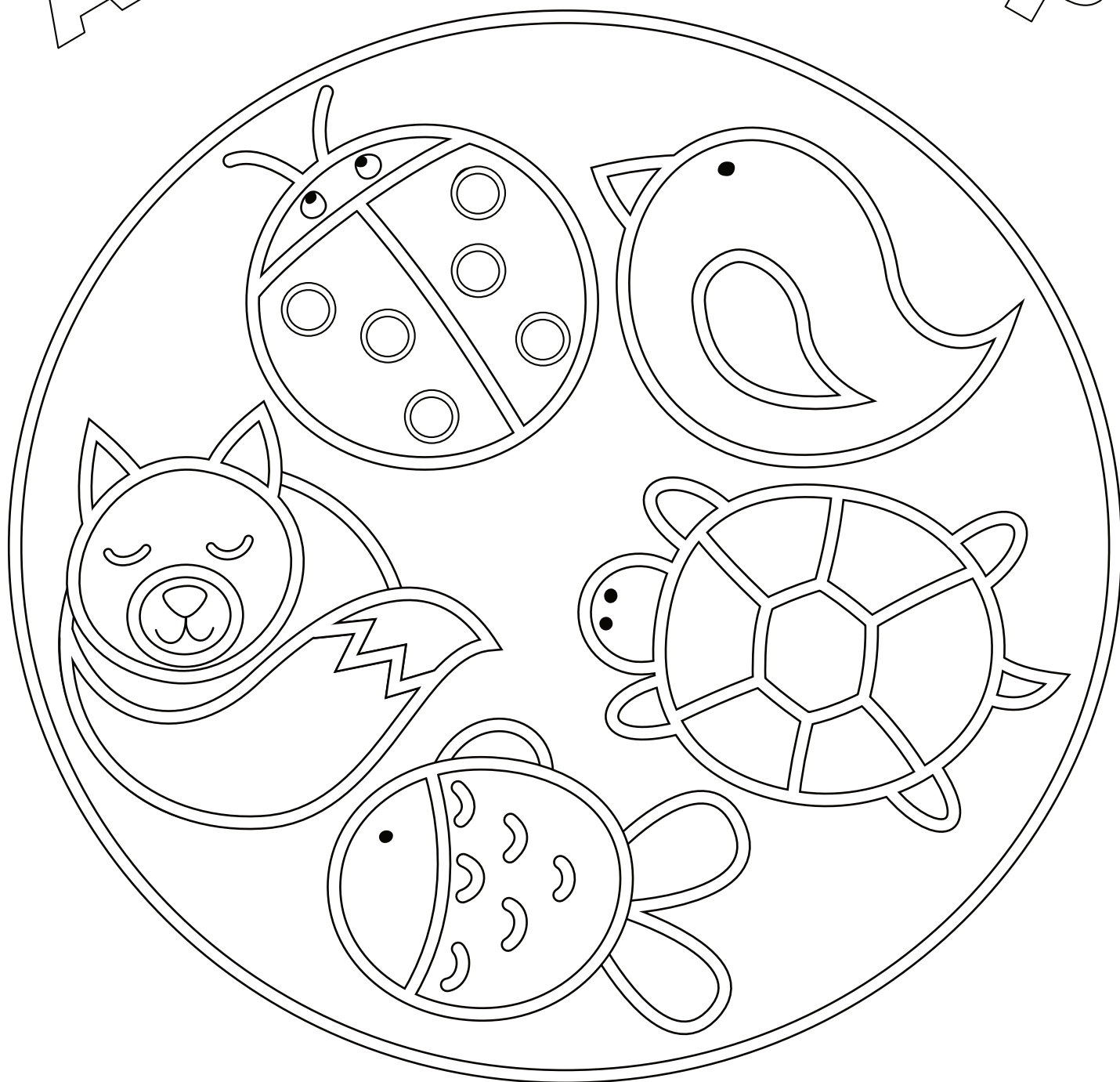


ANIMAL CAMP



With Science Mom & Math Dad

A note about printing:

The worksheets, drawing lessons, and naturalist challenges can be found from pages 5-33.

Music for the animal songs are on pages 34-35.

Paper sack puppet templates are on pages 36-51

When printing, it is best to print pages 1-35 double-sided. The suncatchers and paper sack puppet templates are designed to be cut out, so pages 36-51 should be printed single-sided.

These notes were created for Animal Summer Camp, a virtual camp hosted by Science Mom and Math Dad. All illustrations and text in these notes were created by Jenny Ballif, Serge Ballif, Liza Bishton, and Krista Frye.

COMPLETE SUPPLY LIST

- White paper (for printing the notes, coloring pages and craft instructions)
- Origami paper (**DIY substitution**: construction paper cut square)
- Colored construction paper
- Scissors
- Markers
- Crayons
- Glue sticks
- Paper lunch sacks (white bags are easier to color)
- 2 paper napkins
- 2 wooden skewers or thin wooden dowels
- 1 caterpillar habitat (**DIY substitution**: a quart-sized or bigger container with a screen or lid with holes on top)
- 1 packet unflavored gelatin
- Flour
- 2 cups bird seed
- Muffin tin or cookie cutters
- 1 straw (optional) It can be reusable, paper, or plastic. It's for making holes in the birdseed ornaments)
- Yarn, or string
- A necktie (an old used tie is perfect)
- Cotton balls OR pillow stuffing OR rice (for making a snake necktie)
- 1 piece of red, white, and black felt or fabric
- Hot glue OR gorilla glue OR craft glue
- Pipe cleaners in a variety of colors
- 1 small terra cotta clay pot (**DIY substitution**: a mug or cup you are willing to donate to a science project)
- Pebbles or small rocks
- A handful of popsicle sticks
- 1 permanent marker

Optional items (things we will be using that will enrich the camp experience but are not necessary for the crafts or naturalist activities)

- Googley eyes
- [Pocket microscope](#)
- [Pocket binoculars](#)
- Insect, reptile, amphibian, and mammal identification books (DIY substitution: identification websites and apps! For insects <https://www.insectidentification.org> and <https://www.inaturalist.org/> are great. You can look up most any animal at <https://www.discoverlife.org/nh/tx/>)

ACTIVITIES AND SUPPLIES LISTED BY DAY

Each day, we will be making paper-sack puppets and origami or similar-style paper crafts. Daily supplies include: origami paper, construction paper, scissors, glue, and paper sacks.

Monday: Build a “paper napkin inchworm” using a napkin, wooden skewer, green construction paper, glue (glue stick glue AND hot glue or craft glue)

Naturalist activity: build a caterpillar habitat and find a caterpillar. Indoor variation: research (field guide and paper/scissors/coloring supplies)

Optional accessory: pocket microscope to examine bugs up close.

Tuesday: Build birdseed ornaments using gelatin (if you don’t have any, pectin or cornstarch are viable substitutions), flour, birdseed, string or yarn, and a muffin tin OR cookie cutters.

Naturalist activity: birding scavenger hunt.

Optional accessory: binoculars for birding.

Wednesday: Make a necktie snake from an old tie (If you don’t have a tie, you can use a sock) using stuffing (cotton balls or rice can be substituted if you don’t have batting or pillow stuffing), red felt cut into a forked tongue, and either googley eyes or white and black felt cut into circles. Craft glue or superglue or hot glue recommended, but needle and thread will also work.

Naturalist activity: Research the reptiles in your area.

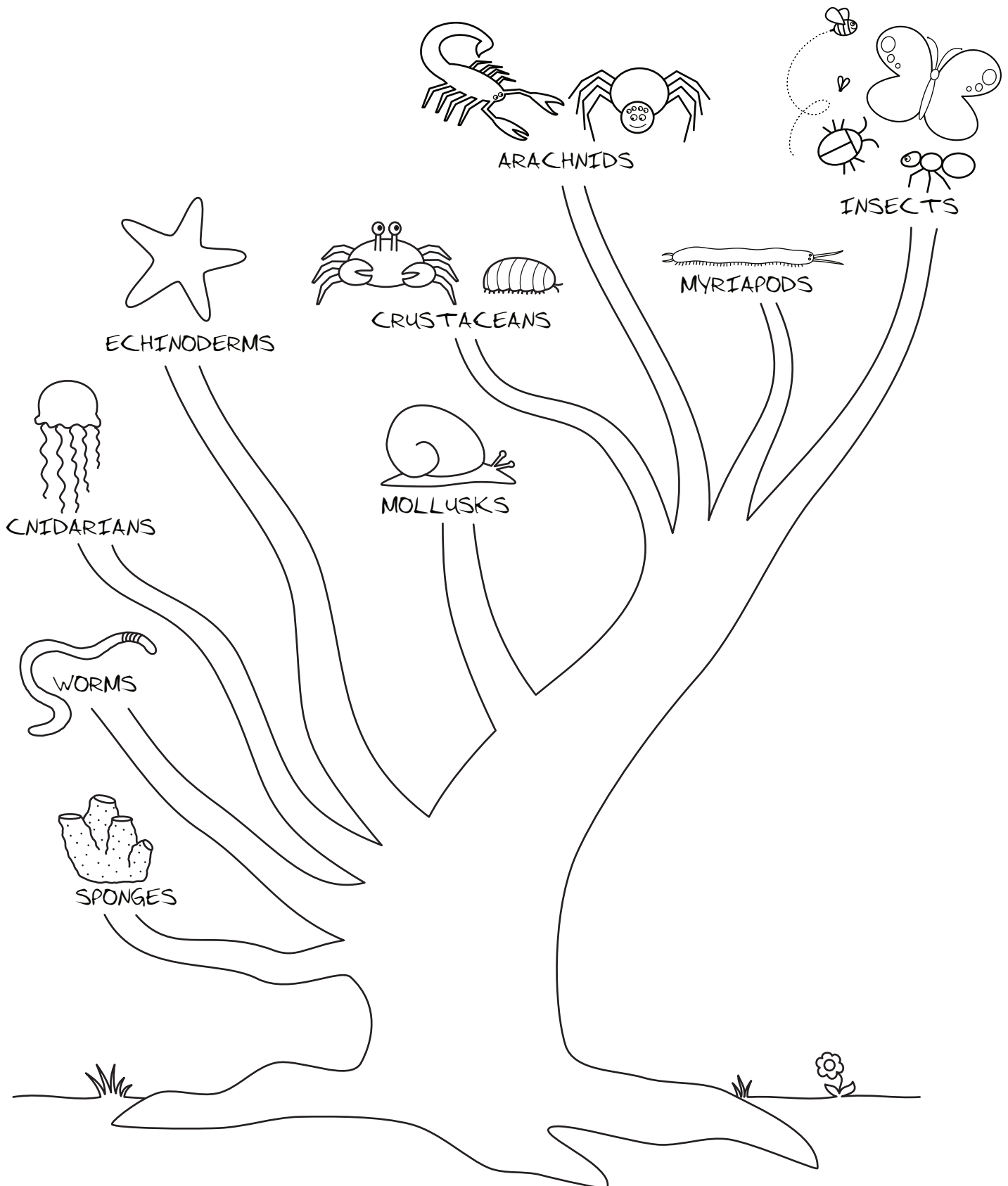
Thursday: Make a toad habitat using a terra cotta pot or an old cup. Decorate it with rocks, sticks, and other materials. Hot glue or super glue recommend for fixing rocks to the pot or cup. Popsicle sticks and a permanent marker may be used to make a welcome sign for the toad.

Naturalist activity: Pick up trash in your neighborhood.

Friday: Make pipe cleaner animals from pipe cleaners.

Naturalist activity: Mammal scavenger hunt

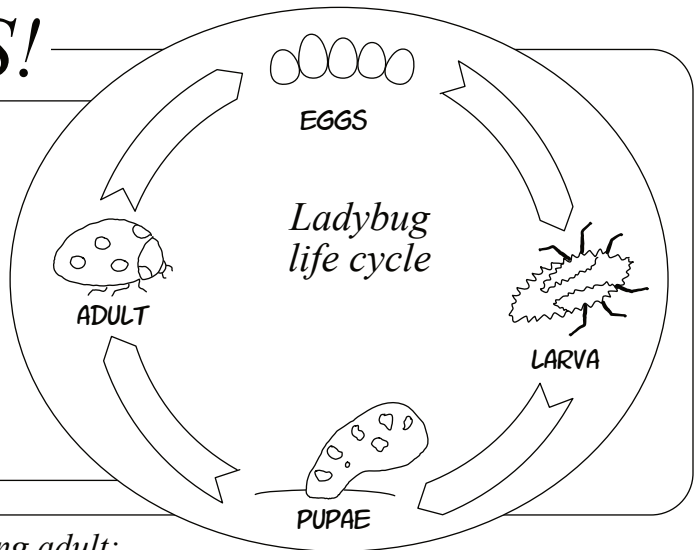
INVERTEBRATES



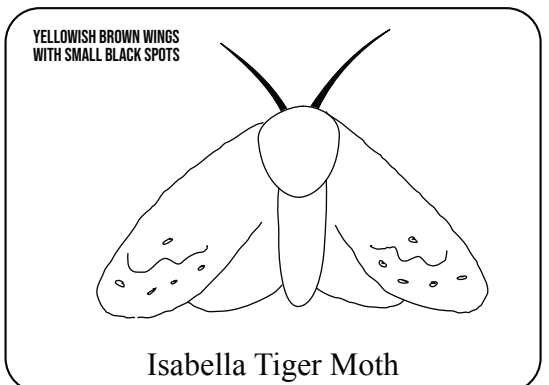
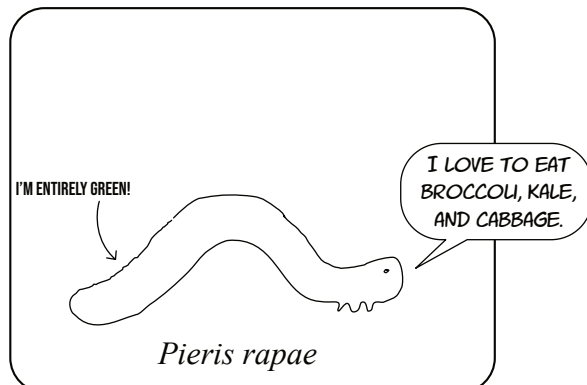
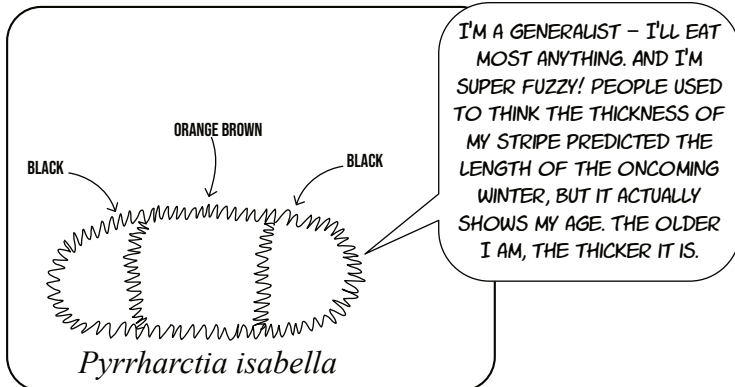
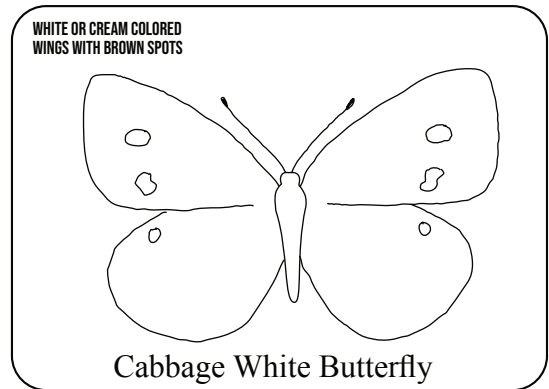
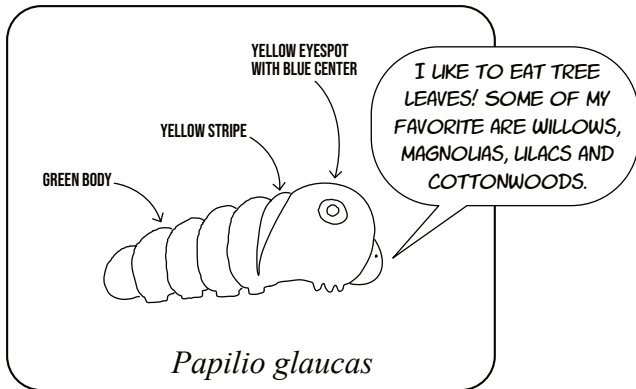
Animals with no backbone!

METAMORPHOSIS!

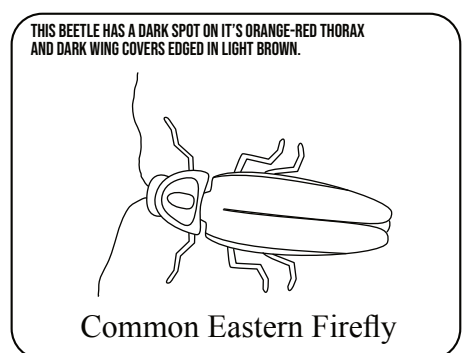
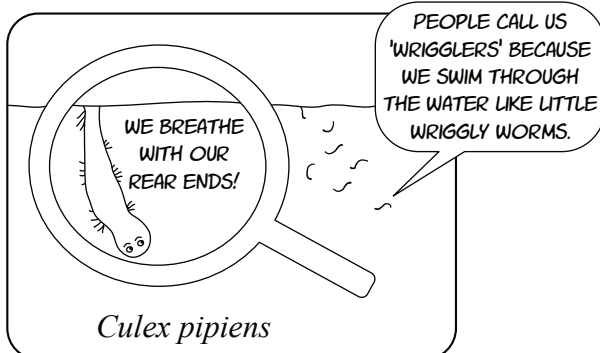
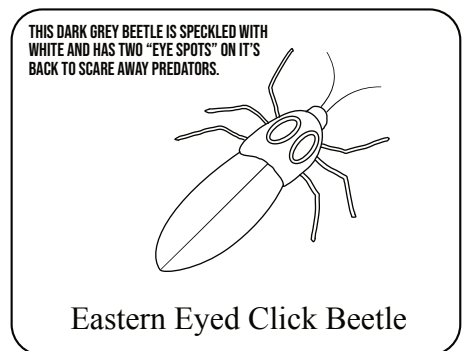
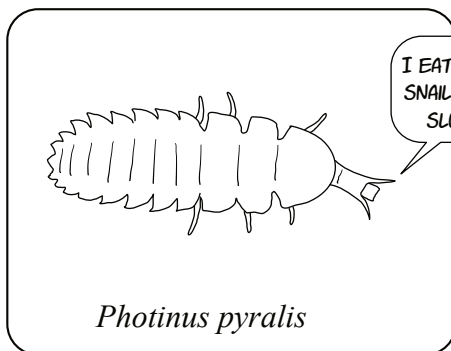
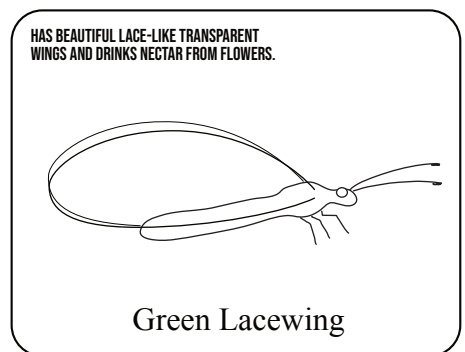
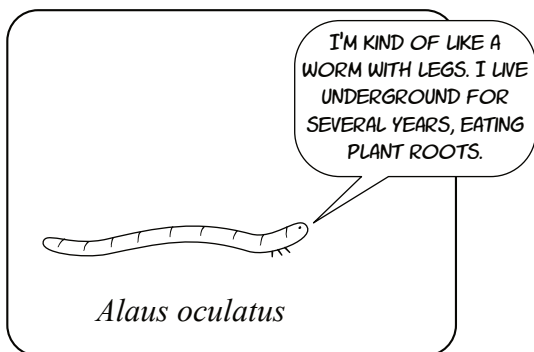
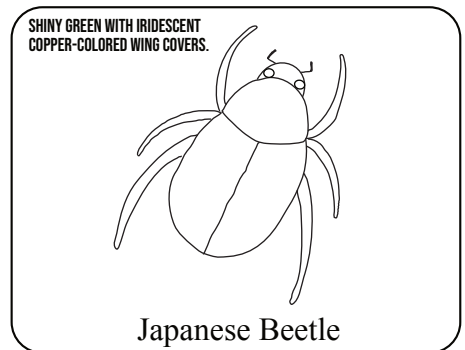
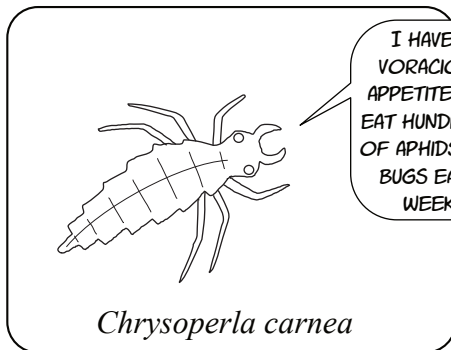
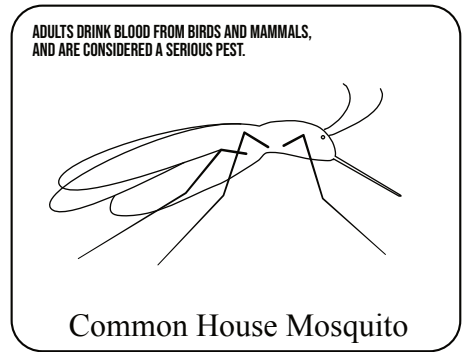
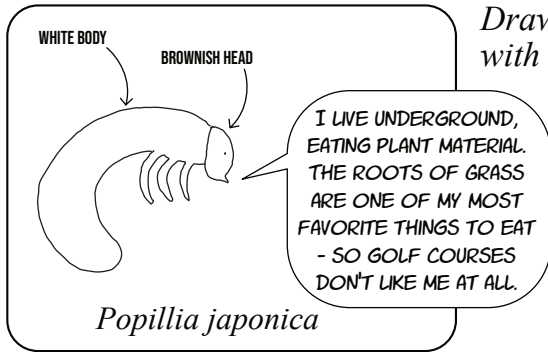
Metamorphosis means changing from one form to another. In insects, there are two main types of metamorphosis: **Simple** (incomplete) and **complete**. Simple metamorphosis has three stages: egg, nymph, and adult. Cockroach, dragonfly, or grasshopper nymphs look very similar to their adult forms. Complete metamorphosis has four stages: egg, larva, pupa, and adult. In this type of metamorphosis the larva (such as caterpillars) often look *completely* different than the adults.



Draw a line to match the larva with the corresponding adult:

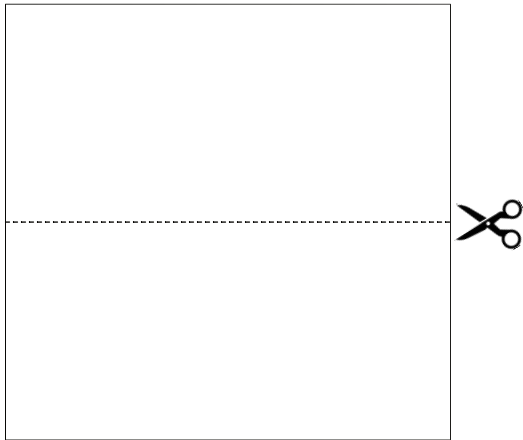


Draw a line to match the larva with the corresponding adult:

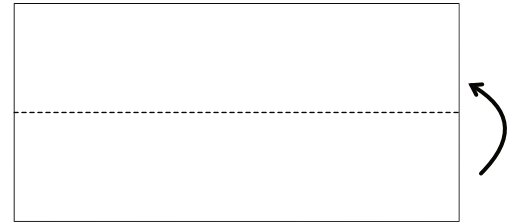


MAKE A PAPER BUTTERFLY

① CUT SQUARE PAPER IN HALF..



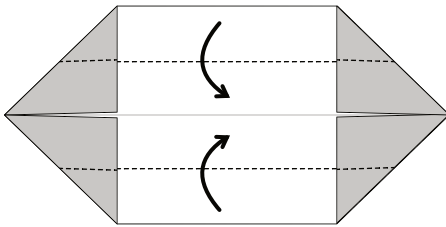
② FOLD ONE PIECE IN HALF LENGTHWISE, CREASE, THEN OPEN.



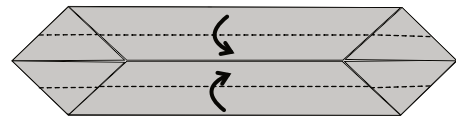
③ FOLD ALL FOUR CORNERS IN TO CENTER.



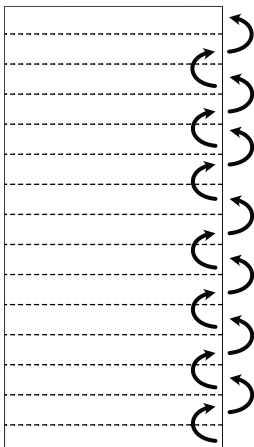
④ FOLD LONG EDGES IN TO CENTER CREASE.



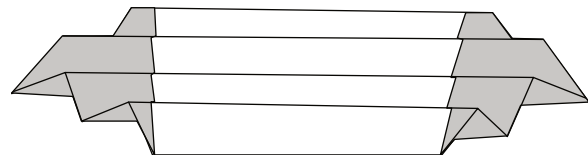
⑤ FOLD LONG EDGES IN TO CENTER CREASE AGAIN. THEN UNFOLD STEPS 4 AND 5.



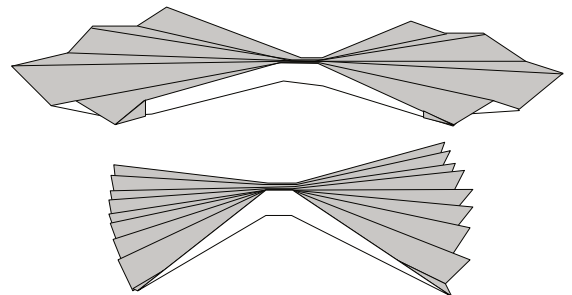
⑦ TAKE THE SECOND HALF OF YOUR ORIGINAL PAPER, AND FOLD IT LIKE A FAN/ZIGZAG ACROSS THE SHORT WIDTH..



⑥ KEEP THE CORNERS FOLDED DOWN, AND USE THE LONG CREASES TO FOLD THE PAPER LIKE A FAN OR ZIGZAG.

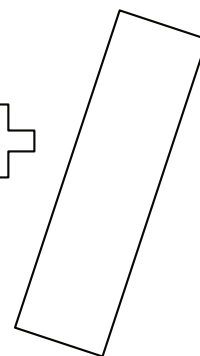
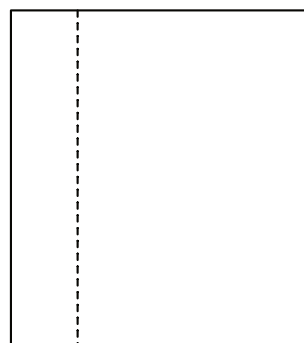
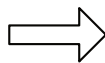
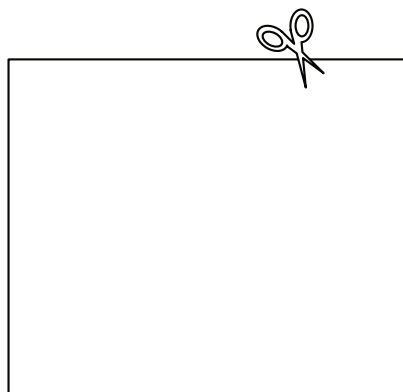


⑧ PINCH BOTH PIECES IN THE MIDDLE AND TIE TOGETHER (WITH PIPE CLEANER OR A STRING).

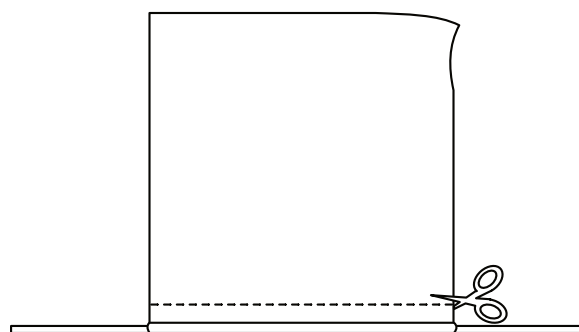
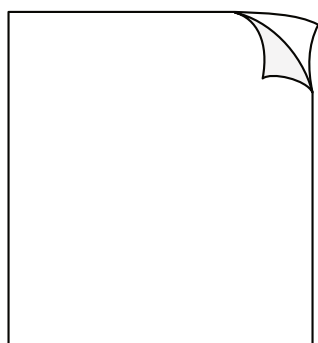


MAKE A NAPKIN CATERPILLAR

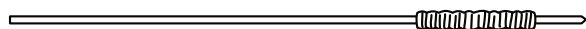
① CUT THE
EDGE OFF A
PAPER NAPKIN.



② THEN
CAREFULLY
PEEL THE
NAPKIN APART
INTO A SINGLE
LAYER.

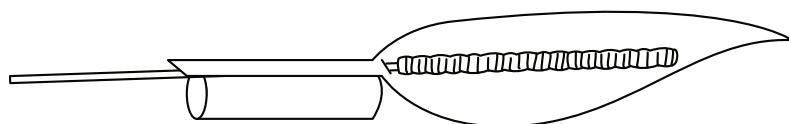
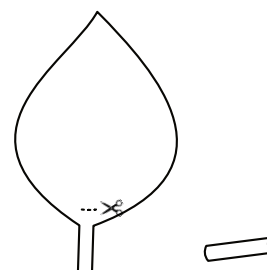


③ ROLL THE SINGLE LAYER OF NAPKIN AROUND A
WOODEN SKEWER 3 TIMES AND USE A GLUE STICK TO
MAKE A TUBE. TRIM OFF THE EXCESS NAPKIN. COLOR
WITH MARKERS IF DESIRED.

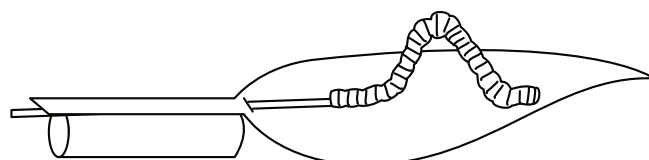


④ SCRUNCH THE NAPKIN DOWN AND SLIDE IT
OFF THE SKEWER.

⑤ CUT A LEAF FROM PAPER AND USE A PIECE
OF PAPER ROLLED UP OR ANOTHER SKEWER
TO REINFORCE IT. CUT A SLIT FOR THE
SKEWER TO FIT THROUGH.



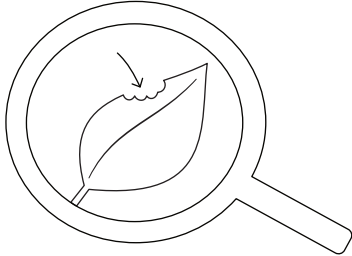
⑥ SLIDE THE SKEWER THROUGH THE SLIT IN
THE LEAF AND GLUE THE NAPKIN TO ONE END
(HOT GLUE OR CRAZY GLUE/SUPER GLUE).



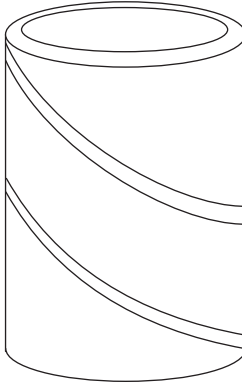
⑦ SLIDE THE SKEWER BACK AND FORTH TO
SEE THE INCH WORM MOVE.

~ NATURALIST IN TRAINING ~

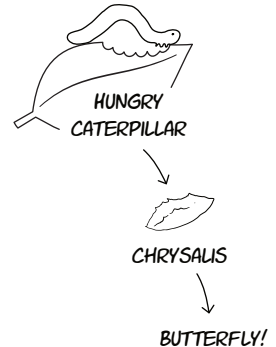
OUTDOOR ACTIVITY: GUIDE A CATERPILLAR THROUGH METAMORPHOSIS!



1. Find a caterpillar. Look for leaves that have signs of being eaten, especially ones with crescent-shaped nibbles along the edges. Caterpillars are often most active at nighttime or dawn and dusk. During the daylight hours they may be hiding.



2. Prepare your butterfly habitat. Use a pop-up screen version or build your own by getting a container from the recycle bin and putting holes in the lid or covering it with paper that has holes.



3. Every day put fresh leaves that your caterpillar likes to eat in the habitat. Feed it steadily until it pupates. After metamorphosis, release your butterfly or moth outside.

Tip: If you can't find any caterpillars outside, you can purchase hornworms at most pet stores. They need to eat leaves from plants in the Solanaceae family (tomato, pepper, eggplant, potato, tobacco, or jimsonweed (*datuna species*)). Drop these leaves in the container daily. Once they get large and start "roaming," provide them with sand or shredded newspaper to burrow in and make sure their environment is dark (they pupate underground.) your sphinx moths should emerge in a week or two.

INDOOR VARIATION: LOOK UP THREE BUTTERFLIES OR MOTHS THAT LIVE IN YOUR STATE OR PROVINCE. DRAW THE LARVA, PUPA, AND ADULT FORMS FOR EACH OF THEM. THEN IDENTIFY ONE OF THEIR HOST PLANTS AND DRAW IT TOO!

FOR EXAMPLE: Monarch butterfly

LARVA



The caterpillar is striped with yellow, white, and black.

PUPA

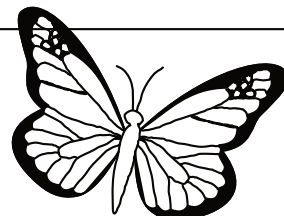


Makes a green chrysalis.



Favorite food is milkweed, but might eat squash, cucumber, or pumpkin leaves.

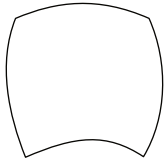
ADULT



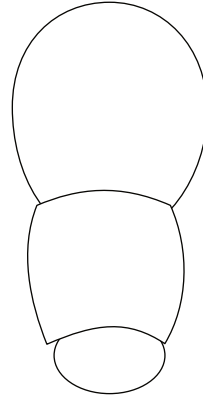
Butterfly is orange and black.

How to Draw a Beetle

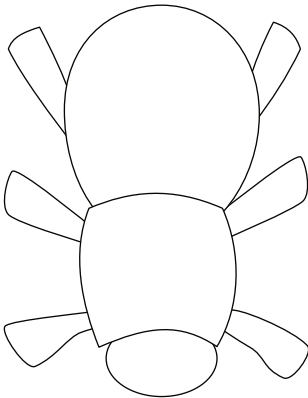
① Draw Thorax.



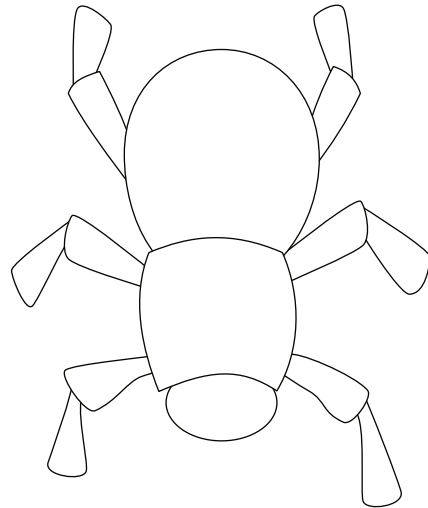
② Add head and abdomen.



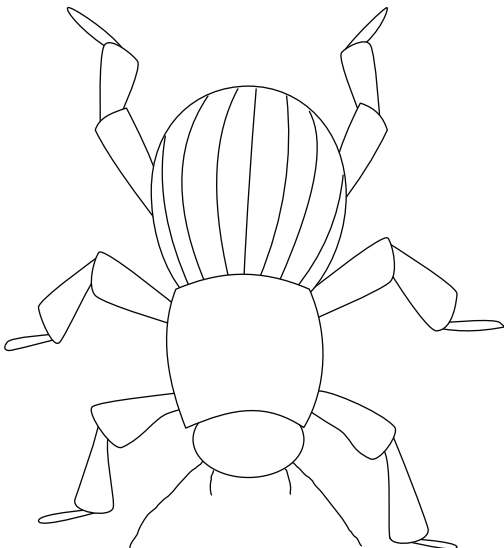
③ Draw first leg segments.



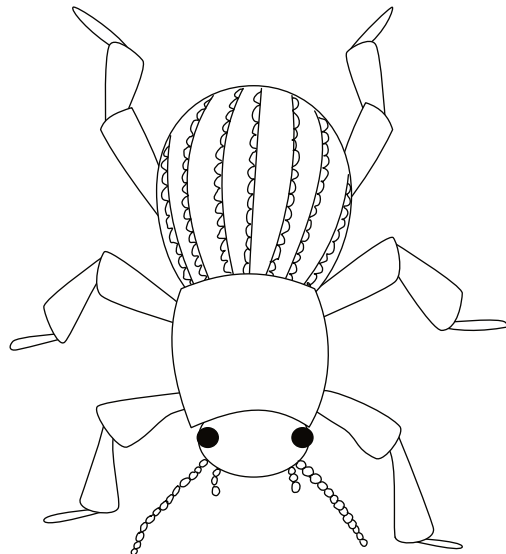
④ Draw Second leg segments.



⑤ Add feet and sketch in antennae and abdomen ridges.

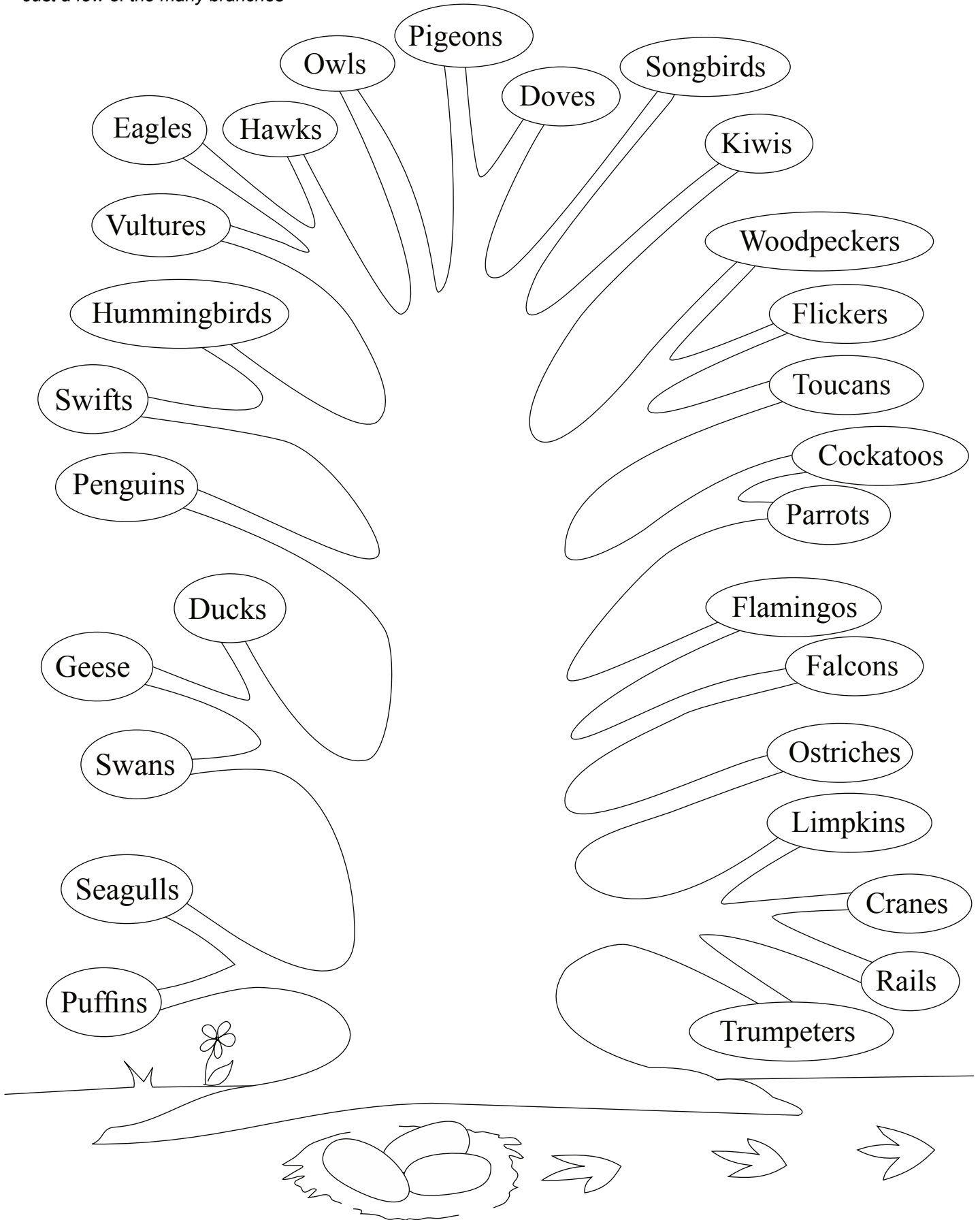


⑥ Draw in eyes. Fill in textures on abdomen and antennae.



BIRDS

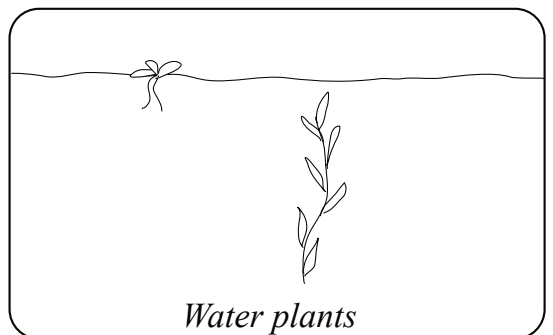
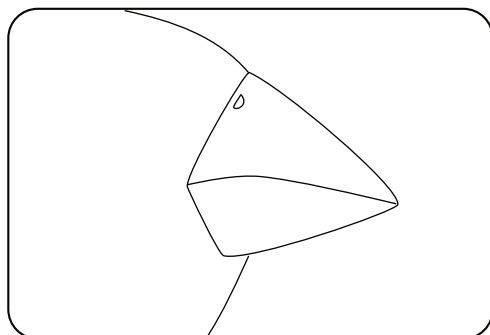
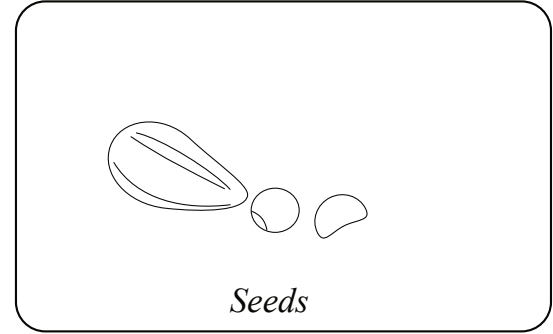
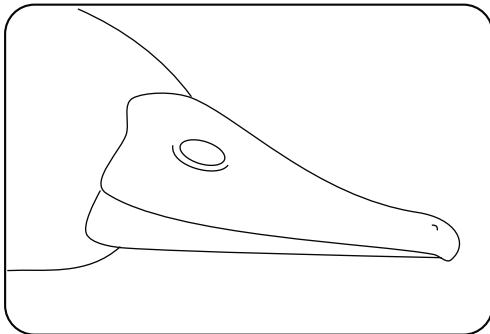
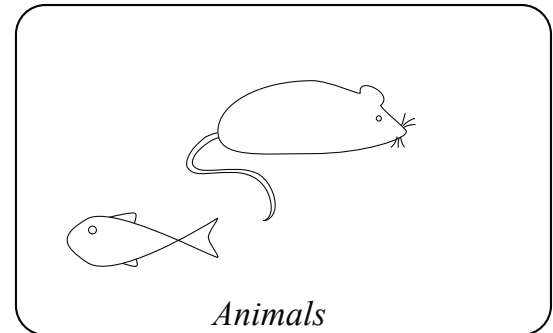
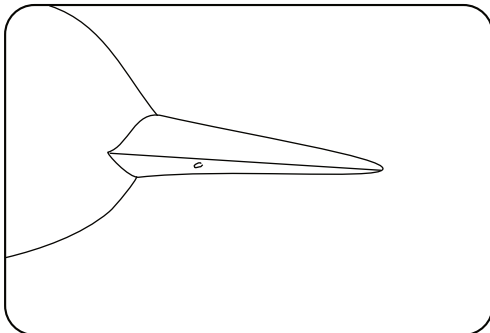
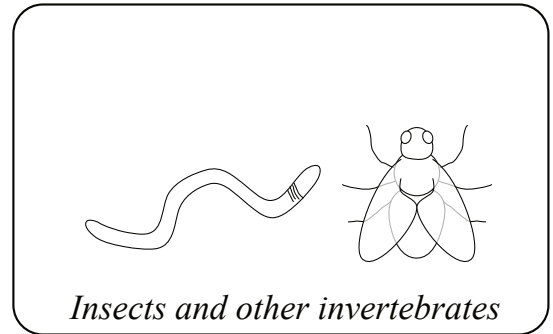
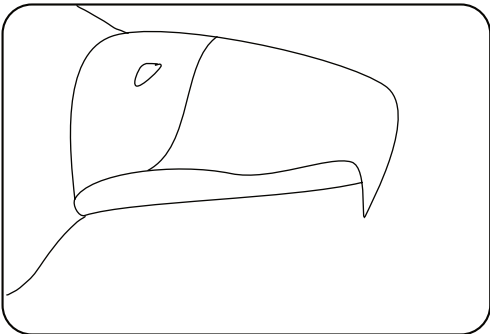
Just a few of the many branches



All about beaks!

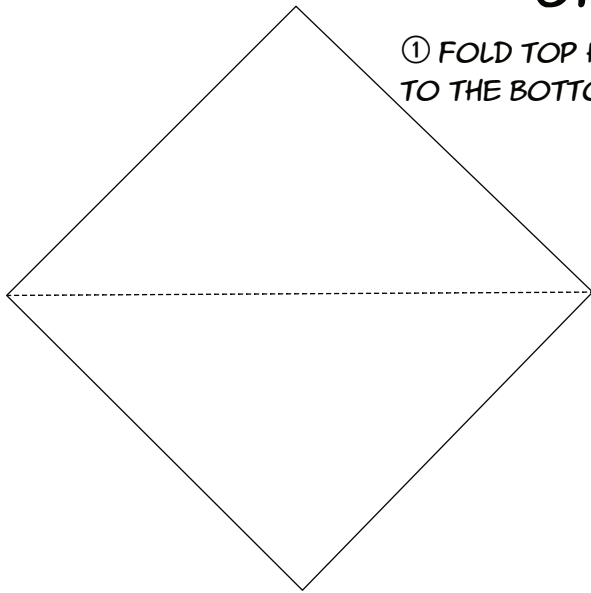
You can tell a lot about what a bird eats by the shape of its beak. Short hooked beaks are for meat, very long thin beaks are for getting nectar from flowers, stout even beaks are for cracking open seeds, slender pointed beaks are for catching insects, and fringed beaks (like a duck) help to strain plants and seeds from mud and water.

Draw a line to match the beak with the corresponding food:

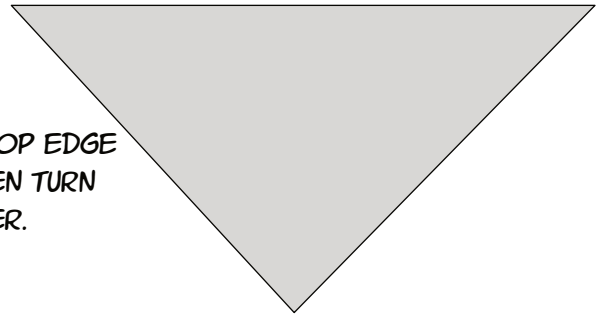


ORIGAMI BIRD

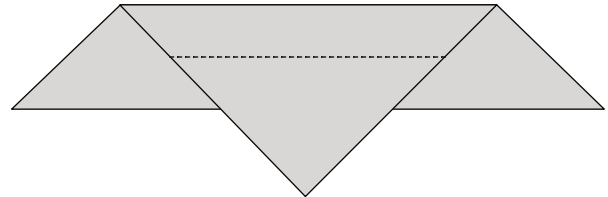
① FOLD TOP HALF TO THE BOTTOM.



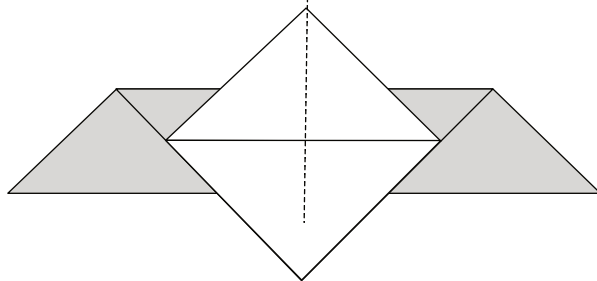
② FOLD TOP EDGE DOWN. THEN TURN PAPER OVER.



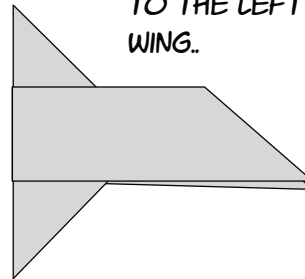
③ FOLD UP THE TOP LAYER OF THE BOTTOM CORNER.



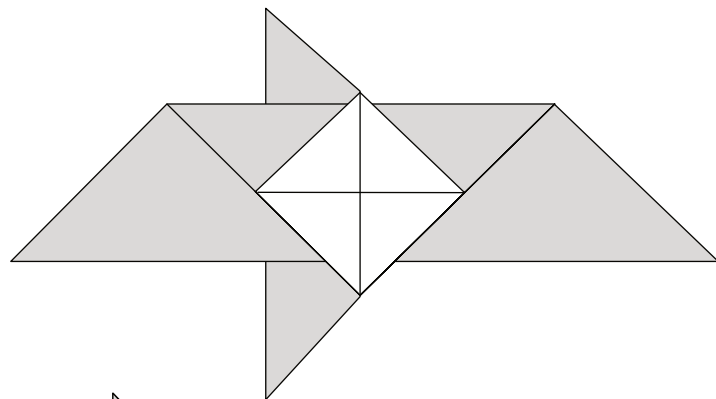
④ FOLD THE LEFT SIDE OVER THE RIGHT SIDE.



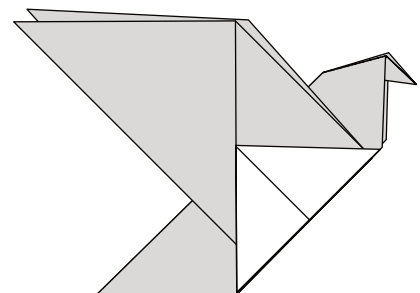
⑤ FOLD THE SAME FLAP BACK TO THE LEFT SIDE TO FORM A WING.



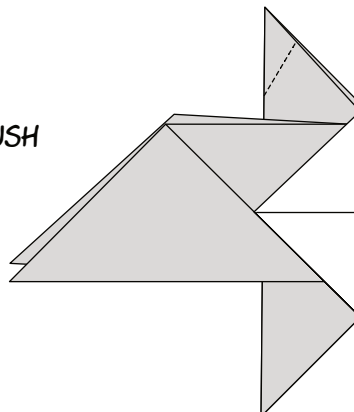
⑥ FOLD ALONG THE DOTTED LINE TO CREATE ONE WING ON EACH SIDE OF THE BIRD'S BODY.



⑧ ROTATE 45°



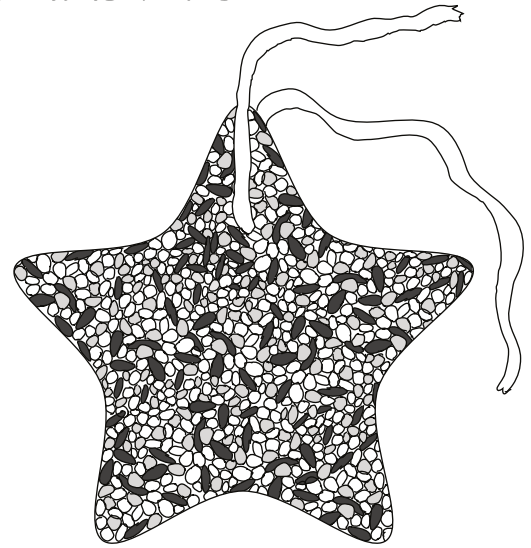
⑦ PRESS ON THE FOLD TO PUSH THE BIRD'S HEAD FORWARD. FLATTEN SIDES TO MAKE A CREASE..



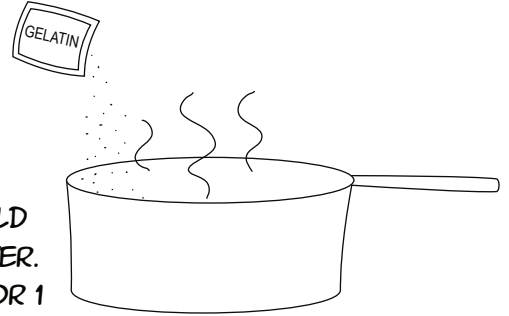
MAKE BIRDSEED ORNAMENTS

INGREDIENTS:

½ CUP WATER
1 PKT UNFLAVORED GELATIN
2 TBSP FLOUR
2 CUPS MIXED BIRD SEED
MUFFIN TIN OR COOKIE CUTTERS
STRING YARN, OR TWINE
STRAWS FOR MAKING HOLES (OPTIONAL)



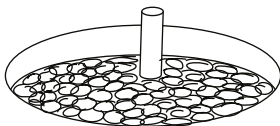
① HEAT WATER TO BOILING ON THE STOVE AND SLOWLY SPRINKLE IN GELATIN, STIRRING CONSTANTLY. REDUCE HEAT AND SIMMER FOR 1 MINUTE, STIRRING OFTEN.



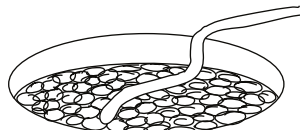
② ADD 2 TABLESPOONS OF FLOUR AND STIR WELL. TEXTURE SHOULD BE "SAUCE-LIKE." IF TOO THICK, ADD A FEW TABLESPOONS OF WATER. IF TOO RUNNY, ADD ANOTHER TABLESPOON OF FLOUR. SIMMER FOR 1 MINUTE. THEN REMOVE FROM HEAT.

③ LET COOL FOR A FEW MINUTES. THEN ADD 2 CUPS OF BIRDSEED AND STIR WELL.

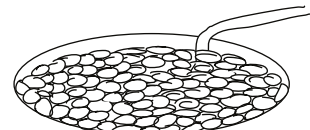
④ PRESS BIRDSEED MIXTURE INTO COOKIE CUTTER MOLDS OR THE WELLS OF A MUFFIN PAN. IF DESIRED, USE STRAWS TO MAKE HOLES TO HANG THE BIRDSEED ORNAMENTS. OTHERWISE, LAY THE STRING IN THE MOLD WHEN IT'S HALF FULL AND PACK THE BIRD SEED OVER THE TOP.



YOU CAN USE A PIECE OF STRAW OR A DOWEL TO MAKE A HOLE FOR THE STRING.



OR YOU CAN LAY THE STRING OR YARN IN THE CENTER OF THE BIRDSEED. BE SURE TO PACK OTHER SEED ON TOP OF THE STRING FIRMLY SO THAT IT'S IN THE MIDDLE OF THE ORNAMENT.



⑤ PLACE IN FRIDGE FOR AT LEAST 2 HOURS TO SET. THEN REMOVE AND HANG OUTSIDE FOR BIRDS TO EAT.

~ *NATURALIST IN TRAINING* ~

Outdoor activity: Get binoculars and a field guide (or a website/app) and go birding! See if you can find different birds that match each square in the scavenger hunt box. Write their name and sketch a drawing of each one!

Indoor variation: Virtual Birding! Look up 2 birds that fit each of the categories. Draw them and write down a few facts you learned about each animal.

Find the bird scavenger hunt!

A bird that migrates more than 200 miles each year.

A bird that eats seeds

A bird with some yellow feathers

A bird that drinks nectar

A bird with some brown feathers

A bird that eats meat

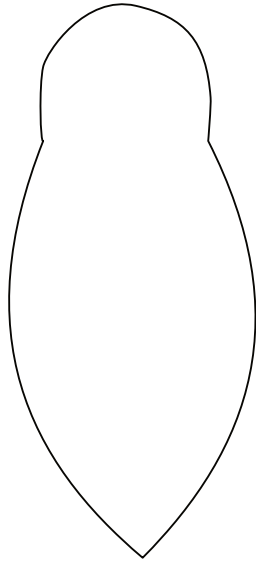
A bird with some red feathers

A bird that eats insects

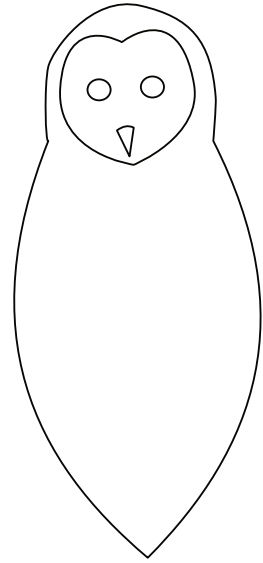
A bird that spends time on water

How to Draw an Owl

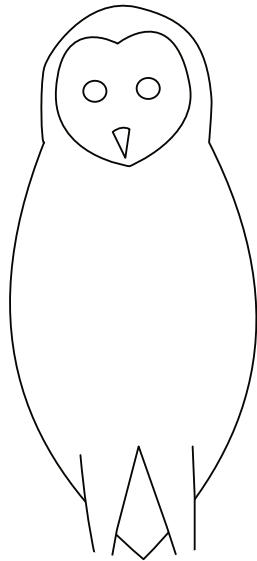
① Make the body like a peanut/bowling pin.



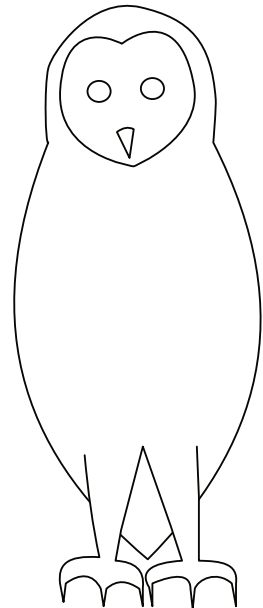
② Make a heart-shaped face. Add eyes and beak.



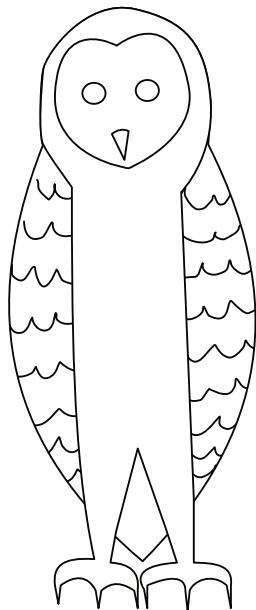
③ Add legs and erase lines in legs.



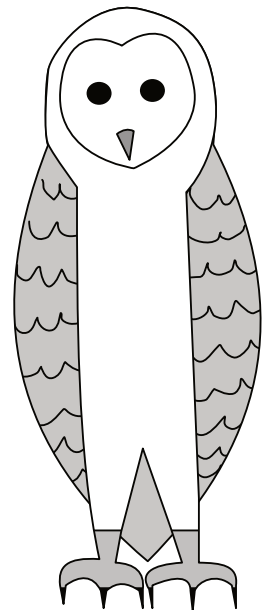
④ Draw in feet.



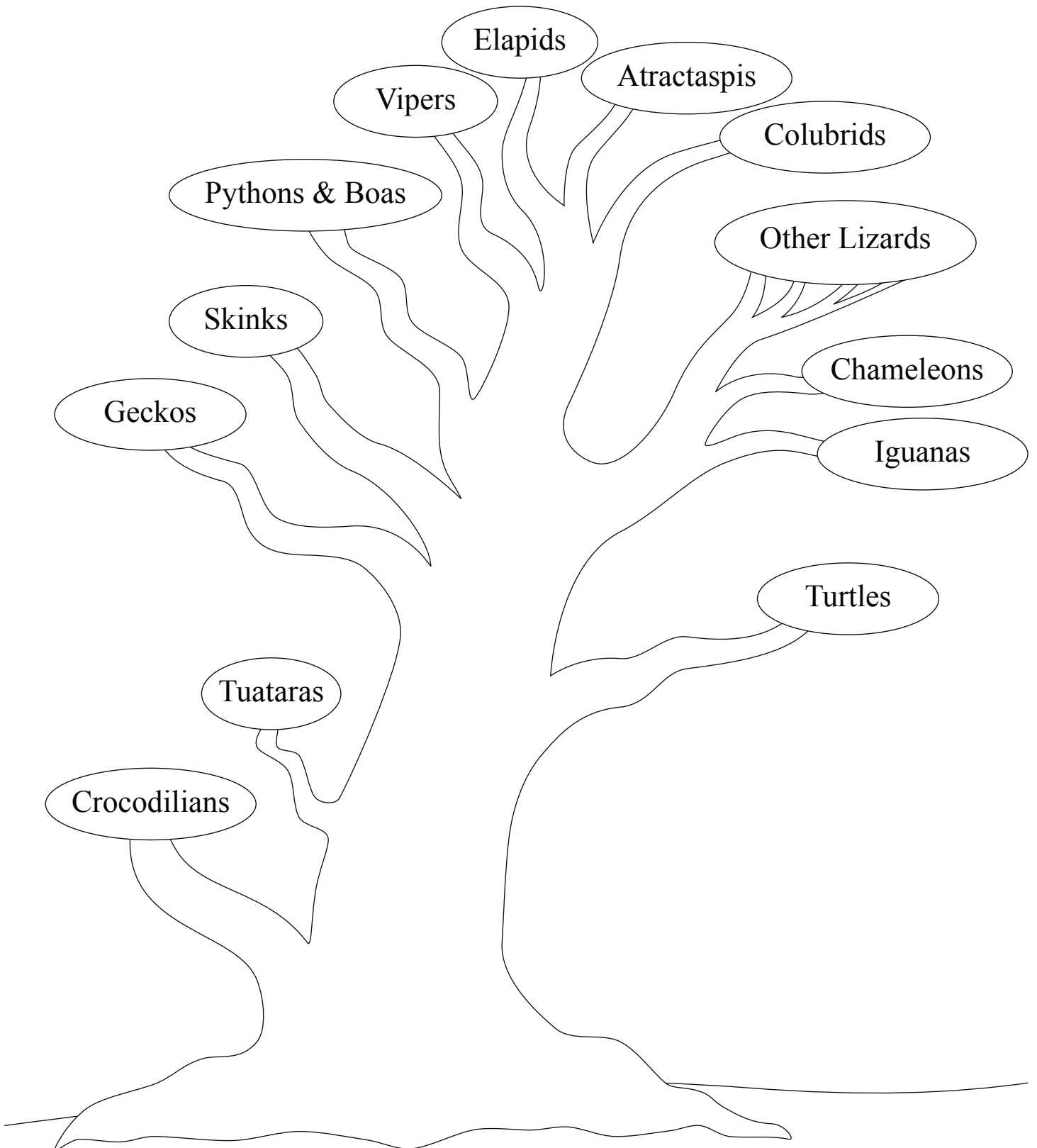
⑤ Add in wings and details.



⑥ Color the wings and feet. Connect eyes and beak.



REPTILES



PET \$HOP

WELCOME TO THE PET SHOP! FIRST, DO SOME RESEARCH AND DECIDE WHICH PET YOU'D LIKE TO GET:

Blue tongued skink

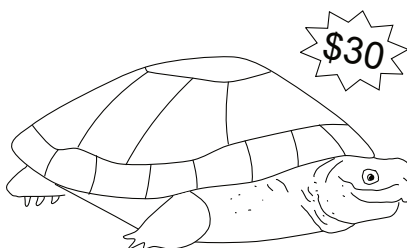


Food: Bell peppers, crickets, mealworms

Habitat: Medium tank

Extras: multi-vitamin, mulch, mister, heat lamp, hideaway, day bulb, water dish

African Sideneck Turtle



Food: Aquatic turtle pellets, small fish, crickets

Habitat: Large Aquarium

Extras: Basking rocks, gravel, filter, multi-vitamin

Ball python



Food: Frozen rodents

Habitat: Large tank

Extras: 2 hideaways, wood log, mister, water dish, thermometer, heat lamp, day bulb

GREAT CHOICE! NOW THAT YOU KNOW ABOUT YOUR PET, IT'S TIME TO SHOP! FIND THE PRICE OF ALL YOUR ITEMS AND ADD THE TOTAL OF EVERYTHING IN YOUR BASKET, INCLUDING YOUR PET.

PET FOOD:

Frozen rodents: \$13.70	Crickets: \$7.99
Small fish: \$2.83	Aquatic turtle pellets: \$10.19
Mealworms: \$9.50	Bell peppers: \$0.98

EXTRAS:

Mulch: \$7.97
 Wood log: \$8.69
 Filter: 15.42
 Water dish: \$11.98
 Hideaway \$19.19
 Basking rocks: \$4.99
 Thermometer: \$4.49
 Heat lamp \$17.09
 Day bulb: \$12.77
 Multi-vitamin: \$3.59
 Mister: \$4.59
 Gravel: \$15.00

TANKS & AQUARIUMS

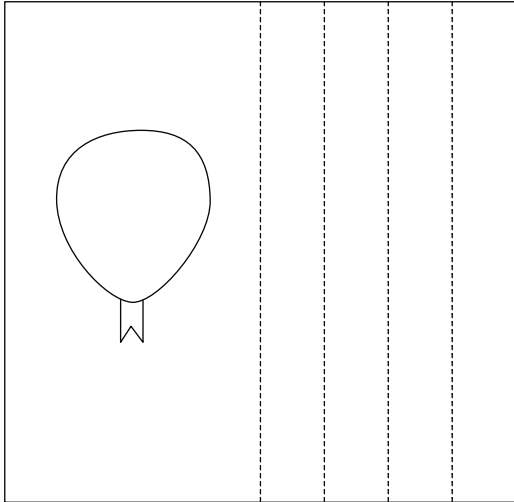
Large aquarium: \$289.99	Large tank: \$149.99
Medium aquarium \$125.75	Medium tank: \$65.99
Small aquarium: \$50.00	Small tank: \$34.99

WHAT BILLS/COINS WOULD YOU USE TO PAY IF YOU DIDN'T WANT ANY CHANGE BACK?

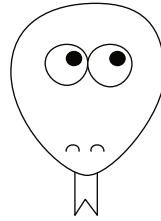
IF YOU HAD SAVED UP \$45 TO BUY A PET REPTILE AND YOUR RICH AUNT LUCY SAID THAT SHE WOULD PAY FOR THE REST, HOW MUCH MORE MONEY WOULD YOU NEED? MAKE SURE YOU DO YOUR MATH CAREFULLY! AUNT LUCY IS ECCENTRIC AND SHE WILL ONLY GIVE YOU THE FUNDS IF YOUR ANSWER IS CORRECT.

MAKE A PAPER SNAKE

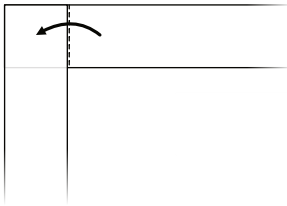
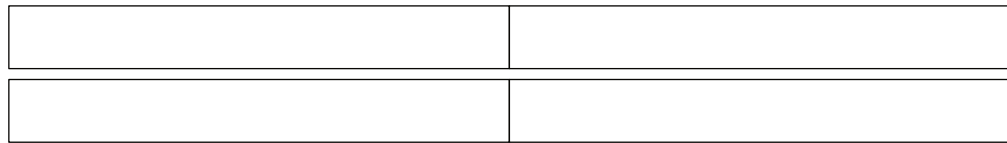
① CUT A PAGE INTO AT LEAST 4 STRIPS OF EQUAL WIDTH. CUT OUT A HEAD SHAPE.



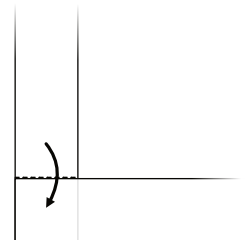
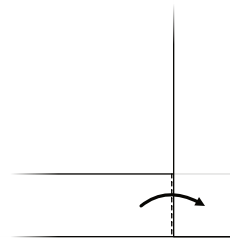
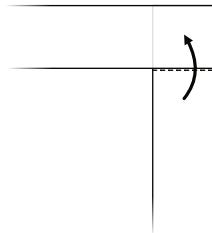
② DECORATE EACH PAPER AS DESIRED.



③ GLUE THE LONG STRIPS INTO 2 EVEN LONGER STRIPS.

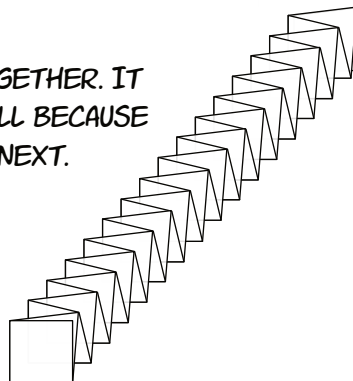


③ PLACE ONE LONG STRAND OVER TOP OF THE OTHER LONG STRAND AND GLUE THE EDGES TOGETHER.

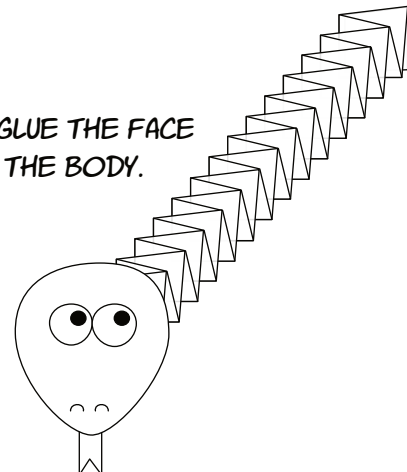


④ ALTERNATELY FOLD ONE SHEET OVER THE OTHER SHEET, BRAIDING THE TWO TOGETHER.

⑤ GLUE THE FINAL FACES TOGETHER. IT DOESN'T NEED TO MATCH WELL BECAUSE YOU WILL GLUE THE FACE ON NEXT.

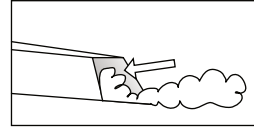


⑥ GLUE THE FACE TO THE BODY.

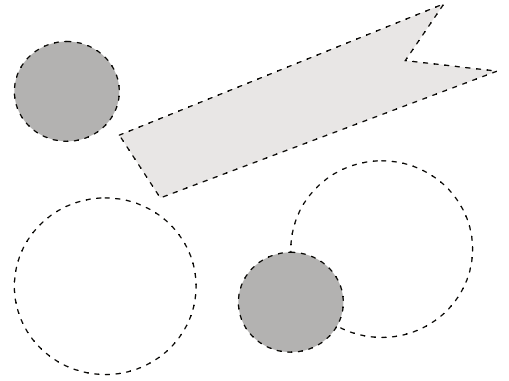


MAKE A NECKTIE SNAKE

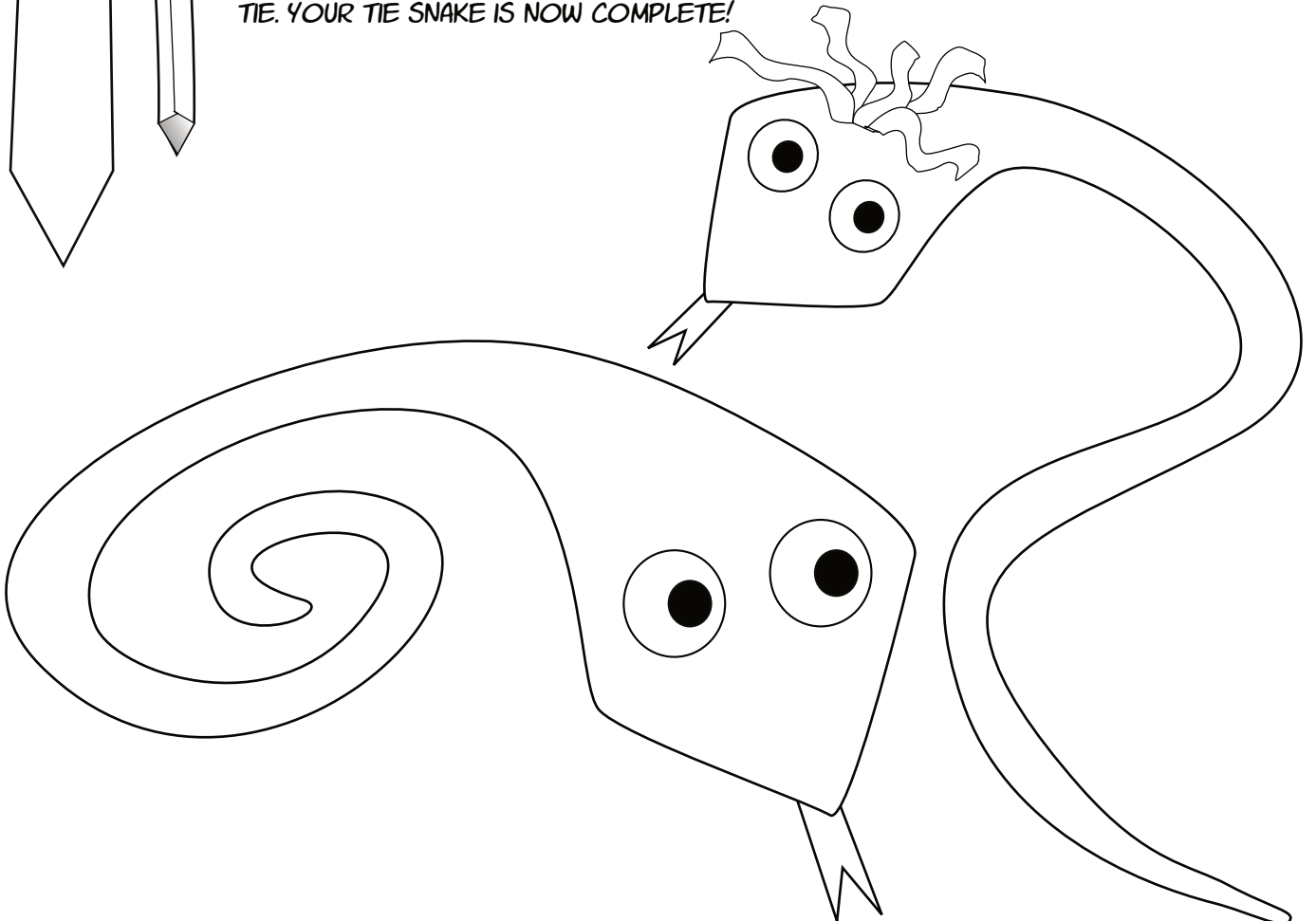
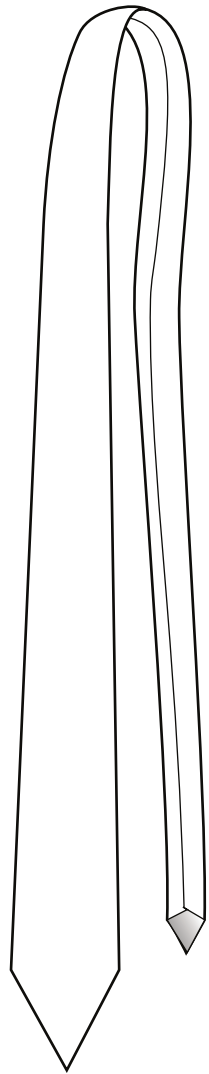
① TAKE AN OLD NECKTIE AND WITH A PENCIL OR OTHER LONG OBJECT PUSH STUFFING IN FROM BOTH ENDS UNTIL THE TIE IS NICE AND ROUND.



② CUT A FORKED TONGUE FROM RED FELT. FOR EYES, EITHER CUT CIRCLES OF WHITE AND BLACK FELT OR GLUE ON GOOGLY EYES. SECURE THE EYES TO THE SNAKE WITH GLUE OR (IF USING THE FELT EYES) NEEDLE AND THREAD. IF DESIRED, YOU CAN SECURE SOME SMALL STRIPS OF FELT OR FABRIC ABOVE THE EYES AS SOME SILLY "HAIR" FOR YOUR SNAKE.



③ USE CRAFT GLUE OR A HOT GLUE GUN OR NEEDLE AND THREAD TO CLOSE THE ENDS SO THAT THE STUFFING WILL NOT FALL OUT. ATTACH THE FELT TONGUE UNDERNEATH THE LARGE TRIANGLE OF THE TIE. YOUR TIE SNAKE IS NOW COMPLETE!



~ *NATURALIST IN TRAINING* ~

Know the snakes and other reptiles in your area!

There are 5 different main families of snakes: Pythons, Vipers, Elapids, Atractasps, and Colubrids. Most pythons and colubrids are not venomous, and many are safe to handle and make good pets or provide really valuable pest control (eating insects or rodents that would otherwise take over). But with the other 3 families of snakes, look out! These snakes have hollow fangs and can inject venom when they bite. Many of them have venom so toxic that one bite can be fatal. For this naturalist project, research the snakes and other reptiles that live in your area. Find an example of a good reptile (native species that controls insect or rodent populations), a bad reptile (are there any non-native species causing problems where you live?), and a deadly reptile (never pick up one of these!). Write about them in the boxes below:

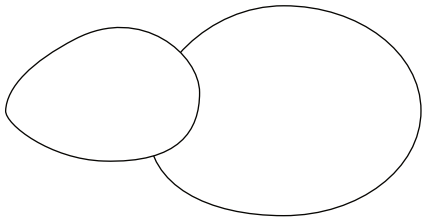
The Good

The Bad (invasive species)

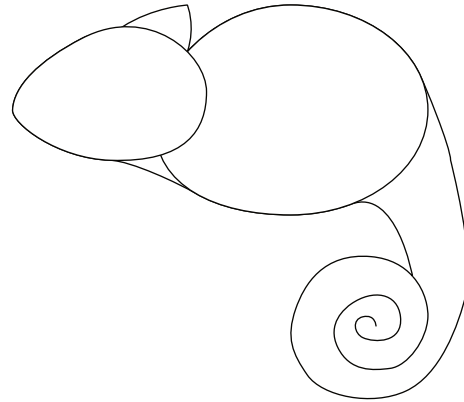
And the Deadly (poisonous reptiles)

How to Draw a Chameleon

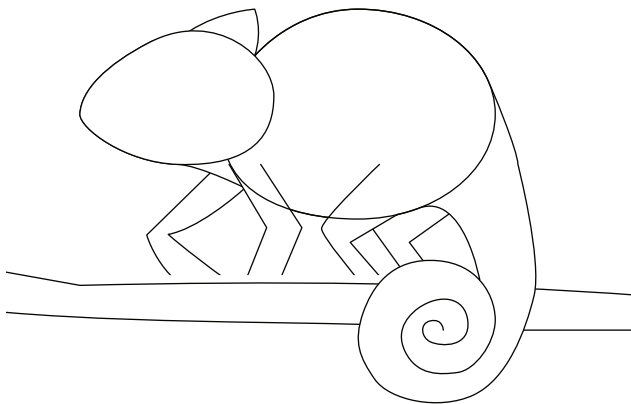
- ① Make the body by drawing two circles.



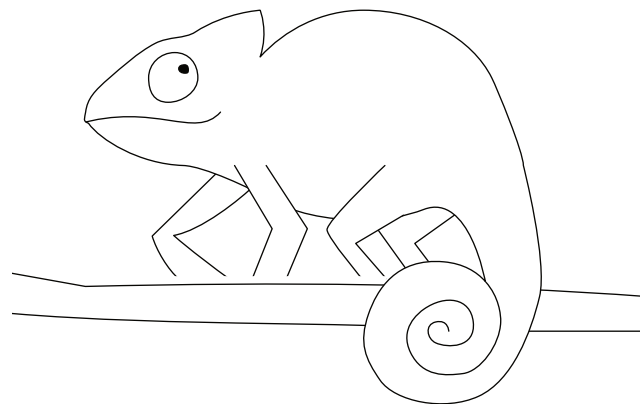
- ② Add the tail and crest.



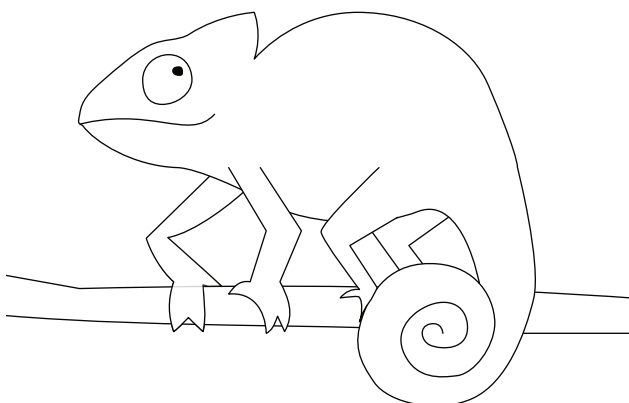
- ③ Add legs and a branch.



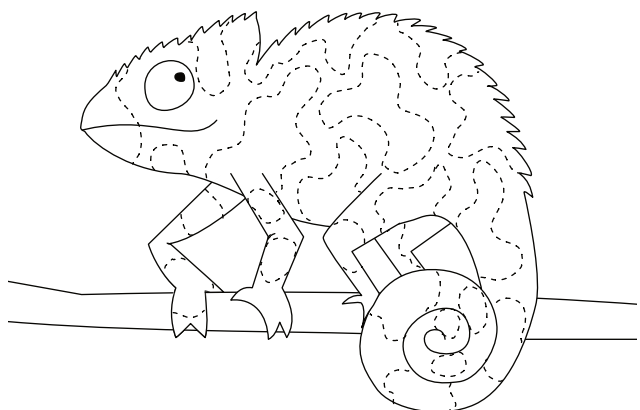
- ④ Add an eye and a mouth. Erase the oval lines.



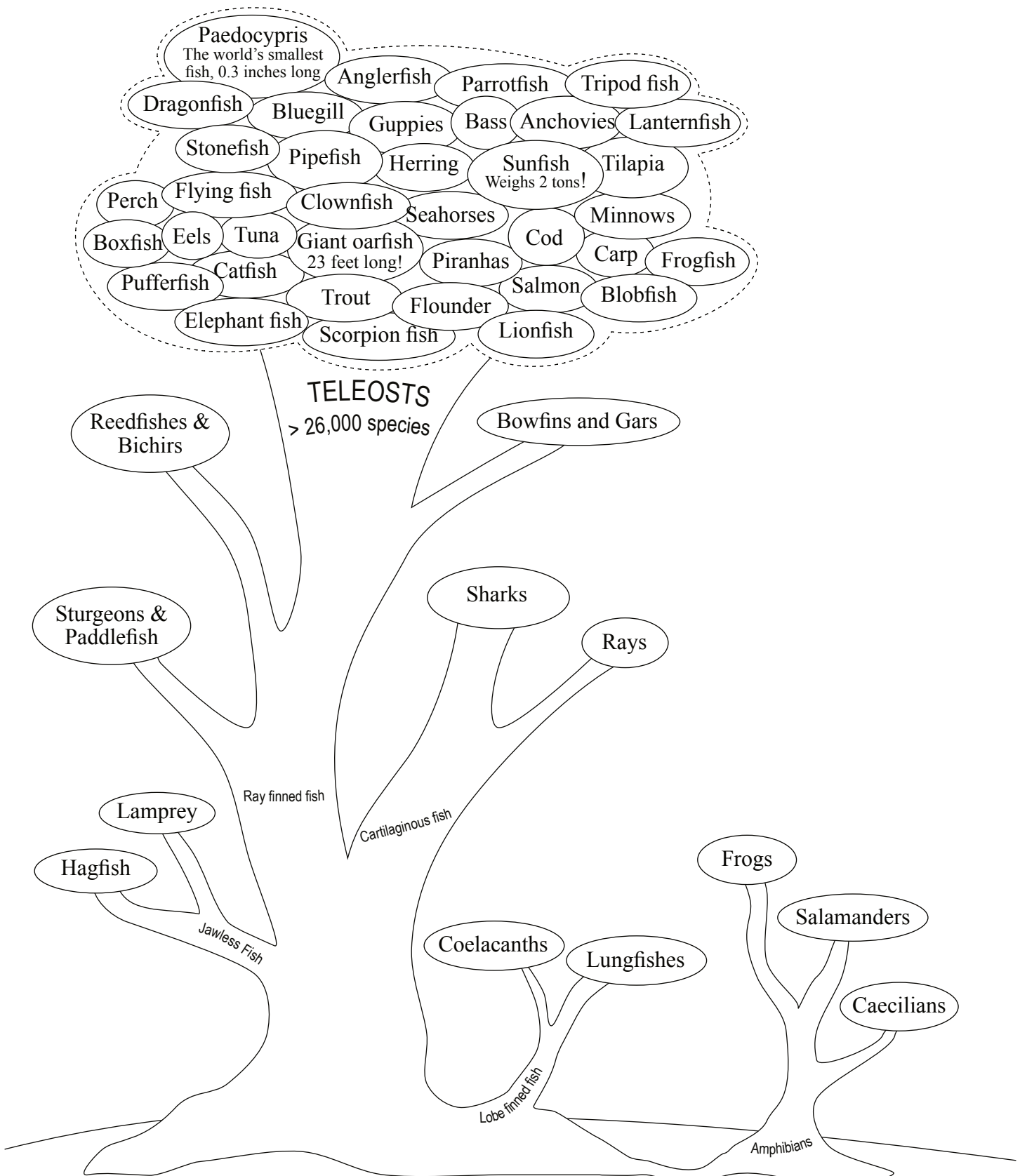
- ⑤ Add the feet.



- ⑥ Add spikes and patterns to the skin.

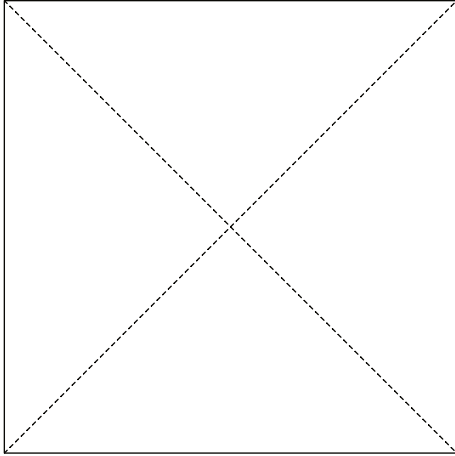


AMPHIBIANS & FISH

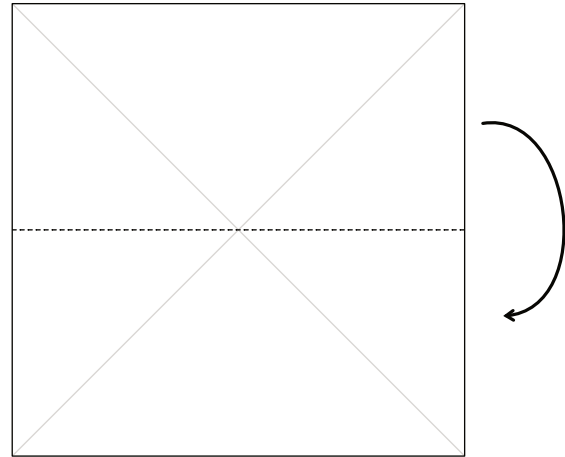


ORIGAMI FISH

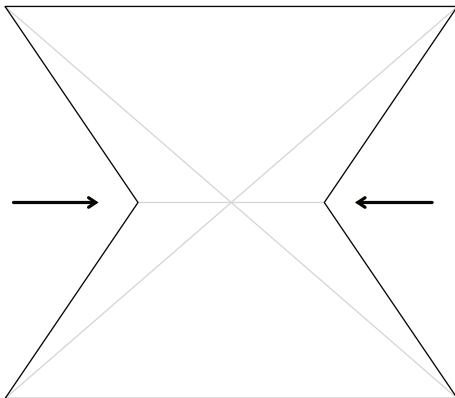
① FOLD CORNER TO CORNER, CREASE, THEN UNFOLD. DO BOTH SETS OF OPPOSITE CORNERS. MAKE A CREASE.



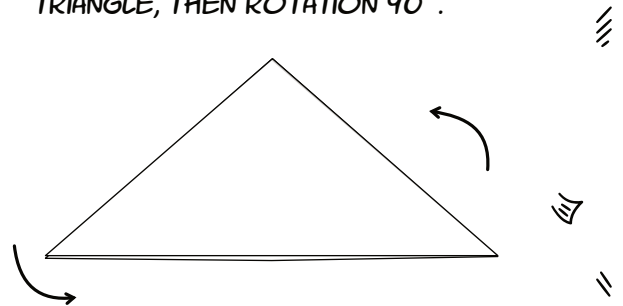
② FOLD TOP HALF BACK, CREASE ALONG MIDDLE, THEN UNFOLD.



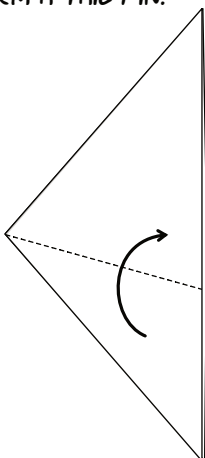
③ POKE CENTER IN AND BRING LEFT AND RIGHT SIDES TOGETHER.



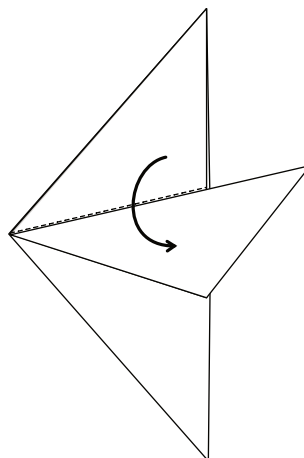
④ COLLAPSE THE PAPER INTO A TRIANGLE, THEN ROTATION 90°.



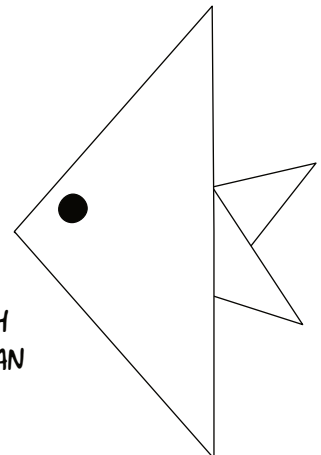
⑤ FOLD BOTTOM CORNER'S TOP LAYER UP SO THE EDGE IS JUST ABOVE THE CENTER TO FORM A TAIL FIN.



⑥ FOLD TOP CORNER'S TOP LAYER DOWN OVER THE FLAP YOU JUST FOLDED TO FORM A SECOND TAIL FIN.



⑦ FLIP YOUR FISH OVER AND DRAW AN EYE AND FINS.



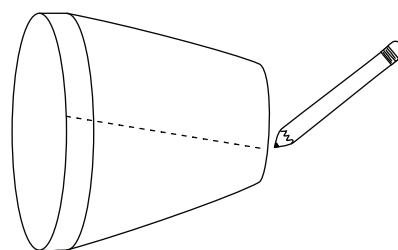
MAKE A TOAD HABITAT

HAVING A TOAD IN YOUR GARDEN IS VERY BENEFICIAL BECAUSE THEY WILL EAT MANY INSECTS AND SLUGS THAT WOULD OTHERWISE BE EATING YOUR GARDEN PLANTS.

BUT TO HAVE A TOAD IN YOUR GARDEN, THAT TOAD NEEDS A LITTLE PLACE TO HIDE! A SIDEWAYS FLOWER POT OR CUP BURIED HALFWAY IN THE DIRT MAKES AN EXCELLENT TOAD HABITAT, BUT YOU CAN MAKE IT EVEN BETTER BY ADDING ROCKS AND A FUN WELCOME SIGN.

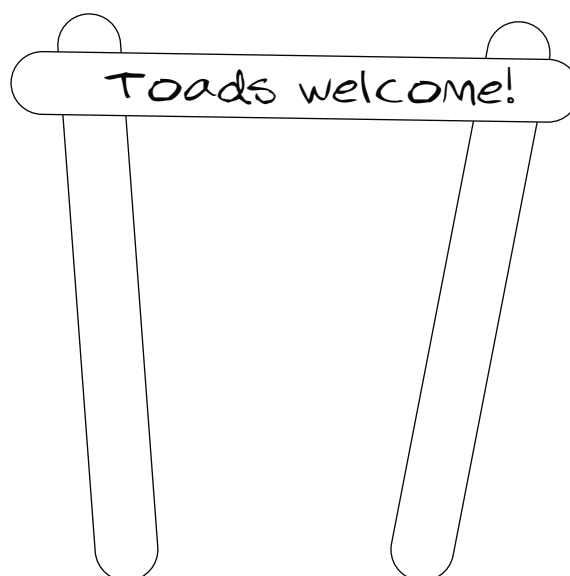


① USE A PENCIL TO DRAW A LINE ALONG YOUR CUP OR FLOWER POT SHOWING WHERE IT WILL BE BURIED.



② USE HOT GLUE OR CRAFT GLUE TO FIX ROCKS OVER THE PART OF THE POT THAT WILL BE OUT OF THE GROUND. YOU CAN ADD BITS OF STICKS OR OTHER NATURAL MATERIAL TO HELP CAMOUFLAGE THE TOP OF YOUR HABITAT. IF USING A FLOWER POT, BE SURE TO GLUE A ROCK OVER THE DRAINAGE HOLE IN THE BACK SO THAT THE HABITAT WILL BE NICE AND DARK INSIDE.

③ GLUE SOME POPSICLE STICKS TOGETHER TO MAKE A SIMPLE SIGN. WRITE "TOADS WELCOME," AND THEN PLANT YOUR HABITAT AND SIGN IN YOUR GARDEN. BE SURE THAT THE HABITAT IS HALF FILLED WITH DIRT SO THAT THE TOAD CAN CLIMB IN AND PARTIALLY BURY ITSELF IN THE SOIL.



~ *NATURALIST IN TRAINING* ~

Be a friend to fish and frogs!

When garbage gets into water, that's a bad thing for water-dwelling animals like fish and amphibians, especially if that garbage contains oil or plastic. Fungi and bacteria can't digest plastic, so it builds up in the ecosystem and a lot of it ends up in rivers, lakes, or the ocean. Many fish can't tell the difference between microplastics (very small pieces of plastic) and the plankton and small invertebrates that they normally eat. If their stomachs become full of plastic that they can't digest, they die. Our oceans and lakes are starting to be in real trouble because of this, but the good news is that you can make a difference. To earn your ichthyologist award, spend a day picking up trash around your home or neighborhood. Then research the 5 hazardous garbage items below and write down how they should be disposed of (hint: NONE of these should be put in a regular trash can!) Last step: come up with three ideas for how you can use less plastic at home. Write those ideas down on this page, and then put them into practice!

Pick up trash in your neighborhood

Date(s):

Amount collected:

When it's old and broken, where should it go? (Hint: NOT the trashcan!)

Paint (oil based, varnishes, paint remover) _____

Batteries (lithium) _____

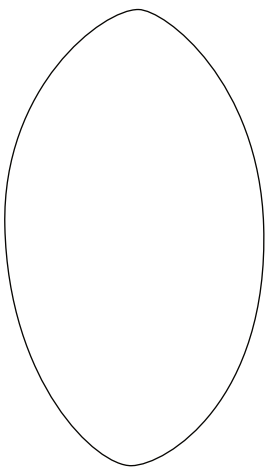
Flourescent lightbulbs _____

Old Electronics (phones, computers) _____

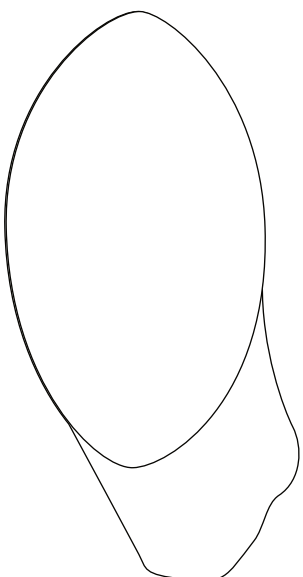
Motor oil _____

3 things you can do to reduce how much plastic you use:

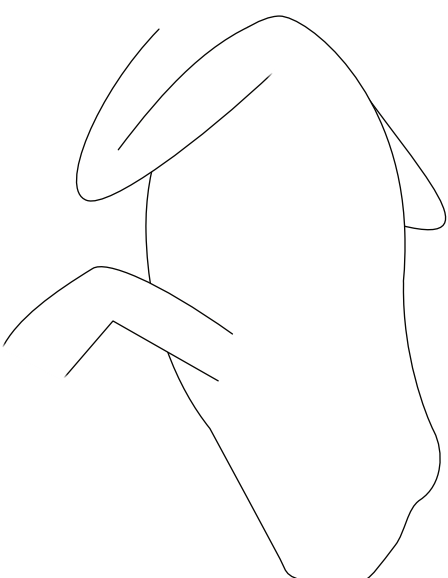
① DRAW A FOOTBALL SHAPED BODY.



② ADD TA HEAD SHAPE..



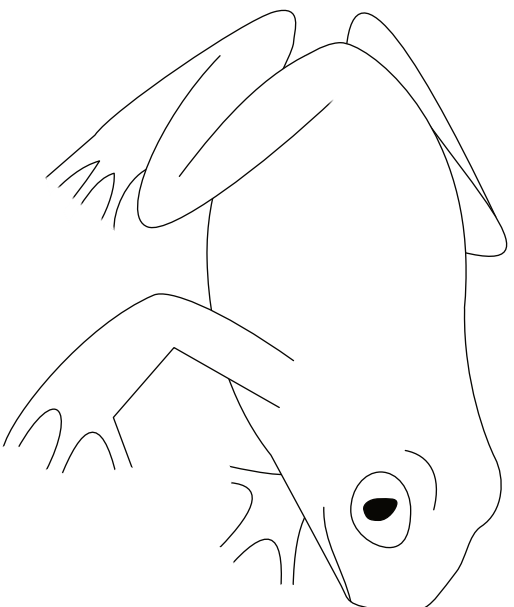
③ DRAW THE LEGS..



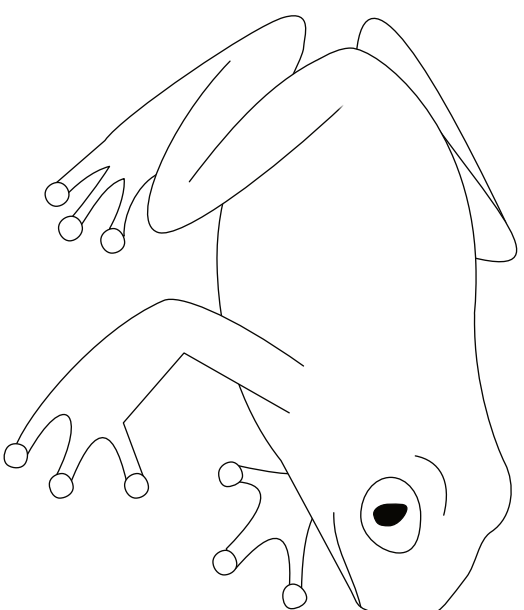
④ DRAW THE FEET.



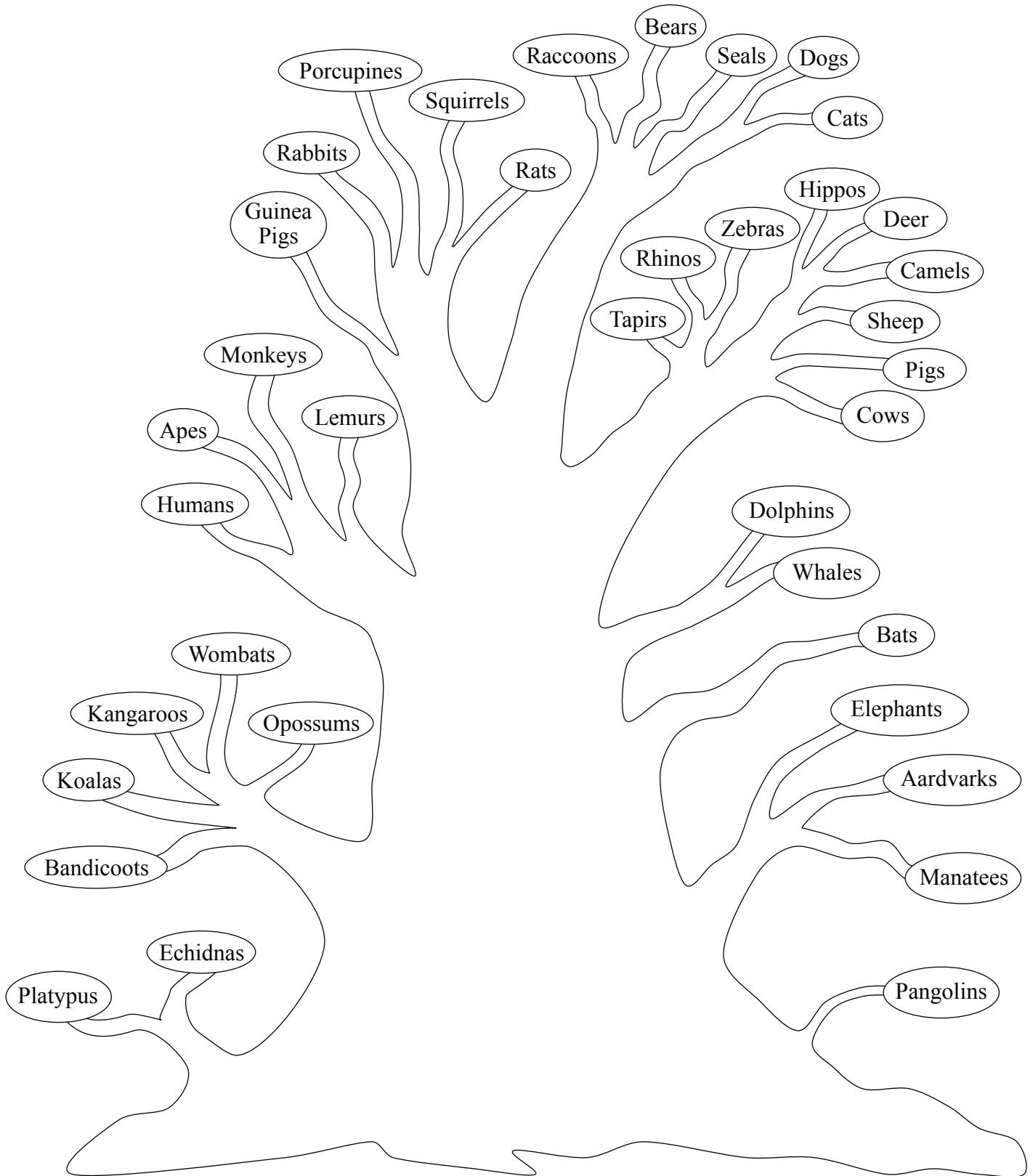
⑤ ADD AN EYE AND A MOUTH.



⑥ ADD IN HEAD AND TOE DETAIL.

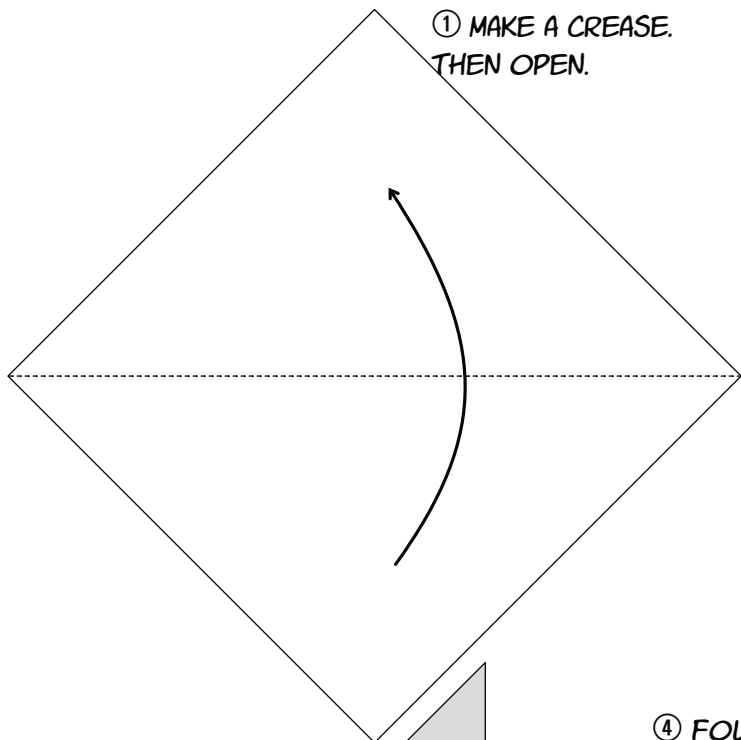


MAMMALS & MARSUPIALS

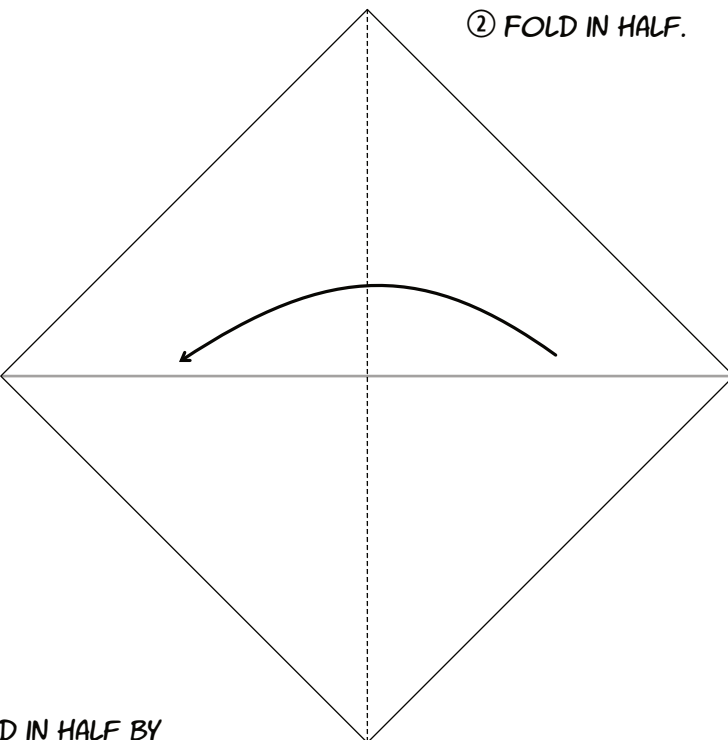


ORIGAMI FOX

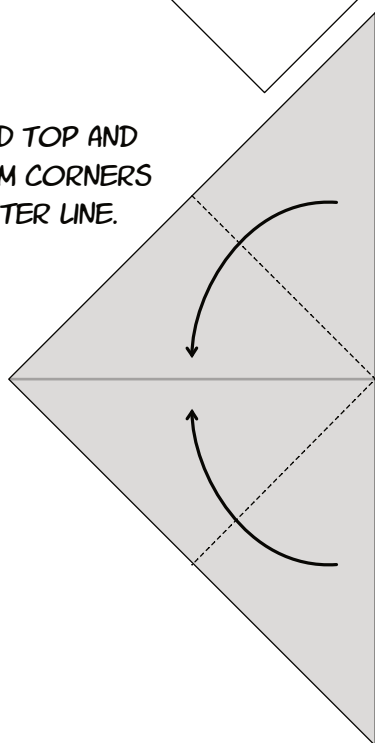
① MAKE A CREASE.
THEN OPEN.



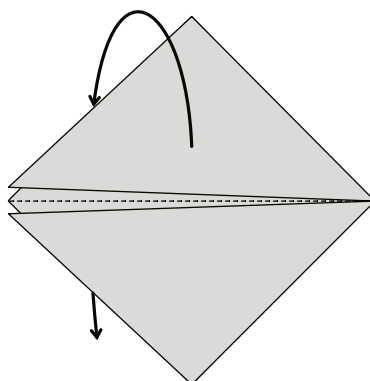
② FOLD IN HALF.



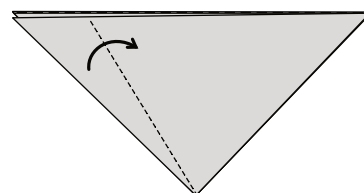
③ FOLD TOP AND
BOTTOM CORNERS
TO CENTER LINE.



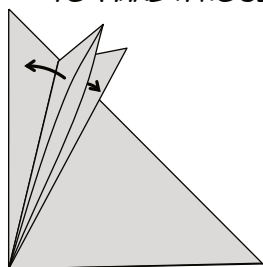
④ FOLD IN HALF BY
BENDING THE TOP
BACK AND DOWN.



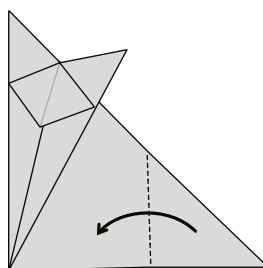
⑤ FOLD TOP LAYER
BACK TO MAKE AN
EAR.



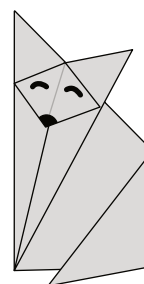
⑥ SPREAD NEXT LAYER
OPEN AND FOLD TIP DOWN
TO MAKE A NOSE.



⑦ FOLD IN TAIL.



⑧ DRAW A FACE.



PIPE CLEANER LION

① GET 3 PIPE CLEANERS OF A LIGHT COLOR AND 1 DARK COLOR.

② JOIN TWO PIPE CLEANERS BY TWISTING THE ENDS TOGETHER. TOGETHER.

③ CUT A 3RD PIECE IN HALF FOR THE FRONT AND BACK LEGS.

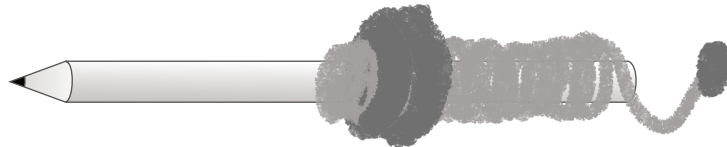


④ CUT A SMALL TAIL PIECE FROM A FULL PIPE CLEANER OF A DIFFERENT COLOR. 

⑤ WRAP THE LONG PIPE CLEANER AROUND THE OUTSIDE OF A PENCIL. LEAVE A BIT AT THE END FOR THE TAIL. FOLD THE TWO HALF PIECES INTO THE FRONT LEGS AND BACK LEGS.



⑥ WRAP THE MANE AROUND THE BODY TO MAKE A FACE AND ATTACH A TAIL PIECE.



⑦ TWIST THE FRONT AND BACK LEGS ONTO THE BODY BY WRAPPING THEM AROUND THE EXISTING BODY.



⑧ RESHAPE THE FACE TO LOOK MORE LIKE A LION. ADD EYES AND A NOSE USING A MARKER.



~ *NATURALIST IN TRAINING* ~

Outdoor activity: Get binoculars and a field guide (or a website/app) and go looking for mammals! See if you can find evidence of animals (tracks, scat, or seeing the animal) that match each square in the scavenger hunt box. Sketch a drawing of each one!

Indoor variation: Virtual Birding! Look up 2 mammals that fit each of the categories. Draw them and write down a few facts you learned about each one.

Find the mammal scavenger hunt!

A mammal that lives in trees

A mammal that is a carnivore

A mammal that lives underground

A mammal that is an omnivore

A domesticated mammal

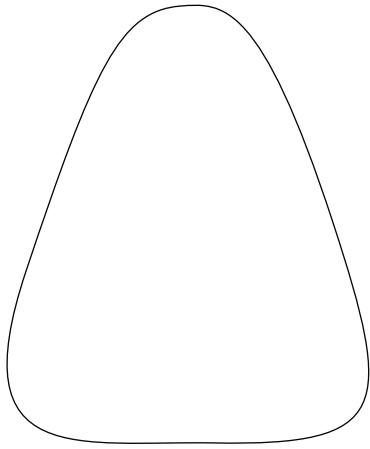
A mammal that is an herbivore

A mammal that hibernates

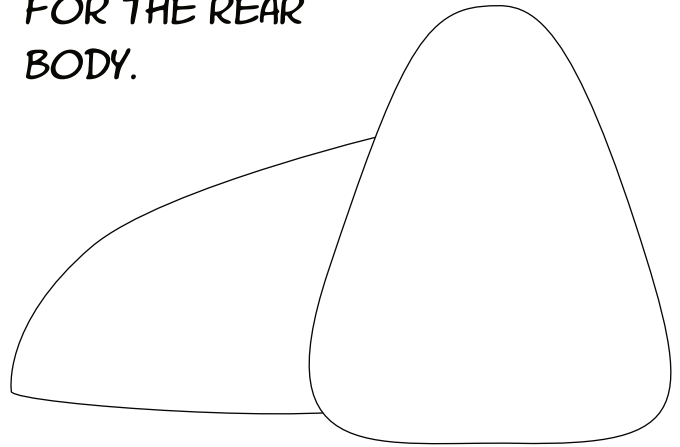
A nocturnal mammal

A mammal that lives
in or near water

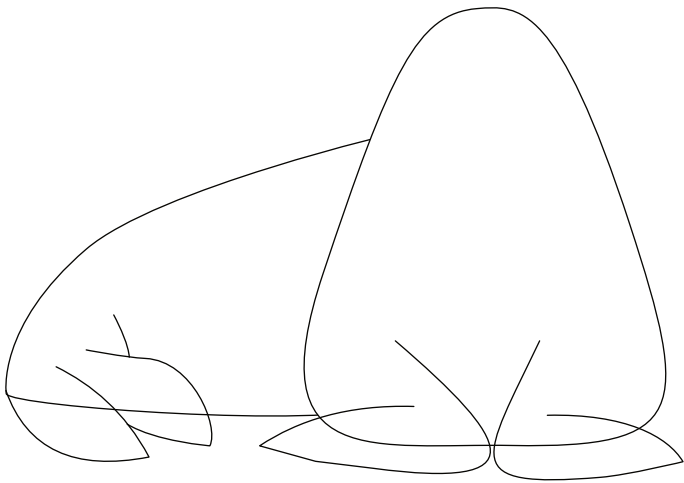
① MAKE A
ROUNDED
TRIANGLE.



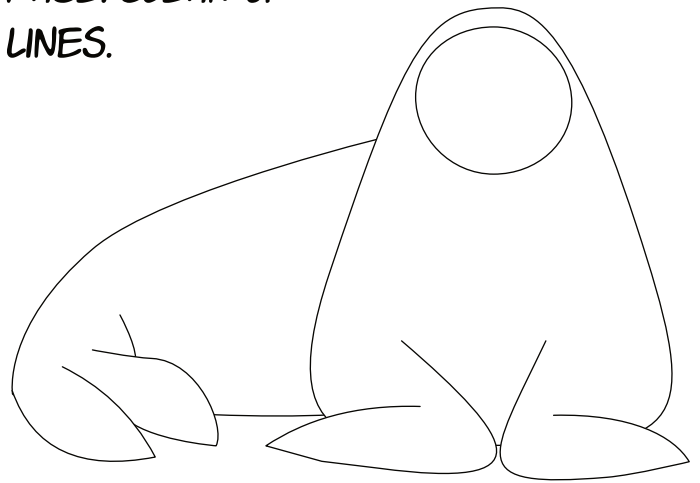
② MAKE A LUMP
FOR THE REAR
BODY.



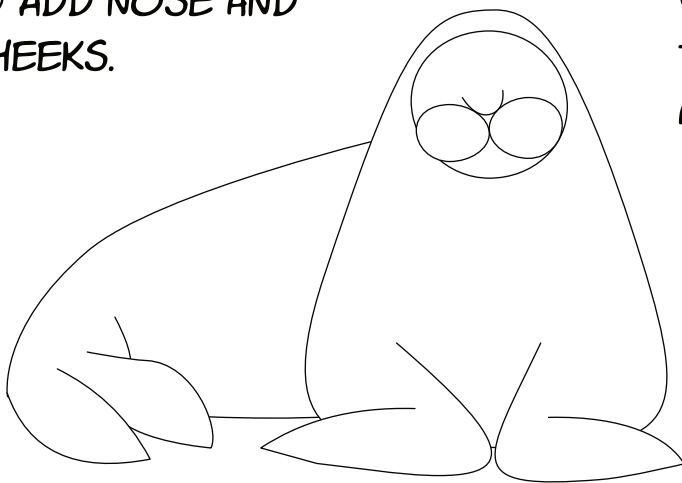
③ ADD FINS.



④ ADD A CIRCULAR
FACE. CLEAN UP
LINES.



⑤ ADD NOSE AND
CHEEKS.



⑥ ADD EYES,
TUSKS, WHISKERS,
AND DETAILS.



Animal Song

-to be sung as a round

Serge Ballif

Cent. No - tice the cen - ti - pede does - n't wear shoes.

Bee Bum - ble bee buzzing by zoom - ing a - cross the sky.

Hum. Hum - mingbird hov - er-ing nec - tar dis - cov - ering

Pen. Pen-guins live on ice and do not mind the cold. They can swim for hou - rs.

Snake Snakes have no legs

Croc. Cro - co diles wait. Fake tears gleam.

Flo. Floun - ders can't look down. They're stuck on the ground.

Sal. A sa - la - man - der can grow back a bo - dy part,

Rab. Ra - like to hop a - round. They dig bu-rrows in the ground.

Sloth Sloths move slow - ly

Cent. La - ces con - fuse him and give him the blues.

Bee Bum - ble bee buzzing by zoom ing a cross the sky.

Hum. Hum - mingbird hov - er - ing nec - tar dis - cov - er-ing

Pen. Eat-ing fish and krill a div-ing they will go, swim-ming su - per pow - ers.

Snk. so they sli - ther.

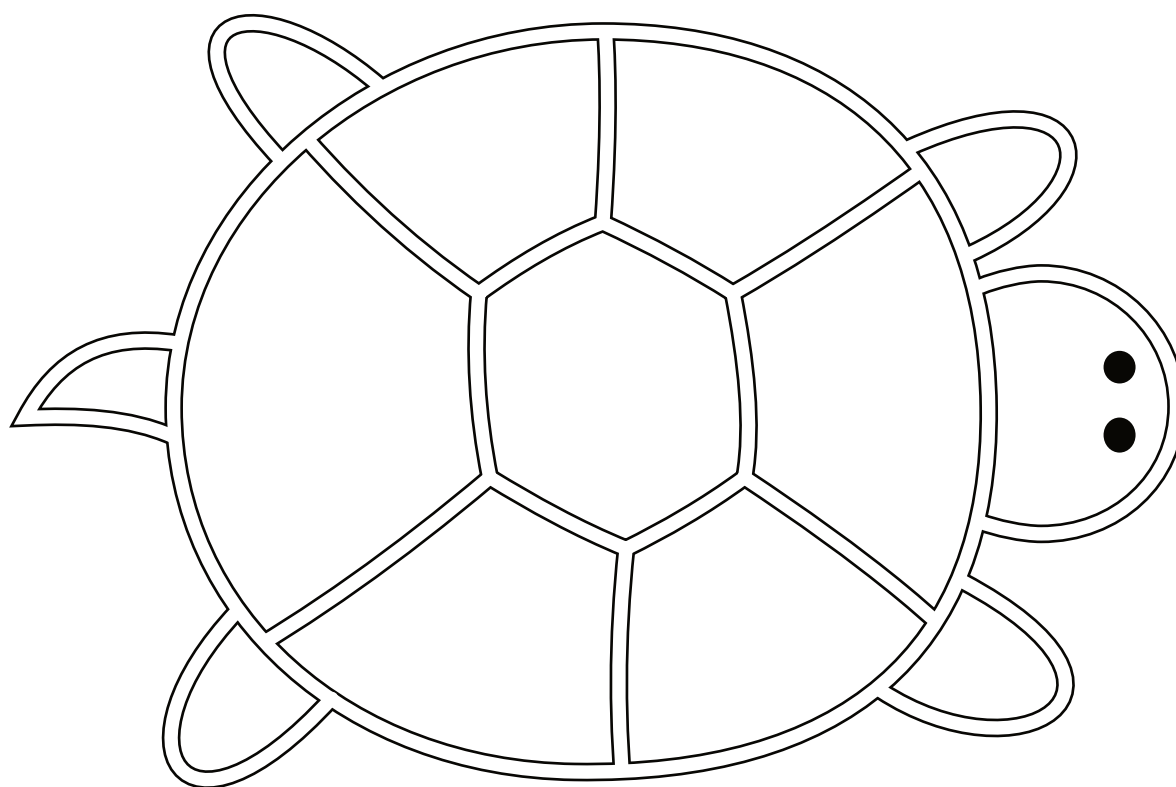
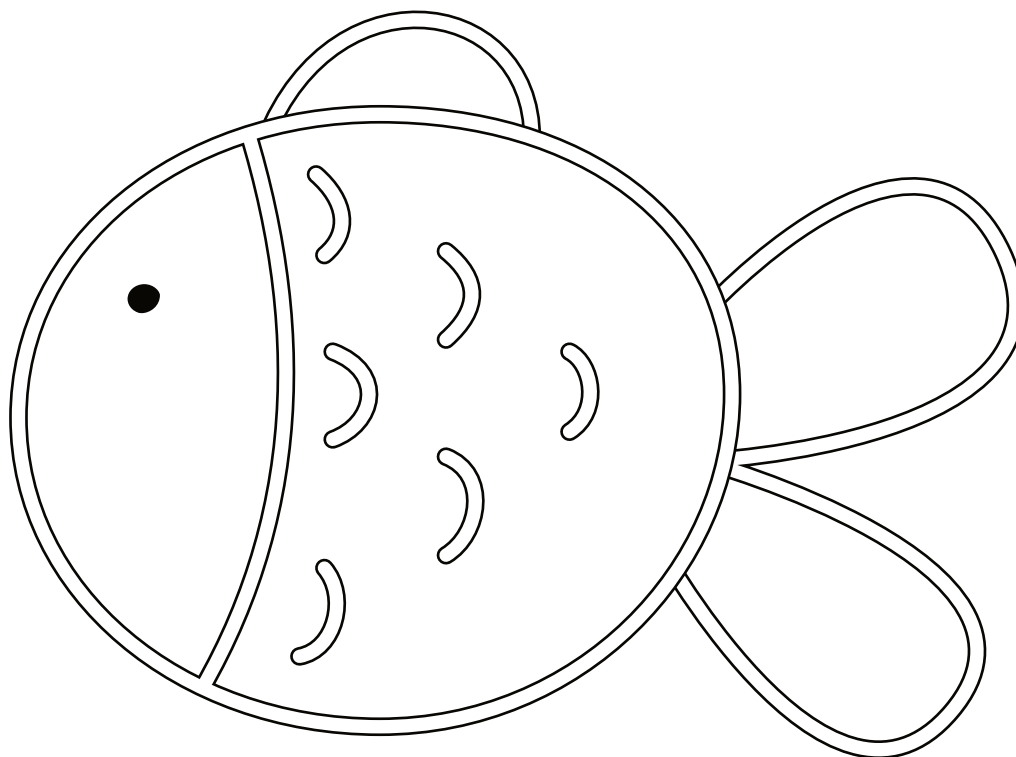
Croc. Look out near wa - ter. There's dan - ger ex - treme.

Flo. Floun - ders can't look down. They're stuck on the ground.

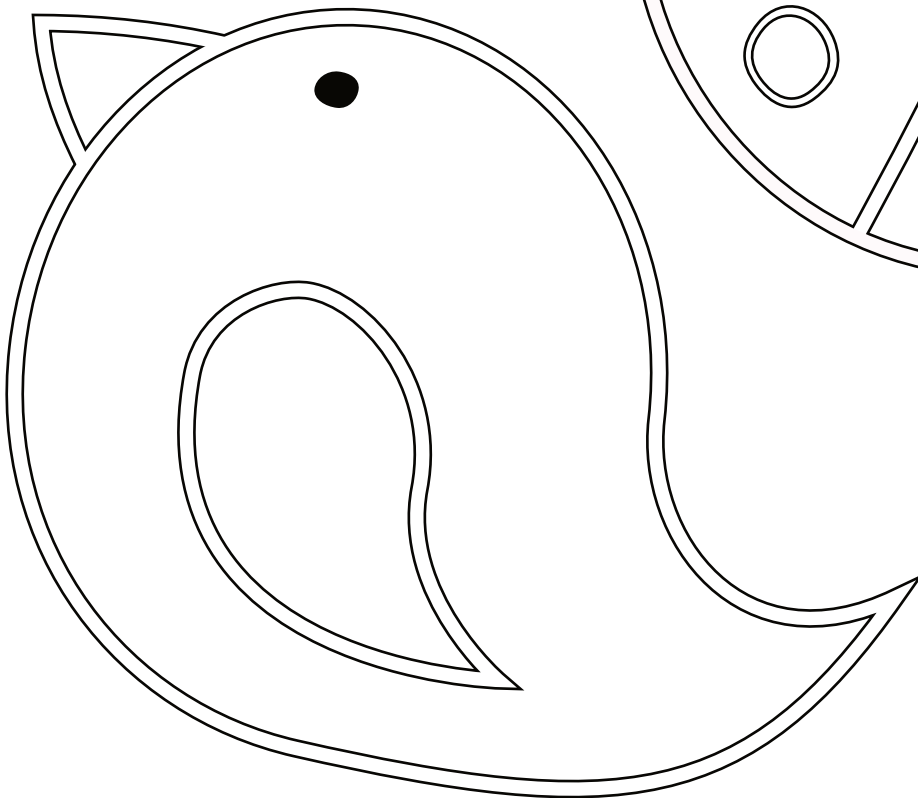
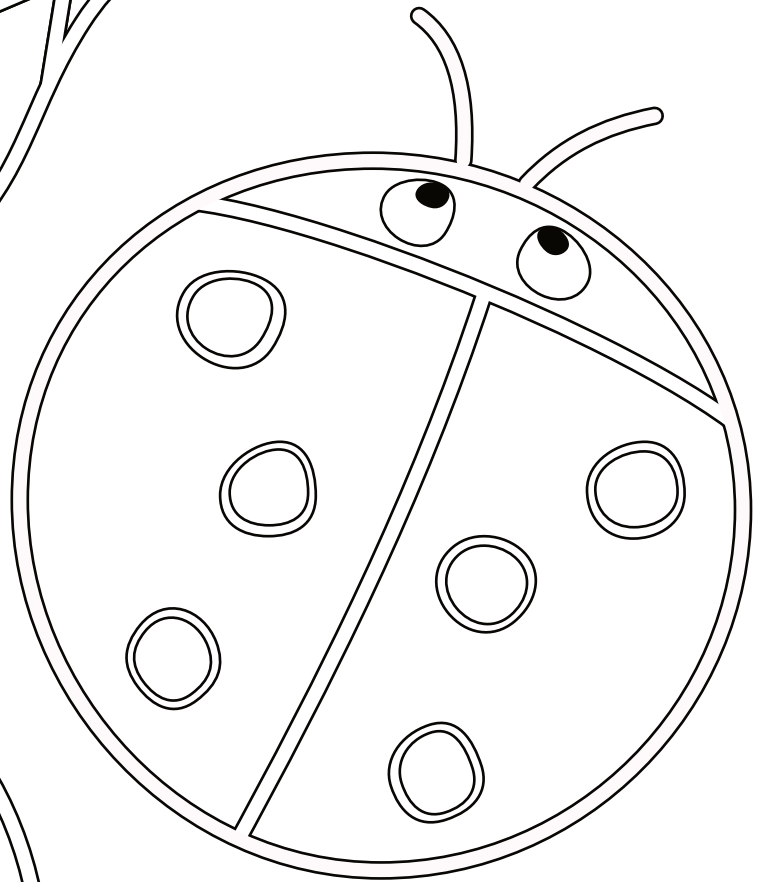
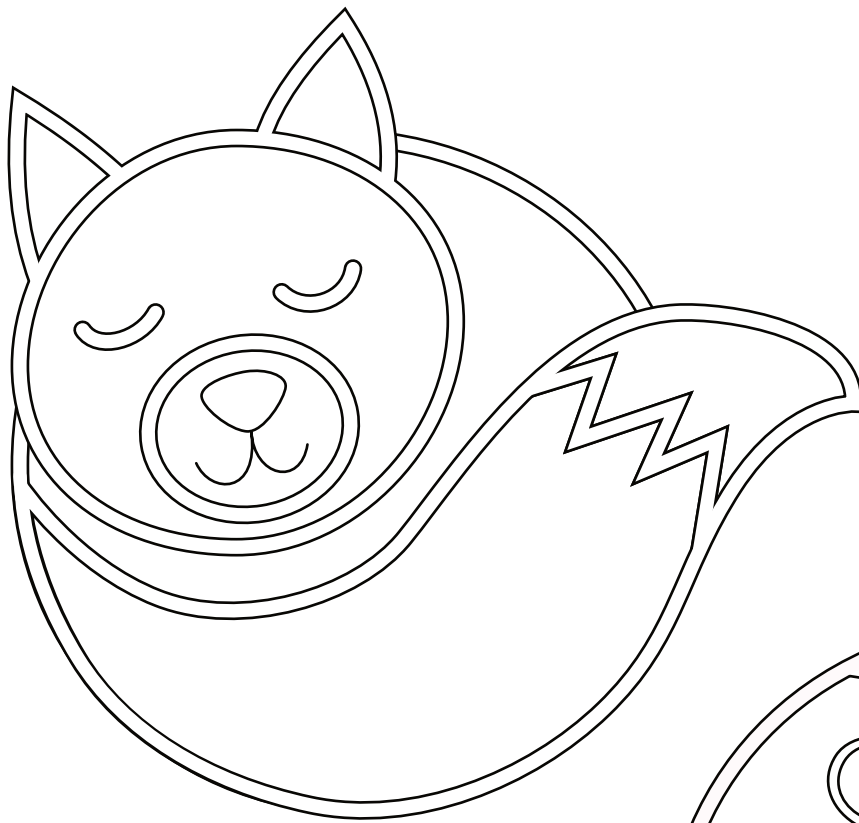
Sal. col - or - ful skin, such a great work of art.

Rab. Ra-bbits like to hop a - round. They dig bu-rrows in the ground.

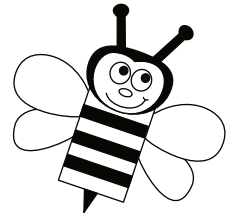
Sloth in the palm tree.



SUNCATCHER ANIMALS! COLOR WITH MARKERS AND CUT OUT. THEN TAPE TO A WINDOW FOR A BEAUTIFUL EFFECT.



PAPER SACK PUPPET- BEE



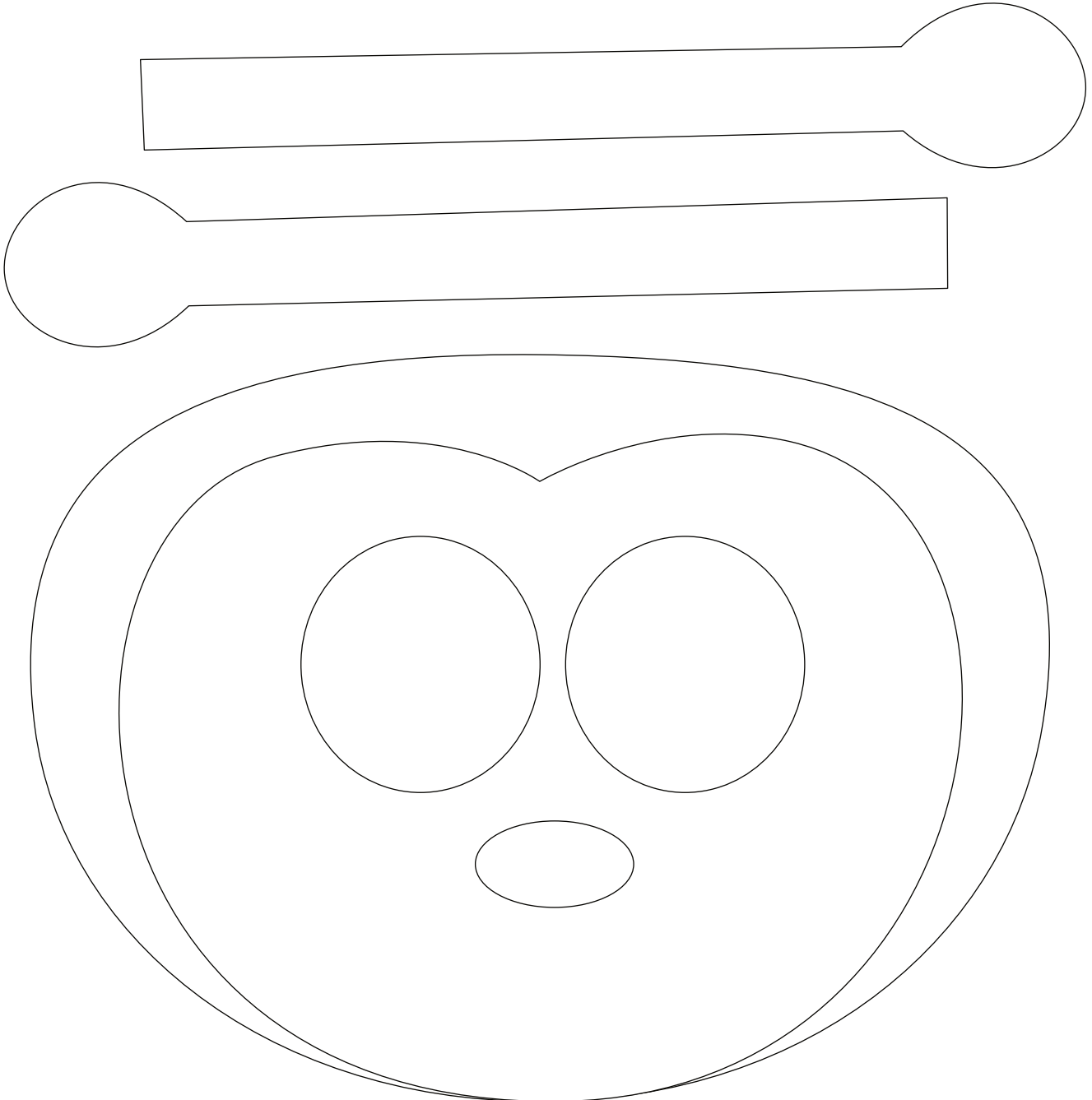
- ① GET A PAPER SACK AND COLOR IT YELLOW OR COVER IT IN YELLOW CONSTRUCTION PAPER.

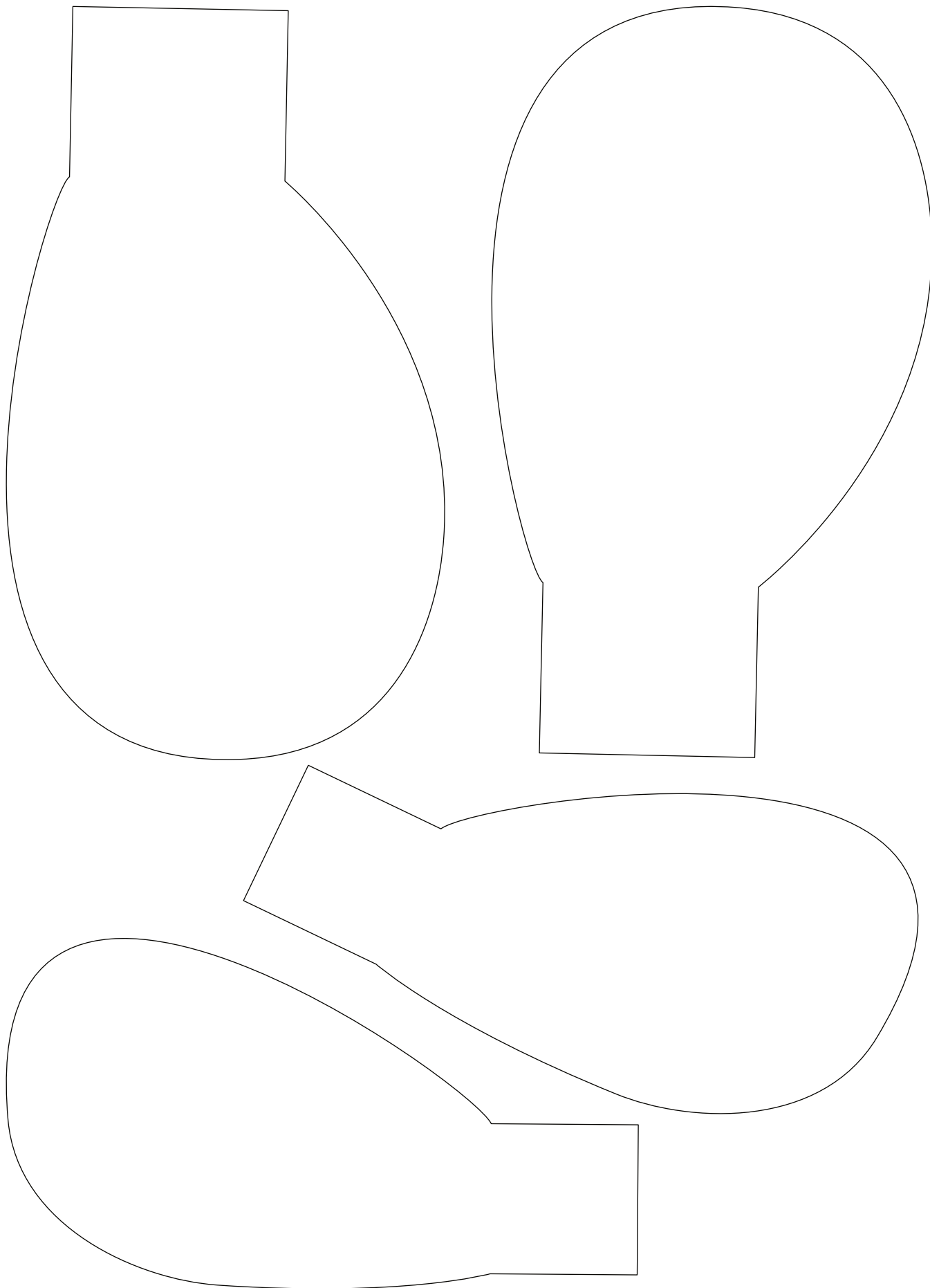


- ② COLOR AND DECORATE THE ANTENNA, FACE, AND WINGS.

- ③ CUT OUT 3 OR 4 STRIPS OF BLACK PAPER AND TAPE THEM TO THE MAIN PART OF THE BAG.

- ④ CUT OUT THE FACE, ANTENNA, WINGS, AND A TRIANGULAR PIECE OF BLACK PAPER FOR THE STINGER. GLUE THEM ON THE BAG TO MAKE YOUR PUPPET.





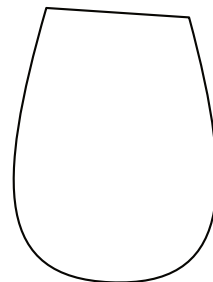
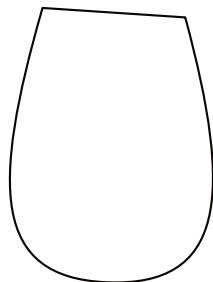
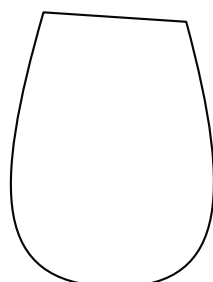
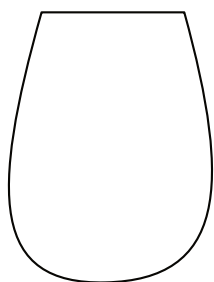
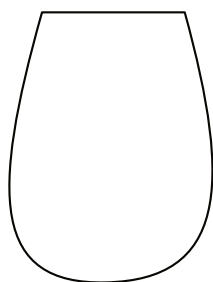
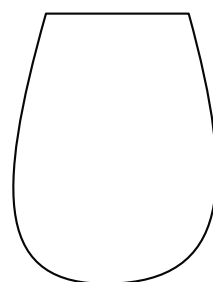
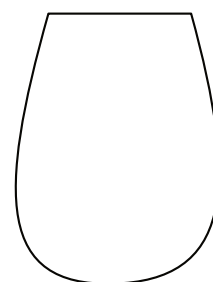
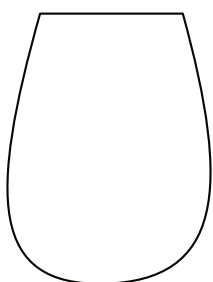
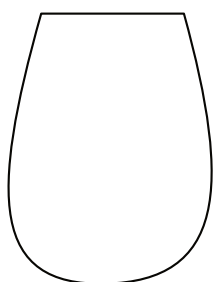
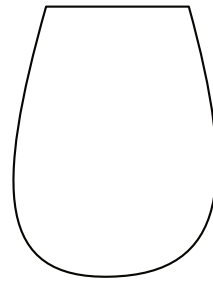
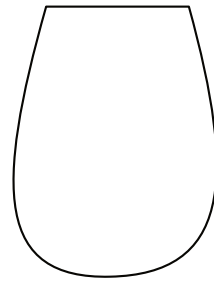
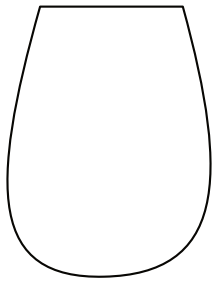
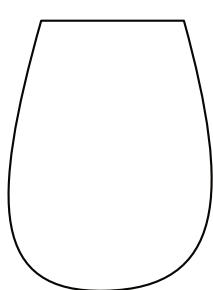
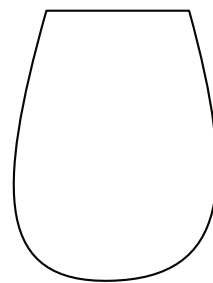
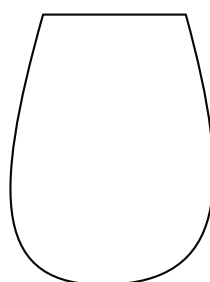
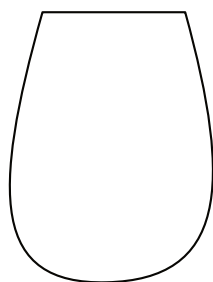
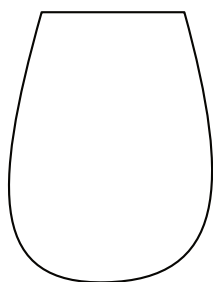
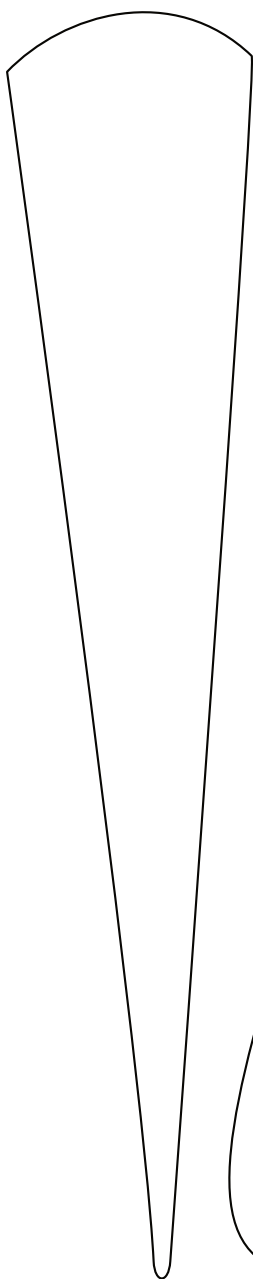
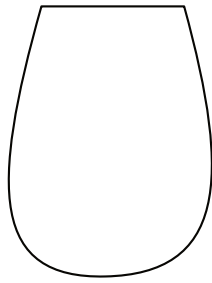
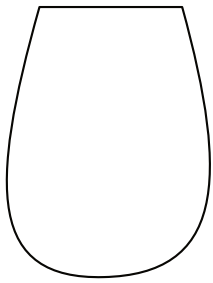
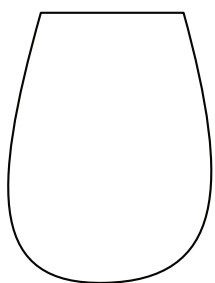
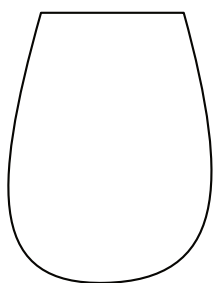
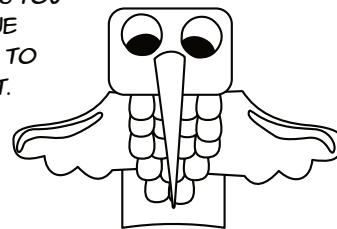
PAPER SACK PUPPET - HUMMINGBIRD

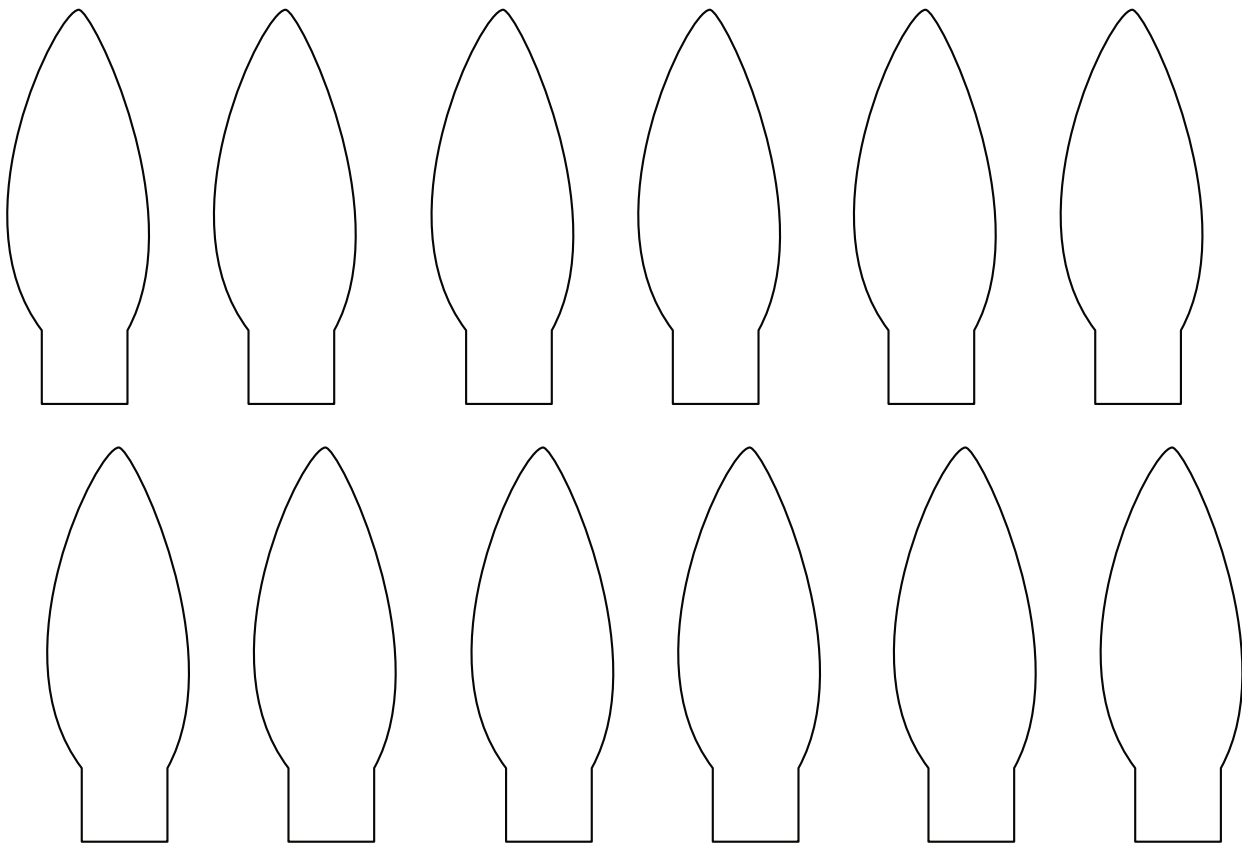
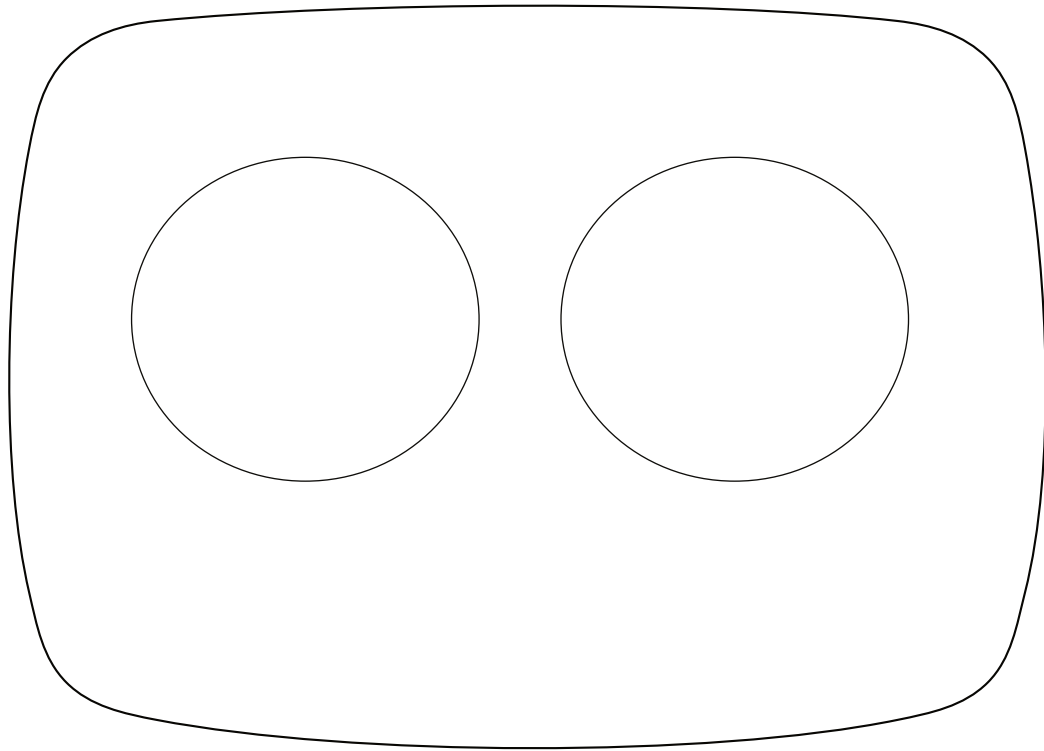
- ① GET A PAPER SACK AND COLOR IT GREEN OR COVER IT IN GREEN CONSTRUCTION PAPER.



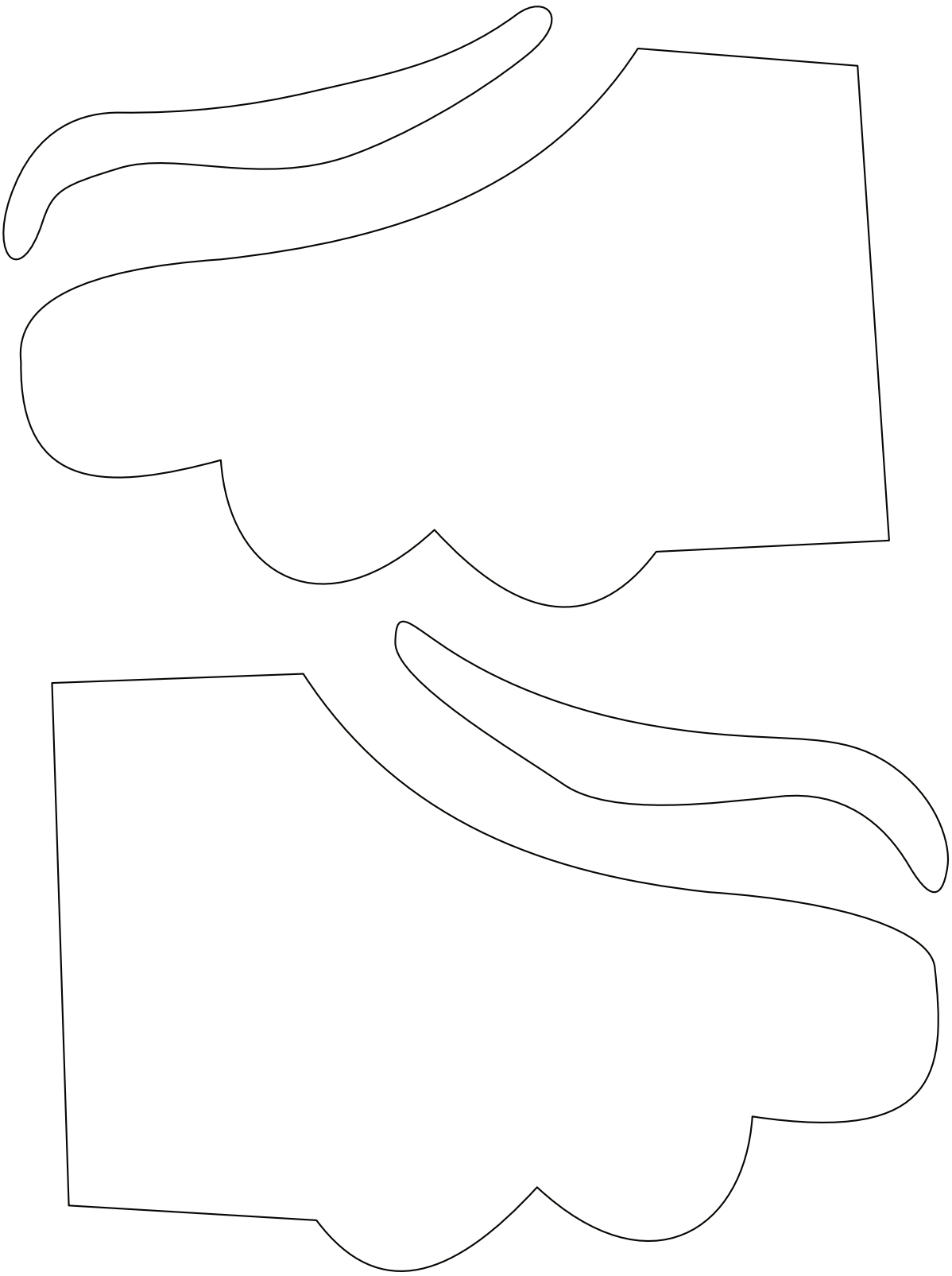
- ② COLOR AND DECORATE THE BEAK, EYES, THROAT FEATHERS AND WINGS.

- ③ CUT OUT THE PARTS YOU COLORED AND GLUE THEM ON THE BAG TO MAKE YOUR PUPPET.



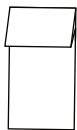


OPTIONAL EXTRA FEATHERS FOR A LITTLE TUFT ON THE HEAD OR A TAIL.



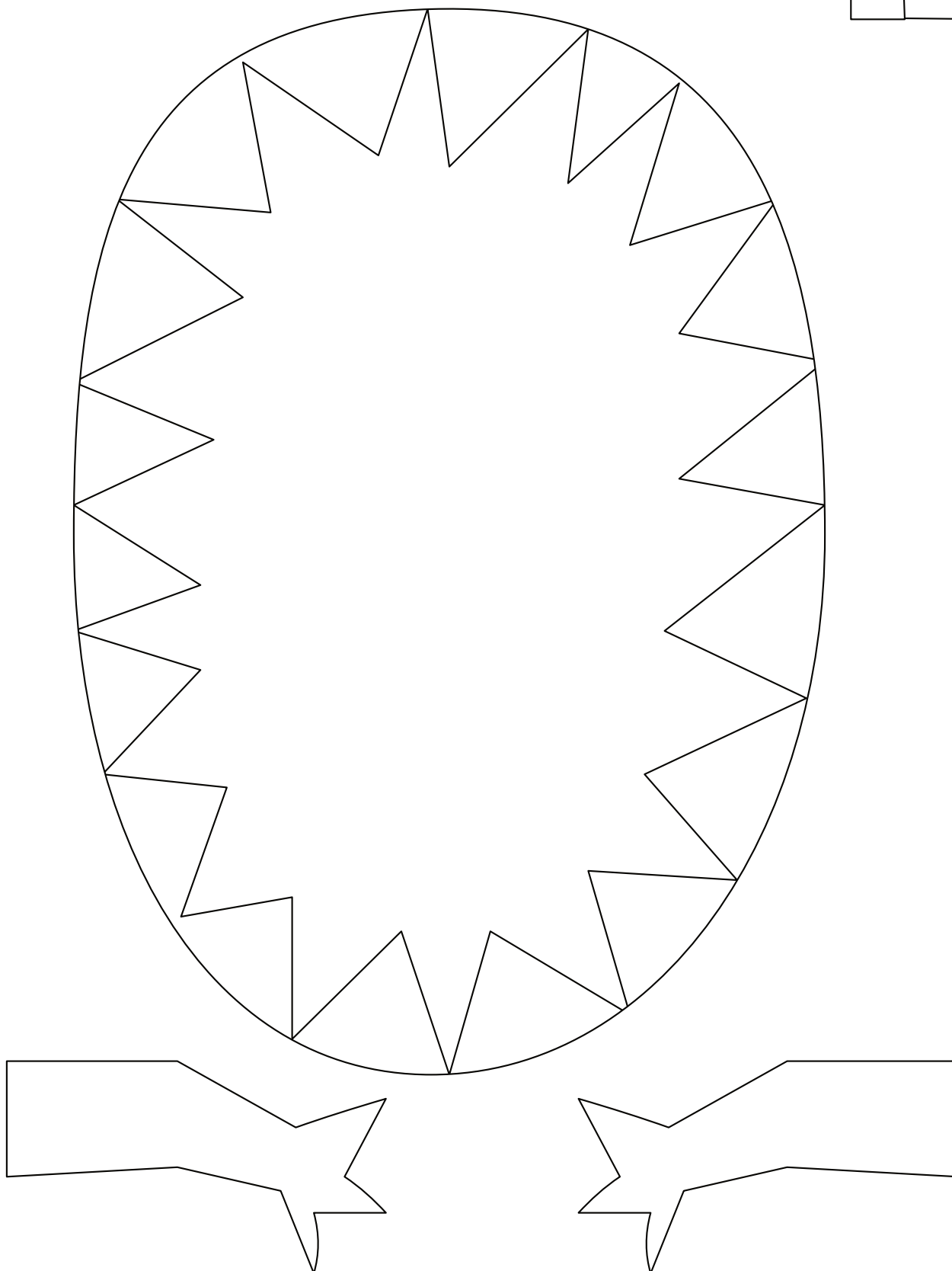
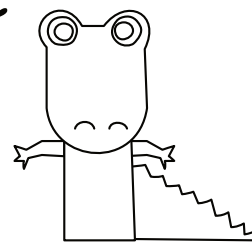
PAPER SACK PUPPET - CROCODILE

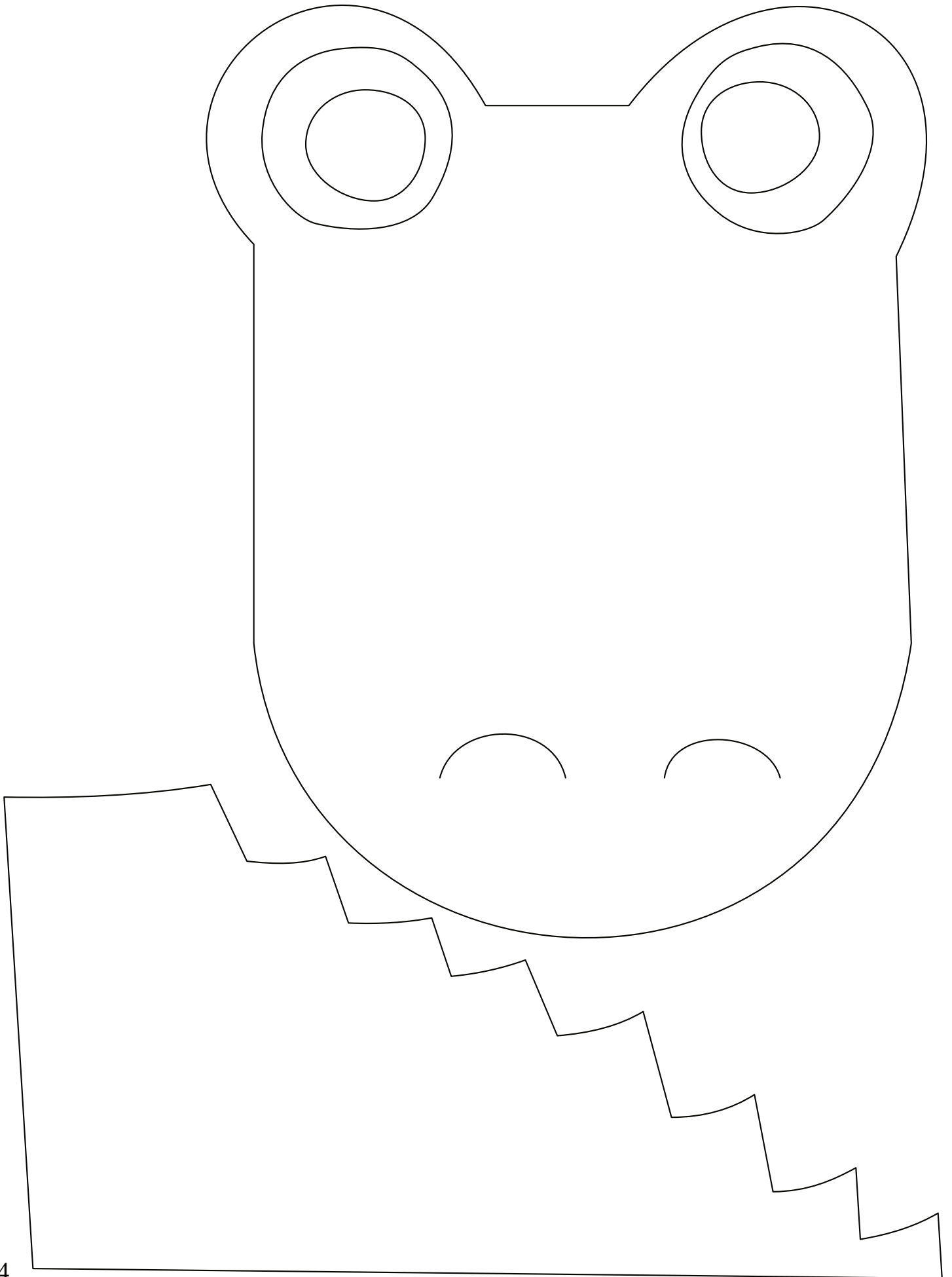
- ① GET A PAPER SACK AND COLOR IT GREEN OR COVER IT IN GREEN CONSTRUCTION PAPER.



- ② COLOR AND DECORATE THE FACE, MOUTH, AND TAIL.

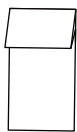
- ③ CUT OUT THE PARTS YOU COLORED AND GLUE THEM ON THE BAG TO MAKE YOUR PUPPET.





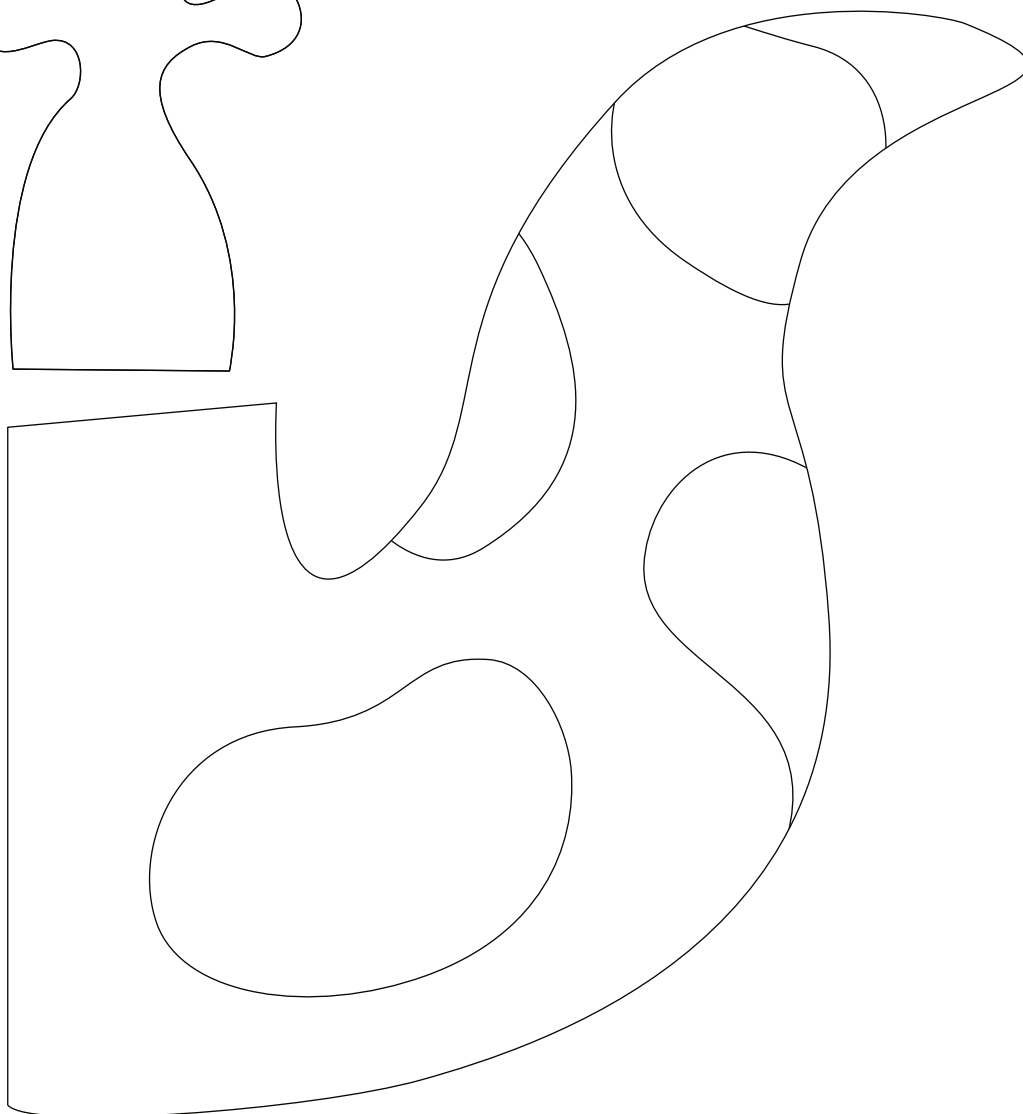
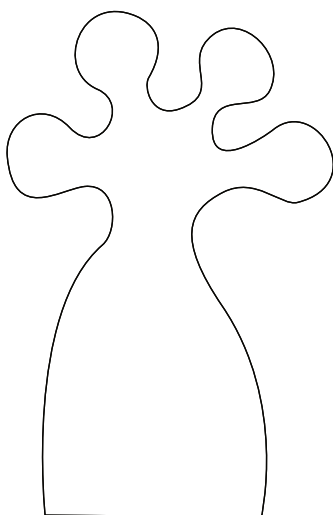
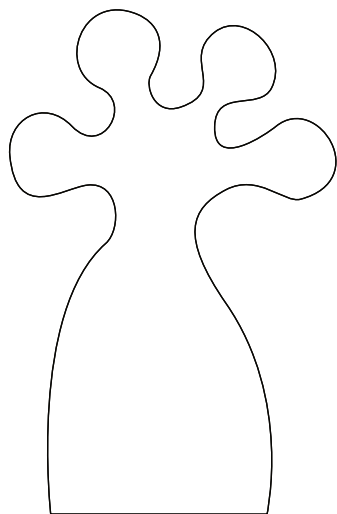
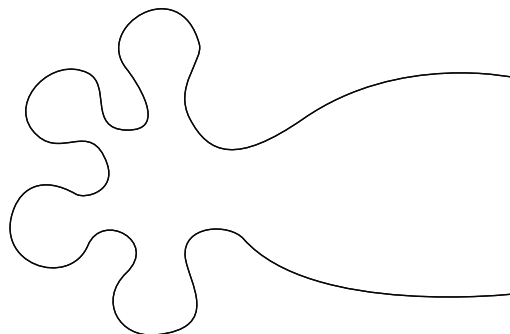
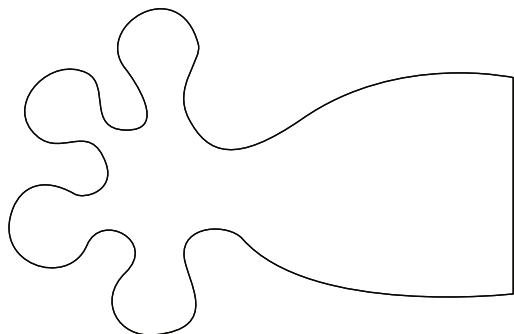
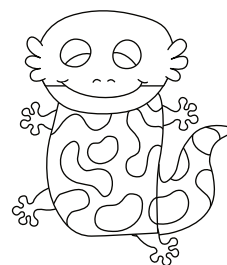
PAPER SACK PUPPET - SALAMANDER

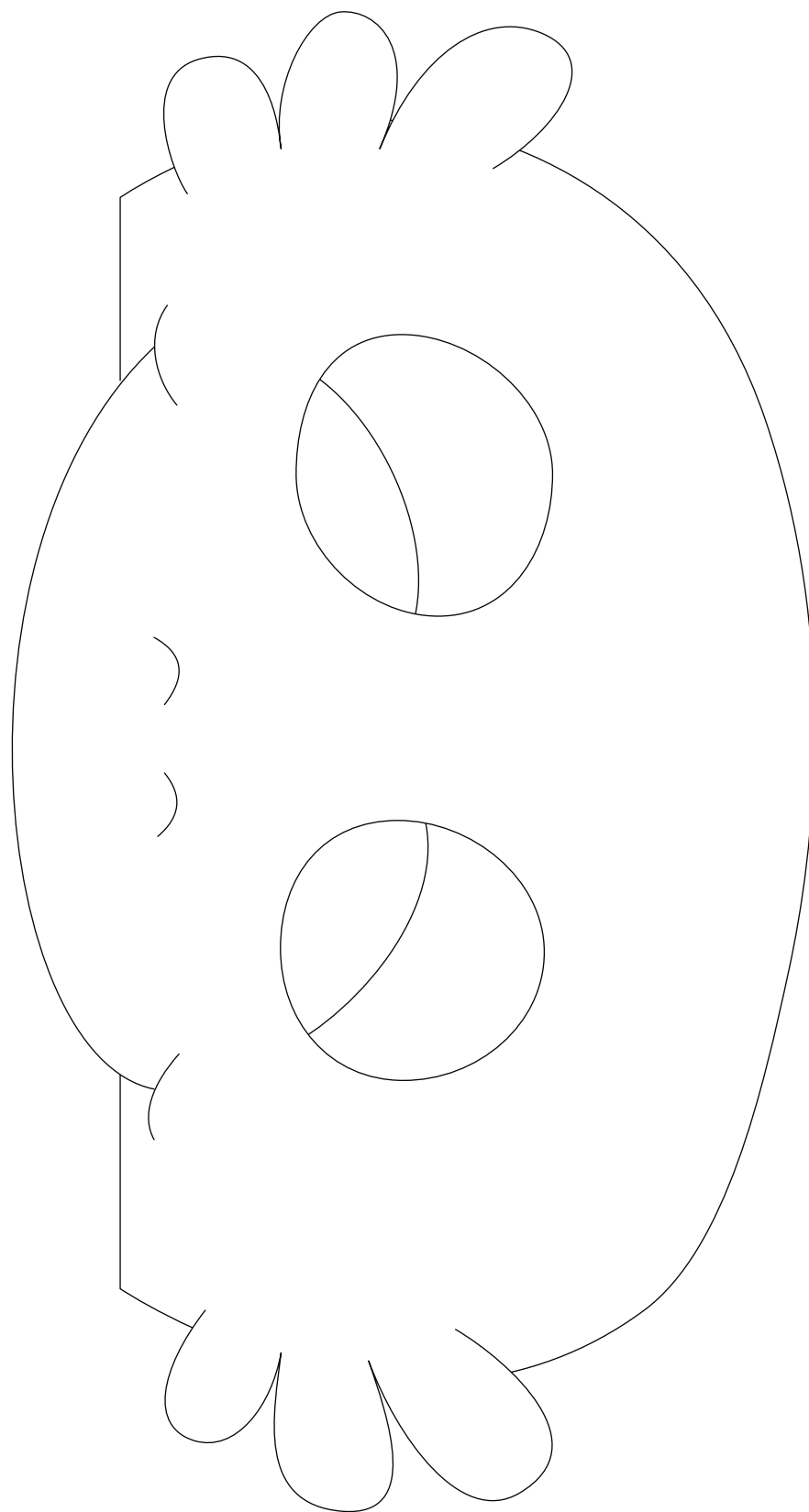
- ① GET A PAPER SACK AND COLOR IT (BLACK AND RED?) OR USE CONSTRUCTION PAPER.

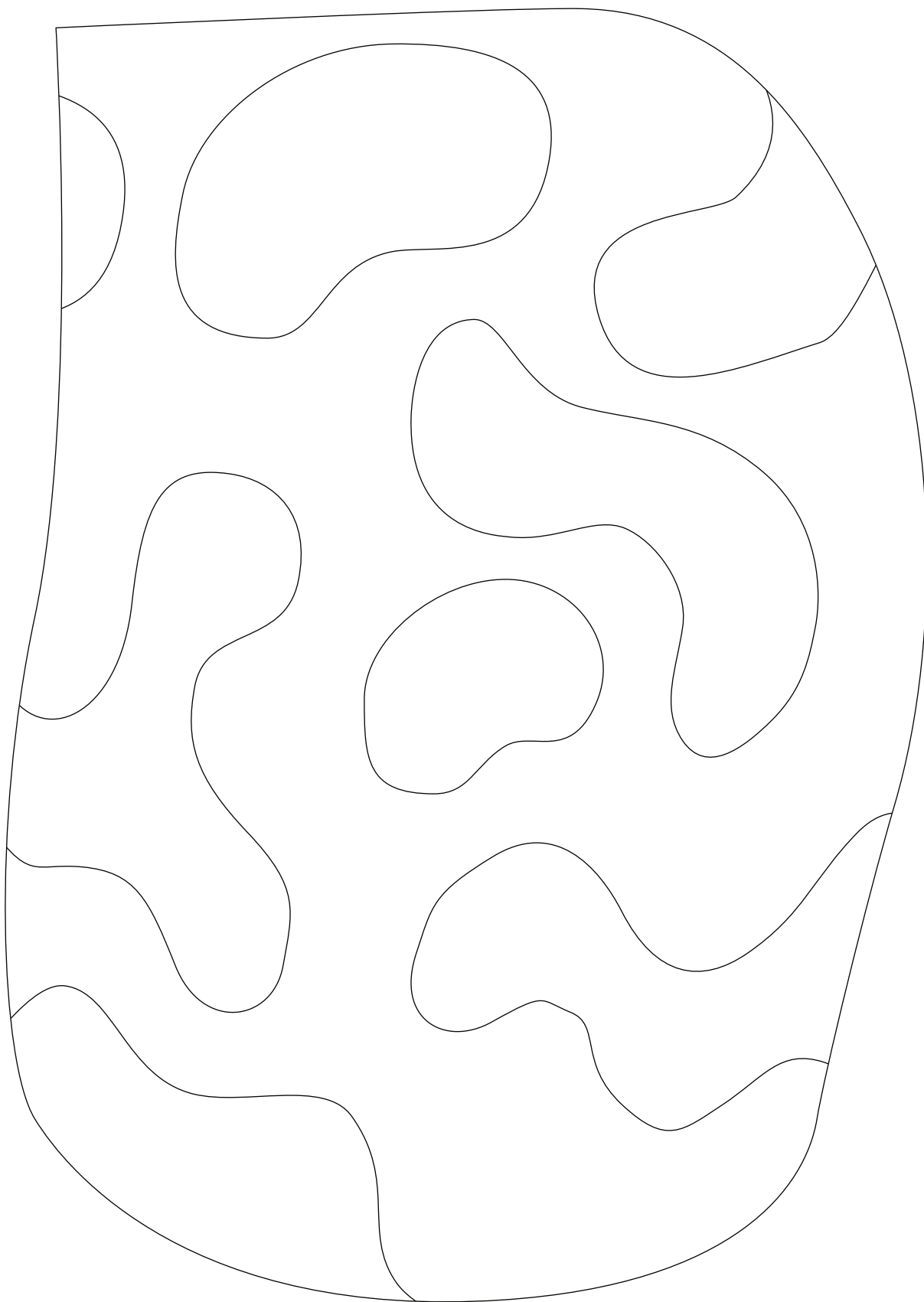


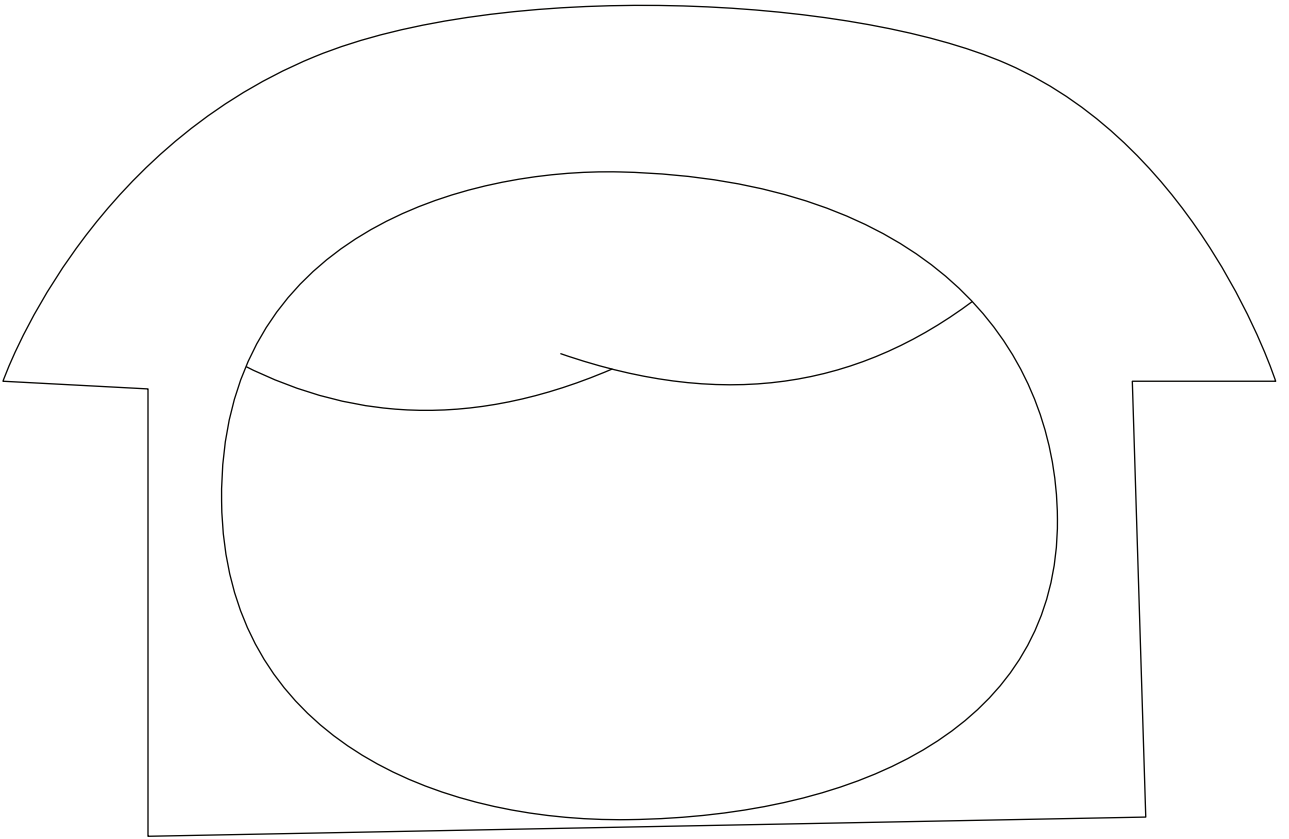
- ② COLOR AND DECORATE THE LEGS, FACE, AND BODY.

- ③ CUT OUT THE PARTS YOU COLORED AND GLUE THEM ON THE BAG TO MAKE YOUR PUPPET.



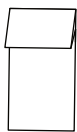






PAPER SACK PUPPET - RABBIT

- ① GET A PAPER SACK AND COLOR IT OR USE CONSTRUCTION PAPER.



- ② COLOR AND DECORATE THE EARS, FACE, AND BODY.

- ③ CUT OUT THE PARTS YOU COLORED AND GLUE THEM ON THE BAG TO MAKE YOUR PUPPET.

