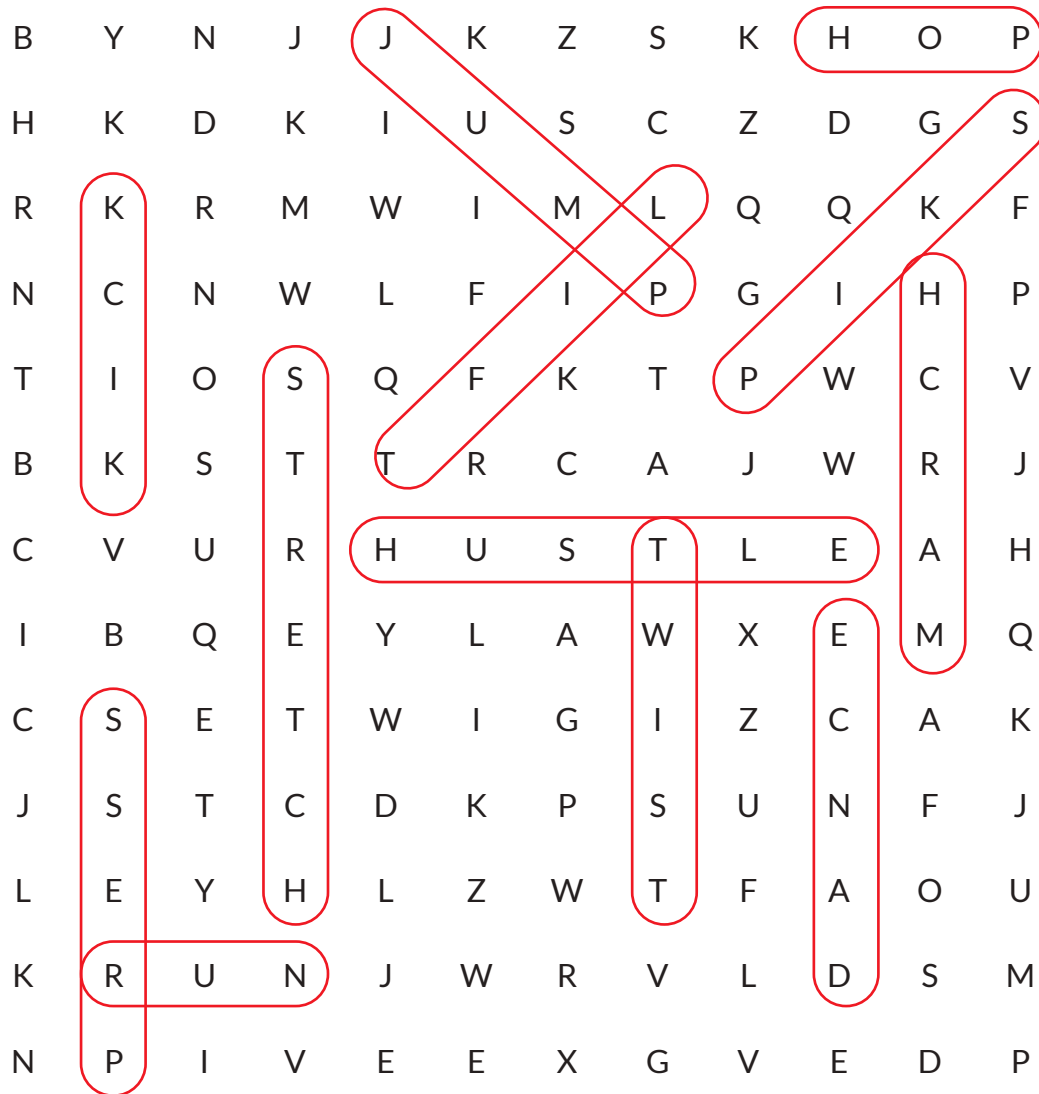
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KICK  
STRETCH  
LIFT  
TWIST



# Puzzles

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Unscramble the letters below to form words for the different kinds of skeletal bones and the makeup of their layers.

SHORT

CANCELLOUS

COMPACT

FLAT

LONG

# Bibliography

Cassan, A., and Gerald L. Geiger. Atlas of the Human Body. Hauppauge, NY: Barrons Educational Series Inc., 2008.

D'Amico, Joan and Karen Eich Drummond. The Science Chef. Toronto, ON: John Wiley & Sons, Inc., 1995. Hall, Katy. Skeletons! Skeletons! All About Bones. New York, NY: Platt & Munk, 1991.

<http://www.armoredpenguin.com/crossword/>

<http://www.arthritis.org/protect-your-joints.php>

<http://www.bestbonesforever.gov/fun/jokes.cfm>

<http://www.chef-in-training.com/2012/01/no-bake-energy-bites/>

<http://www.dswfitness.com/docs/JumpHopSkipArticle.pdf>

<http://www.eggs.ca/cooking-with-eggs/recipe/egg-salad-sliders/>

[http://www.ehow.com/how\\_5171930\\_build-elbow-joint-model.html#ixzz2BwMUGCVb](http://www.ehow.com/how_5171930_build-elbow-joint-model.html#ixzz2BwMUGCVb)

<http://www.instructables.com/id/Anti-stress-balls>

[http://kidshealth.org/teen/your\\_body/body\\_basics/bones\\_muscles\\_joints.html#](http://kidshealth.org/teen/your_body/body_basics/bones_muscles_joints.html#)

<http://www.marthastewart.com/275300/kids-art-projects/@center/276975/marthas-crafts-kids#/269167> <http://www.minieco.co.uk/homemade-pavement-chalk/>

<http://ohsheglows.com/2012/10/29/creamy-orange-sunshine-soup-akafrankensoup/>

<http://shescookin.com/2011/03/08/kid-friendly-quinoa-salad/>

Macnair, Patricia Ann. Movers and Shapers. Boston, MA: Kingfisher Publications, 2004.

McCormick, Rosie. Our Bodies And Art Activities. New York, NY: Crabtree Publishing Company, 2002. Parker, Steve. Muscular and Skeletal Systems. Mankato, MN: New Forest Press, 2010.

Rhatigan, Joe and Rain Newcomb. Run. Jump. Hide. Splash. New York, NY: Lark Books, 2004.

Tagger, Sam. Great Games! Charlotte, VT: Williamson Publishing, 2004.

Virgilio, Stephen J. Active Start for Healthy Kids. Human Kinetics: Windsor, ON, 2006.

Wise, Debra. Great Big Book of Children's Games. McGraw-Hill, Toronto, ON, 2003.

# Picture Sources:

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