Audubon | Hog Island Audubon Camp

Family Camp-in-a-Box

Adult Activity Guide

Welcome to the Hog Island Maine Coast experience.

This Adult Activity Guide will take you through the five main parts of our Family Camp-in-a-Box. Included in the guide are additional projects and crafts for each part as well as supplemental information that you can share with your child about each topic. This guide can be printed for better use. It includes some key components to your boxed items including the Puffin Patch pattern.

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KNOTS & NAUTICAL

These step-by-step instructions can be used in addition to the accompanying YouTube video posted on the Family Camp-in-a-Box website to walk you through knot tying.

BOWLINE

This loop is useful because it could go around a post or pier to keep the boat from floating away.

Begin by making a loop in the line. Make sure that the end of the rope you are working with passes over top of the rest of the line.

Pass the end of the line up through the loop. Don't pull all of it through as this slack will later form the finished loop of the knot

Pass the end of the line behind and around the line that originally had the loop in it.

Bring the end of the line back down through the same loop you came up through.

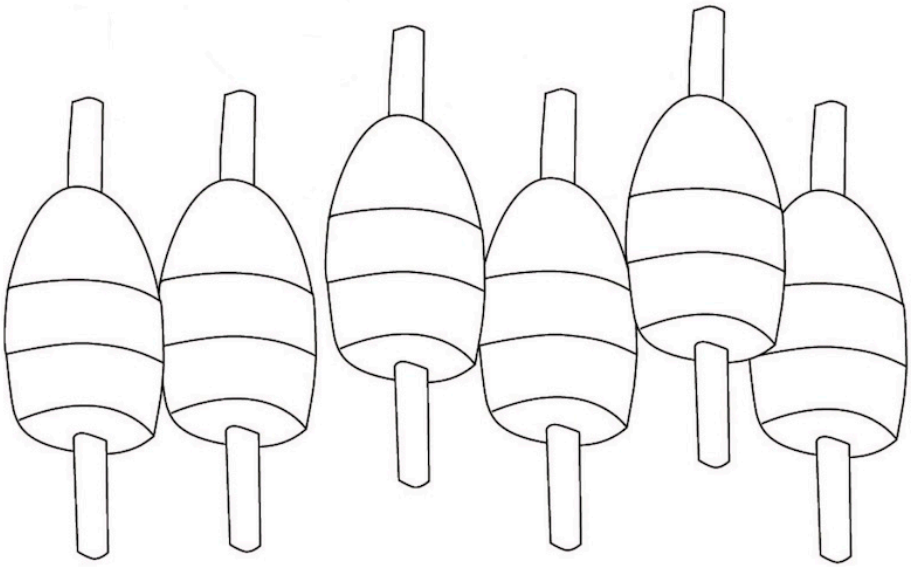
Pull both ends of the line to tighten up the knot and make sure it holds well.

The finished knot should look like this.

From the other side, it looks like this.

The water around Hog Island is salty and rich in life. Lots of people work in boats around Hog Island including lobster fishermen. These fishermen drop special wire cages called lobster pots down to the bottom of the bay. Fish is used as bait to attract lobsters into the lobster pot. Each pot has a line that runs all the way to the surface where it is attached to a buoy that floats on top of the water. The lobstermen paint their buoys a special unique color that only they use. That way they know exactly which lobster pots belong to them and which ones are another fishermen's. Sometimes the water can have hundreds or thousands of brightly colored buoys floating all over its surface. How many different colored buoys can you see in this photo at Hog Island?

If you were a fisherman, what color would you paint your buoy? You can color these blank buoys with whatever crayons, markers, paint, pens, or pencils you have. You could even cut out one of the buoys, poke a hole in it and tie it to your line with a bowline or double sheet bend.



Let's learn the knot the lobster fishermen use to tie the buoys to their lobster traps. This Double Sheet Bend Knot is good for tying 2 lines together and is easy to untie.

DOUBLE SHEET BEND

Begin with the ends of 2 lines. In this case we will use Black and White. Fold one line back on itself. This is called a bight. This line will keep this bend through the tying and in the final knot as well.

Pass the white line up through the bight in the Black line.

Pass the white line around both black lines.

Once you are around both black lines, tuck the white line only under itself.

This is now a single sheet bend. To make it a double and easier to untie after using it. Continue wrapping the white line around the black lines just as you did the first time.

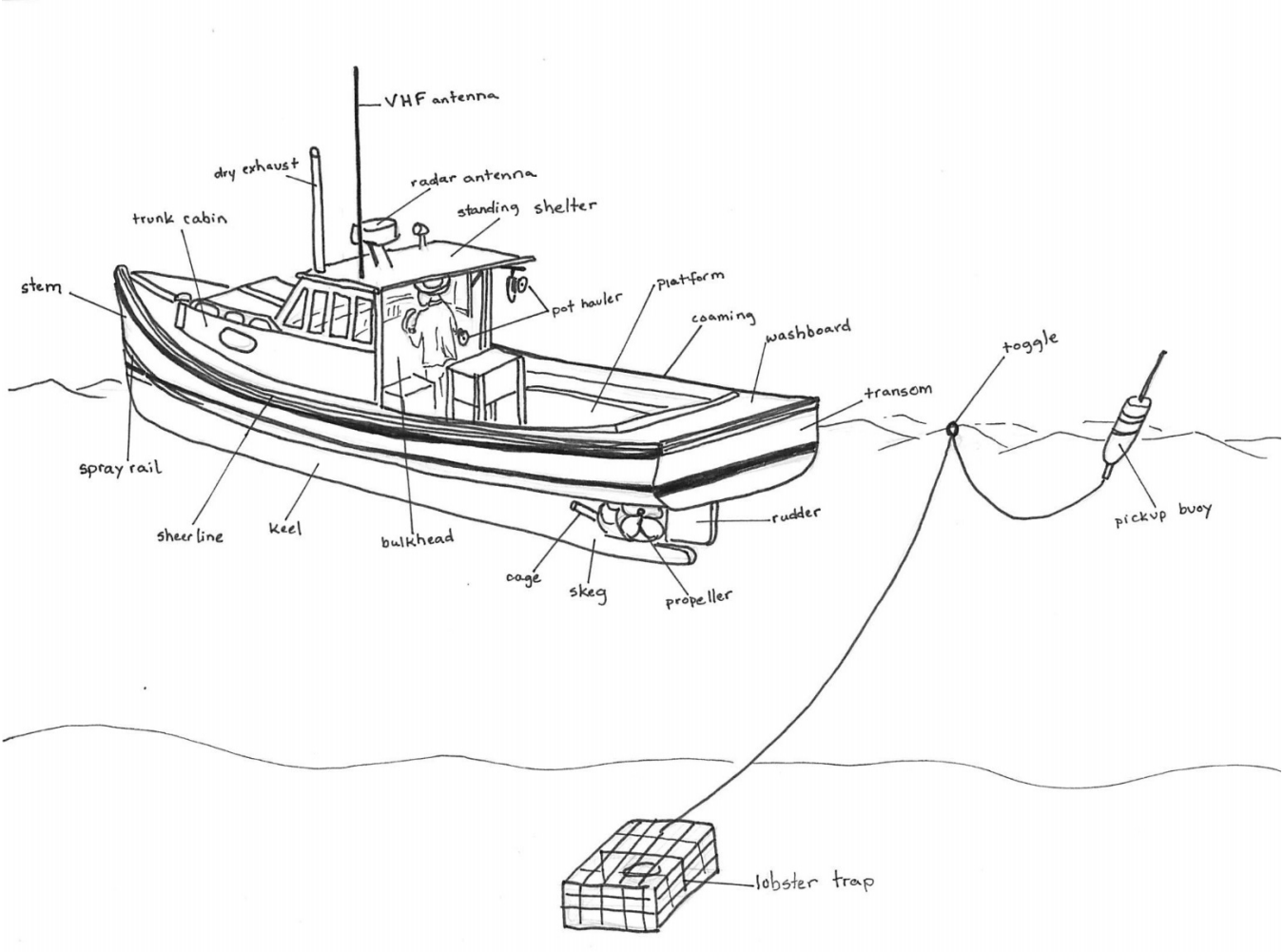
Pass this second loop underneath the white line again just next to the first line you tucked underneath.

Tighten up the line by holding the knot and pulling on the ends of all the lines.

When you are finished it should look like this.

From the other side the knot should look like this.

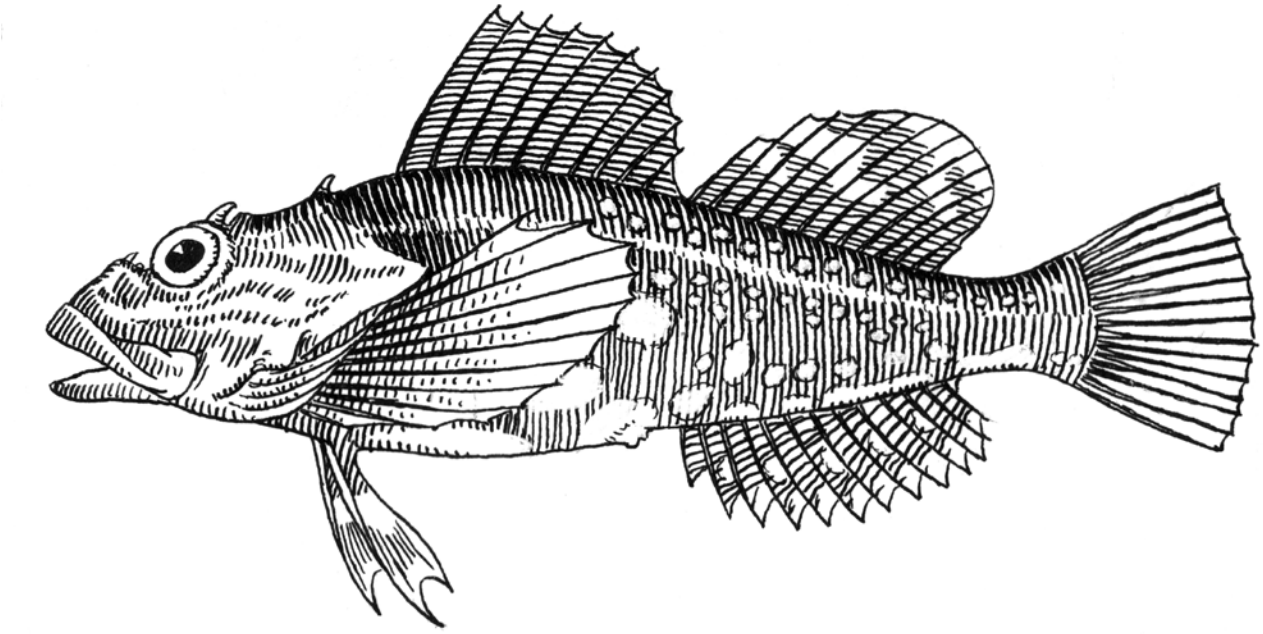
If you want to learn more parts of the Lobster boat you can look at the diagram below to find out.



Sometimes lobster fishermen will pull up other things in their traps that they don't want to keep and throw back into the water.

They often find Green crabs or Rock crabs:

Sometimes they catch Sculpin. (Color the Sculpin)



They often will catch lots of red rock eels that are the favorite food of the Black Guillemot.

When the lobsterman are done hauling traps for the season, they will stack them on deck to bring them ashore. Let's practice a knot that is useful for tying things down so they don't move on the rocking boat.

TAUTLINE HITCH

For this knot we will tie one end around another section of the line.

Begin by wrapping the end of the line around a section of line.

Then wrap it around one more time just below the first.

Then go above the 2 wraps you just made and wrap around one more time in the same direction around the line.

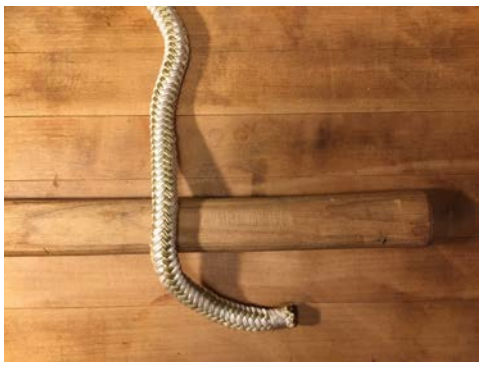
When you get around, tuck the end underneath just the line that you made your last wrap with.

It should look like this and then you can hold the knot and pull on the end of the line to tighten the wraps around the line.

It should look like this. You can use your hand to hold the knot and slide it up and down the line, but if you put the loop around something and pull on the far end of the line, it should hold and not slide. In this way you can use this to pull the line tight and the knot will hold it in that position.

The same knot as the taught line hitch with one less wrap makes a clove hitch, which is very useful for tying rope to a post or pier. Let's try tying the clove hitch.

CLOVE HITCH



Begin with the end of your line and something to tie around such as the leg of a chair or table.

Pass the end of the line around the object.

Then cross over your original line

And pass the end of the line around the object again on the other side of your original line.

Then, tuck the end of your line under only the line you just used to go around the object the last time.

Then pull on both ends of the line to tighten up the knot.

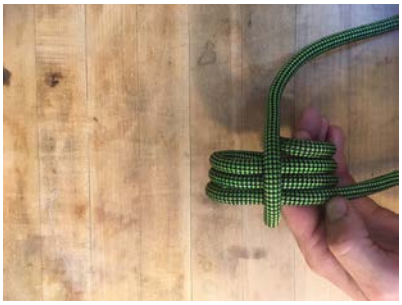
It should look like this.

Sailors also use several knots that are especially beautiful but also have specialized uses. One of these is called the Monkey's Fist and is used to tie a ball of line at the end of the rope so that it is heavy enough to easily throw it when you approach the dock. Someone ashore can then grab the line and help secure the boat to the dock. These lines are sometimes called heaving lines.

MONKEYS FIST

This knot can seem a bit complicated. But is fun when you can learn all of the steps to tying it. Sometimes it is easier to begin by tying the knot around a small object such as a crumpled up ball of paper.

Begin by wrapping the line 3 times around your fingers or the ball of paper.



Then keeping all of those loops parallel, wrap the line around the middle of those loops 3 times.

Then Pass the end of the line around the middle of the 3 loops you just wrapped, but underneath the lines you wrapped the first time around your fingers.

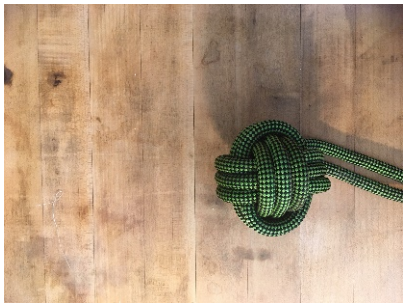
Once you have finished all 3 wraps in all 3 directions it should look kind of like this. You may need to pull each line a little bit to make sure it is next to the lines around it and not riding above or diving below the lines next to it.

After finishing all the wraps you can tuck the end of the line back down into the middle of the knot and pull it out next to the line you started with.

Both ends will now exit the ball at the same place.

You may need to tighten up the ball by pulling each line in succession to take any slack out, but be careful not to pull any one line too much and cause it to not be even with the others.

Here are examples of the finished knot in different orientations.



Another very pretty knot is called the Plait. This knot is used to make a mat and can protect the deck of the boat from things that might bang or fall on deck. It can also make a great home door mat or decorative coaster or trivet.

PLAIT

Begin by making a loop in the line.

Then pass the end of the line through the loop. This is called an overhand knot.

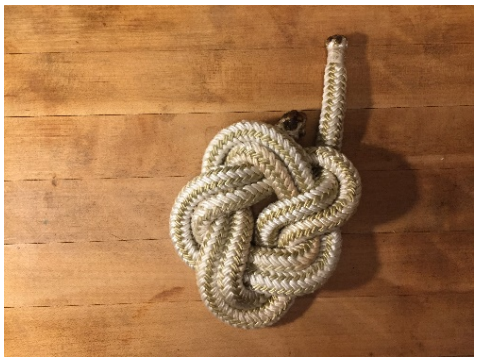
Keep passing the end of the line through the loop in the same direction.

Pass the end around and through the loop one more time. Now you are right next to the line began with. This line will now become your guide.

Follow along right beside this first line staying next to it on the inside without ever crossing over it but following when it goes under or over the other lines.

Keep following it around in the same manner.

Eventually every line will have a second one right next to it.



You may need to pull more line from the beginning to finish the knot. Or you may need to pull more on one line or another or make sure the lines stay parallel, even, and flat.

You can tuck the ends under the knot and it should look similar to this.

There are many kinds of Plait knots and you can experiment with using more initial wraps of line, or following your original wraps 3,4,5 or more times. Just remember to try and keep it flat and each line on the same side of the one you are following.

Owls Versus Ospreys

Hog Island Audubon Camp is known for their livestreaming Osprey nest. You can tune into the nest 24 hours a day at hogisland.audubon.org to watch the nest action! Sometimes the neighboring Great Horned-Owl attacks the Osprey nest and tries to eat the young Osprey. This interaction has caused some drama on the nest. Learn more about Ospreys and Owls in this activity guide.

Similar and Different

Owls and primarily nocturnal (active at night) and Ospreys are diurnal (active during the day). How are these two raptors similar and different? Let's look at adaptations that each animal has to hunt during their active time of day. Using a field guide (online or a book) look at photos of different owls versus photos of Osprey. What do you notice about their adaptations? Using the crayons included in your box, draw a sketch of an owl and an osprey, and label how they are different and similar. Good examples are owls have larger eyes so they can see at night, Ospreys have longer beaks to tear apart fish and both have talons to carry their prey.

At Hog Island we have three main species of owls that can be heard: Barred Owl, Great Horned Owl and Northern Saw-whet Owls. Each of these species are predators but they eat different food sources, especially because Saw-whet Owls are so small compared to a Great Horned-owl. Owls are at the top of the food web/chain. By dissecting their pellets we can study owls and their prey.

Owl Pellet Dissection

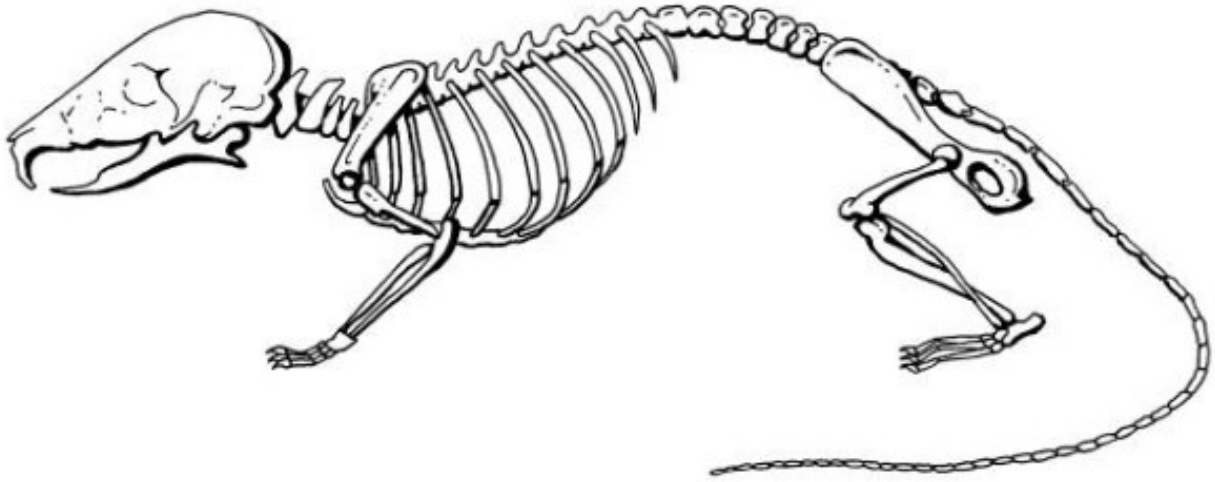
In your Box you will find an owl pellet dissection kit. First, open the brown paper bag and remove the contents. Cut or tear the brown paper bag so that it lays flat. This will be your dissection surface. It's very important that participants wash their hands after dissecting and also that you clean up the area where bones and fur may scatter.

1. First Observe: Open the pellet and make observations about it. If you have a ruler it's nice to measure the pellet and write down a few observations: size, color, texture, and other observations. Use the hand lens in your box to explore the outside of the pellet before dissecting.

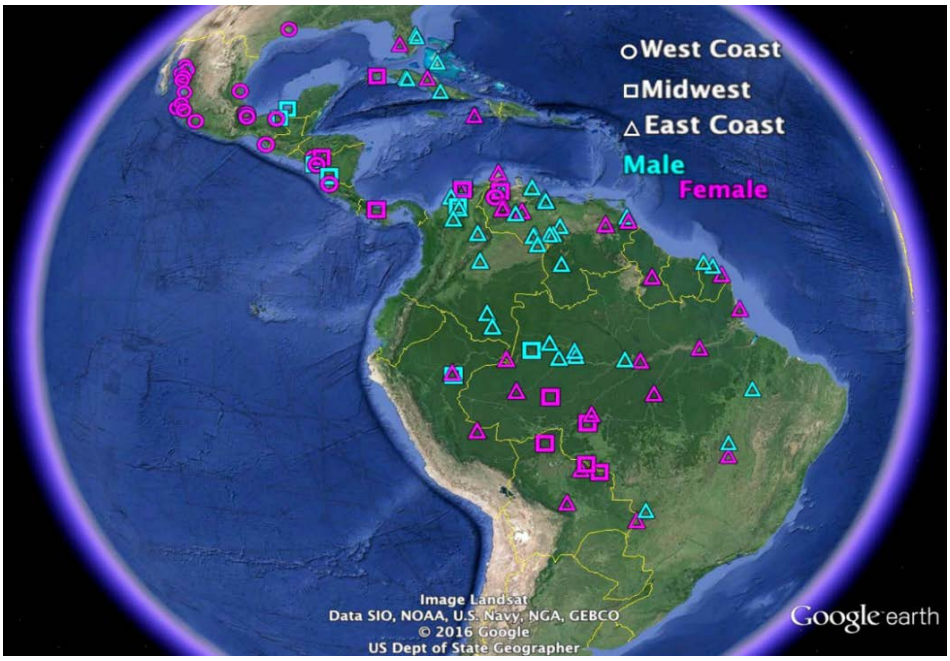
2. Next we will dissect the pellet. Make sure you stress that this activity should be done like a professional scientist. The more bones that can be located, removed, and cleaned without damaged the better you will have a complete picture of what the owl was eating. Using the probe and forceps is a good way to pull bones out of the pellet carefully. Each bone can be extracted, cleaned and placed on the bone chart included in your box.

3. Using the rat skeleton included in your activity cards, you can start by identifying what types of bones are in the pellet and placing them in the correct boxes. When looking at jaw bones it's good to use your hand lens to observe teeth up-close. What do they notice about the teeth?

4. At the end of the dissection it's best to sum up your results. Try asking your child the following questions: How many prey were in the pellet? This is usually determined by how many skulls were present. Was there more than one type of prey included? What type of owl did this pellet come from? (These are Barn Owl pellets). Would a Northern Saw-whet Owl have the same size pellet as a Barn Owl? (No, their pellets are much smaller). Can you find pellets in the wild? (Yes, look for the classic sign of white wash around the base of trees and cliffs. White wash is bird urine and it often stains the rocks and is noticeable on trees. These are roosting sites of owls and often pellets can be found there.) Did you find a complete skeleton? (Use the diagram below to determine.)



To study Ospreys researchers often use satellite tracking information. By observing the tracking information they can determine where Ospreys migrate, how long it takes, and what habitat they use. Ospreys are long distance migrants, most of them make their trip between the Northern and Southern hemispheres. By looking at the map below what observations can you make about these migrating Osprey? Pay attention to the map legend that includes if the Osprey is a male/female and what population it comes from: West Coast, Midwest or East Coast Osprey populations. Can you see any patterns?



Here's a tracking map of one Osprey (Holly). How long did it take Holly to get from Brazil to the United States? How long did it take her to fly across the Caribbean? To learn more about tracking Osprey you can visit the Satellite Tracking website by Hog Island Instructor Rob Bierregaard: OspreyTrax.

Seabirds!

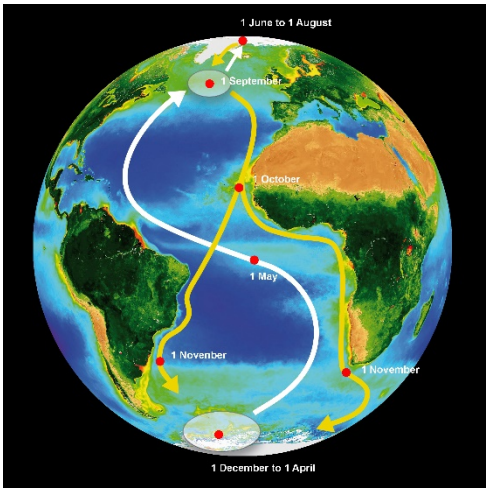
At the Seabird Institute our researchers study seabirds of all shapes and sizes, not just puffins. Many years have been dedicated especially to tern research on our Maine Islands. There are four types of tern that the Audubon researchers study: Least Tern, Common Tern, Roseate Tern and Arctic Tern.

Arctic Terns make the longest flight migration each year than any bird on Earth. They migrate from the Northern Arctic to areas like Antarctica, where they spend their winters. We study tern migration by using geolocators that are attached to their legs. Overall on average, scientists have found that Arctic Terns fly about 56,000 miles during their migration! Arctic Terns are incredibly lightweight, they weight about 4 ounces, which is about the same as 20 quarters.

Tern Migration Hopscotch

To learn about migration draw a hopscotch board on the sidewalk. You could alternatively use squares of paper on the ground if you don't have chalk. Label each square as a point of the Arctic Tern migration. It could look something like this:

1. Maine Nesting Island
2. Gulf of Maine Feeding Grounds
3. St. Lawrence River Feeding Grounds
4. Open Atlantic Ocean
5. Off the Coast of Africa Feeding Grounds
6. Antarctica below Africa
7. Antarctica below South America
8. Off the Coast of Brazil Feeding Grounds
9. Off the Coast of the Caribbean Islands
10. Massachusetts Feeding Grounds



Try migrating from north to south and then turn-around and do it back again, like an Arctic Tern does each year. Next time you talk about threats during migration. Threats are things that make the life of a bird difficult. They could include the lack of food, an oil spill, habitat destruction of their nest sight, etc. What other threats affect seabirds?

Now try migrating again but this time, one of the squares is taken out or crossed off because of a threat. For example, the Arctic Tern can't stop off of Massachusetts' this time because there is overfishing and no food. Was it harder to migrate without that square? Now take another square out each time they migrate. How does this affect the success rate of migration? When there are threats, what happens to the migrating terns? Do they have to work harder to survive? Do some of them fail and not make it from box to box? This is what it's like in the life of a migrating seabird. Threats come from many different sources, most of them man-made.

At Hog Island we are very fortunate to be near so many nesting seabirds. We see on a weekly basis terns, puffins, guillemots, razorbills, and cormorants. To honor these fantastic seabirds, our researchers, volunteers and kitchen staff all get creative to bake and create seabird themed food creations. Here is a selection of some of the creations:

The seabirds above are made from baked goods, frosting designs and even black beans! Your challenge is to create your OWN seabird masterpiece using food. Select your seabird species and then get to designing, baking or cooking up a creation. Send your food art to hogisland@audubon.org to be included in a special seabird themed food post online.

Want to try your hand at making Cream Puffins? The recipe is harder than you might imagine but you're welcome to give it a shot. Find the recipe at our website: https://www.audubon.org/news/meet-cream-puffin-your-new-holiday-baking-challenge

Pollinator Power

Pollinators are important to sustaining life on our planet. Pollinators can be insects, birds and even bats! Let's take a deeper look at plants and the small life that inhabits them.

Most people think of pollinators as day-time insects but many pollinators are moths. Moths are nocturnal insects related to butterflies. Like butterflies they pollinate plants by transferring pollen when they feed on multiple plants each night. Unlike butterflies moths usually have fuzzy bodies and feather-like antennae. At Hog Island we often set up an insect sheet during Family Camp to learn more about these nocturnal insects. You can try this at home with a few simple steps!

Moth Attraction

To attract insects at night you can set up an old bedsheet outside with a light pointed at the sheet. This works best if the sheet is white and the light is bright. Insects are attracted to the light for the heat source and some like it because they are phototaxis, which means positively attracted to light. If you have a black light you can attract different types of insects by using that on the sheet. Remember to be careful when setting up your insect sheet as you don't want the light source to touch the cloth.

For best results set up the sheet and light right after dark and then wait 30 minutes to attract insects. An alternative is to leave the sheet up overnight and observe it the next day. Use the hand lens in your Camp-in-a-Box to observe the small details of the insects attracted at night. If you attract a moth, pay careful attention to the antennae. Try sketching what you see, including notes on distinguishing features. This will help you identify the insect later.

Some variables may affect what you see. You will get fewer insects on nights with a bright moon, so it's best to try this on a dark night. Also during the winter, insects are not very active so you may not see many. Lastly, the type of light source you use can attract different types of insects. Try lights with different wavelengths (colors) or a black light to attract something new to your sheet.

Not just moths will be attracted to your insect sheet. Other insects include beetles, walking sticks, praying mantids, assassin bugs, craneflies and if you're lucky you may see lizards catching dinner! Use your hand lens to explore this world of nocturnal animals.

Hog Island campers explore nocturnal insects with Instructor Steve Mason.

Pollinators play an important role in the production of many food crops including apples, almonds, blueberries, and squash to name a few. Bees are the primary pollinators of many of these crops. But over 100,000 insects serve as pollinators and comprise of butterflies, beetles and flies. In the United States many pollinators are declining at an alarming rate. To encourage insects to thrive you can plant native plants. To learn what plants to grow in your yard or community you can use Audubon's Plants for Birds website. Planting native plants will also help birds. Many birds need insects to survive, because they are a primary food source. If you don't have a yard you can help pollinators and birds by growing a small native-plant container garden.

DIY Native-Plant Container Garden

MATERIALS NEEDED:

- Potting soil
- Seeds or plants (research what native plants are best for wildlife at the Plants for Birds website)
- Newspaper and/or cardboard tubes
- Recycled containers – plastic bottles, cans, buckets, etc.
- Tray or pan

Containers for this project could be made from recycled materials like used food containers or you could cut a plastic bottle open to be a container. When cutting or using recycled materials, make sure all edges are smooth so they don't cut your younger people.

Often when you first plant a seed you only need a small area. One easy DIY solution is using newspaper or toilet paper tubes. Practice making a newspaper pot, you can hold them together with masking tape or using folds at the bottom. Or for a quicker solution you can use old toilet paper tubes, simply make a base for each one so the soil doesn't run out. This base can be made with newspaper and tape or by cutting another piece of cardboard to fit the bottom. Once you figure out a method which works well for you, have your children try. Experiment! Which tube seems to work best?

Once you have your pots, fill them with soil and plant the seeds. Typically one to two seeds will be needed for each DIY pot. Place the pots in a pan or waterproof tray and spray them with water. The soil should be wet but not soggy. Place in a sunny window and wait for the plants to sprout. When the seedlings are a few inches tall they can be transplanted. If you just use newspaper you can actually plant the paper and all in a new, bigger container.

Be creative and think of containers you could use. Some ideas include cutting a plastic milk jug in half and filling it with soil or perhaps you have an old bucket that you can use. Just remember to poke some holes in the bottom of the DIY container so water can drain properly. Once your plants are transplanted move them outdoors and see what pollinators come to visit.

The Mason bee is a common species of native bee. They are named from their habit of making compartments of mud in their nests, which are made in hollow reeds or holes in wood made by wood-boring insects. At Hog Island we have an insect/bee house in our camp garden. To build your own insect hotel you can try this Recycled Materials Mason Bee House plan and see if you help attract more bees to your yard.

Building a Native Bee House out of Recycled Materials

MATERIALS NEEDED:

- Medium size food can (if the edges of the can are sharp you can have an adult grind them down)
- 2 cardboard toilet paper rolls (empty)
- Sheets of paper
- Glue
- Tape
- Paint for the tin can (optional)

1. If you want to paint the can, do that first. You can make designs on it or just paint it a solid color.

2. Measure the length of your can and cut your paper in a way that the length of the paper roll will fit inside the can. The band of paper should be ~5 inches long (half the length of a sheet of paper). The goal is to have a roll of 5 layers minimum. Cut the paper as efficiently as you can.

3. Roll the paper around a pencil to get the right shape, then tape edge of the paper band to the roll to keep the diameter, remove the pencil. Create rolls of ¼ in up to ½ in. You will need ~30 rolls, depending on the size of your tin can and paper rolls.

4. You can apply a thin layer of glue at the bottom of your can to keep things in place. Place your 2 toilet paper rolls anywhere you wish inside the can and fill up the empty space with your remaining paper rolls.

Once done shake your can slightly and make sure that everything stays in place. Add more glue at the bottom or more paper rolls to keep things sturdy if needed.

Find a location for your bee house.

The new mason bee house needs to be in an open, sunny spot which isn't shaded by plants, about 3ft from the ground. Make sure everything is secure and won't blow around in the wind.

Be Creative! You could also use an old jar if you don't have a can. You can experiment with different things inside like straws, rolled up paper, etc.

One of our favorite birds at Hog Island is the Ruby-throated Hummingbird. Did you know hummingbirds beat their wings up to 100 times per second? They can hover in one spot, fly forward and backwards, side to side, straight up and down and even upside-down! Hummingbirds are also pollinators. As they feed from flower to flower they transfer pollen. The pollen becomes attached to their small feathers and beak and then is moved from one plant to another. You can help these hardworking foragers by providing them their favorite meal, nectar. You don't need to buy hummingbird nectar as it's easily made at home. You also don't need to dye your hummingbird food. Red food coloring can be harmful to birds and the hummingbirds will find your food without it.

DIY Hummingbird Food

MATERIALS NEEDED:

- ¼ cup of plain white table sugar (do not use honey or refined white sugar as it can be harmful)
- 1 cup boiling water
- Bowl
- Spoon

Mix the sugar and boiling water in a bowl until the sugar is dissolved. Use the spoon to stir gently. Be careful not to splash the hot water on your skin. Wait for the mixture to cool. Fill a feeder with the nectar and hang it outside. Wait for the hummingbirds to come!

If you don't have a hummingbird feeder you can make one out of a plastic bottle or jar with holes in the lid.

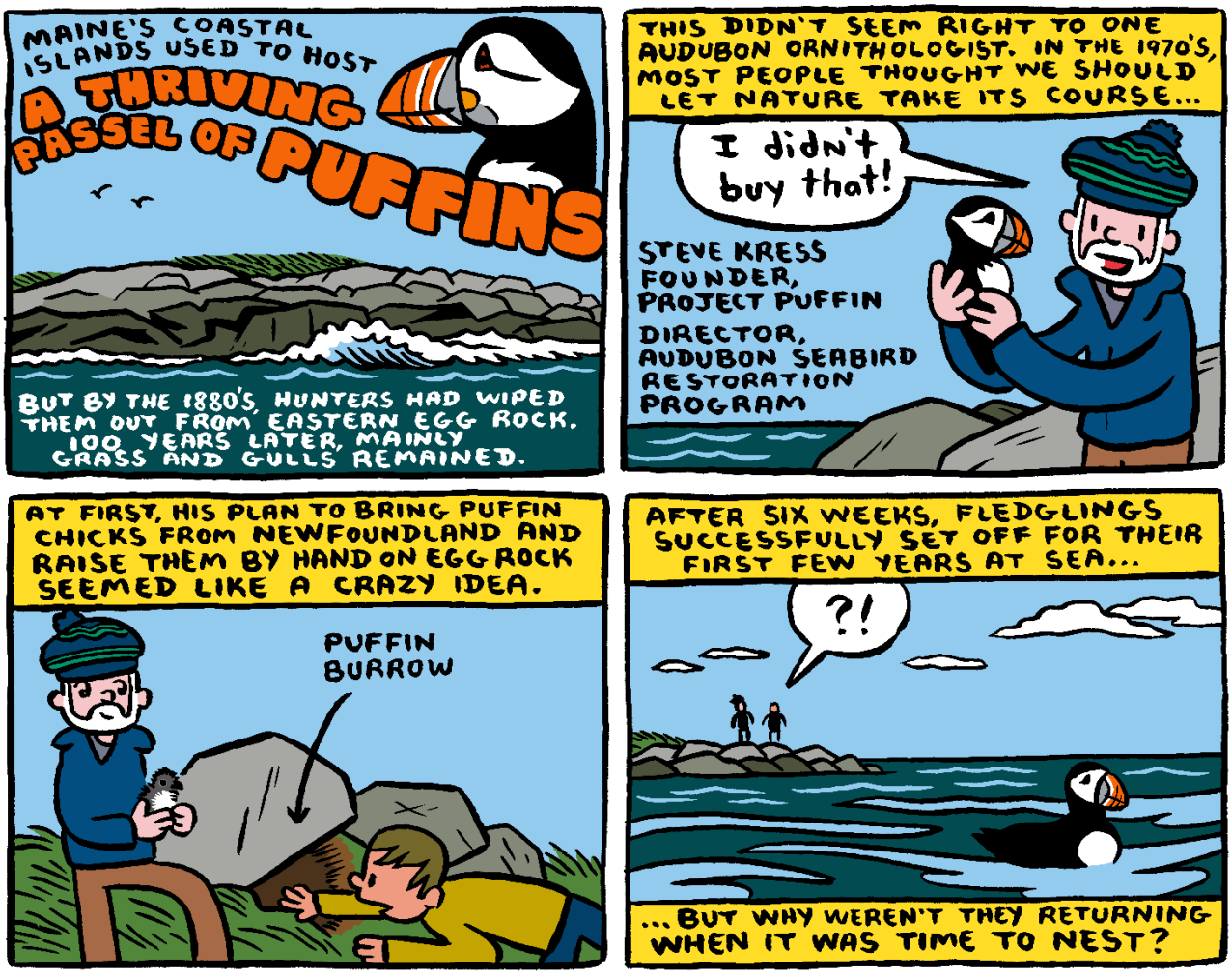
Ruby-throated Hummingbird and honeysuckle
David Shipper/Audubon Photography Awards

Puffin Palooza

Project Puffin was founded over 40 years ago but we keep learning more and more about these fascinating seabirds. Join us as we explore all things puffin-related.

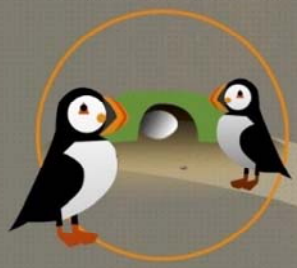
Fun Facts:

The Project Puffin Story:



Watch Puffins Live:

Puffins Nest



Puffins lay just 1 egg a year.

Puffins Fledge

Puffin chicks, called pufflings, fledge at night scampering alone from the burrow to the ocean.

Puffins Float

Puffin Fact
Puffins depend on nutrient-rich fish like herring and white hake. Responsible fishing can help protect puffins' food supply. You can do your part by purchasing sustainable seafood.

They spend the next 2-3 years floating at sea.

Puffins Fly

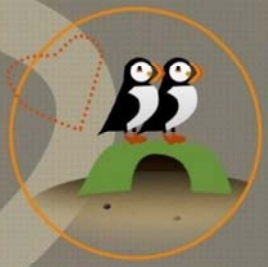
Puffins over-winter far from land from August through early spring each year.

Puffins Return

Puffins return to the vicinity of the colony where they hatched and may nest near their original burrow.

Puffin Fact
Scientists are starting to unlock the secrets of puffin migration. One bird with a tracking device flew to Labrador, then Bermuda, then back to Maine (a journey of 4,600 miles) in eight months.

Puffins Mate

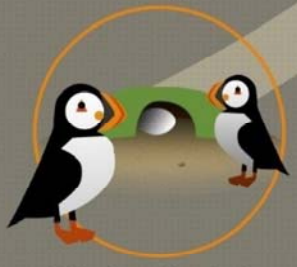


Puffins usually mate for life and return to the same burrow each year.

Puffin Fact
Puffins beat their wings up to 400 times per minute and can fly up to 55 mph, which is faster than a racehorse can run.

Puffins Nest...

all over again!



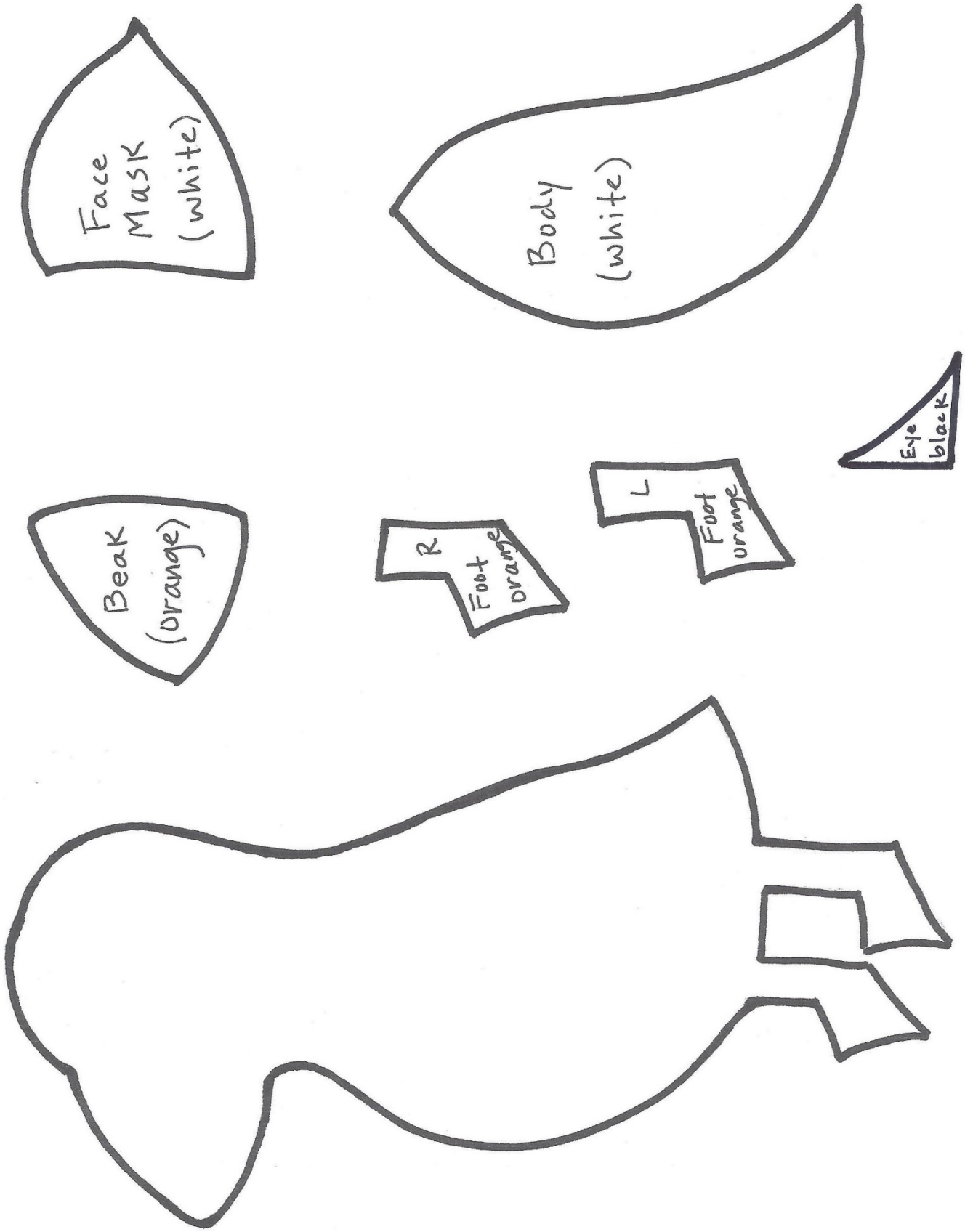
Puffins breed in colonies from April to August.

Protect the Puffin:

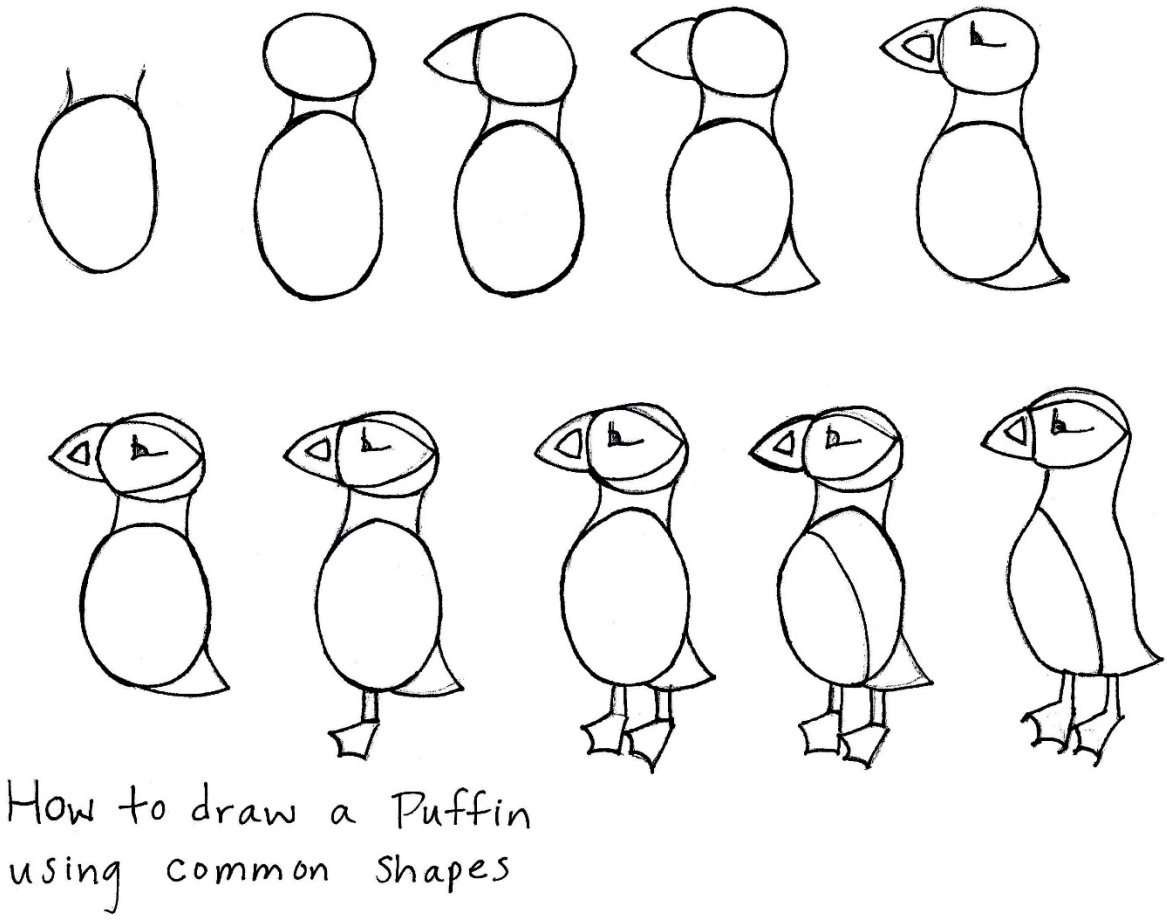
In 2012, puffin chicks weighed less and pufflings and adult birds died in greater numbers than seen before. Climate change can have negative effects on puffin populations. Warming ocean temperatures in the North Atlantic may contribute to increasing numbers of butterfish, a round-bodied fish that puffin chicks have difficulty swallowing.

Puffin Patch

Cut out the pattern and use it to help you cut out the puffin shapes in the felt. After you have your felt pieces cut, then sew them together using the sewing kit. Have an adult help thread the needle and make a simple running stitch to attach the two pieces of felt together. Once you have your patch made, you can attach it to a t-shirt, bag or even make a flag out of scrap fabric or an old pillow case. Hog Island Audubon Camp directors have a tradition of flying their own unique flags. See some of the examples of former camper director flags below. Share your flag or patch creation with us at hogisland@audubon.org


Face Mask (white)
Body (white)
Eye black
Beak (orange)
R Foot orange
L Foot orange

Drawing a puffin can be a challenge the first time. Use this step-by-step guide to draw a puffin using common shapes.



Thank you for joining our Family Camp-in-a-Box!

To learn more about Hog Island Audubon Camp, visit our website. Family Camps are designed for children ages 8 to 13 with a parent/grandparent/guardian. All activities are designed to be done together as a family.

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Hog Island
Audubon Camp