A BC Program Challenge

THESE BONES

Activity Booklet

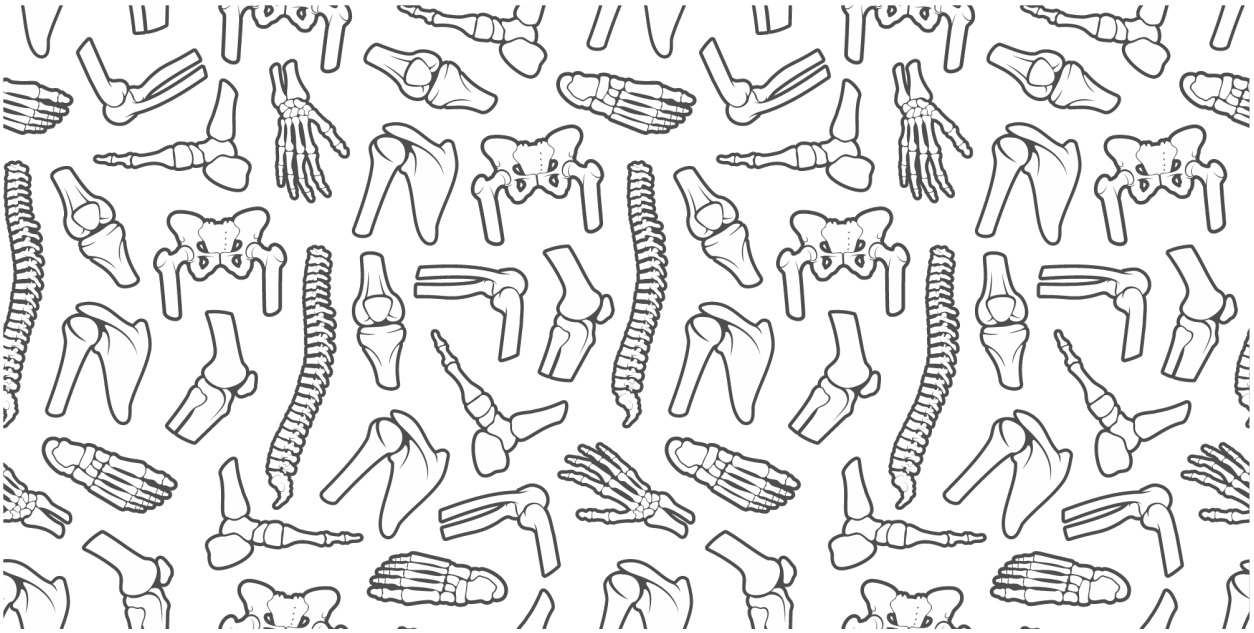
Published: November 2022

Girl Guides
BC Council

Contents

THESE BONES CHALLENGE

CRAFT	**FOOD**	**ACTIVITIES** (Song, games, activities, and exercise)	**SCIENTISTS**
One (1) activity for all branches	One (1) activity for all branches	One (1) activity for Sparks and Embers 2-3 activities for Guides, Pathfinders, and Rangers	One (1) activity for all branches



General knowledge about bones

Inside your body are 206 bones. Each bone is crucial in making your body's mechanics function properly. If a bone breaks, all the bones around it can't perform their duty correctly.

You may think of bone as a hard, dense material, but only one type of bone is like this. This dense, hard bone is called cortical bone. Cortical bones are primarily the "structure" bones.

The second type, trabecular bone, is soft and spongy. It's often found inside large bones, pelvis, ribs, and skulls. Though less dense than cortical bone, it's still quite hard and protective.

Bone marrow is a spongy substance inside large bones like your hips, pelvis, and femur. Bone marrow houses stem cells. Stem cells produce your body's specialized cells, including blood, brain, heart, and bone cells.

The difference between a joint and a bone is that a joint is where two or more bones meet and allow movement. Your knee and elbow are examples of a joint.

Facts

- The clavicle or collar bone is the weakest and softest bone in the human.
- The most fragile bones in the human body are the toe bones.
- The longest bone in the human body is the femur. The femur also has the honour of being the strongest bone in the body.
- The smallest bone in your body is found in your ear and is called the stapes. This bone, along with the hammer and anvil, translates sound waves into signals your brain can understand.
- Babies are born with 270 bones. These tiny bones fuse together to make larger bones, like in the skull.
- Of the 206 bones that adults have, 106 are in your hands and feet.
- The biggest joint in your body is your knee.

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*The enamel on your teeth, considered part of your skeletal system, is **stronger than bones**. Enamel protects the delicate nerves and tissue inside your teeth. Inch for inch, your teeth can take more wear and tear than your other bones.*

- When you fracture a bone, your body produces new bone cells and heals the break. A cast or brace ensures the bone can heal straight, so you don't have problems in the future.
- It takes **about ten years to renew your entire skeleton**.
- Bones lose strength (density) over time. You can keep them strong by eating calcium-rich foods like dairy products, broccoli, and fish. Exercise, especially

weight-bearing exercise, also helps keep bones strong. Your skeletal system can support you for a lifetime of movement. Taking proper care of it ensures you can move longer, experience more, and have good health. Knowing how to care for your bones properly can go a long way to a healthy, fulfilling life.

- Like other mammals, humans are vertebrates. That means that our bones are inside our bodies. Only 10% of the world's animals (humans included) are vertebrates. The other 90% are invertebrates; they do not have bones but rely on a hard shell or other structures. Invertebrates include everything from worms and jellyfish to crabs and beetles.
- An adult human skull contains 22 bones: 8 cranial and 14 facial bones.
- The bone marrow in an adult human weighs about 2.7 kg (6 pounds).
- Bone marrow produces all red blood cells, platelets, and around 60–70% of human adults' lymphocytes (white blood cells). Red bone marrow produces all the blood cell types, while yellow bone marrow produces red blood cells during emergencies and stores fat.
- Your bone marrow produces 200 billion new blood cells every day.
- The funny bone isn't a bone; when you hit your elbow a certain way, you trigger the ulnar nerve.
- Osteoporosis is a common bone disease marked by low bone density and loss.
- The scientific study of bones is called osteology, and someone who studies osteology is called an osteologist.

Sources:

https://www.factsjustforkids.com/human-body-facts/bone-facts-for-kids/

https://www.healthline.com/health/fun-facts-about-the-skeletal-system

https://www.visiblebody.com/learn/skeleton/overview-of-skeleton

https://www.healthline.com/health/fun-facts-about-the-skeletal-system

Crafts

Cotton Swab Hand

Photo credit:
https://www.craftymorning.com/easy-q-tip-handprint-skeleton-craft/

What you need:

- Black construction paper
- White washable paint
- White glue
- Cotton swabs

What to Do:

1. Roll up your sleeves.
2. Paint your hand, wrist, and lower arm with white paint.
3. Stamp your painted hand and arm on the black paper. It works best if you press the arm and hand down to get a good print.
4. Cut cotton swabs into random-sized pieces
5. Glue the pieces on the white print to make the bones.

Tip: Bring a picture of an arm x-ray. Talk about the bones in the arm and hand. With older youth members, try to replicate the x-ray.

Cotton Swab Skeletal System

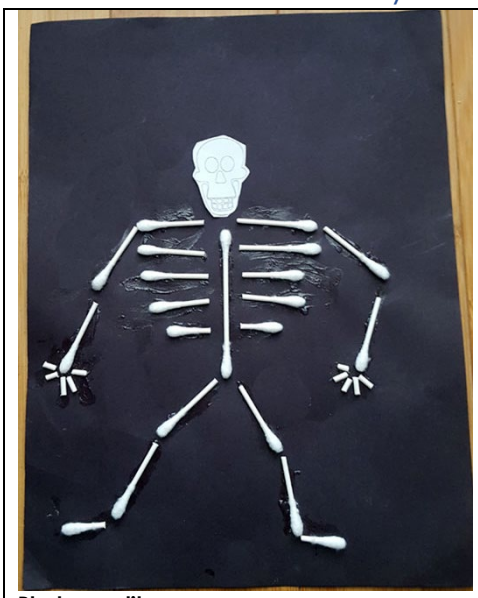


Photo credit:
https://www.livinglifeandlearning.com/skeleton-craft-kids.html

What you need:

- Black construction paper
- Cotton swabs
- Scissors
- Skull printable (Once you click on the link, it will automatically download to your downloads folder)
- White glue

What to Do:

1. Using some cotton swabs, plan how you'd like your body to look. Be sure to include a spine, ribcage, and limbs.
2. Cut cotton swabs into smaller pieces for the smaller limbs.
3. Glue the skull printable to the top of your body for the head.

	4. Glue on the cotton swabs for the body parts. 5. Show off your skeletal system to your Unit! 6. Cut cotton swabs into random-sized pieces 7. Glue the pieces on the white print to make the bones.

3-D Skeletal System

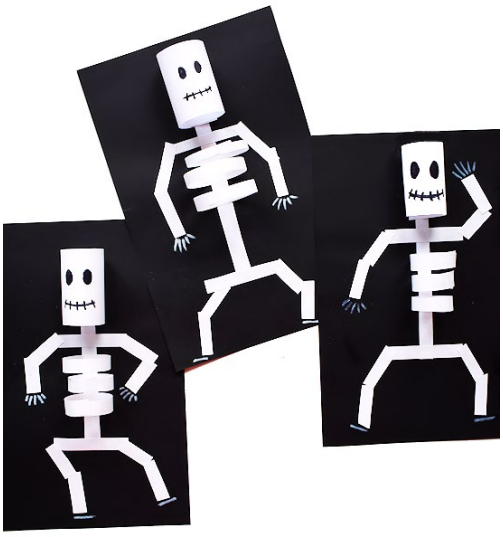


Photo credit:
https://www.ourkidthings.com/paper-loop-skeleton-craft/

What you need:

- Black and white paper
- Black and white markers
- Scissors
- Glue stick

What to Do:

1. Take a piece of black paper and cut it in half.
2. Cut four thin strips across the white paper. They should be 8.5 inches long. Cut these pieces in half.
3. Cut one additional longer strip of white paper.
4. Glue one thin white strip in the centre of the black paper. This strip is the spine.
5. Cut one of the strips in half again. Glue in place for the collarbone and hips.
6. Cut two strips in half, then in half again. These are the arms and legs.
7. Take 3 of the longer strips and glue only on the centre of the spine, so just one end is attached. Bring the strips up into a loop and glue the ends together.
8. Form a mouth and eyes in the centre of the larger-width strip of white paper.
9. Bring the ends together into a loop and glue them together. Then glue at the top of the spine
10. Finish by forming fingers and feet with the white marker.
11. Position the feet and arms in different positions and see what you can make your skeletal system do!

Build a Skeletal System

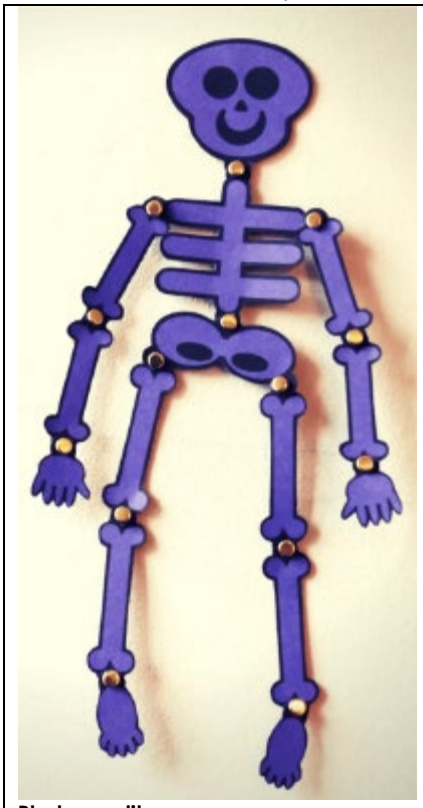


Photo credit: https://www.thepurplepumpkinblog.co.uk/build-a-skeleton-free-printable-instructions-crafty-october/

What you need:

- Bone template for each unit member printed onto cardstock
- Scissors
- Darning needle or something with a sharp point
- Paper fasteners/split pins (14 for each skeletal system)

What to Do:

1. Cut each of the pieces out
2. Using a darning needle (or something with a sharp point), pierce a little hole in the centre of each black circle at the end of the bones. Do not pierce the eye circles or form the pelvic bone.
3. Try to work out which bone goes where. You can use the photo as a reference.
4. Attach the bones together using a paper fastener, splitting it at the back to secure them into place.
5. Show your skeletal system to your unit!

Build a Candy Spine

Photo credit: https://ticiamessing.com/make-candy-spine/

What you need:

- Lifesaver hard candy
- Lifesaver gummies
- Licorice laces

What to Do:

1. Take candies out of wrappers.
2. Weave two licorice strands through a hard lifesaver. Then take turns layering the hard and gummy lifesavers on the 'spinal cord' of your candy spine.
3. Break some licorice into smaller pieces and put that between the hard and gummy lifesavers.

Candy Explanation:

	• We use two licorice whips because our spinal cord is multiple nerve fibres clustered together. • The hard lifesavers represent our vertebrae, which protect our spinal cord and let us stand. Without them, we wouldn't be able to walk upright. • The soft lifesavers represent our intervertebral discs, which are necessary to pad the bones to prevent pain. These discs are cartilage between our vertebrae.

Build a Backbone Model

Photo credit: https://spelloutloud.com/right-now-we-are-on-break-but-i-thought.html

What you need:

- One pool noodle
- One laundry line or rope
- 24 ponytail holders or thick rubber bands
- X-acto knife

What to Do:

- Cut the pool noodle into 24 pieces with an X-acto knife.
- Cut a piece of rope a little longer than the 24 pieces of 'noodle.'
- String the pieces together on the rope. Talk about what each piece represents in the spinal column. The rope is the spinal cord, the pool noodle pieces are the vertebrae, and the ponytail holders are the discs.
- Use this model to show how flexible our backbone can be.

Did you know?

- Our spinal column has a spinal cord, the central part of the nervous system and needs protection.
- Each bone that makes up our spine is called a vertebra. There are different sections of vertebrae—neck (cervical), chest (lumbar), and bottom (sacral).

	• All 24 vertebrae stack on top of each other with discs in between. This structure allows us to move in many ways while protecting the spinal cord.

What is Blood Made Of?

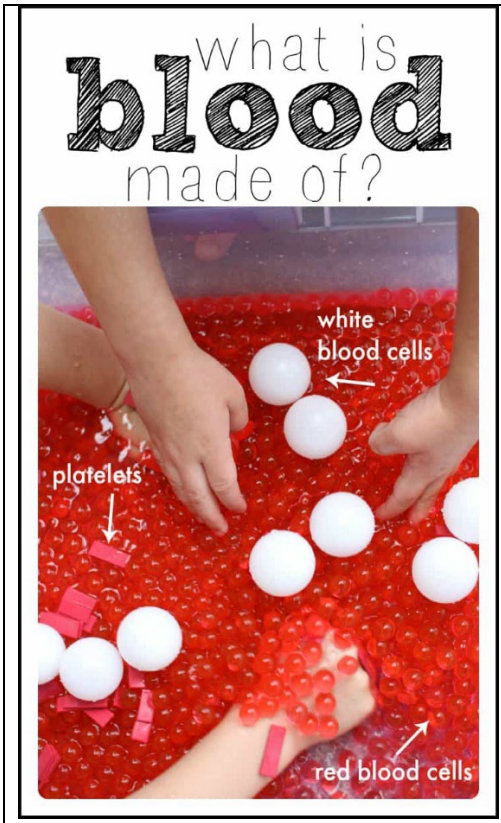


Photo credit:
https://www.icanteachmychild.com/what-is-blood-made-of/

What you need:

- Large plastic container
- Red water beads
- Ping pong balls
- Water
- Red cardstock

What to Do:

1. Hydrate the water beads following the instructions on the packaging. Put them and the water into your plastic tub to soak. This is the blood.
2. Cut the white cardstock into small pieces to create platelets.
3. Put the paper platelets and several ping pong balls in your plastic tub of blood
4. Let the Unit explore the blood for a while.
5. Talk about the components of blood:
    - Red water beads = red blood cells (carry oxygen)
    - Ping pong balls = white blood cells (destroy bacteria, viruses, and other invaders)
    - White cardstock pieces = platelets (help heal cuts and wounds)
    - Water = plasma (liquid that allows blood to move through veins and arteries)

Egg Carton Spine Model

Photo credit:
https://www.mombrite.com/egg-carton-spine-model/

What you need:

- Egg cartons
- Felt sheets or construction paper
- Pipe cleaners
- Scissors

What to Do:

1. Cut out the cups from the egg carton.
2. Trim away any excess paper from the cups.
3. Optional: Cut the sides of the cups to have 4-5' legs' sticking out.
4. Cut the felt or paper into small circles or rounded squares resembling the shape and size of the bottom of your egg cups.
5. Poke a small hole in the centre of each egg cup and the felt/paper circles.
6. Push an egg cup onto the pipe cleaner, followed by a circle.
7. Repeat step #6 until you finish threading all the cups and circles.
8. Talk about what the model represents:
    - The egg cups represent the vertebrae. Each vertebra is covered with strong cortical bone and provides stiffening for the body. Vertebral processes, which look like spikes coming out of the bone, connect the spine to ligaments and tendons.
    - The felt circles are the intervertebral discs, which serve as cushions between the vertebrae and prevent the bones from grinding against one another. Like coiled springs, the discs absorb stress and shock to the body as we move around.
    - The pipe cleaner is the spinal cord, which works with the brain to form our central nervous system. The information from our brain moves through the spinal cord, then travels

	through nerves into the rest of our body.

Articulated Hand

Photo credit: https://gosciencekids.com/

What you need:

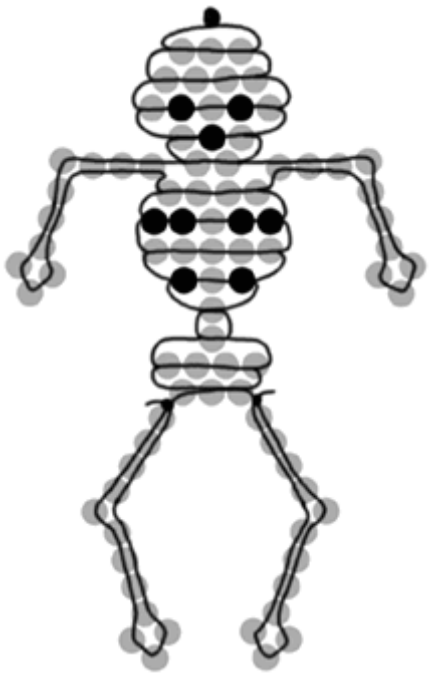
- Black construction paper
- Pencils
- Scissors
- White paper straws
- Black markers
- Clear drying glue
- Black pony beads
- Black yarn
- Large eye blunt needle
- Wooden chopsticks
- Black and white paint
- Thin paintbrushes

What to Do:

1. Use a pencil to trace your hand on construction paper lightly. Cut it out.
2. Cut paper straws into small sections to represent bones. Glue these on.
    a. Check which way your hand is facing before you glue on the straws. You want to have one right hand and one left hand.
    b. Make sure to leave a large gap between each straw section. Otherwise, you won't be able to bend your hand's fingers later on.
    c. Leave a small space for the chopstick between the hand bones. This will be added in the next step.
3. Paint a chopstick black. Glue this between the straws to be the handle. Leave to dry.
4. Cut 5 long pieces of yarn. Tie a pony bead to the end of each piece.
5. Thread each piece of yarn through one of the four fingers and thumb — and through the corresponding straw in the hand. A large-eye blunt needle makes this process easier, but you can do it without this.

	Leave long' tails,' as you will pull on these to bend the fingers and thumb. 6. Flip the hands over and paint bones on the other side using white paint and a thin paintbrush.

Skeletal System Keychains

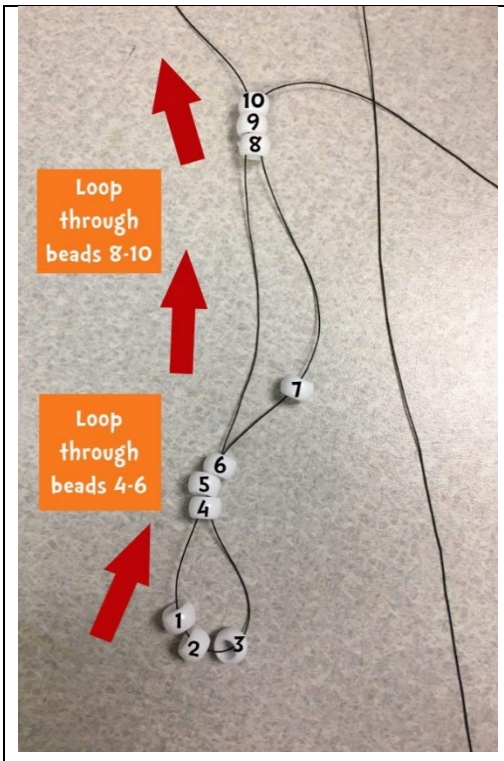


What you need:

- 9 black pony beads
- 78 white pony beads
- Black cord
- Scissors
- Tape
- Key ring or lanyard hook

What to Do:

1. Using 2 metres of cord, find the middle. Tie the ring or hook on the middle so that two equal pieces of cord hang down.
2. Tape the ring (or hook) onto a hard surface.
3. Start at the top of the pattern guide. The first row needs 3 white pony beads. With the cord on your left, string on these white pony beads.
4. Taking the end of the cord on your right, loop it back through the 3 white beads from step #3. Repeat steps 3 & 4 for the next row (4 white beads). Note: After each row, the cords will be on the opposite side of the previous row of beads.
5. After the top 2 rows, some lower rows need both black and white beads. Follow the pattern guide and count across the row.
6. Continue the rows until you finish the head.
7. The arms and legs are a little trickier than the head and body. For each arm and leg, you only use one cord (left cord for the left arm/leg, right cord for the right arm/leg). String 10 white beads on the left cord.
8. For each arm, after you add the beads, loop the end of the same cord back



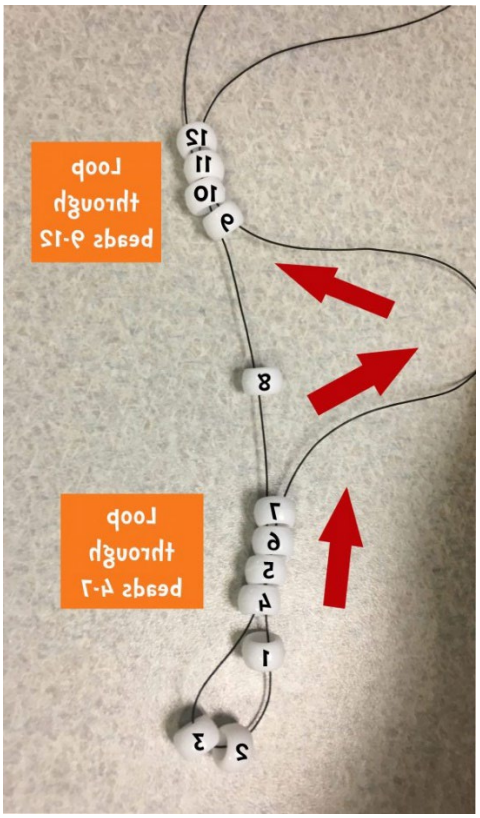


Photo credit: Campbell County Public Library

through beads 4–6. DO NOT put the cord back through bead 7; skip it and loop through beads 8–10.

9. After putting the end of the cord back through bead 10, pull the cord down to tighten the arm.
10. Repeat steps #7–9 for the right arm (only use right cord for the right arm).
11. Continue working down the rows to complete the body. Like for the head, use both cords for each row of the body. Put the beads on the left cord and then pass the right cord back through the beads.
12. After completing the body, it's time for the legs. Like with the arms, use one cord for each leg (left cord for left leg, right cord for right leg). String 12 beads on the left cord.
13. Loop the end of the same cord back through beads 4–7. DO NOT go through bead 8; skip it and loop through 9–12.
14. After putting the end of the cord back through bead 12, pull the cord down to tighten the leg.
15. Tie a knot with the cord between bead 12 and the previous row of beads where the leg meets the hip. Cut off the extra cord.
16. Repeat step 15 for the right leg. Cut off the extra cord.
17. You're finished!

Mini Skeletal System Stuffie

Photo credit:
https://www.feltwithlovedesigns.com/

What you need:

- Pattern
- Felt
- Embroidery thread
- Poly-fil stuffing
- Sewing needles
- Pins or clips (optional)
- Scissors
- Felt glue (optional)
- Freezer paper (optional)

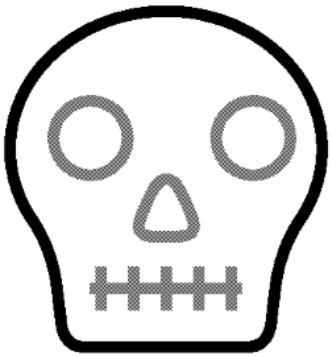
What to Do:

1. Cut out the paper pieces on the template. Place these pieces onto the felt, using black for the body, eyes, and nose and white for the additional bones. Cut out the felt pieces.
2. Thread your needle and tie a knot at the end of the thread.
3. Start by sewing the white bone pieces to the front black body piece.
4. Sew the black eyes and nose to the skull piece.
5. Embroider or draw a mouth below the nose.
6. Sew the heart on the back skeleton body piece.
7. Line up the embellished front piece with the back piece, wrong sides together. Pin or clip to hold in position. Sew all the way around, leaving a 2 cm gap for the stuffing.
8. Lightly stuff, being careful to work stuffing into the limbs. Sew closed

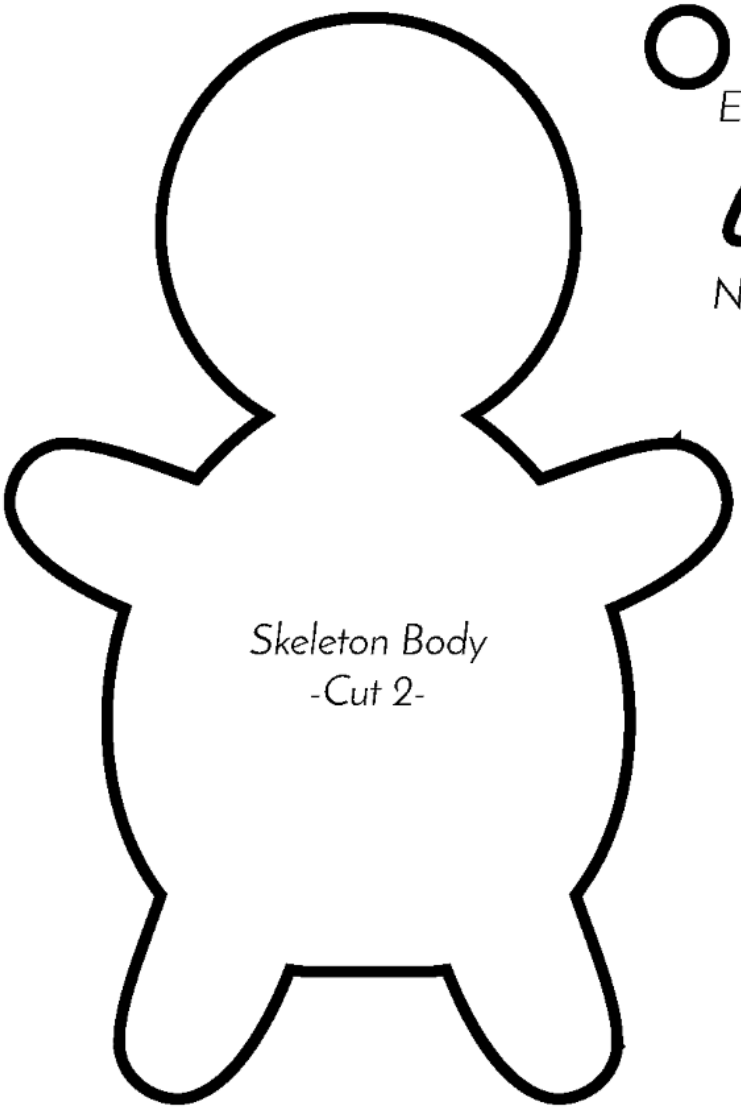
Skeleton Softie

Eyes

Nose



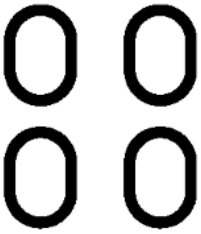
Skull



Skeleton Body
-Cut 2-

Ribs

Pelvis



Arms/Legs

Heart

1 Inch
Test
Square

Pipe Cleaner Dolls

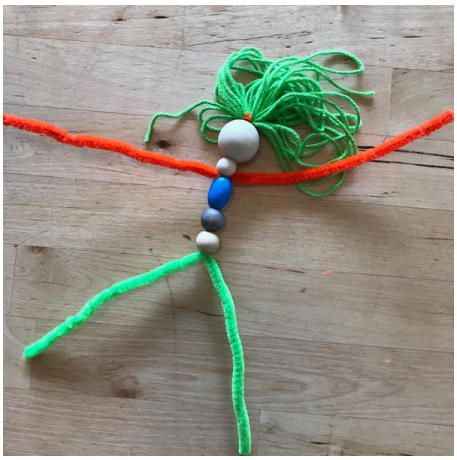


Photo credit:
https://minimadthings.com/blogs/news/pipe-cleaner-dolls

These dolls use wooden beads for joints, so you can explore how joints provide flexibility and movement.

What you need:

- Pipe cleaners
- Wooden beads (large ones for the head and smaller ones for the body)
- Paper straws
- Yarn
- Black marker pen

What to Do:

1. Wrap the yarn loosely around several fingers to create a thick bundle.
2. Remove the bundle of yarn, keeping the loops in place.
3. Fold a pipe cleaner in half and trap the yarn in the middle. Twist the pipe cleaner to secure the yarn.
4. Thread the ends of the pipe cleaner through the large 'head' bead. Pull the bead to the top of the pipe cleaner to trap the yarn.
5. Trim the looped ends of the yarn to make hair.
6. Add a small bead to make the neck. Bend the pipe cleaner ends out to make the arms.
7. Fold a second pipe cleaner in half and put it over one arm to make the body and legs.
8. Add beads to make the body.
9. Add beads and straws to make the arms and legs.
10. Fold the ends of the pipe cleaners over to secure the last beads.

Food

Meringue Bones

Source:
www.allrecipes.com/recipe/228248/meringue-bones/

What you need:

- 2 baking sheets
- Oven gloves
- Bowl
- Electric mixer or eggbeater
- Pastry bag with small tip

Ingredients:

- 6 egg whites
- ½ teaspoon cream of tartar
- 1 pinch salt
- 1 ⅓ cups white sugar
- 2 teaspoons vanilla extract

Directions:

1. Preheat oven to 225° F (110° C). Line 2 baking sheets with aluminum foil and grease the foil.
2. Beat egg whites with cream of tartar and salt in a bowl with an electric mixer until egg whites are foamy. Gradually beat in sugar, a few tablespoons at a time, beating until the sugar dissolves in the meringue before adding more. Continue beating until the meringue is glossy and forms a sharp peak when beaters are lifted straight up out of the bowl; beat in vanilla extract. Spoon the meringue into a pastry bag fitted with a small tip.
3. Pipe meringue into small bone shapes on the prepared baking sheets. You must pipe all the shapes at once or the meringue will deflate.
4. Place baking sheets into the preheated oven and bake for 1 hour. Do not open the oven door during baking.
5. Turn the oven off and let the meringue bones cool in the oven without opening the door for 1 hour. Gently and carefully remove cookies from the foil to prevent broken bones.

Veggie Skeleton

Source: thishealthytable.com/blog/veggie-skeleton

Make a self-portrait of your skeletal system, all while making a delicious treat! A Guider or other adult should be nearby while cutting the vegetables.

What you need:

- Knives for cutting veggies
- Chopping boards
- Plates

Ingredients:

- Vegetables of your unit's choice (carrot sticks, celery sticks, broccoli, peppers, mushrooms, cucumbers, and cherry tomatoes
- Optional: veggie dip

Directions:

1. Each person should have a plate, cutting board, and knife.
2. Wash your vegetables.
3. Cut your vegetables into shapes.
4. Take the cut pieces and build a self-portrait of your skeletal system. What vegetable features do you want?
5. Add vegetable dip if you wish.
6. Show off your self-portrait and take a photo if you wish.
7. Now you can eat your self-portrait skeletal system!

Breadstick Bones

Source:

What you need:

- Baking sheet
- Oil for greasing
- Knife
- Oven gloves

Ingredients:

retrohousewifegoesgreen.com/breadstick-bones/	• 1 can of pizza dough (or homemade pizza dough), per 12 people • 2 tablespoons grated parmesan • Garlic powder to taste • Salt to taste **Directions:** 1. Preheat oven to 400° F. Grease a baking sheet. 2. Unroll dough onto the baking sheet and cut 12 even strips. 3. Tie knots on each of the ends of the strips. 4. Sprinkle parmesan, garlic, and salt over the breadsticks. 5. Bake for 11–13 minutes or until golden brown. 6. Enjoy!

Bone Crescent Roll-ups

 **Source:** noplatelikehome.com/bone-shaped-ham-cheese-crescent-roll-ups/	**What you need:** • Baking sheets • Rolling pin • Oven gloves **Ingredients:** • 1 mozzarella string cheese per person • 1 can of pizza dough (per 4 people) • 1 slice ham per person (optional) **Directions:** 1. Preheat oven to 375° F. 2. Roll out crescent rolls to form 4 rectangles. 3. Place one slice of ham (if using) and one string cheese on top. 4. Roll the ham slice around the cheese. 5. Wrap the crescent roll around the ham and cheese. 6. On one end of the dough, pinch and tear 1 cm horizontally. Pull the pieces to opposite sides and around, as shown.

	7. Repeat on the other side of the crescent roll. 8. Bake for 10 minutes or until the crescent rolls have browned.

Pretzel Skeletal System

Source:
amberbrunson.blogspot.com/2010/10/pretzel-skeleton.html

Ingredients:

- Bags of pretzels in assorted shapes (round, sticks, twists, rods, pieces, etc.)
- Skeletal bones picture (one per person), as found online.
- Dipping sauces (optional: chocolate, nacho cheese, ranch, etc.)

Directions:

1. Using the skeleton printout as a guide, use pretzels to create a pretzel skeleton on top. See how precise you can get with the pretzels.
2. Once you are done, show off your skeletal system.
3. Enjoy your pretzels and try different dipping sauces if you wish. Which is your favourite?

Mini Skeleton Bones

Source: familyspice.com/

What you need:

- Baking sheets
- Parchment paper
- Double boiler
- Forks

Ingredients:

- Pretzel sticks (bones)
- Mini marshmallows (ends of the edible bones) (or Dandy's for vegetarians)
- White chocolate chips, melted (for dipping)

Directions:

1. Line a baking sheet with parchment paper.
2. Attach mini marshmallows to each end of the pretzel sticks.
3. Over a double boiler, melt the white chocolate or candy melts over simmering water, stirring frequently. Be careful not to use high heat as white chocolate burns easily.
4. Dip the marshmallow and pretzel rods into the melted chocolate to coat them completely. Use a fork gently to maneuver and turn the bones.
5. Lift the bones out of the chocolate and place onto the baking sheet with parchment paper. Once the sheet is filled with bones, refrigerate for 30 minutes to harden the chocolate. Store in an airtight container in the refrigerator.

Recipes that are good for your bones!

Owl Rice Cakes

Source: www.superhealthykids.com/fun-food-kids-owl-rice-cakes/

What you need:

- Baking sheets
- Knives
- Peeler

Ingredients:

- Rice cakes
- Bananas
- Peanut butter, sun butter, or alternative
- Blueberries
- Apples
- Carrot
- Circular cereal

Directions:

1. Lay out rice cakes on a baking sheet.
2. Slice the bananas and set aside.
3. Spread peanut butter or alternative over each rice cake. Place two slices of banana towards the upper part of each rice cake. These are your owl's eyes.
4. Dab a small amount of peanut butter or alternative on the centre of the owl's eyes. Add a blueberry for each pupil.
5. Slice apples in half. Then slice each half into very thin wedges (1/4 cm thick). Place two apple slices onto each rice cake, peel side out, for the owl's wings.
6. Peel the carrot and slice thinly. Cut into triangles for the beak.
7. Add some cereal between the wings for feathers.

Homemade Hot Chocolate

Source: traditionallymodernfood.com/baked-carrot-fries/

What you need:

- Large saucepan
- Mugs
- Spoons

Ingredients:

- Milk or milk alternative
- Unsweetened cocoa powder
- Maple syrup
- Vanilla
- Chocolate chips, or chopped dark chocolate.

Directions:

1. Heat the milk until just simmering.
2. Whisk in the cocoa powder, maple syrup, and salt.
3. Add the chocolate chips and vanilla. Whisk until the chocolate is melted and combined.
4. Serve in a mug with additional chocolate as desired.

Bake Carrot Fries

Source traditionallymodernfood.com/baked-carrot-fries/

What you need:

- Cutting board
- Knife
- Parchment paper
- Cookie sheet
- Large bowl

Ingredients:

- Carrots, peeled and cut lengthwise into fry shapes
- Panko bread crumbs
- Salt, to taste
- Pepper, to taste
- Dry basil, to taste
- Pinch of garlic powder

	• 1 tsp oil **Directions:** 1. Preheat the oven to 400° F. Place parchment paper on a baking sheet. 2. In a large bowl, add all dry ingredients and mix well. 3. Add the carrots. Coat with dry mix. 4. Place coated carrots on parchment paper. 5. Bake for 14–18 minutes.

Mini Cauliflower Pizzas

Source damndelicious.net/2015/04/20/mini-cauliflower-pizzas/

What you need:

- Baking sheets
- Parchment paper
- Food processor
- Bowl, microwave safe
- Microwave
- Cheese cloth
- Oven gloves
- Ice cream scoop

Ingredients:

- 1/3 cup marinara sauce
- 1/2 cup mozzarella cheese, shredded
- 1/4 cup mini pepperoni, sliced (optional)
- 2 Tbsp fresh basil leaves, chopped

For the crust:

- 1 cauliflower, chopped
- 1 large egg
- 1/3 cup mozzarella cheese, shredded
- 2 Tbsp freshly grated parmesan
- 1 tsp dried basil
- 1/2 tsp dried oregano
- 1/2 tsp garlic powder
- 1/4 tsp onion powder
- Nonstick spray or oil

Directions:

	1. Preheat oven to 425° F. Line a baking sheet with parchment paper or a silicone baking mat. Set aside. 2. To make the cauliflower crust, add cauliflower to the bowl of a food processor and pulse until finely ground. 3. Transfer ground cauliflower to a microwave-safe bowl. Cover loosely and microwave for 4–5 minutes or until softened. Let cool. 4. Using a clean dish towel or cheesecloth, drain the cauliflower completely, removing as much water as possible. 5. Transfer cauliflower to a large bowl. Stir in egg, mozzarella, parmesan, basil, oregano, garlic powder, and onion powder. Season with salt and pepper. 6. Place the cauliflower mixture on the baking sheet using an ice cream scoop. Spread each scoop into a flat circle. Spray lightly with nonstick spray and bake for 10–12 minutes or until golden. 7. Top each cauliflower round with marinara sauce, mozzarella, and pepperoni slices. Place in oven and cook until the cheese has melted about 3–4 minutes. 8. Serve immediately, sprinkled with basil if desired.

Banana Oat Muffins

Source www.thelazydish.com/healthy-banana-oat-muffins-3-ingredients/

What you need:

- Mini muffin pan
- Large bowl
- Fork
- Spoon

Ingredients:

- 3 large ripe bananas, mashed
- 3 cups oats
- 1 tsp. vanilla
- Optional add-ins: chocolate chips, sunflower seeds, blueberries, etc.

Directions:

1. Preheat oven to 350° F. Generously grease a mini muffin pan.
2. Mix the smashed bananas, oats, and vanilla in a large bowl.
3. Add any options of your choice. Stir to combine.
4. Spoon the mixture into the muffin pan, filling each well close to the top.
5. Bake for 15–18 minutes.
6. Allow to cool for 5 minutes.

Pan-Fried Cinnamon Bananas

Source www.freebiefindingmom.com/healthy-fun-snacks-for-kids-pan-fried-cinnamon-bananas/

What you need:

- Frying pan
- Knife
- Cutting board
- Small bowl

Ingredients:

- 2 large bananas
- 2 teaspoons sugar
- 1 teaspoon cinnamon
- 1/2 teaspoon nutmeg
- 1 teaspoon olive oil

	Directions: 1. Add olive oil to a frying pan. 2. Cut bananas into 1cm slices. 3. Combine cinnamon, nutmeg, and sugar in a small bowl. 4. Place bananas in the frying pan. Cook on medium heat for 2–3 minutes. 5. Sprinkle bananas with half the cinnamon mixture. 6. Flip the bananas and cook for another 2-3 minutes. 7. Sprinkle bananas with remaining cinnamon mixture and remove from heat. 8. Yum!

Fruit Pizza Minis

Source www.superhealthykids.com/healthy-fruit-pizza-minis/

What you need:

- Small cookie cutter or glass
- Small mixing bowl
- Knife
- Cutting board
- Spoon

Ingredients:

- 4 medium tortillas, whole wheat
- ½ cup Greek yogurt, plain
- ½ tsp honey
- ½ tsp vanilla
- 3/4 Tbsp orange juice
- Toppings: 1/4 cup strawberries, 1/4 cup kiwi, 1/4 cup mandarin oranges (canned), 1/4 cup blueberries, 1/4 cup green grapes

Directions:

1. Use a small cookie cutter or drinking glass to cut circles in the tortillas. Set aside.
2. Add yogurt, honey, vanilla, and orange juice in a small mixing bowl. Stir until fully blended.

	3. Slice strawberries. Peel and slice kiwi. Drain mandarin oranges and slice into smaller pieces. Slice grapes into quarters. 4. Spread yogurt mixture onto tortilla circles and top with fruit.

Homemade Movie Theatre Popcorn

What you need:

- Brown paper bag
- Microwave oven

Ingredients:

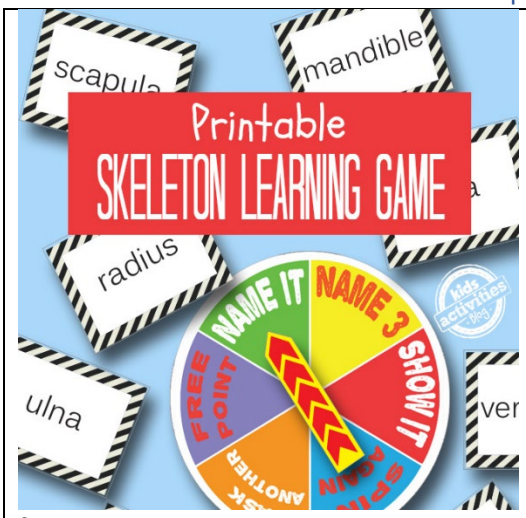
- ¼ cup popcorn kernels
- Optional toppings: salt, butter, grated parmesan, nutritional yeast, etc.

Directions:

1. Pour the popcorn kernels into a brown sandwich bag.
2. Fold over the top of the bag 2 or 3 times. Place the bag, folded side down, in the microwave.
3. Microwave on the popcorn setting until the popping slows.
4. Remove from the microwave, open the bag, and season as desired.

Activities and Games

Homemade Movie Theatre Popcorn



Source: kidsactivitiesblog.com/60287/skeleton-printable-game

What you need:

- Spinner pieces
- Cards (click to download)

What to do:

This game can be played individually or in groups. Players take turns to spin the spinner and complete the task shown. Each completed task gets one point.

Spin categories include:

- Free Point: You automatically get one point if the spinner stops here.
- Name It: The leader shows one bone on a picture of a skeleton or their own body. If the player names the bone correctly, they get a point.
- Name 3: The player has to name 3 bones to earn a point.
- Show It: The player draws a game card with a bone name (option: the leader can name a bone). To get a point, the player must show this bone (on a picture of the skeleton or on their body) correctly.
- Spin Again: The player must spin again.
- Ask Another: The player can pick someone (from the other team) to name or show a bone. If that person answers correctly, both teams get a point. If the other person is incorrect, the player whose spin landed there gets a point.

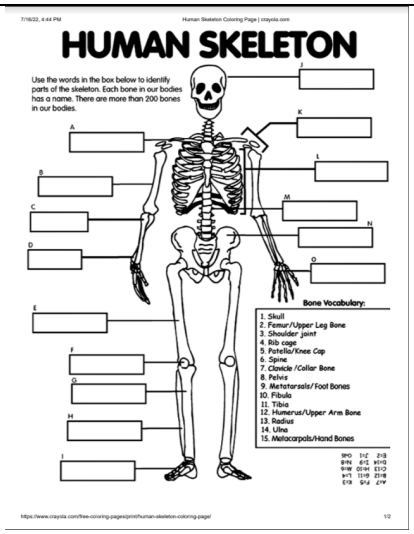
The first team or player to get to a specific number of points (e.g., 5, 10, 20) wins! Set the final number depending on how many players (or teams) and how long you want the game to last.

Online Skeleton Labelling Game

Do you have access to a computer in your meeting space, such as a library? This online game is a great way to learn all about the skeletal system. If you do not have a computer in your meeting space, this can also be done in a virtual meeting or on your unit members' own time at home.

Find the game at www.abcya.com/games/skeletal_system

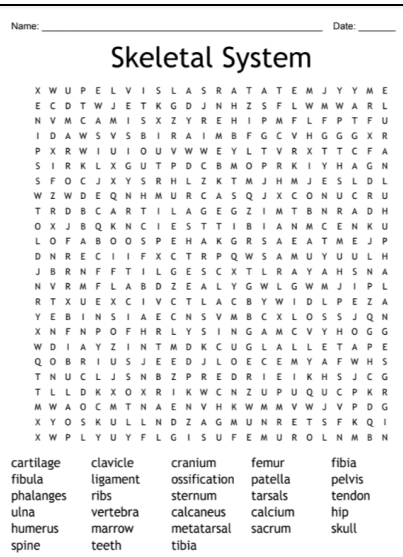
Bones Labelling Sheet



Download at https://drive.google.com/file/d/1G5pRaXbmvdzKKHjhSZkRU67K5h48ycxH/view?usp=sharing

(Source: www.crayola.com/free-coloring-pages/print/human-skeleton-coloring-page/)

Skeletal System Word Search



Name: _____ Date: _____

Skeletal System

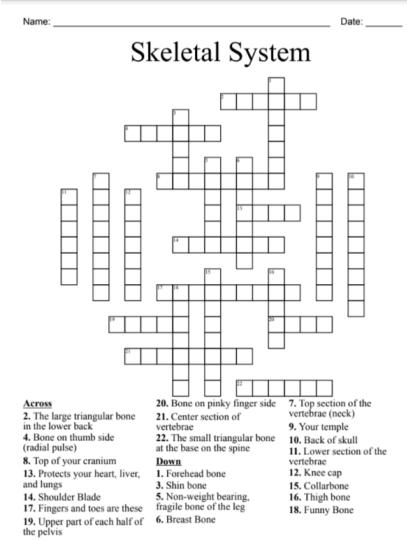
X W U P E L V I S L A S R A T A T E M J Y Y M E
E C D T W J E T K G D J N H Z S F L W M W A R L
N V M C A M I S X Z Y R E H I P M F L F P T F U
I D A W S V S B I R A I M B F G C V H G G G X R
P X R W I U I O U V W W E Y L T V R X T T C F A
S I R K L X G U T P D C B M O P R K I Y H A G N
S F O C J X Y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

cartilage	clavicle	cranium	femur	fibia
fibula	ligament	ossification	patella	pelvis
phalanges	ribs	sternum	tarsals	tendon
ulna	vertebra	calcaneus	calcium	hip
humerus	marrow	metatarsal	sacrum	skull
spine	teeth	tibia		

Download at
https://drive.google.com/file/d/1Us1QS3Qgav7FbCd2_caTozY6xMNfKPC5/view?usp=sharing

(Source: wordmint.com/public_puzzles/8849)

Skeletal System Crossword



Name: _____ Date: _____

Skeletal System

Across

2. The large triangular bone in the lower back
4. Bone on thumb side (radial pulse)
8. Top of your cranium
13. Protects your heart, liver, and lungs
14. Shoulder Blade
17. Fingers and toes are these
19. Upper part of each half of the pelvis
20. Bone on pinky finger side
21. Center section of vertebrae
22. The small triangular bone at the base on the spine

Down

1. Forehead bone
3. Shin bone
5. Non-weight bearing, fragile bone of the leg
6. Breast Bone
7. Top section of the vertebrae (neck)
9. Your temple
10. Back of skull
11. Lower section of the vertebrae
12. Knee cap
15. Collarbone
16. Thigh bone
18. Funny Bone

Download at
https://drive.google.com/file/d/1FfmakUoDg5y0OFXnWsOnUk30jZ2LztP_/view?usp=sharing

(Source: https://wordmint.com/public_puzzles/8849)

'Dig Those Bones' Word Search

Name: _____ Date: _____

Dig Those Bones

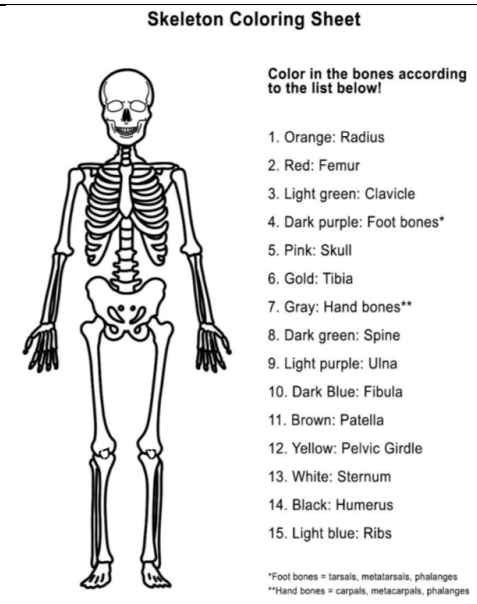
A F X I C A S M A S Y D M R D G Z
P A T E L L A L I N A E B U O H U
J H A I B I T R A Y L F V M A Q T
V H U I J T Z G Q S A U O E P C P
N E R M N S C R U F R P I F K H K
C I R Z E D W I V F S A E R A L Q
F N U T V R D H R C L L T L W B V
U I E D E A U V L D G J A A V G W
L G L E R B L S G S E N M P T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

mandible	tarsals	radius	metatarsals
femur	vertebra	sternum	phalanges
metacarpals	cranium	ulna	scapula
pelvis	humerus	clavical	tibia
ribs	patella	Fibula	carpals

Download at https://drive.google.com/file/d/1h7kq88GegkDVj0gPs_zs5VWln-JvUCL_/view?usp=sharing

(Source: https://wordmint.com/public_puzzles/8849)

Bones Coluring Sheet



Skeleton Coloring Sheet

Color in the bones according to the list below!

1. Orange: Radius
2. Red: Femur
3. Light green: Clavicle
4. Dark purple: Foot bones*
5. Pink: Skull
6. Gold: Tibia
7. Gray: Hand bones**
8. Dark green: Spine
9. Light purple: Ulna
10. Dark Blue: Fibula
11. Brown: Patella
12. Yellow: Pelvic Girdle
13. White: Sternum
14. Black: Humerus
15. Light blue: Ribs

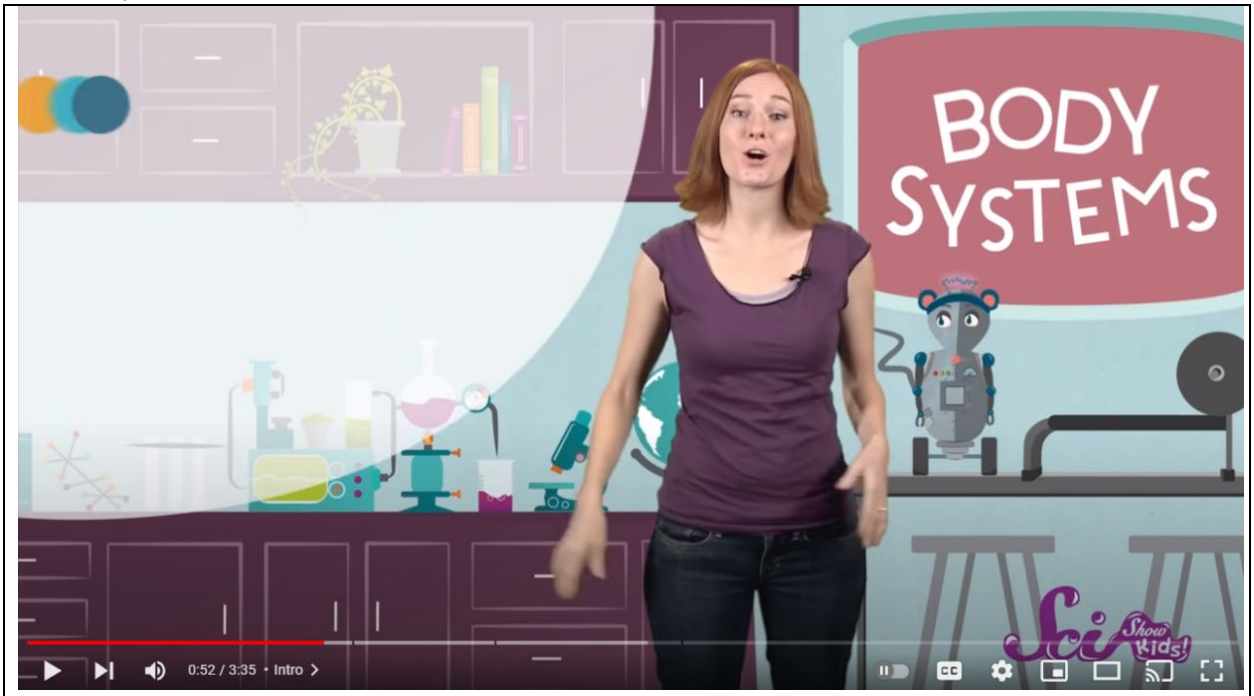
*Foot bones = tarsals, metatarsals, phalanges
**Hand bones = carpals, metacarpals, phalanges

https://drive.google.com/file/d/1ixnMNEmlqvdwSR0FLcgDWfKld0TTi4GQ/view?usp=sharing
(Source: https://artsphere.org/wp-content/uploads/2021/07/Bones-Handout.pdf)

Video | Your Super Skeleton

https://www.youtube.com/watch?v=vRuh9aBwUdM

Video | How Do Our Bodies Move?



https://www.youtube.com/watch?v=j918PoWWaB0

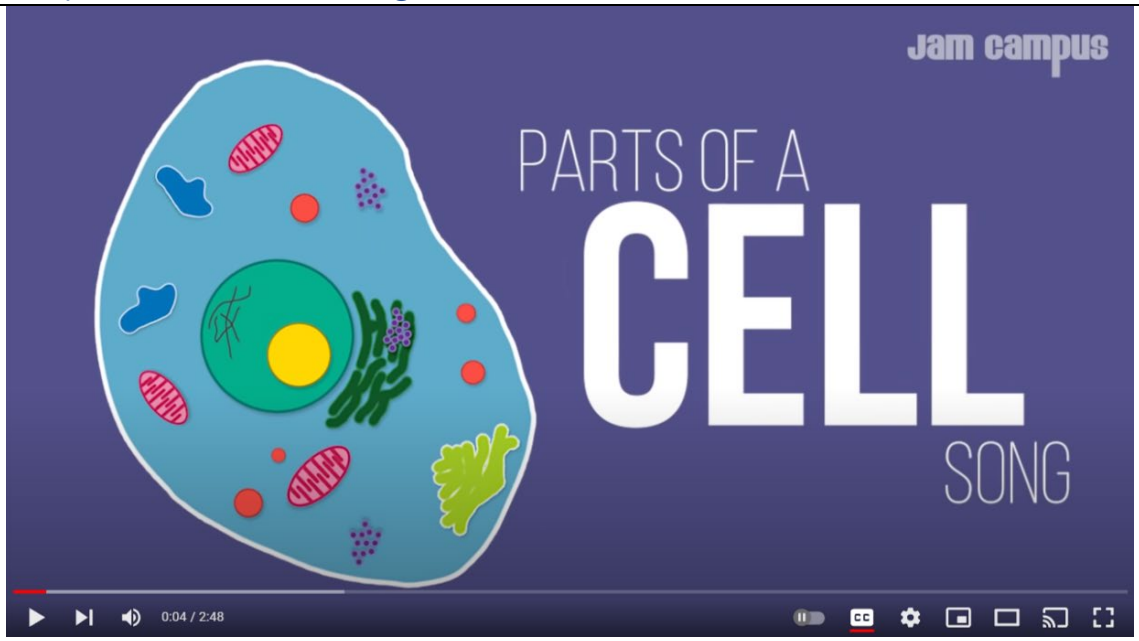
Video | How Your Bones and Skeleton Move

https://www.youtube.com/watch?v=i42FSNA9bAY

Video | The Human Bones Song

https://www.youtube.com/watch?v=h5dYvPruBFY

Video | Parts of a Cell Song



https://www.youtube.com/watch?v=NkC9AiJf7gI

Games

Game | Push Wars

This is a fun game to release energy and build bone strength. Monitor closely to ensure safety, as players try to push each other with only their hands touching.	**What to do:** 1. Have the group form pairs, with each pairs facing each other. 2. Partners place their hands on the other person's shoulders, keeping arms straight and feet together. 3. When the game begins, partners hold their arms straight out in front and place their palms together. 4. Keeping your palms touching and feet together, the goal is to get your partner to lose their balance by pushing them. The trick is pushing – or not pushing – at just the right time. This will either push your partner over or your partner may lunge forward and fall. 5. The winner is the last person still standing.

Game | Skeleton Scavenger Hunt

Scavenger hunts can be done indoors or outdoors, depending on the weather.

What you'll need:
In preparation, print skeletons on cardstock. Depending on the size of your group, plan for one skeleton per 4-6 people.

What to do:

1. Now disassemble the skeletons and hide the bones around the meeting space or outside.

2. Once the bones are found, each team tries to reassemble into a complete skeleton set.

Tip: with multiple teams, try using different colour sets of bones. Also, adjust the pieces to be age appropriate (e.g., keep the ribcage together for Sparks and Embers).

Game | Bony Relay

Divide into groups of ten. Using paper, make a life-size skeleton. Each skeleton should have 10 joinable parts. In a relay format, each team member runs, picks up a body part, and places it on the skeleton.

Game | Move Your Body

This is a great energizer activity. You will need large cards with pictures or names of body parts marked in bright, colours (e.g., belly, shoulders, toes, chin, fingers, hair, etc.). Loud, upbeat music is also an asset.

1. To start, the leader flashes a card. Everyone is instructed to move or "shake" that body part.
2. Cards continue to be shown until the participants are "all shook up".
3. Try flashing toe cards quickly to see the laughter and mayhem that follows.
4. Introduce an added challenge by identifying a penalty body part. When that body part is shown, players must sit down. Whoever forgets and shakes that body part instead, is eliminated. See which players stay in the game the longest.

Game | Circle Ball

Scavenger hunts can be done indoors or outdoors, depending on the weather.

What you'll need:
- 1 soccer ball
- 2 ping pong balls
- 2 skipping ropes.

What to do:

1. Divide the group into two teams.
2. Use the skipping ropes to make two circular goals in the ends of the playing area.
3. Each team is given a ping pong ball. The soccer ball is placed in the middle of the space.
4. Each team has to move as a unit. If any member of the team lets go or becomes separated from the rest of the group, the team loses a point.
5. The leader says, "GO", and each team moves its ping pong ball along the ground and into the goal of the opposing team. Any player may touch the ball. No player may touch the ball twice in a row.
6. As soon as a team gets a goal with its ping pong ball, it races to the centre to try to kick the soccer ball into the opposing goal. The first team to do so scores a point and the game is repeated.
7. The team that scores the most goals with the soccer ball is the winner.

Sparks and Embers Game | The Bone (version 1)

This game works best for Sparks and Embers, with a group of 10 or more players.
Equipment Needed: Something to be the "bone" and a blindfold

1. Sit down in a circle.
2. Pick one person to be the dog. The dog is blindfolded and sits on a chair in the centre of the circle. They guard the "bone" placed under the chair.
3. Everyone has to be silent.
4. The leader chooses one person by silently pointing. That person's goal is to steal the bone without getting caught.
5. The dog barks and points in the direction where the stealer is approaching. But the dog only gets three chances to bark.
6. If the stealer gets back to their spot without being caught, the stealer becomes the new dog.
7. If the dog catches the stealer, the game continues with the same dog. The leader chooses a new stealer

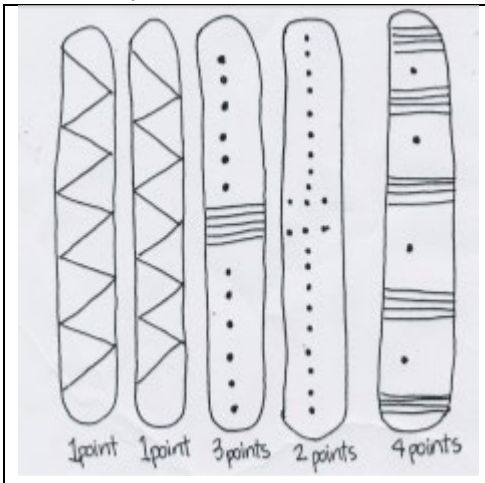
Sparks and Embers Game | The Bone (version 2): Doggy, Doggy, Where is Your Bone?

This is a guessing game that works for Sparks and Embers. You need a prop to be the bone.

1. Start with the group standing or sitting in a circle.
2. One person is the dog and will find the bone. This person closes their eyes or is blindfolded.
3. The leader chooses someone in the circle to sneak up and steal the bone.

4. When they steal the bone, they use a disguised voice to say, "Doggy, doggy, where is your bone?"
5. When the stealer returns to the circle, everyone keeps their hands behind their backs. The dog tries to guess who has the bone.
6. Once they guess correctly, the stealer becomes the dog.

Game | Bone Game



Source: intranet.csf.bc.ca/wp-content/uploads/sites/2/2019/12/resources/EA_indigenous-games-for-children-en.pdf

Traditionally, this Blackfoot game was played with carved buffalo rib bones. Children learn to add and count. With a large group, you can split into teams.

What you need:

- A small open area
- 5 "bones" or large tongue depressors
- Markers

What to do:

1. Each person takes a turn to throw the "bones" on the floor in front of them.
2. Count the points. Blank sides count as 0.
3. Give the "bones" to the next person.
4. The winner is the first person (or team) who gets to 20 points.
5. Make your own version of the game to take home, following the patterns shown to the left.

Game | Elephants, Giraffes, and Palm Trees

Scavenger hunts can be done indoors or outdoors, depending on the weather.

- **ELEPHANT**: Put your shoulder on your nose with an arm dangling to form the trunk. People on either side hold their palms extended to form the elephant's ears.
- **GIRAFFE**: Put your right hand in a fist up over the head, head down.
- **PALM TREE**: Put both arms up over the head, swaying back and forth while making a noise (whoooooh) like a breeze. Two people attach themselves to either side of the first person's hips to become side palm trees.

What to do:

1. Form a circle with the leader in the middle.
2. Explain the three positions. Then the leader points to someone in rapid and random order, naming one of the positions.

3. The person then assumes that position, with help from their neighbours as needed.
4. If they make a mistake, they run around the circle (or do pushups).
5. Point to the next person and repeat.

Sparks and Embers Game | Jump and Stick

This game works well for Sparks and Embers. Tell a story while everyone acts it out. Include many actions describing jumping, bending, supporting, turning, and twisting. You can add optional equipment to suit the theme, such as hula hoops representing puddles or benches representing rocks to climb over. Encourage moves with one and two-foot hops and jumps and solid landings.

SAMPLE: SPROING'S STORY
Say the bold words loudly and watch for everyone doing the actions.

There once was a squirrel who loved to **jump**. This squirrel's name was Sproing. Sproing did not **scamper** most of the time like regular squirrels but instead **hopped**, jumped, and leaped everywhere she went. She woke up early every morning, **stretched** her arms, **waved** hello to the sun then **scampered** down her tree to begin her day. She rarely went straight down the tree. She liked to **jump** from branch to branch first. She loved it when the branch would **bounce,** and she would have to try to **keep her balance** before **leaping** to the next branch.

The first stop in Sproing's day was almost always the park. She would find the benches and **climb** up onto the seats. She would **walk carefully** along the benches and then **jump** off, making a **safe landing**. She would **look under** the benches to see if she could find any food or treats. Another of Sproing's favourite things to do was to **run** along the path in the park and **jump high** over every crack in the sidewalk. She pretended she was a **super-flying squirrel, jumping** as high as she could over every line she saw. Sproing's day went on like that, with every activity involving **jumping**. She **hopped** over small things like leaves, jumped over big things like rocks, and especially loved jumping over things that were in a row – like **jumping** from rock to rock in the river.

Sproing's day usually ended with a visit to the garden. She would **jump** from flower bed to flower bed, **sniffing** the beautiful flowers, **reaching up** to touch the tall sunflowers and **crouching down** to look at the tiny pieces of grass. Sproing was usually pretty tired at the end of the day. She liked to do a little **stretching** in the garden before going home to her nest. She **reached high** to the sky, **stretched** her paws **out to both sides**, **stretched down** and **touched her toes**. She **shook out her legs** after all of her **jumping**, then headed home for one leisurely **climb** into her tree. In her nest, she **curled up**, **closed her eyes** and went to **sleep**, dreaming of another day of **jumping** tomorrow.

Songs

Songs | These Bones

The foot bone's connected to the leg bone,
The leg bone's connected to the knee bone,
The knee bone's connected to the thigh bone,
The thigh bone's connected to the back bone,
The back bone's connected to the neck bone,
The neck bone's connected to the head bone,
Go, Bones, Go! (boom, boom, boom)

These bones, these bones, gonna walk around,
These bones, these bones, gonna walk around,
These bones, these bones, gonna walk around,
Go, Bones, Go! (boom, boom, boom)

The head bone's connected to the neck bone,
The neck bone's connected to the back bone,
The back bone's connected to the thigh bone,
The thigh bone's connected to the knee bone,
The knee bone's connected to the leg bone,
The leg bone's connected to the foot bone,
Go, Bones, Go! (boom, boom, boom)

These bones, these bones, gonna walk around,
These bones, these bones, gonna walk around,
These bones, these bones, gonna walk around,
Go, Bones, Go! (boom, boom, boom)

Songs | Head, Shoulders, Knees, and Toes

This is an action song. Point to each part, bending down for the knees and toes. Sing it 4-5 times, getting faster and faster each time. How fast can you go?

Head, shoulders, knees and toes,
Knees and toes,
Head, shoulders, knees and toes,
Knees and toes,
Eyes and ears and mouth and nose,
Head, shoulders, knees and toes,
Knees and toes.

Here's a video with the tune: https://www.youtube.com/watch?v=WX8HmogNyCY

Exercise

The following information is based on Canadian 24-Hour Movement Guidelines at www.buildyourbestday.com.

There are many determinants of health and moving our bodies in physical activities is an important component.

The Canadian 24-Hour Movement Guidelines shows four areas to consider:

1. **Sweat** – Moving your body in a 'heart-pumping' active way

   "You need at least 60 minutes of heart-pumping physical activity every day. Choose activities that make you sweat and make you breath harder or be out of breath."

2. **Step** – Light physical activities – moving but not sweating

   "You need several hours of light physical activity every day. Choose activities that get you up and moving around, but not enough to make you breath harder or sweat."

3. **Sleep –** Getting enough sleep helps us have energy to move

   "If you're 5 to 13 years old, you need 9 to 11 hours of uninterrupted sleep each night, and if you're 14-17, you need 8-10 hours with the same bedtime and wake-up time each day."

4. **Sit –**Activities done in sitting – for example, screen time

   "No more than 2 hours of recreational screen time each day and limited sitting for extended periods."

Youth must try many types of physical activities to learn about what they like and develop lifelong habits.

Being active can be challenging for many reasons, including schedules, family activities, injuries, and habits.

As you work through the activities, please be mindful of the abilities of each youth member, space, costs, and interests.

Being Active Activities

Objective: To try various forms of physical activity and promote lifelong physical activity.

Let's Get Moving- Try these to warm up

- **Jumping** – Jump on both feet/on one foot/jumping jacks

- **Hoping** – Hop in a line, hop in a circle, hop back and forth
- Sit down and **draw the alphabet** with your feet in the air
- Move your arms to **fly like a bird**
- Sing **Head and Shoulders**

Sparks | Hopscotch (from Colour Me Healthy Challenge)

What you need:

- chalk or masking tape to create a hopscotch design
- small rock or beanbag for a marker

What to do:

1. Throw the marker so it lands in the first square. If it does not land within the lines of the first square, you miss your turn.
2. Hop through the squares in order, skipping the one with the marker. Hop with just one foot on the ground in each square. The only time two feet can touch the ground at the same time is when there are two squares next to each other
3. When you get to the end, turn around (still on one foot), and hop back to the beginning, picking up the marker on your way.
4. If you complete your turn without losing your turn (lose a turn if you step in a square with the marker in it, step on a line, or don't throw the marker into the right square), then go again, throwing the marker into the next number in order, otherwise play passes to the next person.

Sparks | Body Ball (from Colour Me Healthy Challenge)

Adapted from the Active Living Toolkit for Sparks.

What you need:

- Small ball or beanbag for each youth

What to do:

1. Line up balls or beanbags and youth along one side of the playing space.

	2. The Guider calls out a body part. Youth must try to move their ball or beanbag to the other side of the play space using only that body part (Example: foot, hand, shoulder, nose etc)

Sparks | Rainbow Tag (from Colour Me Healthy Challenge)

What you need:

- Coloured items (one for each youth, and at least 4 or 5 of each colour):
  - beanbags
  - pipe cleaners
  - pompoms
  - craft stones

What to do:

1. Give each youth a coloured item. More than one youth should have the same colour (e.g. 5 youth have blue, 5 youth have red, 3 youth have orange, etc.)
2. The Guider calls out one of the colours. All youth holding that colour are now "it". They run around trying to tag other youth.
3. If they tag someone, they trade coloured items,and are no longer "it". For example, blue is "it" and tags an orange player. Both players switch beanbags (or other coloured item). The youth that was orange now has the blue beanbag and is now "it". The youth that had the blue beanbag now has an orange one and is no longer "it".
4. The Guider calls out a new colour every few minutes.

All Branches | Swimming (follow SafeGuide steps for swimming)

Take your youth swimming! (Follow Safe Guide steps for swimming)

Pool games:

- Volleyball/basketball
- Ring retrieval: divide youth into two teams. Scatter diving rings into the pool. The team with the most rings wins the round.
- Play on the pool floats
- Have a fun relay or competition (if the youth members want to compete)

All branches | Invented Active Game

Divide youth into groups of 3-4 and have them invent an active game using your unit fitness supplies (balls, hula-hoops, etc.), then teach it to the rest of the unit. Try all of the games and evaluate them afterwards.

Sparks, Embers, Guides | Active in My Community

Hold a meeting outside of your regular meeting place and do something active. Visit a gymnastics gym, go to a dance studio, go swimming, try skating, visit a martial arts centre, go for a hike in a nearby park, or play at a nearby playground. Whatever you decide as a unit, get out and get active while having fun!

Embers | Dancing as a Star (from Colour Me Healthy Challenge)

Have a dance-themed meeting! Are there any dancers in your unit? If so, what do they do in dance class? What are the different styles of dance that you know and why is dance a great form of exercise? (Hint: how about cardio, strength, and flexibility?)

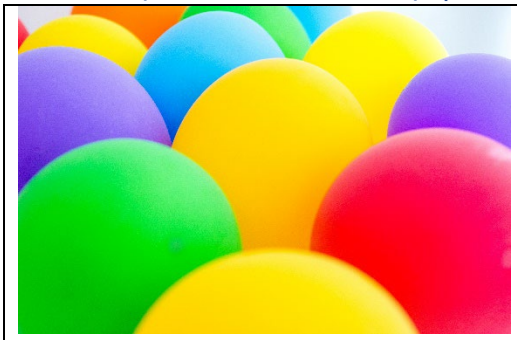
What you need:

- Music

What to do:

1. Play a game that involves dance: for example, a relay where each youth has to make their way across the room and back by dancing however they chooses (using music makes this really fun!).
2. Divide into groups, choose a song, and create a dance you can perform together at the end of the meeting.
3. If possible, invite a dance teacher or a dancer (could be a Pathfinder or leader too!) to give a talk about their style of dance and show you some dance moves.

Embers | Balloon Hockey (from Colour Me Healthy Challenge)



**Latex Allergies: Check health

What you need:

- pool noodles (cut in half – one piece per youth)
- 30-40 inflated balloons
- two laundry baskets

What to do:

forms for any latex allergies before playing with balloons.	1. Place a laundry basket at either end of the playing area and give each youth half of a pool noodle. 2. Spread 30 to 40 balloons throughout the playing area. 3. Put the youth into two teams - the object is to get as many balloons into the baskets as possible within a set time period. 4. The balloons can either be popped once they are in the basket or the youth can keep the balloons so that they can play with them later.

Embers, Guides, Pathfinders, Rangers | Banana Relays (from Colour Me Healthy Challenge)

What you need:

- bananas (one per team of 4-5 youth)

What to do:

1. Divide the group into teams of 4 or 5 players and give each team a banana. Teams are to complete various relays. Examples of relays follow.
2. Place the banana between the knees and waddle across the room and back.
3. Two teammates toss the banana back and forth to each other as they walk/run across the room and back.
4. Pass the banana from between the chin and neck down through the entire line of team-mates and back.
5. Balance the banana on the head and run/walk a cross the room and back.
6. Idea: Use the bananas for a nutritious drink (e.g. to make smoothies) after the youth have finished using the bananas for these games.

Embers, Guides | Skipping Games (from Colour Me Healthy Challenge)

<table>
<tr><td>There are many fun skipping games. Here are a few games to try with the Embers</td><td>What you need:

• Skipping ropes (single and extra long), music</td></tr>
<tr><td>Skipping Freeze
1. Have youth skip around the room or play space while the music is playing.
2. When the music stops, the youth must freeze.
3. Anyone seen still moving after the music stops is "out".
4. Alternatively, this could be done without music, and the Guider could call out "go" and "stop" to signal the youth.</td><td>Apples to Zucchinis

1. Divide youth into groups of three.
2. Two youths hold the ends of a long skipping rope and turn the rope, while one youth skips in the middle.
3. As the skipper hops they chants the alphabet and a fruit or vegetable corresponding to that letter. For example: "A is for apple, B is for banana, C is for cucumber, D is for date", etc.
4. The skipper skips until they stops the rope or names an incorrect fruit or vegetable. They can then switch places with one of the rope turners.</td></tr>
<tr><td>Birthday Plum

1. Divide youth into groups of three.
2. Two youth hold the ends of along skipping rope and turn the rope, while one youth skips in the middle.
3. As the skipper starts skipping, sing "Apples, pears, peaches, plums. Tell us when your birthday comes".
4. At this point turn the rope faster as you recite the months of the year. The skipper stops jumping (or jumps out of the rope) when their birthday month is called out.</td><td>Teddy Bear

1. Divide the youth into groups of three.
2. Two youths hold the ends of a long skipping rope and turn the rope while one youth skips in the middle.
3. As the skipper starts skipping, sing:

Teddy bear, teddy bear, turn around, Teddy bear, teddy bear, touch the ground, Teddy bear, teddy bear, show your shoe, Teddy bear, teddy bear, that will do. Teddy bear, teddy bear, brush your hair, Teddy bear, teddy bear, climb the stairs. Teddy bear, teddy bear, reach for the sky, Teddy bear, teddy bear, wave goodbye.</td></tr>
</table>

Embers | Obstacle Course (from Colour Me Healthy Challenge)

Photo credit: https://www.parents.com/fun/activities/outdoor/tips-to-help-you-host-a-fun-family-field-day/

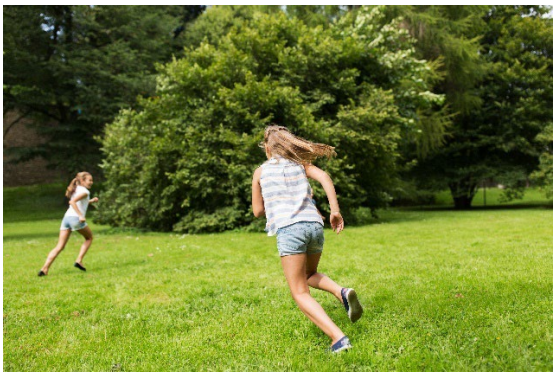
What you need:

- skipping ropes
- hula-hoops
- safety cones
- balls
- Frisbees
- beanbags

What to do:

1. Together as a group, create an obstacle course that includes various activities like jumping, light lifting, walking, skipping, and balancing. Use the supplies you have available.
2. Have youth run through the obstacle course. Discuss some challenges of the course.
3. Let the youth redesign the course and have them play again.

Embers, Guides | Everybody's It Tag (from Colour Me Healthy Challenge)

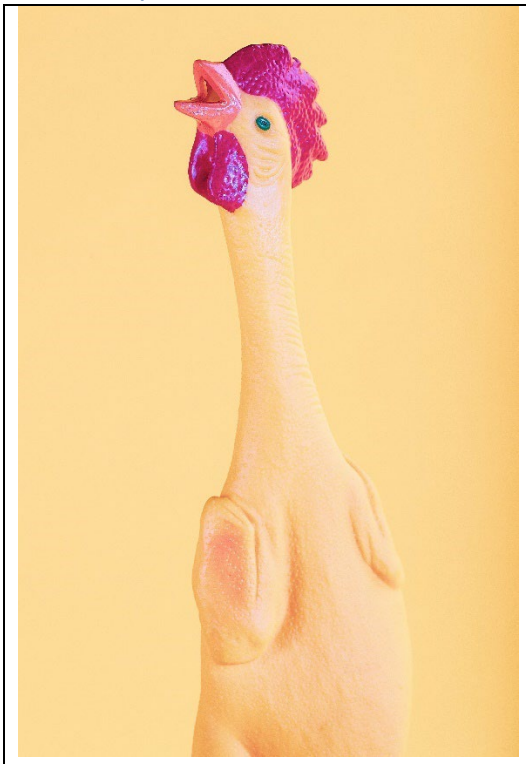


1. Before beginning, determine the play boundaries.
2. Tell the youth that in this game, everybody is 'it' and in order to tag another youth, they must tap the other youth below the knees.
3. If a youth is tagged, instead of being out, the youth must do three jumping jacks in order to return to the game.
4. Time the game for about 1 minute, then try a variation:

Moving variations:

- Hopping
- Skipping
- Crabwalk
- Walking backward

Guides | Chuck the Chicken



What you need:

1. Rubber chicken or other silly thing to throw

What to do:

2. Start by forming two equal teams - team A and team B.
3. Team A starts by throwing the rubber chicken across the playing area, away from team B. Directions 3 and 4 should happen in unison.
4. **Team B** runs toward the rubber chicken. One team member from team B grabs the chicken while the rest of the team lines up behind that team member. The rubber chicken is then passed over the head of the first person, then through the legs of the second person, then over the head, etc. until it reaches the last team member in the line. This person will then yell 'chuck the chicken' and throw it away from team A.
5. While team B is passing the chicken, **team A** huddles together as one team member runs laps around them. Each time the team member completes one lap around team A, team A receives a point. The runner for team A will stop when team B yells 'chuck the chicken' and the whole team will run after the chicken and the team roles are reversed to complete the round.

6. In each round, the person running around scoring points must be a different team member.
7. After a predetermined number of rounds, the team with the most amount of points wins (it's usually pretty close).

Pathfinders, Rangers | Insanity!

Warning: This game is wild and crazy! Factor in speed and it becomes INSANITY!

List of Insanity Challenges

(The caller should always proceed it with "I need to see the team number and ....)

1. Someone with 2 different patterned or coloured socks
2. Your team clucking like a chicken
3. Someone who can sing Taps
4. Someone who has a hair elastic
5. Your team singing and doing the actions for YMCA
6. Someone who has a hole in their sock
7. Someone who is wearing runners
8. Someone who has blue eyes
9. Someone who can roll their tongue
10. Your team is making GGC with your bodies
11. Someone who can say hello in 3 languages
12. Someone who can do a somersault
13. Someone who can tie a clove hitch
14. Your team carrying one person
15. Someone wearing more than 5 pieces of jewelry
16. Someone with stained clothes
17. Someone who can name 5 reality shows
18. Someone who can imitate a worm

What you need:

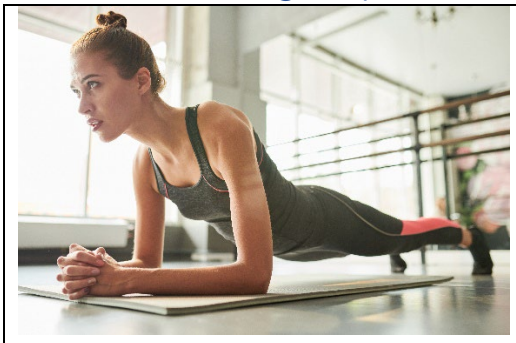
- list of Insanity challenges
- cards labeled with team numbers, e.g. if you have 4 teams, then you need cards labeled with 1 to 4

What to do:

1. Divide the youth into teams. 6-8 youth per team works best.
2. Give each team a number card. In order to keep the game going at a fast speed, the team number is carried with the person presenting to the caller so they don't have to slow down to ask who is from what team. If the team number is visible, they will get the ap-propriate points.
3. Explain to the youth that the goal of the game is SPEED, and that points are received for the team who can accomplish each challenge the fastest.
4. One person is appointed to be the caller and one as the point taker.
5. The caller calls out one of the statements on the Insanity challenge list. For example, "I need to see the team number with a youth wearing 2 different patterned or coloured socks."
6. The team is responsible for finding a person who fits the criteria and making sure that they go to the caller with their team number and the proof that they have 2 different socks.
7. Points are awarded as follows: If there are 4 teams, then the winning team gets 4 points, the second team gets 3 points, the third gets 2 points and the last team if they arrive gets one point.
8. The caller is not limited to the challenges on the list but can add fun and interesting challenges of their own as the game goes on.

19. .... any other challenges you can think of.	

Pathfinders, Rangers | Planktionary



This one could be tricky for some because it requires drawing a picture while holding a plank.

What to do:

1. Both/all players get into a plank position (Forearms and toes on the ground, lift your body up to be flat. Can also do with knees on the ground).
2. The first person starts to draw and everyone else must guess what it is.
3. When someone guesses correctly everyone can come out of the plank (Yay!)
4. Take a break before repeating with another person drawing. You may want to switch up to exercise each round

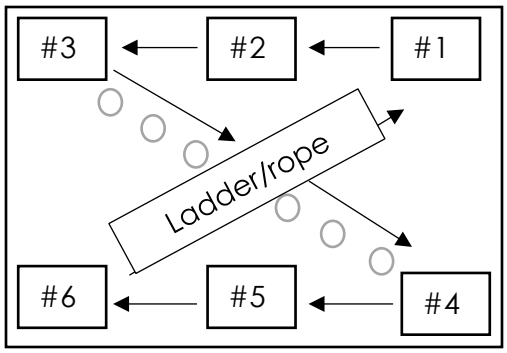
Variations:

- Play a different game like this. Hangman? Articulate? Taboo?
- Switch up the type of hold you're doing (eg. dish, squat-hold, side-plank)
- For every wrong guess, everyone has to…(eg. Push up onto their hands, do a push-up and go back to their elbows without putting their knees down.)

Pathfinders, Rangers | TikTok Dances

Pathfinders/Rangers choose a Tiktok Dance for the whole unit to learn. Can divide into smaller groups if you want.

Pathfinders, Rangers | Circuit Fitness



What you need:

- Agility ladders, poly spots, exercise mats, other fitness equipment (optional), station signs

What to do:

1. Choose ANY six fitness activities of your choice (plank, lunges, push ups, curls, jumping jacks, etc. – the ideas are endless).
2. Set-up the "X" circuit using agility/fitness ladders and poly spots.
3. Youth members will start at a certain location, spread out fairly evenly, and for 2 minutes they will run through the circuit, completing everything in a directional path chosen be-forehand.
4. Youth members will go through as many times as possible in the 2 minutes (but the proper form and technique is more important than speed).
5. After the 2 mins are over, a quick break – maybe 30 seconds. And then go again. Repeat as desired. Switch up time duration or fitness exercises as desired.

Pathfinders, Rangers | Active in My Community

Hold a meeting outside of your regular meeting place and do something active. Visit a gymnastics gym, go to a dance studio, go swimming, try skating, visit a martial arts centre, go for a hike in a nearby park, or play at a nearby playground. Whatever you decide as a unit, get out and get active while having fun!

- **Fitness Centre Orientation**
  Many recreation centres offer teen orientations to their fitness area, explaining proper equipment use and etiquette. Schedule an orientation at your local centre and then have the youth try a few weight machines as well as cardio machines. Hint: if you have a larger unit, divide youth into smaller groups and schedule an orientation for each group. The other groups can do another activity in the rec centre while waiting their turn.

- **Open Gym/Drop-in Sports**
  Take a look at the gym schedule and find out when their open gym time is - ask

the youth what kind of activities they think they can do during open gym. Ask a staff member at the centre if there is equipment for loan during open gym and if there is a system for loan-out. If the schedule indicates that it is currently open gym, pick an activity (basketball, soccer, badminton, volleyball, etc.) and play a quick game with your unit.

Science

Background

The bones in your body are important for 3 reasons:

- **Support**: Your skeleton holds up your whole body. Your spine allows us to stand and walk upright. Since humans walk on two legs, our arms are free to do other things at the same time, for instance you can carry things and use tools. That allows us to play tennis and field hockey, do archery, and many other activities.
- **Protection**: A strong skeleton protects our soft internal organs. For example, the rib cage protects our heart and lungs. Can you think of other bones that protect important body parts?
- **Movement**: The skeleton and muscles work together so our bodies can move many different ways. When our brain tells a muscle to move, the muscle pulls or pushes its attached bones.

Dense connective tissue is also important in your skeleton. Ligaments hold two bones together, preventing them from moving too far apart or twisting. Tendons connect muscles to bones. Tendons are strong yet flexible; the easiest tendon to see is the Achilles' tendon that connects the calf muscles to the heel bone. Without it, you cannot walk.

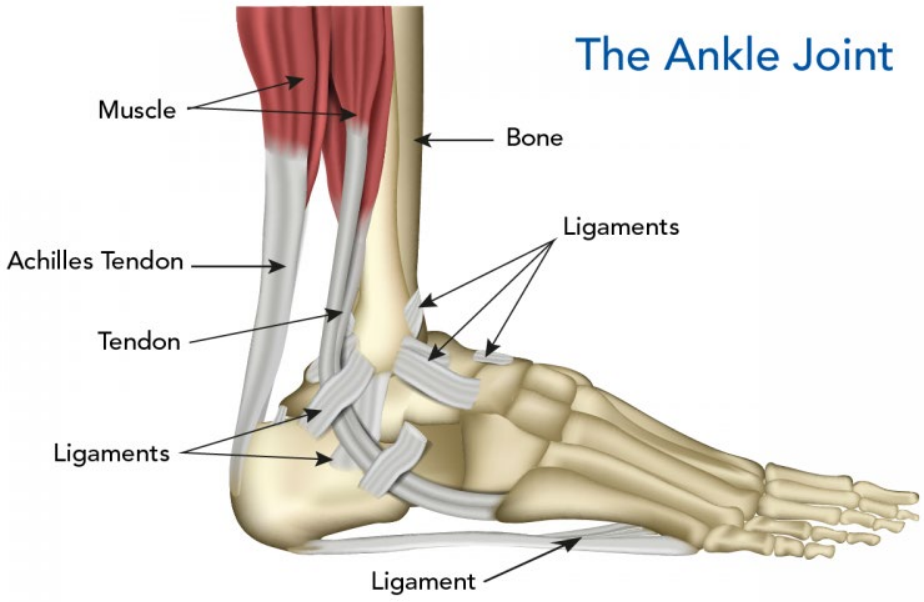
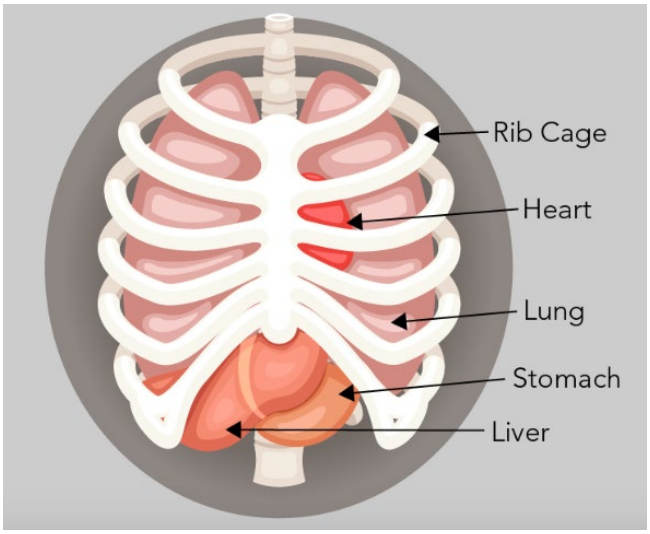
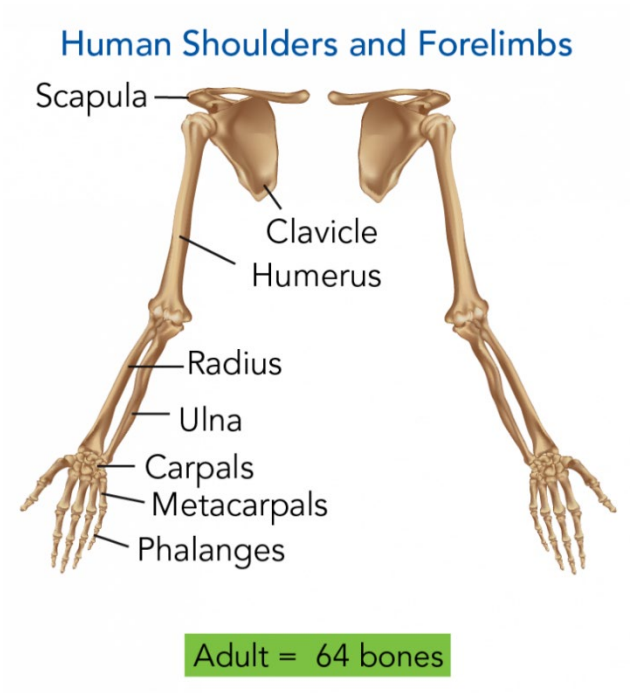


Photo credit: The human ankle showing the locations of some tendons and ligaments (Let's Talk Science using an image by medicalstocks via iStockphoto).



When two bones connect, they have a protective covering called cartilage, which prevents the bones from rubbing together. Cartilage is at the ends of many bones and in joints. It also connects parts of the rib cage to allow movement during breathing.

Photo credit: https://letstalkscience.ca/educational-resources/backgrounders/musculoskeletal-systems-in-animal-kingdom Photo credit: https://letstalkscience.ca/educational-resources/backgrounders/musculoskeletal-systems-in-animal-kingdom



Zoologists study animal skeletons to understand the evolution of species and classify different groups of animals. For some extinct species like dinosaurs, fossilized skeletons are the main source of information. Comparing fossil skeletons to living animal skeletons tells us interesting things, such as the evolution of birds from dinosaurs!

Did you know? Almost all mammals, including giraffes and whales, have 7 vertebrae in their necks.

Most vertebrates have limbs (arms, legs). Can you think of a vertebrate without limbs? (snakes)

Photo credit: Human shoulder blades and forelimbs (Source: Let's Talk Science using an image by red_frog via iStockphoto).

Forelimbs, also called front legs or arms, are connected to the upper spine. All vertebrates have the same bones in their forelimbs: humerus, radius, ulna, carpals, metacarpals, and phalanges. These are the bones of the arm, wrist, and hand. However, even with the same bones, animal forelimbs can look very different; the specific shape allows animals to move in different environments on land, in the water, and in the air.

Large land animals, including humans, can run fast due to long leg and arm bones. Other land animals, like kangaroos and rabbits, have shorter bones in their front legs and longer ones in their back legs; this allows them to jump very high. Aquatic animals have shorter, sometimes fused, arm and leg bones that allow them to swim quickly. Moles have very big foot bones, which allows them to burrow in the ground.

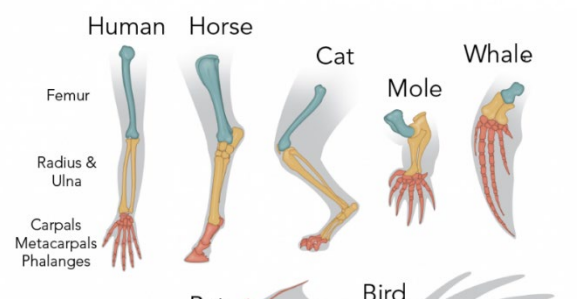


Photo credit: Front limb bones of different animals including a human, horse, cat, mole, whale, frog, bat, and bird (Let's Talk Science using an image by Aldona via iStockphoto).

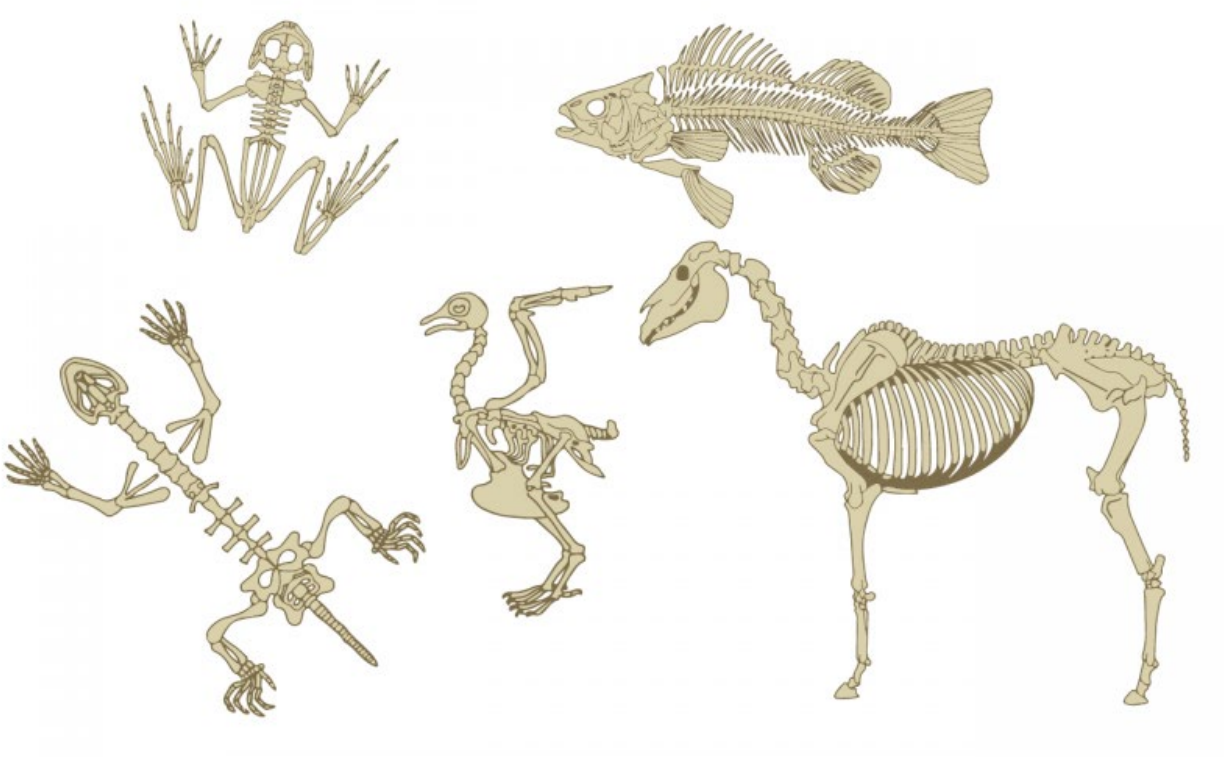


Photo credit: Animal skeletons. Clockwise from top left: Frog, fish, horse, bird and lizard (Let's Talk Science using an image by kowalska-art via iStockphoto).

Can you identify these animals from their skeletons?

Bird bones are pneumatic bones or "breathing bones" because air flows through them. Bird bones are connected to air sacs, which may allow the bones to be strengthened by air pressure. Instead of being lighter than mammal skeletons, bird bones are actually more dense. While they have air spaces, these bones also have internal struts.

Photo credit: Cross section of a bird bone showing the hollow interior with crisscrossing struts (Source: Floyd Hayes, OpenStax College, cnx.org. Via ResearchGate).

Did you know? The internal struts of bird bones makes them shatter easily. You should never give chicken or turkey bones to a dog or cat, as these bone can break into shards that might get stuck in a pet's throat.

You've probably heard about drinking milk because it is good for bones. That is true. Bones contain calcium phosphate ($Ca_3(PO_4)_2$) to make them strong. Bones also contain water and small amounts of different minerals such as magnesium and sodium. Bones store calcium, and when other parts of the body need calcium, it comes from bones.

Experiments

Bending Bones

What you need:	**What happened?**
• Bones (chicken legs work best) • Jar with lid • White vinegar • Plastic wrap • Water **What to do:** 1. Choose two clean dry bones about the same shape and size. Make sure all the meat is removed from the bones. 2. Place one bone in a jar. Pour in white vinegar until the bone is	Bones are made of hard calcium phosphate (70% in humans) and soft collagen (30% in humans). Vinegar is a mild acid. When you soaked the bone in vinegar, it dissolved the calcium phosphate so that only collagen was left. Calcium makes our bones strong. Without calcium, our bones become soft and bendable, and they are more likely to break.

completely covered. Put the lid on the jar. 3. Wrap the second bone in plastic wrap and place it next to the jar. 4. After leaving the bones for three days, unwrap the bone that was in plastic wrap. Remove the other bone from the jar and rinse it with water. 5. Try to bend the bone that was in plastic wrap. What happens? How does it feel? 6. Now try to bend the bone that was soaked in vinegar. How does it feel compared to the first bone? Does it bend easily? What happens when you try to break it in half?	

Brittle Bones

What you need: • Bones (chicken legs work best) • Baking pan • Oven • Oven gloves **What to do:** 1. Choose two clean dry bones about the same shape and size. Make sure all the meat is removed from the bones. 2. Put one bone in a baking pan. Bake it in the oven at 250° F for three hours. 3. Remove the pan from the oven. Let the bone cool down for at least 15 minutes before touching it. Have an adult check the bone to make sure it's safe to touch. 4. First, try to bend the bone that wasn't baked. What happens? How does it feel?	**What happened?** Baking the bone breaks down its collagen, so it just has calcium phosphate. Without collagen, the bone is brittle and easy to break; it's no longer flexible. If the bones in your body lacked collagen, they would break easily. *Credit: https://askabiologist.asu.edu/bone-experiments*

5. Now try to bend the bone that was baked. How does it feel compared to the first bone? Does it bend easily? What happens when you try to break it in half?	

Back Bends

What you need: • Plastic straws • Pipe cleaners • Scissors **What to do:** 1. Thread the pipe cleaner through the straw. 2. Gently bend the pipe cleaner where it is covered by the straw. How much does it bend? 3. Now remove the pipe cleaner from the straw. Cut the straw into pieces about 2 cm long. 4. Put all the pieces of straw onto the pipe cleaner so they are touching each other. 5. Gently bend the pipe cleaner again. How much does it bend now?	**What happened?** The pipe cleaner and straw represent how joints allow our bodies to move. When the straw is in one long piece, it acts like a long bone like the thigh bone (femur) or upper arm bone (humerus). These bones can't bend because there's no joint to allow movement. These bones give our bodies stability. When the straw was cut into pieces and placed on the pipe cleaner, it was very easy to bend because of 'joints' created by multiple smaller pieces. A joint is where two or more bones meet. The small pieces of straw stacked on top of each other are very similar to our spine, which is made up of small bones stacked on top of each other. The spinal cord is threaded through these bones (vertebrae). Like the pipe cleaner, you can bend your back forward and backward, side to side, and even rotate in a circle. However, the stacked bones are not very stable, so your back has strong muscles to help keep your spine straight. Your body has many other joints too. Try bending your arms and legs, wiggle your fingers and toes, sit down, reach up high, and look from side to side. You can move your body all of these ways because of joints in your fingers, ankles, knees, hips, elbows, neck, and everywhere else that bones connect inside your body.

Photo credit: https://laughingkidslearn.com/simple-threading-activity-using-cut-straws-and-pipe-cleaners/

Source: https://learning-center.homesciencetools.com/article/skeletons-and-bones-science-projects/

The Joy of Joints

A joint is where two or more bones meet. We have different types of joint in our body. Test them out!

Hinge joint

To demonstrate a hinge joint, open and close a door. Look at where the door is attached to the wall, which gives the door its movement. This is the hinge, and it's very similar to how your finger joints move. Bend your fingers. Can you see how the knuckles only allow the sections of your fingers to move in toward your palm – not side-to-side or backwards. Your knees are also hinge joints.

Saddle joint

This joint works like a hinge joint with slightly more flexibility. A good example is where your thumb meets your palm. Your thumb can move forward and backward and side to side. This movement allows you to grasp objects between your thumb and fingers. Try grasping something to test this saddle joint, as it gives your hand a pincer grip.

Pivot joint

This joint allows rotating movement. The two bones in your forearm connect to your elbow with a pivot joint. To see how this works, open a door using a doorknob. It's not just your hand that moves, but the whole lower part of your arm rotates to twist the knob.

Ball and socket joint

To demonstrate how this joint works, make a fist with one hand, and then cover it with the other. Move your fist around – it can move freely in a circle, just like a ball and socket joint. Your shoulders and hips are ball an socket joints, and they have the most flexibility. Compare this with most animals that walk on four legs, like dogs and cats. They don't have shoulders with ball and socket joints, as the flexibility of these joints makes the shoulder and arm bones less stable. Instead, these animals have shoulder joints that resemble hinge joints, to increase the shoulder stability and allow very fast running on all four legs.

Bird Bone Experiment

Did you know that birds have hollow bones? This is an adaptation that allows birds to be lightweight so they can fly. But it's hard to picture how hollow bones are strong enough to support a bird's muscles and the physical stresses of takeoff and landing. This experiment tests how strong hollow bones can be.

What you need:

- Paper plates
- Scrap paper
- Tape
- Pennies, small rocks, anything with weight that you have lots of
- Books, water bottle, etc.

What to do:

1. Split the unit into small groups.
2. Each group should roll 3 pieces of paper, on the short side, into 3 tubes about 2 cm in di-ameter. Use tape to secure the tubes. These are your hollow bones.
3. Balance the 'bones' on one end to stand tall and make a triangle.
4. Balance the paper plate on top of the paper' bones.'
5. Ask each group how many objects (pennies/rocks/etc.) they think their structure will hold. Have them write down their estimates on a piece of paper.
6. Add the small objects one at a time to see how many the structure can hold. Make sure to spread them evenly around the centre of the plate to stay balanced.
7. Continue adding weights until the structure collapses or you run out. Now count them. Were your estimates close?

 Source: https://abnc.ca/wordpress/wp-content/uploads/2020/05/Bird-Bone-Experiment.pdf	8. If your structure is still intact, try experimenting further. Find other heavy items, such as books, a water bottle, etc., and balance them on the plate instead. You may be surprised at how much weight it can hold. Remember your structure may eventually collapse so don't place use anything that could spill or break. 9. As a group, compare the strength of your structures. Were they surprised by the strength of the hollow 'bones'? Did the structure hold more weight than expected?

Pathfinders and Rangers | Bones and Calcium Experiment

Our bones are made out of calcium, which is a mineral found in milk. Drinking milk and eating other calcium-rich foods can help us build strong healthy bones. What about other animals? What are their bones made of? What kind of bones do they have? Are there animals without bones? Are endoskeletons and exoskeletons made out of the same materials?
 	
This experiment will look at bones and other hard parts from animals to determine what has properties similar to calcium in bones. All vertebrates have internal bony skeletons made out of calcium to support their bodies. Invertebrates use different strategies to support their body weight. For instance, earthworms have no hard body parts and use a hydrostatic skeleton; this uses water pressure for support. Insects and
	What you need:
	• White vinegar
	• Cups
	• Hard parts of several different types of animals:
	  ○ Chicken bones
	  ○ Fish bones
	  ○ Eggshell
	  ○ Crab claw
	  ○ Shrimp shells
	  ○ Sea urchin test (shell)
	  ○ Tooth
	  ○ Snail shells
	  ○ Fingernail clippings
	
	What to do:
	
	1. Collect a few materials to test, using the hard parts from different animal sources. Try to get a good variety from as many different kinds of animal as you can. Use your imagination, the grocery store, the beach, etc. Many grocery stores will give

crustaceans have hard outside structures called an exoskeleton. Snails make shells that partially enclose their body. Are bones and invertebrate exoskeletons made from the same materials?

You will use vinegar to react with the calcium found in bones, and also test if hard body parts from other animals are also made out of calcium. Wash your hands after handling bones and other animal materials.

out soup bones for free. Try fish markets as well.
2. Place each sample in a cup. Label the cup with a description of the material.
3. Make initial observations of each sample. What does it feel like? What does it look like? Write down your observations in a data table, focusing on the similarities and differences between materials.
4. Pour vinegar into each cup until the sample is submerged (covered) with vinegar.
5. Let the cups sit at room temperature for several days. Check the cups occasionally to ensure the vinegar still covers the material. You may need to add more vinegar to the cup.
6. Remove the samples from the vinegar. Make your 'after treatment' observations. How does each material look and feel? How do the material textures feel compared with before? Write down your observations in a data table, focusing on the similarities and differences between materials.

Material	Initial observation before treatment	Final observation after treatment

Question: How do endoskeletons and exoskeletons compare? Did they react with the vinegar in a similar or different way? Do you think they are made out of similar or different materials?

Variations

- Bones are made out of calcium, which can be found in different in many vitamins and antacids. Try putting some calcium vitamins and different brands of antacid into vinegar. Do they react similarly to bone?
- Some bones have special adaptations. Examine a chicken bone, looking for tiny chambers in the middle of the bone. Check bones from other birds from the

store: turkey, quail, Cornish hen, goose, or duck. What similarities do they all have? How are they different? [Note: do not use wild birds due to the risk of avian influenza, which can spread to pets and other birds.]
- You can clean a skeleton thoroughly by boiling the bones and then soaking in bleach. With adult supervision, try doing this with a quail, Cornish hen, or small chicken. Can you put the skeleton back together?

Source: https://www.sciencebuddies.org/science-fair-projects/project-ideas/Zoo_p010/zoology/bones-and-calcium

Bone Safety

- Always use the right safety equipment, such as helmets and protective pads, when playing sports. Your equipment should fit properly, or it may not do its job. Remember that different helmets work for different sports, from riding your bike to horse-riding to skiing. Use the safety gear designed for your activity.
- Always wear your seatbelt in a car or other vehicle. In BC, children over 18 kg (40 lbs.) should use a booster seat until they are 9 years old or 145 cm (4' 9") tall. Children 12 and under who are too old or large for a booster seat should always sit in the back seat with a properly adjusted seatbelt.
- Keep your stairs clear of objects that you could trip over.
- Falls happen. Learn how to fall correctly. Most people stick their arms straight out and try to catch themselves with their hands. But this can lead to a broken wrist or elbow. Instead, practice falling onto your forearms and rolling, reducing the risk of a broken bone. Practice on a soft surface, like a mattress, gym mat, or grass.
- Trampolines are associated with a higher risk of broken bones, so take some precautions. Check that the trampoline has a proper net and that the springs are covered. Only one child should jump on the trampoline at a time for optimal safety.

Sources: https://www.icbc.com/road-safety/safer-drivers/Pages/Child-car-seats.aspx, https://www.choa.org/parent-resources/orthopedics/preventing-broken-bones-in-kids-and-teens

How Do Broken Bones Heal?

There are three stages of bone healing: the inflammatory, reparative, and remodeling stages.

- **Inflammatory Stage**
  When a bone breaks, the body sends out signals for special cells to come to the injured area. Some of these cells make the injured area get inflamed (red, swollen, and painful). This inflammation tells your body to stop using the injured part so it can heal. Other cells form a hematoma (blood clot) around the broken

bone. This helps create a bridge between the pieces of broken bone so it can start healing.

- **Reparative Stage**
  About a week after the injury, a soft callus (a type of soft bone) replaces the blood clot that formed in the inflammatory stage. This callus holds the bone together, but it isn't strong enough to use the injured part yet. Over the next few weeks, the callus becomes harder. Depending on the bone and type of break, after 2–6 weeks, the hard callus is strong enough to use the body part.

- **Remodelling Stage**
  Around 6 weeks after the injury, regular bone replaces the hard callus. If you saw an X-ray of the healing bone, it would look uneven. Over the next few months, the bone is reshaped and will go back to the way it looked before the injury.

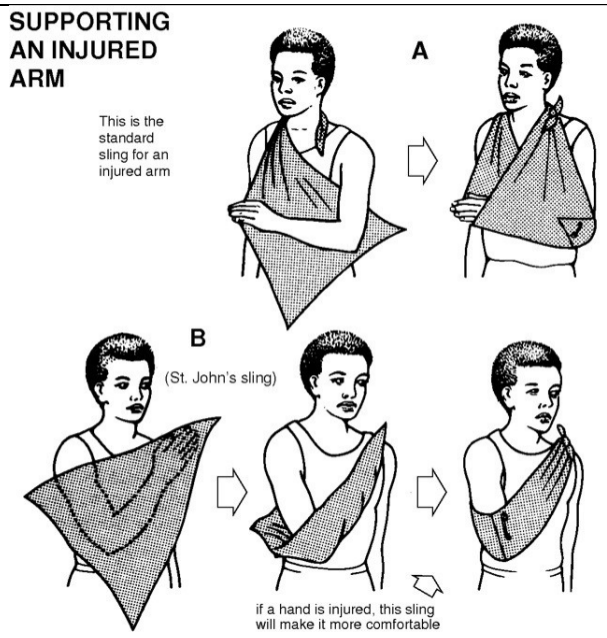
Casts and splints hold broken bones in place while they heal. New hard bone forms in about 3–6 weeks, and then the cast or splint can come off.

Basic First Aid

Did you know that Youth Guide scarves have a special purpose? They can be used for emergency first aid! However, we suggest using some plain cloth squares, cut up sheets, or bandanas for practice. Sparks and Embers can learn some techniques on their favourite teddy bear, while Guides and up can practice with a partner or two.

There are various types of bandages, designed for different injuries. Triangular bandages are used to support for a limb, bone, or joint. A triangular bandage is usually made of cotton or other lightweight cloth that can be folded into a sling. It can also provide pressure to a bleeding injury.

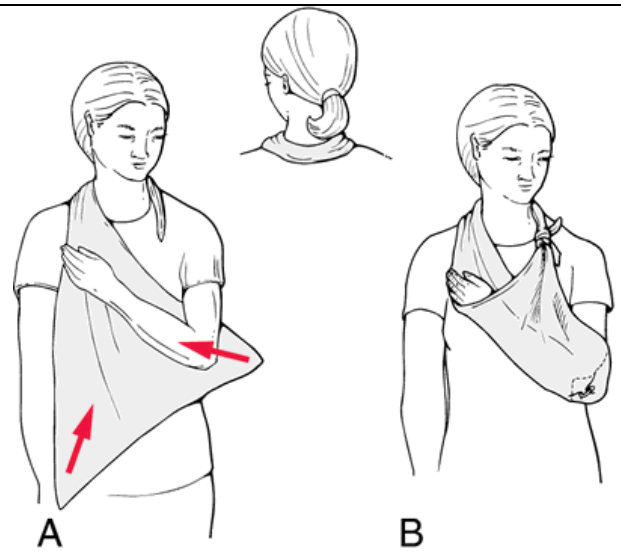
Depending on the use, you can fold a triangular bandage in different ways. Here are the most common uses – see if you can create these bandages on your stuffie or partner.



https://gluestickmum.wordpress.com/2014/07/13/its-a-sling-thing/

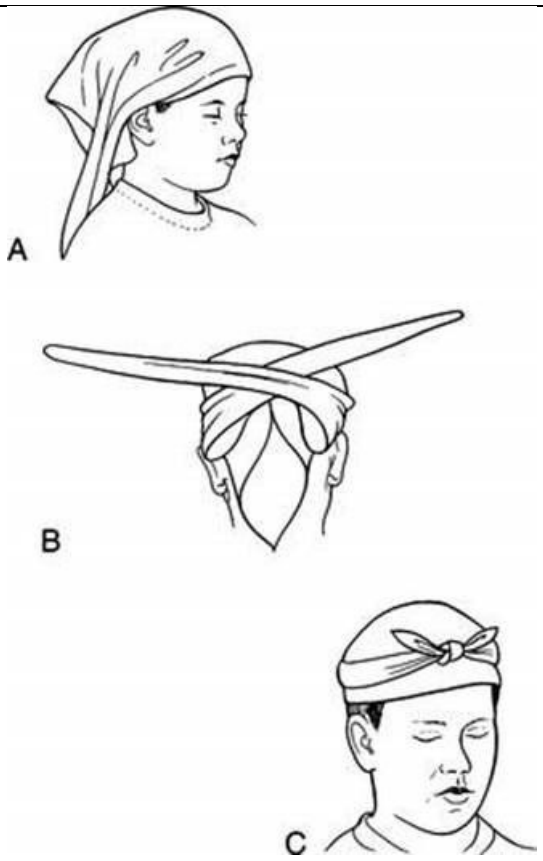
Arm sling

Ask the patient to hold the injured arm across their body in a position that is comfortable for them. Hold the bandage so the long side goes down the centre of the body and the point is on the elbow on the injured side. Slip the top tip gently under the supported arm; then wrap it around the back of the neck, so it rests on the shoulder of the affected side. Bring the lower point up and over to meet the upper point by the neck. Tie the ends with a reef knot just above the collarbone to prevent pressure on the neck. Adjust the sling so the fingertips are visible and check circulation by comparing fingertip colour on the uninjured arm. If the fingertips look darker or lighter, loosen the sling.



Elevation sling

Ask the patient to hold the injured arm across the body with their fingers pointing to the opposite shoulder tip. Make sure this is a comfortable position for them. Hold the bandage so the long side goes down the centre of the body and the point is on the elbow on the injured side. Place the bandage gently over the supported arm. Then, bring the top end around the front of the neck so it rests on the uninjured shoulder. Wrap the lower half of the bandage gently around the affected side. Bring the free end from the elbow across the back to the opposite shoulder. Twist the top point of the bandage gently around the fingers. Tie the two ends with a reef knot, and place it just above the collarbone to avoid pressure on the neck. Smooth the loose fabric from the point of the elbow along the arm under the sling

	**Head bandage** Fold back about 5 cm to create a hem on the long side. Place the middle on the forehead just above the eyebrows. Make sure the hem is on the outside. Allow the point to fall over the head and down the back. Bring the tips over the ears, cross them over the point, bring around the forehead and tie with a square knot. Bring the point up and tuck into the bandage where it crosses behind the head.

OTHER IDEAS

- Challenge the unit to walk more that week and report back next week
- Use a cellphone or pedometer to count steps for a week
- Use Google maps to calculate how far you walk to school and back (or to another location like a friend's house, the library, unit meetings, etc.).