

PIRATE SCAVENGER HUNT

AGES

Children 6+
Multigenerational

PROGRAM DESCRIPTION

Participants explore the library or community looking for treasures! Modify the scavenger hunt list to suit any theme or audience. Participants could also be given a treasure map to follow until they reach the X. Excellent for family nights. Suggested runtime: 45 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Printed scavenger hunt lists (modify as desired); pencils

Suggested instructions for an in-person family event:

- Divide participants into groups of 2–3 people.
- Give them 30 minutes to explore and check off their findings.
- Be sure to give the exact time all groups should be back at the library.
- Don't forget prizes!

TIP:

See Here Be Monsters on page 329 for a family map-making program that could be combined with this scavenger hunt.

TIP:

Prearrange with community partners to place pirate and ocean-related props and pictures. Think inflatable sharks or mermaids, and nets with starfish or seashells.

ADAPTATION:

You could also have patrons paint seashells, then hide them around town. Let others post their findings on the library's Facebook page!

ADAPTATION:

Another idea is to hide laminated pirate/ocean words throughout a small geographic area, such as a local park. Participants write down all the words they can find, then use those words to make a sentence (or a short story). They get a prize for bringing their sentence to the librarian.

GAME/ACTIVITY | PASSIVE | LOW COST

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Books

Non-fiction

Treasure Hunting and Real Life Treasure Hunters (2019) by Catherine Fet (children's)

The Treasure Hunter's Handbook (2014) by Liz Gardner Walsh and Jennifer Smith-Mayo (children's)

Pirates and Treasure (1995) by Saviour Pirotta (children's)

Fiction

Treasure Island (1881) by Robert Louis Stevenson (children's)

Captain Jack and the Pirates (2016) by Peter Bently and Helen Oxenbury (children's)

The Treasure of Pirate Frank (2018) by Mal Peet, Elspeth Graham, and Jez Tuya (children's)

Pirate Nell's Tale to Tell (2020) by Helen Docherty and Thomas Docherty (children's)

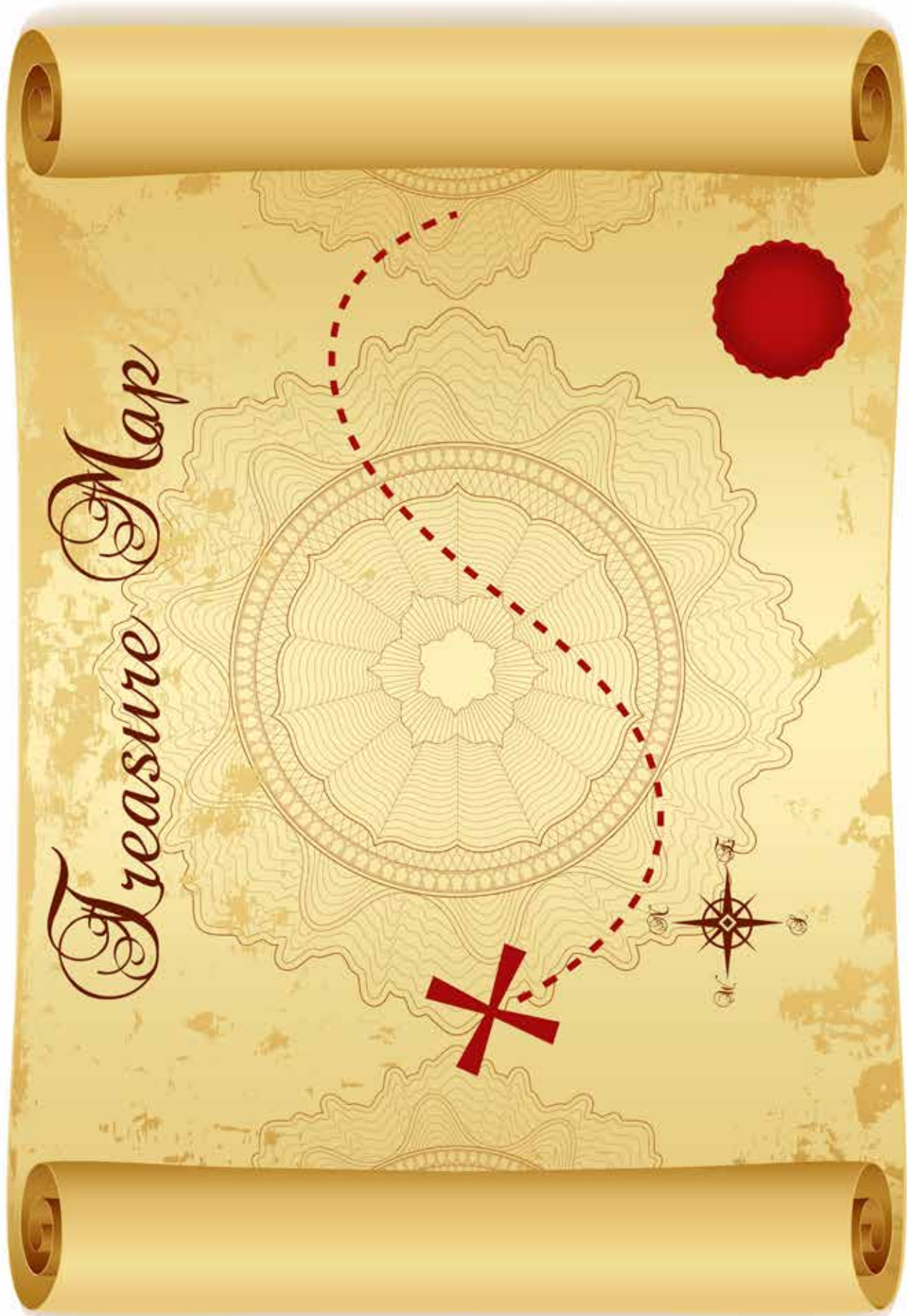
Printables

Blank Treasure Map

Pirate Scavenger Hunt

FUN FACT:

It is a literary trope that pirates buried their treasure, born from the popular novel *Treasure Island*: See <https://bit.ly/2TlwNVI> or <https://bit.ly/3hY76Ve> for more info.



PIRATE SCAVENGER HUNT

Can You Find...

A plank of wood _____

An eye patch _____

A hook _____

A rope _____

A flag _____

A map _____

An X _____

A parrot _____

A mermaid _____

A seashell _____

A coin _____

A key _____

A skull _____

A barrel _____

Stripes _____

Something that rhymes with wave _____

Something that rhymes with ship _____

Something that rhymes with blue _____

Something gray like a shark _____

Something wavy like seaweed _____

Something shiny like treasure _____

Something colorful like a parrot _____

SECRET MESSAGE IN A BOTTLE

AGES

Children 8+ years

Teens/tweens

PROGRAM DESCRIPTION

Decoding secret messages is sure to be a hit with older children and tweens! First they create their secret codes, then write secret messages to each other. Have them put their secret messages into empty soda bottles for transport. Suggested runtime: 45–60 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials: Paper; pens/pencils/markers; empty plastic water bottles; printable code references (see Resources); cardstock, split pins, and template (optional, for cipher wheel).

Instructions:

- Before the program, set up tables and chairs, and set out supplies.
- Once children have experimented with codes, they can either decode messages that you've put in bottles before the program, or trade their own codes with other children to decipher.
- They could also decorate the bottles.

Secret Code Ideas

Number Substitution

One number represents one letter. The simplest version is 1=A, 2=B, 3=C, and so forth.

Morse Code

Letters are represented by lines and dots. See Lighthouse STEAM Challenge on page 304 for a Morse code printable.

GAME/ACTIVITY | CRAFT | LOW COST

Book Cipher

This code requires that both the code writer and the person decoding it use the same edition of an agreed-upon book. It references entire words rather than letters. It works by providing numbers in sequences of threes—these numbers refer to the page number, line number, and word. You could use books in the library as references for this cipher!

Pigpen Code

This code uses shapes and dots to represent letters. (See Resources for a printable Pigpen code alphabet.)

Cipher Wheel

This code gives the children an opportunity to create their own cipher wheel.

- Print the cipher wheel template (see Resources) onto cardstock.
- Cut out the circles.
- Write the alphabet in the outer margin squares of each wheel.
- Use a split pin to secure the wheels together through the center, with the smaller wheel on top.

To use:

- Align the wheels so that the alphabet matches on both wheels.
- Choose two letters that both you and the recipient of the code will need to remember.
- Adjust the wheels so that these two letters line up.
- Now, you can use a simple letter substitution method to write your code!

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES**Web**

Secret codes from *Enchanted Little World*: <https://bit.ly/3c05AhP>

Secret codes from *Pickle Bums*: <https://bit.ly/3hTpiiZ>

Cipher wheel tutorial from *Savvy Homemade*: <https://bit.ly/3fnFuaq>

Printable pigpen cipher from *Pickle Bums*: <https://bit.ly/3umjuAZ>

Books

Non-fiction

Top Secret: A Handbook of Codes, Ciphers, and Secret Writing (2006) by Jenna Lareau (children's)

Samuel Morse, That's Who! (2019) by Tracy Nelson Maurer and el primo Ramón (children's)

Fiction

The Uncorker of Ocean Bottles (2016) by Michelle Cuevas and Erin E. Stead (children's)

Harriet the Spy (2001) by Louise Fitzhugh (children's)

The Haunted Lighthouse (The Code Busters Club) (2013) by Penny Warner (children's)

The Secret Three (1963) by Mildred Myrick (children's)

The Mysterious Message (Geronimo Stilton Micekings) (2017) by Geronimo Stilton (children's)

Printables

Alphabet Cipher Wheel



AHOY, MATEY! TALK LIKE A PIRATE DAY

AGES

Children 8+

Teens/tweens

PROGRAM DESCRIPTION

Celebrate the seafaring life through knotting and pirate talk! This program has several activity ideas. Run a quiz-style game on sailor/pirate vocabulary, modified for age-appropriateness. Make temporary tattoos and set up a sailor's "tattoo parlor." Teach a few basic seafaring knots and let participants practice them before running a contest to see who can tie them the fastest. Children can also use basic knots to create one-of-a-kind friendship bracelets or reef knot necklaces. Choose whichever games and crafts would best suit your library and audience, or run them all as stations. This program works well outdoors, and the knot-tying component would be easy to include in take-and-make bags. Suggested runtime: 45–90 min.



Image source: Shutterstock

Clove hitch knot

MATERIALS AND PREPARATION

Sailor's Tattoo Parlor

Materials: Printable clip art (see Resources); regular inkjet printer; white letter-size printer paper; A4 tattoo transfer paper; popsicle sticks

Instructions:

- Print tattoo clip art onto regular printer paper
- Apply adhesive transfer paper to printed sheets and remove air bubbles with popsicle stick
- Cut out tattoos
- Set up a tattoo station

TIP:

If your library subscribes to Mango Languages, it includes Pirate!

NOTE:

International Talk Like a Pirate Day is on September 19, so you could also run this program in the fall.

TIP:

Temporary tattoos also make great prizes for other programs. Get some printed with your library's logo here: <https://bit.ly/2STarun>

ADAPTATION:

Older audiences might love a presentation about historical pirates or what life is like on the high seas.

TIP:

If you're printing words, remember to print a mirror image of the tattoo! Otherwise, it will print backwards on skin.

Seafarer's Knots

Materials: Lengths of rope or macrame cord; pieces of doweling or overturned tables (to hitch to the legs); knot-tying books from your collection; embroidery floss; tape; ocean-themed charms, beads, and letters (optional); Cotton rope 3–10mm; scissors; ruler; masking tape

Instructable tutorial here: <https://bit.ly/3yGUDv3>

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Add an extra volunteer to each station to help with crafts.

RESOURCES

Web

Reef knot necklace from *Instructables*: <https://bit.ly/3yGUDv3>

“How to Tie Friendship Bracelets” from *WikiHow*: <https://bit.ly/3bZq7Tz>

Ways to start and finish bracelets from *DIYholic*: <https://bit.ly/3bYseXQ>

Sliding knot paracord bracelet from *Bored Paracord*: <https://bit.ly/3fqJG9p>

“Junior Pirates” from *Talk Like a Pirate*: <https://bit.ly/3ySzEFY>

Books

Non-fiction

The Whydah: A Pirate Ship Feared, Wrecked, and Found (2017) By Martin W. Sandler (YA)

Brevertton's Nautical Curiosities: A Book Of The Sea (2010) by Terry Brevertton (YA)

Fiction

The Last Voyage of Poe Blythe (2019) by Ally Condie (YA)

The Abyss Surrounds Us (2016) by Emily Skrutskie (YA)

Daughter of the Pirate King (2017) by Tricia Levenseller (YA)

Along the Saltwise Sea (2021) by A. Deborah Baker (YA)

The Bloody Jack series (2002–2014) by L. A. Meyer (children's)

The Castaways of the Flying Dutchman series (2002–2005) by Brian Jacques (children's)

Hook's Daughter: The Untold Tale of a Pirate Princess (2018) by R.V. Bowman (children's)

Printables

Nautical Knots

Oysterman and Stevedore Knot Steps

Sailor/Pirate Tattoos

Sailor Vocabulary

TIP:

If running as a large event with many people, it might be helpful to have a “cool down” space, a smaller, quieter room that can be used if a participant becomes overwhelmed by the noise/number of people.



Sheet Bend



Square Knot



Clove Hitch



Reef Knot



Figure 8 Knot



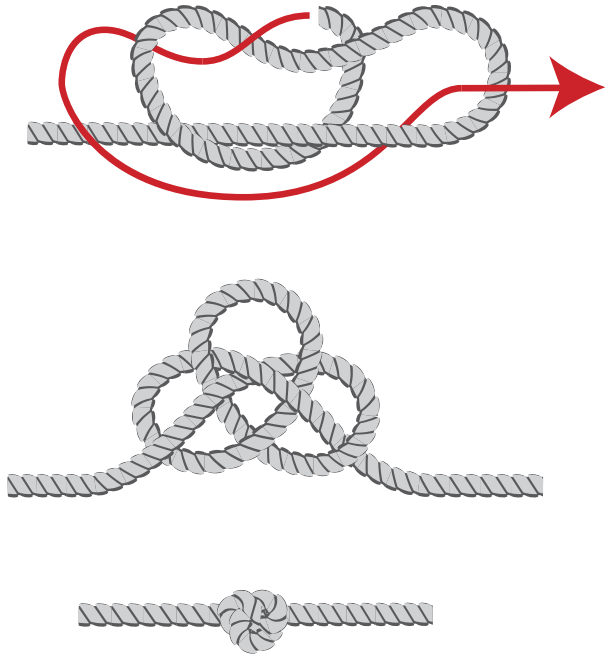
Fisherman's Knot



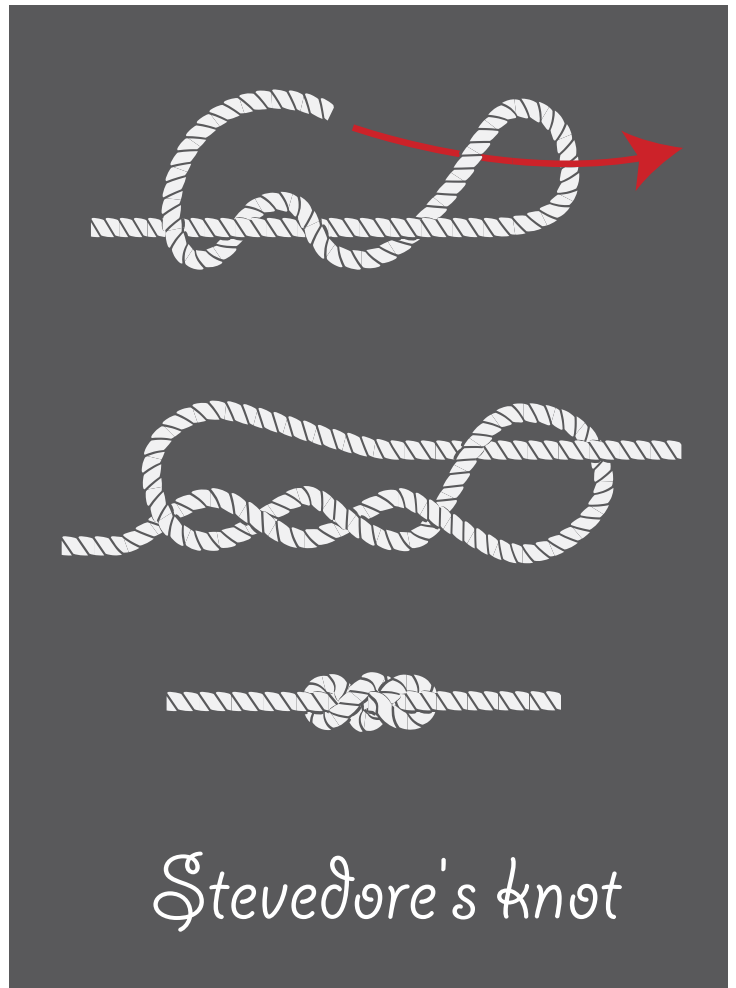
Carrick Bend



Overhand Knot



Oysterman's knot



Stevedore's knot



SAILOR VOCABULARY

Ship Vocabulary

1. Baggywrinkle: A soft covering for standing rigging that prevents sail chafing.
2. Bumpkin: A beam projecting from the hull of a vessel.
3. Scantlings: The dimensions of a ship's structure.
4. Port and starboard: The left and right of a vessel.
5. Bow and stern: The front and back of a vessel.
6. Fathom: Unit of length to measure depth, the equivalent of six feet.
7. Bear: A large square stone used with sand to scrape wood decks clean.
8. Skiff: A small boat for leisure or fishing.
9. Stow: To store or put things away.

Sailor Vocabulary

1. Geedunk: Junk food.
2. Avast!: Stop what you're doing.
3. Scuttlebutt: Sailor gossip; also, an open cask of drinking water.
4. Landlubber: Someone unfamiliar with the sea.
5. Sea dog: An experienced sailor; also, a pirate or a harbor seal.
6. Flotsam: Wreckage from a ship floating on the water.
7. Jetsam: Goods from a ship cast deliberately overboard.
8. Grog: A mix of rum and water.
9. Bottomry: Pledging a ship as security in a financial transaction.

ANIMAL CROSSING: NEW HORIZONS ISLAND HOP

AGES

Tweens

PROGRAM DESCRIPTION

Animal Crossing: New Horizons has tons to explore on land and in the ocean! Invite patrons to visit library staff islands for treasures, games, freebies, and more! Make this a one-island journey, or more, if multiple library staff have islands to play. A fun social game for making friends. This is also a good program to use as filler at the end of other programs. Suggested runtime: 15–30 min.



Image source: Shutterstock

TIP:

Enlist the help of a teen volunteer if you aren't familiar with the game.

MATERIALS AND PREPARATION

Materials: Nintendo Switch; Animal Crossing New Horizons

Instructions:

- In advance, set up your own island and game.
- If running virtually, share Dodo Codes with patrons before the event.
- Also share guidelines for good gamer etiquette.
- If you have a lot of virtual interest, have participants sign up for 15-min time slots.

Game ideas:

- For an ocean scavenger hunt, research what ocean creatures spawn during this time of day/year. Create a list of fish or deep sea creatures to find.
- For an island fishing tournament, create different fishing challenges with specific fish to find, or set a timer and see who can catch the most fish.
- For a seek-and-find gift grab, hide bells and wrapped presents around your island, such as behind buildings, trees, and/or other structures.

GAME/ACTIVITY | LOW COST

Tips for gameplay:

- In the game, plan to have extra tools, like fishing rods, wetsuits, and vaulting poles to help island visitors that forget something.
- Only seven people can be on your island at once, including yourself!
- Island hoppers can only join one at a time, and the game pauses every time a new person lands.
- Keep a look out for special visitors, like Flick, Mabel, Redd, etc., and let visitors know to visit with them.
- Only people that are your “best friend” can use a shovel or axe.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Virtual or in-person. Solo-librarian friendly.

RESOURCES

Web

Guide to Animal Crossing: New Horizons from *Digital Bookmobile*:
<https://bit.ly/3oTI1gY>

Virtual library in Animal Crossing: New Horizons from *KidLit TV*:
<https://bit.ly/3wvd9ou>

Game ideas for Animal Crossing: New Horizons from *Screen Rant*
<https://bit.ly/3yHRsTT>

Tips for playing Animal Crossing: New Horizons from *Nintendo*:
<https://bit.ly/3bTZRtR>

Books

Non-fiction

Enchanted Air (2016) by Margarita Engle (YA)

Island: A Story of the Galápagos (2012) by Jason Chin (children’s)

Fiction

Lalani of the Distant Sea (2019) by Erin Entrada Kelly (YA)

Beauty Queens (2011) by Libba Bray (YA)

Summer of Salt (2018) by Katrina Leno (YA)

The Floating Islands (2011) by Rachel Neumeier (YA)

CRAFT

OCEAN TREASURE CHESTS OR JEWELRY TRAYS

AGES

Teens/tweens

PROGRAM DESCRIPTION

Where do we stash our treasures? In this program, teens/tweens decorate either a wooden box to make a treasure chest, or an oyster shell to make a jewelry tray. Offer a variety of paints and napkins/magazines so participants can showcase their own style. See Resources for a coloring sheet they can work on while they wait for their projects to dry. Don't forget the treasure hunt book display! This program could also be adapted for take-and-make bags. Suggested runtime: 60–90 min.



Image source: Shutterstock



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Oyster shells or craft sea shells (large)
- Small wooden boxes
- Mod Podge
- Acrylic paints
- Paint brushes
- Scissors
- Ocean themed napkins or magazines
- White or gold spray paint (optional)

CRAFT

Preparation:

- Check local seafood markets for oyster shells.
- Mix the acrylic paint with a little mod podge for better adhesion.
- Optionally, pre-paint the shell interiors white to cover dark spots.
- Set up tables and chairs

UNIQUE SPACE AND/OR PERSONNEL NEEDS

One extra staff member or volunteer for in-person programs.

RESOURCES**Web**

Oyster shell dish tutorial from *A Piece of Rainbow*: <https://bit.ly/3oTjsuJ>

Oyster shell dish tutorial from *Kailea Crafting on the Fly* (video):
<https://bit.ly/3uo9ibf>

BooksNon-fiction

Pirate Hunters: Treasure, Obsession, and the Search for a Legendary Pirate Ship (2016) by Robert Kurson (YA/adult)

Treasure (Eyewitness Books) (2010) by Philip Steele (children's)

The Usborne Book of Treasure Hunting (1999) by Anna Claybourne et al.

Fiction

The Oyster Thief (2018) by Sonia Faruqi (YA)

Pirates of the Caribbean: The Price of Freedom (2011) by A.C. Crispin (YA)

The Pirate Captain's Daughter (2011) by Eve Bunting (YA)

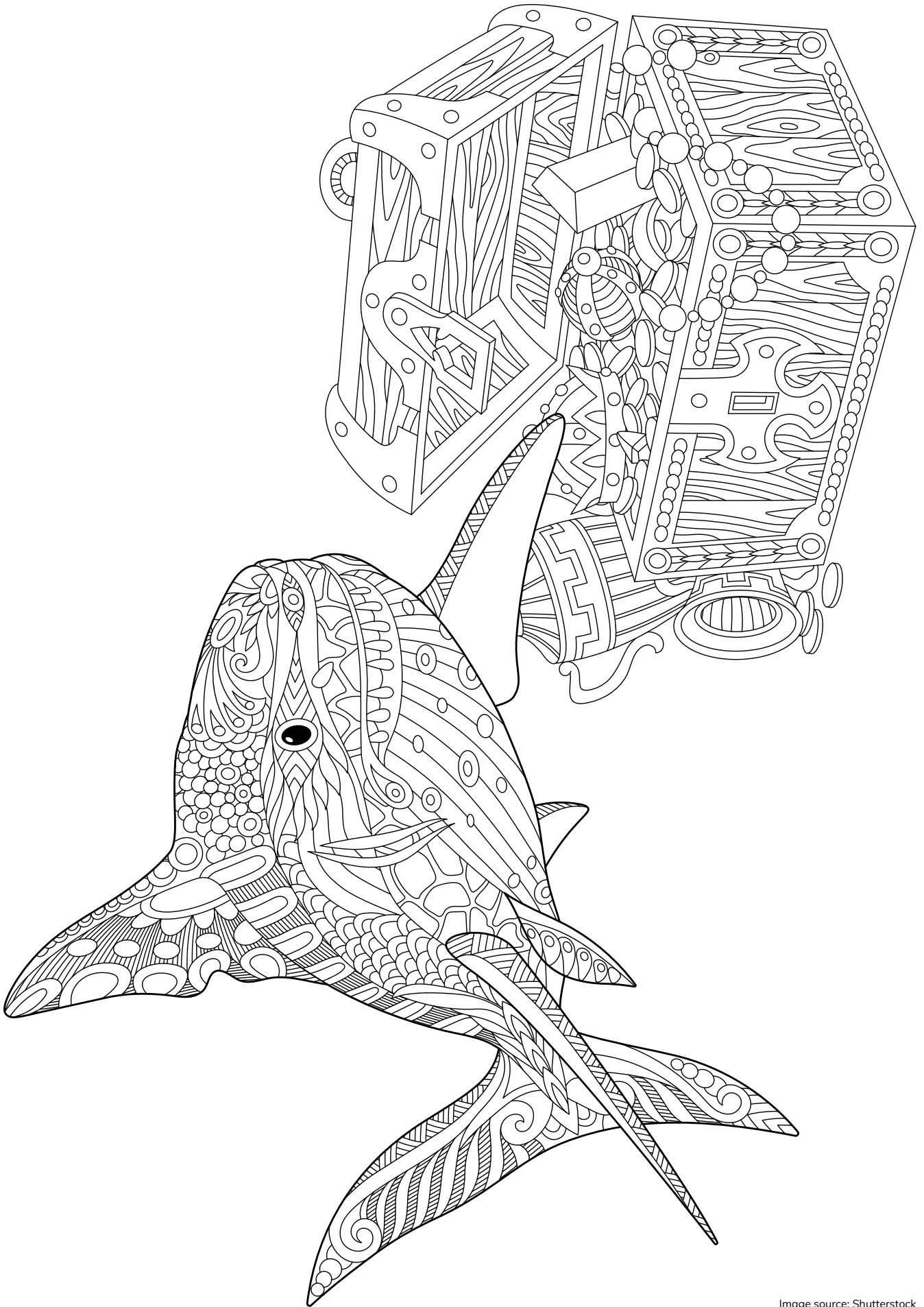
The Storm Keeper's Island (2019) by Catherine Doyle (children's)

Gold (2017) by Geraldine Mills (children's)

Pirates!: The True and Remarkable Adventures of Minerva Sharpe and Nancy Kington, Female Pirates (2005) by Celia Rees (YA)

Printables

Shark and Treasure Chest Coloring Sheet



CRAFT

MARBLED MUGS

AGES

Teens/tweens

PROGRAM DESCRIPTION

Personalize a mug with a marbled ocean or coastline scene! Participants dip their mugs into a mixture of water and nail polish to get the marbled effect. Provide a variety of nail polish colors to allow for more variation. Each mug is unique, and they are quick and easy to make. You can also create take-and-make bags that each include a mug and marbling instructions for doing it at home. Suggested runtime: 45 min.



Image source: Sally Mason of LeRoy Collins Leon County Public Library, Tallahassee, FL

MATERIALS AND PREPARATION

Materials:

- White or black ceramic mugs, or reusable water bottles
- Nail polish (but NOT chunky glitter nail polish because it clumps)
- Deep disposable bowls or aluminum pans
- Plastic grocery bags
- Paper towels
- Warm water
- Table cloths for tables
- Mod Podge to make the mugs dishwasher safe
- Paintbrushes
- Optional: Toothpicks, nail polish remover, cotton balls, gloves, ocean animal silhouettes

For an in-person program, set up tables and chairs, and set out supplies. For take-and-make bags, include instructions, a mug, food coloring, and nail polish.

TIPS:

Nail polish residue is very hard to get off of bowls, so use large craft/paint bowls or disposable bowls.

Check your local Goodwill or Dollar Store for white ceramic mugs.

CRAFT

To make:

- The hotter the water, the better. Keep a kettle or coffee pot brewing, and add one hot pot to each gallon of cool water. This allows the water to be warm enough for the nail polish to spread, but cool enough to touch.
- After the mugs have been dipped and dried, coat with Mod Podge.
- See Resources for variations.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

One extra staff member or volunteer for in-person programs.

RESOURCES

Web

Marbled mugs tutorial from Sweetest Occasion: <https://bit.ly/3fOaNu4>

Simple marbled mugs from What's Up Moms (video):
<https://bit.ly/3yTw6Do>

Marbled mugs tutorial from DIY Candy: <https://bit.ly/3wAK3nC>

Books

Fiction

Secret Sisters of the Salty Sea (2019) by Lynne Rae Perkins

The Vanishing Deep (2020) by Astrid Scholt (YA)

Starfish (2017) by Akemi Dawn Bowman (YA)

Draw the Line (2017) by Laurent Linn (YA)

Non-fiction

This is What I Know About Art (2020) by Kimberley Drew and Ashley Lukashevsky (YA)

Techniques for Painting Seascapes (2010) by Borlase Smart (YA/adult)

CRAFT

PLASTIC BAG PLANT POT

AGES

Teens/Adults

PROGRAM DESCRIPTION

Turn plastic bags into treasure! To reduce the risk of them ending up in our precious waterways, gather patrons to repurpose their plastic grocery bags into yarn for plant pots. This is a simple beginner crochet project. If you don't crochet, consider enlisting the help of a volunteer instructor, or see the alternate craft options for coasters, reusable bags, and braided flower pots. This is also good for a passive and/or virtual program with take-and-make bags. Suggested runtime: 60–90 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Plastic grocery bags (collect beforehand)
- Crochet hooks
- Coat hangers
- Scissors
- Pins
- Sewing needles and strong thread
- Printed instructions (optional)



Image source: Shelby Graam of The Indianapolis Public Library, Indianapolis, IN

ADAPTATIONS:

You could also combine this program with outreach with a local craft group or community organization—or host a pop-up library!—to hold this program out in the community.

CRAFT

To make plarn:

1. Flatten your plastic bags out on a tabletop.
2. Fold the bags vertically into thirds, and smooth them out.
3. Working with one bag at a time, use scissors to cut neatly across the top and bottom, removing the handles and the bottom seams.
4. Starting at one end of your folded bag, slice the bag into pieces that are approximately 1”.
5. Unfold these pieces; they will all be loops.
6. Connect the loops as follows:
 - Lay out two loops so that the left loop overlaps the right.
 - Reach your left hand underneath the left loop and pull its end backwards towards the left, underneath the right loop’s end, and then pull it back through the left loop.
 - The far side of the left loop will flip over and form a knot. Pull it taut, but be careful not to rip the bag.
7. Continue to connect the loops, adding additional loops to the left side of the chain.
8. Make sure that the two sides of each loop are even.
9. Once you have connected all of your loops, continue with the rest of your bags, and wrap your plarn into a ball or around a piece of cardboard to keep it from getting tangled.

To make a braided flower pot:

1. Take three balls of plarn and tie the ends of them to the bottom of a coat hanger, leaving a “tail” beyond the knots (about 5”).
2. Begin to braid the three strands of plarn into a basic flat plait: Cross the right-hand section over the centre section, then the left-hand section over that. Continue to criss-cross the strands, alternating which section is in the centre.
3. Try to maintain a medium-level tension as you braid. Too little tension and the braid will fall apart; too much and you will get a very small braid with no texture.
4. Continue to braid until you are about 5” from the end of the plarn, and then tie the ends together.
5. Untie the top from the coat hanger, then retie those ends together.
6. Coil your braid into a flat circle. This will be the base of your flowerpot, so adjust the size according to how big or small you would like it to be.

TIP:

See Resources for a link to the crochet tutorial.

CRAFT

7. Secure the base with a pin, and then sew it together by weaving a threaded needle over and under the layers as you push it through the centre, and across to the other side.
8. Do this as many times as necessary to secure the base.
9. Begin to build up the sides of the flowerpot by coiling the braids and stacking them on top of one another. Tack the layers into place with the needle and thread every 1–2" by sewing diagonally through the braids and securing them to the layers beneath them.
10. Repeat the process until you reach the end of your braid, or you reach a size for your flower pot that you like.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

One extra crafty staff member or volunteer to help braid or crochet.

RESOURCES

Web

Plarn tutorial from Amanda's Happy Hearth: <https://bit.ly/3oWMC0L>

Plastic bag flower pot crochet from Mami Made It: <https://bit.ly/2SyqGg6>

Braided plarn tutorial from SFGate: <https://bit.ly/3oTKwPf>

Braided plastic pot tutorial from 1 Million Women: <https://bit.ly/3fMIFHT>

Plarn and coaster tutorial from Kenarry: <https://bit.ly/3c0qT2O>

Books

Non-fiction

Upcycling: 20 Creative Projects Made from Reclaimed Material (2016) by Max McMurdo

Upcycling Outdoors: 20 Creative Garden Projects Made from Reclaimed Materials (2018) by Max McMurdo

Upcyclist (2015) by Antonia Edwards

Fiction

Balance of Fragile Things: A Novel (2012) by Olivia Chadha (adult)

Falling Into Green: An Eco Mystery (2012) by Cher Fischer (YA)

The Last Wild trilogy (2014–2015) by Piers Torday (children's)

OUTSIDE PRESENTER | OUTREACH | PASSIVE | LOW COST

PIRATES OF THE PAST

AGES

Adults

Multigenerational

PROGRAM DESCRIPTION

Learn the truth about pirates of the past, and separate the myths and legends from the facts. If you are unable to locate a historian for your program, see Resources for some pirate documentaries. Modify the presentation or films for younger or multigenerational audiences. Could also be combined with Ahoy, Matey! Talk Like a Pirate Day on page 39 for a multigenerational event.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Computer/projector and screen
- Audience chairs

To prepare, identify pirate resources that best suit your audience (and to which your library has public viewing rights).

ADAPTATIONS:

For a passive program, display pirate resources and run a poll about pirate fact vs. fiction. This is also a good program to run over a virtual platform. Don't forget to include closed captioning and audiobooks

OUTSIDE PRESENTER | OUTREACH | PASSIVE | LOW COST

UNIQUE SPACE OR PERSONNEL NEEDS

For outreach, consider local teachers or history organizations.

RESOURCES

Web

Pirate History Podcast: <https://bit.ly/3vrbVKV>

Pirate information and activities from *Pirate Attack*:
<https://bit.ly/3i1W3KP>

Pirate lessons from *Share My Lesson*: <https://bit.ly/3vtFMSL>

Movies

Smithsonian: The Real Story: Pirates of the Caribbean DVD. PBS (Direct), 2017.

History: True Caribbean Pirates DVD. Lionsgate, 2010.

National Geographic: National Geographic: Blackbeard—Terror at Sea DVD. National Geographic Video, 2006.

Books

Non-fiction

Pirates and Privateers in the 18th Century—The Final Flourish (2019) by Mike Rendell (adult)

Black Flags, Blue Waters: The Epic History of America's Most Notorious Pirates (2019) by Eric J. Dolin (adult)

The Last Pirate of New York: A Ghost Ship, a Killer, and the Birth of a Gangster Nation (2019) by Rich Cohen (adult)

Enemy of All Mankind—A True Story of Piracy, Power, and History's First Global Manhunt (2020) by Steve Johnson (adult)

Fiction

The Devil in Paradise: Captain Putnam in Hawaii (A Bliven Putnam Naval Adventure) (2019) by James L. Haley (adult)

In Search of Truth (Deadly Force #3) (2020) by Sharon Wray (adult)

Preacher's Frenzy (Preacher/First Mountain Man) (2019) by William W. Johnstone and J.A. Johnstone (adult)

The Sin in the Steel (The Fall of the Gods #1) (2020) by Ryan Van Loan (adult)

The Dragonfly Sea: A Novel (2019) by Yvonne Adhiambo Owuor (adult)

GIVE ME A SIGN! FUN WITH DIVING SIGN LANGUAGE

AGES

Children 8+ years
Multigenerational

PROGRAM DESCRIPTION

Learn about diving hand signals, then use them in an “underwater” obstacle course! Easily adaptable for children of all ages by controlling the number of hand signals you learn, or by adjusting the difficulty of the obstacle course. Good for families as well! See Resources for videos created by Allyson Brickner of Southwest Public Libraries in Grove City, OH. Suggested runtime: 45 min



Image source: Shutterstock

TIP:

See Printables for an infographic on organizing multigenerational events, created by Stacey Brown of Augusta Memorial Public Library, Augusta, WI.

TIP:

When designing the courses, be sure to keep mobility issues in mind. Keep spaces wide and provide alternate routes for those in wheelchairs.

ADAPTATION:

If you can find a diving instructor, dive school, or diving enthusiast in your area, have them come in and talk about their experiences, bring their diving equipment and explain what hand signals they use.

MATERIALS AND PREPARATION

To introduce the topic, show a photo of a diver in a wetsuit/mask, or watch a video of scuba divers underwater. Discuss how communication changes when diving. For example, the mask/regulator makes seeing faces difficult, and divers can't talk. If you have a diving face mask/snorkel available you can use them to demonstrate. What might you need to say to someone under water? How could you make that clear without talking?

Hand Signals Practice

- Divide participants into groups of 2–4.
- Give each group at least one copy of the scuba hand signals page.
- Have them practice communicating with each other using only hand signals.
- Then tell a diving story for the whole room to practice together. It might sound something like this: “You have just dived into the ocean. Get with your buddy! (They show the “get with buddy” sign.) Tell your buddy you want to dive down! (They show the “go down” sign.) Or have groups make up their own stories.

IMAGINARY DIVE

Materials:

- Face masks (pandemic style), goggles/swim masks, or crafted masks
- Obstacle cards or objects

Instructions:

Keep participants in groups of 2–4. Have them wear “scuba” masks of some sort. One person in each group is the “dive leader” and directs the other members around the obstacle course using only hand signals. You can set up the obstacle course in your programming space beforehand, or have participants write/draw obstacles on poster board to spread around the room. For example, a sign might say “Oh, no! You're running short on air!” At that obstacle, divers must solve the problem by using the dive sign “ascend.” You can also designate a volunteer to read each obstacle card out loud (for participants who cannot read).

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly

TIP:

In addition to the handout, play YouTube videos that demonstrate diving hand signals! See Resources for videos made by Allyson Brickner of Southwest Public Libraries in Grove City, OH.

TIP:

To make the experience even more immersive, set up a laptop/projector to project a live underwater scene that participants can “swim” through.

RESOURCES

Web

Video (silent) by Allyson Brickner of Southwest Public Libraries in Grove City, OH: <https://youtu.be/-2p0H2GNSr8>

Video (with speech) by Allyson Brickner of Southwest Public Libraries in Grove City, OH: <https://youtu.be/vEGJQ3z1Eto>

“What Is Scuba Diving Like?” [1:12] from Groupon:
<https://bit.ly/2QXmR3T>

“Diving Underwater with PADI Instructor Thomas Koch” [1:15]:
<https://bit.ly/3wEb9KI>

Basic diving signs from *For Divers*: <https://bit.ly/3yBRMnn>

Scuba diving hand signals and printable from PADI:
<https://bit.ly/3xkvrjW>

Books

Non-fiction

Scubasigns: The Guide to All Diving Hand Signals (2009) by Dave van Stijn and Mike Harterink (adult)

Fiction

The Aquanaut (2021) by Jill Heinerth and Jamie Kim (children's)

Pete the Cat: Scuba-Cat (Pete the Cat: I Can Read! series) (2016) by James Dean and Kimberly Dean (children's)

Scuba Dog (2016) by Ann Marie Stephens and Jess Golden (children's)

Printables

Tips for Running Multigenerational Programs

TIP:

In “Diving Underwater with PADI Instructor Thomas Koch,” a deaf diving instructor explains the difference between diving signals and ASL. Subtitles/no sound.

TIPS FOR PLANNING MULTIGENERATIONAL /FAMILY EVENTS



CHOOSE A SAFE HOST LOCATION

Be sure to consider the needs of seniors and young children. Look for potential hazards from falling, electricity, and water. Avoid pools/lakes where there is no lifeguard. Look for even walkways in outdoor spaces. Find ground level facilities or those that are handicap accessible.

ENSURE ADEQUATE SEATING

Provide some chairs with arms to help the elderly get up more easily. Offer high chairs or secure seats for toddlers. Allow space between seats for folks to navigate with walkers and canes. Reserve seating near aisles for parents with strollers and those in wheelchairs or who may need extra space.



INCLUSIVE ACTIVITIES

Try to include activities that everyone can participate in, such as puzzles, crafts, games, singing, or watching movies.

SERVE APPEALING FOODS/DRINKS

Offer kid-friendly finger food or other snack options that are easy to serve and appeal to a variety of age groups. This is helpful for parents as well as seniors who may have difficulty with passing heavy dishes or carrying trays to a table.



BOOST HEARING & VISUAL AIDS

Provide microphones and/or sound system amplification so that everyone can hear the presentation. Utilize a large screen with a large font on visual presentations so that even those seated in the back can read the slides.

KEEP IT SHORT & ENGAGING

Allow time for folks to get up and move around. It can be challenging to sit for a long presentation. Break it up into smaller bits to allow time for restroom breaks and snacks.



OTHER MATTERS FOR CONVENIENCE



- Find a location with a kitchen space if planning to serve foods.
- Make things user-friendly for seniors and parents of small children (e.g., restrooms with changing tables, accessible restroom facilities, elevators, handicap parking, etc.).
- Place trash and recycling bins near exits for easier cleanup.
- Ensure plenty of power supplies, outlets, and extension cords for AV equipment and/or small appliances for keeping food hot.

For additional tips visit
<https://productionplus.com/blog/event-solutions/multigenerational-event-planning-tips/>

Infographic created by Stacey Brown Augusta Memorial Public Library, Augusta, WI

VIRTUAL REALITY (AND VIRTUAL) OCEAN TOURS

AGES

Teens/tweens

PROGRAM DESCRIPTION

Not able to take a real dive in the ocean? Host a virtual reality diving adventure to get up close to shipwrecks, coral reefs, and marine life! Optionally, screen virtual tours without the VR components. YouTube has many virtual (and virtual reality) ocean tours from all over the world. This short program is a great one to combine with any simple craft or trivia game. You could also make it a party with ocean-themed snacks. Suggested runtime: 30 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Virtual reality headset, such as Oculus, PlayStation VR, a VR Headset for cellphones, or Google Cardboard
- Sanitizing wipes or spray if headsets will be shared
- Laptop/projector (for non-VR tours)
- Audience chairs
- Tables and chairs (if participants will assemble Google Cardboards)

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

ADAPTATION:

Create a weekly culture exploration series, and take a deep dive off a new coast every week!

TIP:

Google Cardboard is the least expensive VR option, at around \$10/kit with bulk education discounts. Teens can assemble the kit as part of the program.

GAME/ACTIVITY

RESOURCES**Web**

Google Cardboard: <https://bit.ly/3oWv8BN>

Titanic wreckage video from MBTubes: <https://bit.ly/2QVFiG2>

HMNZS Canterbury wreckage video from Xlvisuals Limited:
<https://bit.ly/2TiDgR7>

MS Mikhail Lermontov wreckage video from Xlvisuals Limited:
<https://bit.ly/3bXKjFf>

Shipwrecks in the Red Sea from Ilovethesea Vr: <https://bit.ly/3vrYEBv>

SS Thistlegorm Shipwreck from *The Thistlegorm Project*:
<https://bit.ly/3vnl8md>

10 best virtual ocean adventures from *The Guardian*: <https://bit.ly/3i24lCq>

“Great Barrier Reef” from David Attenborough:
<https://attenboroughsreef.com/>

Coral reef virtual tour from *360 Virtual Tour*: <https://bit.ly/3vuEdEi>

Shab Claudio shallow tour from *360 Tourist*: <https://bit.ly/2ToNIXt>

Neptune Memorial Reef tour from *Neptune Memorial Reef*:
<https://bit.ly/3ut3HQS>

Underwater cave in Komodo, Indonesia from *Air Pano*:
<https://bit.ly/3foDnml>

List of virtual ocean adventures from *Travel.Earth*: <https://bit.ly/3wDrKy5>

BooksFiction

The Discovery (2003) by Gordon Korman (children’s)

Where the World Ends (2019) by Geraldine McCaughrean (YA)

Deeplight (2020) by Frances Hardinge (YA)

Non-fiction

100 Dives of a Lifetime: The World’s Ultimate Underwater Destinations (2019) by Carrie Miller (YA/adult)

Sylvia Earle: Guardian of the Sea (2000) by Beth Baker (children’s)

SUBMARINE SCIENCE

AGES

Teens/tweens

PROGRAM DESCRIPTION

Submarines are large, powerful vessels that travel underwater. First invented in the early 17th century, they have been used for military missions, tourism, scientific explorations, and more. The secret to submarines is buoyancy, their ability to float in water or air. The ballast tanks of a submarine fill with water to sink the submarine deep into the ocean, or they fill with air so the vessel rises to the surface and floats on water. In this program, participants create a simple submarine out of a plastic bottle to test the water and air ratios needed to achieve buoyancy. Participants can also develop hypotheses on what happens if you fill the water bottle with different liquids, or travel in salt water vs. fresh water. Suggested runtime: 30–60 min.

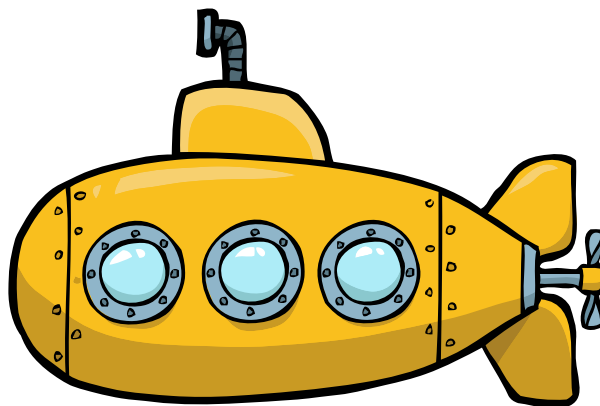


Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Plastic bottles (one per participant)
- Reusable bendy straws (one per participant)
- Pennies (24 per participant)
- Aluminum foil
- Rubber bands (3 per participant)
- Large bowls, or a kiddie pool, filled with water
- Small amount of clay

Preparation:

Before the program, hold each water bottle horizontal and drill or punch three evenly spaced holes across the bottom. See Resources for the original tutorial from the National Museum of the U.S. Navy.

TIP:

To study mechanical engineering, aerodynamics, or hydrodynamics in a more complex submarine experiment, see the Science Buddies experiment under Resources.

ADAPTATION:

For children, premake a few submarines so participants can start experimenting with buoyancy right away.

ADAPTATION:

For a family engineering night, provide snacks and have families design their own submarines. Hold submarine races, and don't forget prizes!

ADAPTATION:

Submarines are sometimes used to assist submersibles or remotely operated vehicles (ROV) for ocean exploration. Instead of building a submarine, consider partnering with a local school's robotics club to explore underwater robotics by building and testing simple ROVs.

GAME/ACTIVITY

To assemble the submarines:

- Wrap foil around three stacks of pennies (one stack of 4, one stack of 8, one stack of 12).
- In between the pre-drilled holes, wrap three rubber bands around the water bottle.
- Place the small stack of pennies under the rubber band closest to the cap.
- Place the medium stack of pennies under the middle rubber band.
- Place the large stack of pennies under the rubber band furthest from the cap.
- Slip the short end of a straw into the open end and secure it with clay.
- Place in water and allow it to sink (keep the straw above water).
- Blow in the straw to raise the submarine.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Due to the kiddie pool filled with water, this is a good program to take outside.

RESOURCES

Web

Penny submarine experiment from *National Museum of the U.S. Navy*:
<https://bit.ly/2ROFt6o>

Build a submarine video tutorial from *Science Buddies*:
<https://bit.ly/3wD1J1R>

“Bottled-up Buoyancy” from *Science Buddies*: <https://bit.ly/3wHh6qj>

“How Submarines Work” from *National Geographic Kids*:
<https://bit.ly/3vuoaWO>

“How Submarines Work” from *HowStuffWorks*: <https://bit.ly/3vr45AY>

Books

Non-fiction

In the Waves: My Quest to Solve the Mystery of a Civil War Submarine (2020) by Rachel Lance (YA/adult)

Secrets of a Civil War Submarine (2005) by Sally M. Walker (YA)

GAME/ACTIVITY

The Amazing History of Transportation (Machines in Motion) (2020) by Tom Jackson (children's)

Submarines at Sea (2017) by Louise A. Spilsbury and Richard Spilsbury (children's)

Flying Deep (2018) by Michelle Cusolito and Nicole Wong (children's)

Otis and Will Discover the Deep (2018) by Barb Rosenstock and Katherine Roy (children's)

Fiction

One if by Land, Two if by Submarine (2019) by Eileen Schnabel (YA)

20,000 Leagues under the Sea (1870) by Jules Verne (YA)

Mary Underwater (2020) by Shannon Doleski (children's)

CRAFT

CAPTAIN'S LOG

AGES

Teens/tweens
Adults

PROGRAM DESCRIPTION

Captain's logs and ship's logs have a rich history, and provide insight into how life on seafaring vessels went (and still go today). Continue this tradition by hosting a journal-making program at your library. Skills of book-binding, journaling, and history lessons can be explored. This could also be a two-part program where you make paper for the journal during the first week. Suggested runtime: 90 min.

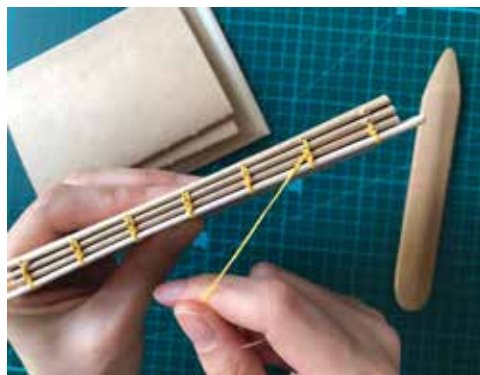


Image source: Shutterstock

TIP:

Participants can also learn about maritime signal flags. With blue, black, red, and yellow markers on white paper, they could create codes by drawing signal flags and then trade them to solve. Or you could place laminated signal flags on a magnetic white board to make messages for the group to decipher.

MATERIALS AND PREPARATION

Materials:

- Book-binding materials including paper, glue, scissors, leather/vegan leather/fabric, string, and cardboard
- Tables and chairs

Preparation:

Contact local craft stores for deals on supplies or possible donations. Identify a staff or volunteer book-binding expert who can help with the craft. See if there is a nautical society or local historian who can speak about seafarers' journals. See Resources for a DIY journal tutorial.

CRAFT

UNIQUE SPACE AND/OR PERSONNEL NEEDS

An extra staff member or volunteer to help with book-binding.

RESOURCES**Web**

“How and Why to Keep a Captain’s Log” by Shaunta Grimes:
<https://bit.ly/3wEBpV6>

“DIY Leather Journal” from *Instructables*: <https://bit.ly/3up2UQX>

“International Maritime Signal Flags” from *Wikipedia*:
<https://bit.ly/2Te0asO>

BooksNon-fiction

Journal Sparks: Fire Up Your Creativity with Spontaneous Art, Wild Writing, and Inventive Thinking (2017) by Emily K. Neuburger (YA)

How to Be an Explorer of the World: Portable Life Museum (2018) by Keri Smith (YA)

Little Fish: A Memoir from a Different Kind of Year (2014) by Ramsey Beyer (YA)

Fathoms: The World in the Whale (2020) by Rebecca Giggs (adult)

Fiction

Final Draft (2018) by Riley Redgate (YA)

Eliza and her Monsters (2017) by Francesca Zappia (YA)

Printables

Maritime Signal Flags

TIP:

Search the Library of Congress for first person captain’s logs; Ancestry Online for Libraries also has ship manifests.

A	Alpha		•	J	Juliet		•••••	S	Sierra		•••	1	Unaone		•••••	Aux. flag	Code & answer	
B	Bravo		•••••	K	Kilo		•••••	T	Tango		•	2	Bissotwo		•••••	Aux. flag	Replacement No. 1	
C	Charlie		•••••	L	Lima		•••••	U	Uniform		•••••	3	Terrathree		•••••	Aux. flag	Replacement No. 2	
D	Delta		•••	M	Mike		•••	V	Victor		•••••	4	Kartefour		•••••	Aux. flag	Replacement No. 3	
E	Echo		•	N	November		••	W	Whiskey		•••••	5	Pantafive		•••••			
F	Foxtrot		•••••	O	Oscar		•••••	X	X-ray		•••••	6	Soxisix		•••••			
G	Golf		•••••	P	Papa		•••••	Y	Yankee		•••••	7	Setteseiven		•••••			
H	Hotel		•••••	Q	Quebec		•••••	Z	Zulu		•••••	8	Oktroueight		•••••			
I	India		••	R	Romeo		•••••	0	Nadazero		•••••	9	Novenine		•••••			

GAME/ACTIVITY

PERCY JACKSON BOOK CLUB

AGES

Children 8+ years

Teens/tweens

PROGRAM DESCRIPTION

Run a Percy Jackson Book Club and end the summer with a Percy Jackson Party! If your budget allows, offer a book to anyone who participates. Once the books have been read but prior to the celebration, have children choose their Greek god/goddess name and come dressed as that character (e.g., Zeus, Poseidon, Hades, Hera, Ares, Athena, Apollo, Aphrodite, Hermes, Artemis, Hephaestus, Demeter, Dionysus). Percy's Mother had a thing for blue food, so you could serve blueberries, blue corn tortilla chips, blue Gatorade, blue jelly beans, blue fruit roll-ups, and blue yogurt. For a teen adaptation, consider *Lore* by Alexandra Bracken or *Tristan Strong Punches a Hole in the Sky* by Kwame Mbalia. Suggested runtime: 90 min.

ADAPTATION:

Tie a program to Artemis, Goddess of the Hunt. Many state wildlife or parks departments offer free archery lessons for kids.



Image source: Shutterstock



Image source: Shutterstock

GAME/ACTIVITY

MATERIALS AND PREPARATION**Activity #1: Create a God/Goddess Headband**

Materials: Plastic headbands, cardstock, scissors, felt, glue, ribbon

Instructions:

- Draw a laurel leaf template on cardstock and cut it out.
- Trace the leaf shape onto felt.
- Cut out as many leaves as desired, and glue them to the headband.
- Add ribbon if desired.



Image source: Shutterstock

Activity #2: Battle with Poseidon

Materials: Kiddie pool or large tub, water, corks, rubber bands, toothpicks, colored paper



Image source: Shutterstock

Instructions:

- Use corks to build a simple toy boat by securing three corks together side-by-side with rubber bands.
- Once you have the floating cork base, push a toothpick partially into the center, so that it sticks straight up.
- Cut a triangle out of the colored paper for the sail, and “thread” it onto the toothpick by puncturing the paper at the top and bottom.
- Sail your boat across the sea (kiddie pool or tub).
- You can create your own Sea of Monsters for the boats to battle across by adding items which represent Polyphemus, Scylla and Charybdis, the Sirens, or Poseidon.

GAME/ACTIVITY

Activity #3: Percy Jackson Mad-Libs

Materials: Official Percy Jackson Mad-Libs are available online; alternatively, make your own using the books as reference.

Instructions:

- In advance, make or purchase Percy Jackson Mad-Libs.
- Have children call out different kinds of words to fill in the blanks and make funny sentences.
- Children could also play this in pairs.

Activity #4: Temporary Tattoos

Materials: Simple clip art (the more basic the better), printer and paper, spray bottle of isopropyl alcohol, hot water, sink or basin to hold the water, towels or rags

Instructions:

- In advance, research the history of tattoos.
- Share the cultural and historical importance of tattoos with the participants.
- Invite children to choose a simple clip art image. See Resources for a Greek gods clip art.
- Print images and cut them out, leaving about ½ inch–1 inch of border around the image.
- Spray the image with isopropyl alcohol from a distance of about six inches. Continue spraying until the image is fully drenched.
- Prepare a hot water bath, either by filling a sink with hot water, or boiling water and pouring it into a basin.
- Immerse the paper in the hot water for 3–5 minutes.
- Very carefully remove the paper—it will be delicate and rip easily!
- Spray your arm (or the place where you want the tattoo to go) with the isopropyl alcohol.
- Lay the paper face down on your arm, cover with a rag or towel, and hold tightly for 90 seconds.
- Lift the towel and peel the paper off. Voilà! You have a tattoo.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

The Battle with Poseidon is a good activity to take outside.

GAME/ACTIVITY

RESOURCES**Web**

“Laurel Wreaths Three Ways” from *Small Talk Mama*: <https://bit.ly/3iaCm3N>

Easy cork boat craft from *RedTedArt*: <https://bit.ly/3hVADiz>

Percy Jackson Mad Libs from Amazon: <https://amzn.to/3hXDO9p>

Temporary tattoos with perfume from *Readers Digest*: <https://bit.ly/3fqDnmr>

Temporary tattoos with alcohol from *LifeHacker*: <https://bit.ly/34ITfA2>

Books

Percy Jackson and the Olympians series by Rick Riordan (children’s):

#1: *The Lightning Thief* (2005)

#2: *The Sea of Monsters* (2006)

#3: *The Titan’s Curse* (2007)

#4: *The Battle of the Labyrinth* (2008)

#5: *The Last Olympian* (2009)

Printables

Greek Gods/Goddesses Clip Art



MYTHICAL SEA CREATURES: FLIPBOOKS, BINGO, AND MORE!

AGES

Children 8+ years

Teens/tweens

PROGRAM DESCRIPTION

Participants draw their own versions of mythical sea creatures using fish, human, monster, or animal body parts. Their drawings then get sliced into thirds and compiled into a flipbook. You can also make this into a collaborative drawing game known as Exquisite Corpse, where children add to each other's drawings without seeing what was drawn before. While the flipbooks get compiled, children can play sea creature bingo, or make mermaid terrariums or painted rocks. The bingo cards would also work in a library scavenger hunt. Suggested runtime: 45–60 min.

MATERIALS AND PREPARATION

Activity #1: Mix-Up Flip Books

Materials: Drawing paper; construction paper; pens, colored pencils, crayons, or markers; stapler; 3-hole punch and rings or spiral binding machine; photocopier (optional)

Instructions:

- In advance, prepare an 8 ½ x 11" piece of paper by dividing it into thirds with dotted lines (head, body, and tail sections). Across the whole page, draw a partial outline of a sea creature for children to finish. Ensure that you leave a margin on the left hand side for binding. Make enough copies for every participant.
- Children draw/finish their mythical creatures.
- When the drawings are complete, cut the pictures along the dotted lines.
- Staple, hole-punch, or spiral bind the different pictures together along the left side and bind them together into a book.
- Use as a flip book, changing which parts line up, to make new creatures.

TIP:

If running this program Exquisite Corpse-style, you can mark the points at which the head should join to the body, and the body should join the tail. Or you can leave the very bottom strip of the previous drawing exposed when it is passed to the next person. Either way allows for vastly different drawings to match up for continuity.

ADAPTATION:

For a passive option, provide stacks of paper on which teens draw their own versions of gods/goddess/sirens. After a number of submissions, slice each drawing into thirds and turn them into a laminated flipbook to display in the teen area of the library.

CRAFT | GAME/ACTIVITY | PASSIVE

- Optionally, make copies of each participant's drawing, then collate them so every participant gets to take home their own flipbook.
- Run an ocean-themed game or craft in the interim while a volunteer or other staff member does the photocopying and binding.

Activity #2: Sea Creatures Bingo

Materials: Sea creature bingo cards or printouts, bingo markers

Instructions:

- In advance, create sea creature bingo cards by writing different sea creatures in each bingo square. Use the template provided or design your own cards using Adobe Spark (see Resources). You could also laminate them for multiple uses.
- Choose obscure or well-known sea creatures, depending on your audience.
- If families participate, children as young as four could play along.

Activity #3: Mermaid or Sea Creature Terrariums

Materials: Clear containers such as glass pint jars, clear plastic cups, glass vases, or clear recycled soda bottles; pebbles; real moss and/or plants, or "plants" made from colored paper, clay, or recycled materials; soil if using real plants; plastic sea creatures/mermaids or clay



Image source: Shutterstock

Instructions:

- Have children build their terrariums by layering their materials in the clear containers in the following order:
 - Pebbles
 - Soil
 - Moss
 - Plants (real or crafted), as well as sea creatures/mermaids, etc.
- If plants are used, teach children how to water and look after their terrariums.

TIP:

Using real dirt in terrariums can get messy, so consider taking this craft outside.

Activity #4: Painted Mermaid Rocks

Materials: Flat rocks, acrylic paint, paintbrushes, Mod Podge (optional), metallic paint pens (optional)

Instructions:

- Before beginning, wash your rocks and allow them to dry.
- Invite children to mix blue or green colors and cover their rocks with a coat of color.
- Using a fine brush or a paint pen, add mermaid scales over top of the blue or green color.
- Alternatively, children can paint fish, sea creatures, waves, etc. on the rocks. See Resources for inspiration.
- Once the paint has dried, coat the rocks with a layer of Mod Podge (optional)



Image source: Joelle Wake of Whiting Public Library, Whiting, IN

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Volunteers to collate the drawings and/or help with individual activities.

RESOURCES

Web

Bingo card templates from Adobe: <https://adobe.ly/3urM44a>

List of legendary creatures from Wikipedia: <https://bit.ly/2R2o4ql>

“Exquisite Corpse” video from Art in Motion: <https://bit.ly/3i4J1vY>

Monster flip book tutorial from Make and Takes: <https://bit.ly/3uvYwQ9>

“Ocean Animals Mix and Match” (printable) from All Kids Network: <https://bit.ly/3wQIALp>

CRAFT | GAME/ACTIVITY | PASSIVE

“DIY Terrariums for Kids” from CBC Kids: <https://bit.ly/3oUtG2F>

Exquisite corpse explanation from MOMA: <https://mo.ma/3yGX15c>

Exquisite corpse from Wikipedia: <https://bit.ly/3yH2cCb>

Painting mermaid rocks tutorial from *Fin Fun*: <https://bit.ly/2SaPQSn>

Books

Non-fiction

The Loch Ness Monster (2020) by Jen Besel (children’s)

The Atlas of Monsters: Mythical Creatures from Around the World (2019) by Sandra Lawrence and Stuart Hill (children’s)

Children’s Book of Mythical Beasts and Magical Monsters (2018) by DK (children’s)

Fiction

Myth Match: A Fantastical Flipbook of Extraordinary Beasts (2018) by Good Wives and Warriors (children’s)

Putuguq and Kublu and the Qalupalik (2019) by Roselynn Christopher, Danny Christopher, and Astrid Ariyanto (children’s)

The Loch Ness Monster (Autobiographies You Thought You’d Never Read) (2015) by Catherine Chambers (children’s)


How to Catch a Mermaid (2018) by Adam Wallace and Andy Elkerton (children’s)

Emily Windsnap series by Liz Kessler and Natacha Ledwidge (children’s)

Mabel: A Mermaid Fable (2020) by Rowboat Watkins (children’s)

Printables

Blank Bingo Card

B	I	N	G	O
				

PLAY LIKE VIKINGS: HNEFATAFL

AGES

Teens/tweens

Multigenerational

PROGRAM DESCRIPTION

Make your own Hnefatafl game (also known as Tablut), which the Vikings used to play. This game is over 1600 years old. You could premake several board games and run a Viking-themed games night, or have participants create and decorate their own boards. To expand, discuss other games and activities that Vikings used to play. Or have participants design Viking dragon boats out of construction paper or recycled materials. Suggested runtime: 90 min.



Image source: Shutterstock



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials: Paper, rulers, pencils, colored markers or paint and paintbrushes, scissors, tables and chairs

Instructions:

- There are many variations of Hnefatafl. Decide which version you want to use in advance.
- Participants can create and decorate their own game boards, or you can premake them.
- Cut out 25 circles that will fit inside the squares on the game board, 9 with one pattern, and 16 with another.
- Teach the players how the game works, and let everyone have a try playing it.

TIP:

You can also make a sturdier version using small wood cubes and laminated or cardboard gameboards.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

About Hnefatafl from *Board Game Geek*: <https://bit.ly/3vEA00A>

Books

Non-fiction

Viking (*Eyewitness Books*) (2009) by Susan Margeson

The Vicious Vikings (*Horrible Histories*) (2017) by Terry Deary (children's)

Norse Mythology (2018) by Neil Gaiman (YA/adult)

Fiction

How to Train Your Dragon series (2010) by Cressida Cowell (children's)

You Wouldn't Want to be a Viking Explorer (2013) by Andrew Langley and David Antram (children's)

The Last Shadow Warrior (2021) by Sam Subity (children's)

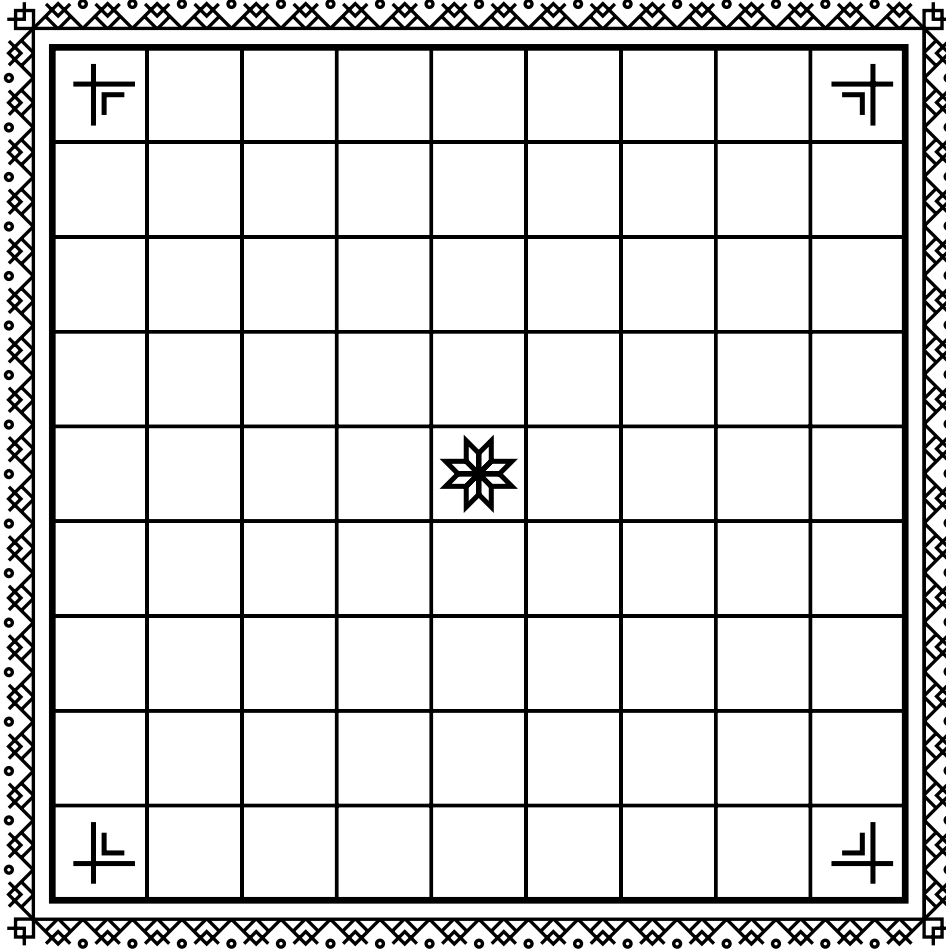
Odd and the Frost Giants (2010) by Neil Gaiman (children's)

The Saga of Erik the Viking (1988) by Terry Jones and Michael Foreman (children's)

Riddle of the Runes (2018) by Janina Ramirez and David Wyatt (children's)

Printables

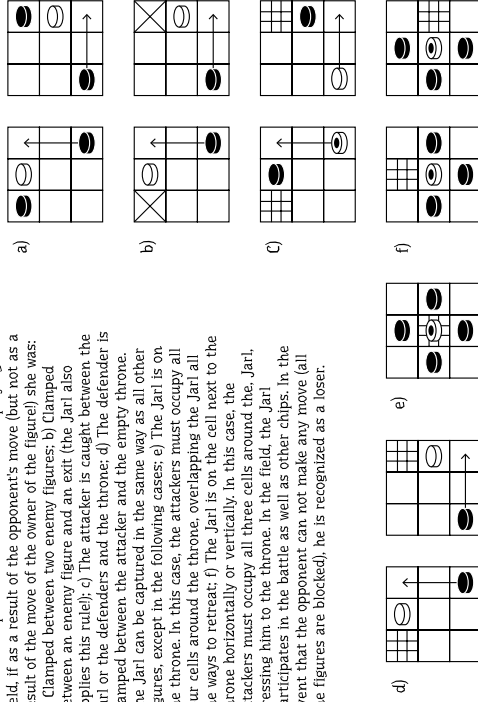
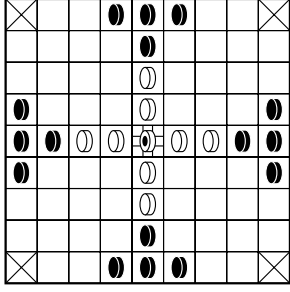
Tablut Game and Instructions



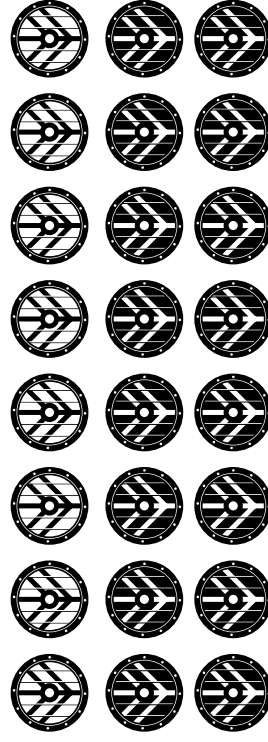
RULES

Arrangement of figures. There are 25 pieces: the Jarl and his eight defenders and sixteen attackers. Jarl must reach one of the four exits. The attacking side, the black figures, makes the first move. The player must move one of his or her figures to an arbitrary number of free cells horizontally or vertically. Figures do not jump over other figures. Jarl, unlike all other figures, can not be moved more than three cells. He can get on the throne, the central cell on the field, and on the exits - all other figures on these cells can not be placed. You can transfer figures through the throne. The figure is considered captured and removed from the playing field, if as a result of the opponent's move (but not as a result of the move of the owner of the figure) she was:

- a) Clamped between two enemy figures; b) Clamped between an enemy figure and an exit (the Jarl also applies this rule); c) The attacker is caught between the Jarl or the defenders and the throne; d) The defender is clamped between the attacker and the empty throne. The Jarl can be captured in the same way as all other figures, except in the following cases; e) The Jarl is on the throne. In this case, the attackers must occupy all four cells around the throne, overlapping the Jarl all the ways to retreat; f) The Jarl is on the cell next to the throne horizontally or vertically. In this case, the attackers must occupy all three cells around the Jarl, pressing him to the throne. In the field, the Jarl participates in the battle as well as other chips. In the event that the opponent can not make any move (all the figures are blocked), he is recognized as a loser.



This sheet has the size A3. Print it on thick paper. You can also print to A4, the first right side of the image, then the left side. Carefully cut out the shapes. For the convenience of the game figures, you can paste them with several sheets of paper, reaching the optimal thickness.



UNDER CONSTRUCTION: SEVEN WONDERS OF THE SEVEN SEAS

AGES

Children 8+

Teens/tweens

PROGRAM DESCRIPTION

In this program, teens build structures based on the New Seven Wonders of the World. They could use candy, veggie sticks and toothpicks, and/or non-edible building materials such as Legos, popsicle sticks, or balsa wood. Choose building materials that work best for your library and patrons. As an icebreaker, run a seven seas taste-testing challenge! Set out seven different flavors of Goldfish crackers (or nori, sea creature gummies, etc.). Participants can try to name the flavors or simply rank their favorites from best to worst. You could also feature one book to go with each flavor. See Printables for a Goldfish coloring sheet for teens who finish both activities early. Suggested runtime: 60–90 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Goldfish Taste Testing

Materials:

- Goldfish crackers in assorted flavors
- One bowl per flavor
- Cups for each participant to put goldfish crackers in
- Forms listing each goldfish cracker, with a blank space for rating
- Small pencils
- Napkins
- Featured book descriptions

Instructions:

- Set up tables throughout the room.
- Each table should have a bowl of Goldfish crackers, napkins, and spoons.
- When teens arrive, give them the form to fill out, a pencil, and a cup.
- Randomly assign teens to tables.
- Give two minutes at each station to sample and read book descriptions.
- At the end, give five minutes for teens to rate. Compare ratings.
- Let teens peruse the featured books.

Building Activities

Materials:

- Building materials
- Photos of the New Seven Wonders of the World
- Prizes for the winners

Instructions: Set up seven tables up with tablecloths and evenly divide candy or building supplies. Label each table with a different wonder of the world and place a corresponding photo on the table. Divide teens evenly and have them create their interpretations of one of the seven wonders. Let teens know how much time they have to build. At the end, have a representative from each group talk about their wonder, then have teens vote by applause (while not voting for their own wonder). The group with the loudest applause will be declared winners!

TIP:

Have teens peruse the actual books (rather than descriptions) after the taste-testing to avoid greasy fingers on books. Be sure to acquire (or interlibrary loan) extra copies of your chosen books!

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Consider soliciting food donations from a local grocery store or bakery.

RESOURCES

Web

“Seven Wonders of the Ancient World” from *National Geographic Kids*:
<https://bit.ly/3fpXIs0>

“Seven Wonders of the Ancient World” from *Wikipedia*:
<https://bit.ly/3vwS1Oo>

“Seven Modern Wonders of the World” from *Wikipedia*:
<https://bit.ly/3uqUFUA>

List of Goldfish flavors from *Thrillist*: <https://bit.ly/2ROU8yA>

Books

Fiction

The Seven Wonders series (2013–2016) by Peter Lerangis (YA)

Non-fiction

Where Were the Seven Wonders of the Ancient World? (2020) by Yona Z. McDonough and Dede Putra (children)

Seven Wonders of the Ancient World (2002) by Diana Bentley (YA)

Book of the Seven Seas (2003) by Peter Freuchen (YA)

The Seven Wonders of the World: A History of the Modern Imagination (2005) by John Romer and Elizabeth Romer (YA)

What are the Seven Wonders of the World? And 60 Other Great Cultural Questions (2005) by Peter D’Epiro, Mary Desmond Pinkowish, and Richard Beards (YA/adult)

Printables

Goldfish Coloring Sheet

TIP:

The middle grade *Where Is?* series is also a good choice about specific locations and wonders from all over the world.



TABLETOP ROLE-PLAYING GAMES: ONE-SHOT ADVENTURES

AGES

TEENS/TWEENS

PROGRAM DESCRIPTION

Have you considered a tabletop role playing game (TTRPG) for your library but think Dungeons and Dragons is too complex for your audience? This program provides a list of games in which creating characters and one-shot adventure gameplay is much easier. This program is also easily run virtually using Discord. Suggested runtime: 60–120 min.



Image source: Shutterstock

TIP:

There is a teen/tween version of Pathfinder with hosts who have been taught to run one-shot campaigns for kids.

TIP:

Local comic book stores or schools with D&D clubs may offer help in setting up games in the library. You could also ask teens familiar with role-playing games who need volunteer hours to lead the program. If you don't have assistance from avid role-players, be sure to go through a practice run of the game to make sure it plays smoothly.

TIP:

You can also find free one-shot D&D campaigns about the high seas on websites such as Wizards of the Coast. The Missing Misty Mermaid is a campaign to consider: <https://bit.ly/3vuuHkp>. An experienced Dungeon Master can introduce the ins and outs of this team-oriented role-playing game.

MATERIALS AND PREPARATION

Simplified table top role-playing games (TTRPG) to consider:

- Pathfinder
- Starport
- Cats of Catthulhu
- No Thank You, Evil
- Lasers and Feelings
- Kids on Bikes
- Amazing Tales
- Bubblegumshoe
- Pugmire/Monarchies of Mau

Registration is very important for role-playing games to make sure you do not have too many (or too few) players. Before you open registration, develop a list of characters that participants can sign up to play. This saves a lot of time.

Materials for D&D diehards:

- An adventure/campaign
- A dungeon master
- Pre-generated character sheets
- D&D 5E Combat Actions Cheat Sheet: <https://bit.ly/3fqfBqp>
- Paper and pencil
- One set of dice: D4, D6, D8, D10, D12 and D20 (in-person program)
- A Discord or Zoom room with a screen sharing option (virtual program)
- Microphone (virtual program)
- Virtual dice roller (virtual program)

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly. If possible, enlist a teen volunteer who is an avid role player.

TIP:

Check app stores for downloadable dice rollers.

RESOURCES

Web

D&D Beyond: <https://www.dndbeyond.com/>

Discord: <https://discord.com/>

Dungeon Masters Guild: <https://www.dmsguild.com/>

Character sheet generator from *Fast Character*:
<http://www.fastcharacter.com/>

“Dungeons & Dragons Dice Roller” from Wizards: <https://bit.ly/2Toy6mM>

“The Missing Misty Mermaid” from *Dungeon Master’s Guild*:
<https://bit.ly/3hYzxT9>

Books

Fiction

A Wizard of Earthsea (1968) by Ursula K. Le Guin (YA)

Dark Shores (2019) by Danielle L. Jensen (YA)

Seafire (2018) by Natalie C. Parker (YA)

The Soul Keepers (2018) by Devon Taylor (YA)

The Mermaid, the Witch, and the Sea (2020) by Maggie Tokuda-Hall (YA)

Non-fiction

Dungeons and Dragons Player’s Handbook 5th Edition (2014) (YA/adult)

MERMAID SUGAR SCRUB

AGES

Teens/tweens

PROGRAM DESCRIPTION

Make your own natural body scrub with a mermaid twist! Perfect for dry skin from all that time in the summer sun. This easy recipe would make a great in-person program or take-and-make bag for teens. Suggested runtime: 45 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Granulated sugar
- Fractionated coconut oil
- Containers
- Essential oils (optional)
- Soap colorant or food coloring (optional)
- Sugar sprinkles (optional)

TIP:

Leave out colorants for an allergy-free option. You could also use natural items for color, such as tea bags, green leaves, or flower petals.

ADAPTATION:

Beeswax food wraps (toaster oven required), <https://bit.ly/3hShiPg>, or reusable straw holders, <https://bit.ly/3fRaRJG>, also make good eco-friendly DIY projects.

Instructions:

- Mix together the coconut oil and the granulated sugar. A good ratio to begin with is 4 parts sugar to one part oil, but you can add more oil or more sugar to get the consistency that you like.
- If using, add in a couple of drops of food coloring and/or sugar sprinkles, and mix well.
- Once everything has been mixed, add a few drops of essential oils, if desired.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

Two-step mermaid scrub from *Ruffles and Rain Boots*:

<https://bit.ly/3p16Q9x>

“Mermaid Sugar Scrub” from *Nerdy Mamma*: <https://bit.ly/2SA4LoQ>

Mermaid scrub recipe with printable from *We Three Shanes*:

<https://bit.ly/2QZd3GD>

Books

Fiction

Sea Witch (2018) by Sarah Henning (YA)

The Siren (2017) by Kiera Cass (YA)

The Vicious Deep (2012) by Zoraida Córdova (YA)

Mermaid Moon (2020) by Susann Cokal (YA)

Non-fiction

Bath Bombs, Body Scrubs & More!: Over 50 Natural Bath and Beauty Recipes for Gorgeous Skin (2019) by Isabel Bercaw and Caroline Bercaw (YA)

Homemade Beauty: 150 Simple Beauty Recipes Made from All-Natural Ingredients (2014) by Annie Strole (YA)

DIY Beauty (2019) by Ina De Clercq (YA)

COASTAL COSPLAY COSTUMES

AGES

Teens/tweens

PROGRAM DESCRIPTION

Be the wonder in the ocean! Invite teens and tweens to come up with funny, clever, or realistic interpretations of oceanic characters to wear to a cosplay event at your library. For example, someone could wear a “Mariana Trench-coat” or dress as the “Deep Blue ‘C’”. They could be a Sharknado, paint their face to emulate the amazing camouflage techniques of cuttlefish, or dress as an enormous sea mammal and constantly say “Why I otter!” Provide a list of famous ocean characters (such as Ursula, Ariel, or Jack Sparrow) if they struggle to come up with their own. Suggested runtime: 90–120 min.

TIP:

Combine with Tabletop Role-Playing Games on page 144 for a multi-part program. You can also have teens/tweens create a photo booth and props before the cosplay event.



Image source: Shutterstock



Image source: Shutterstock



Image source: Shutterstock

GAME/ACTIVITY

MATERIALS AND PREPARATION

Materials:

- Fabric, sewing supplies
- Paint, markers, glue
- Craft supplies
- Snacks/drinks (optional)
- Sewing machines (optional)
- Photo booth materials (optional)

Before the program, contact local craft stores or resale shops, who might be willing to partner with you and donate items. Reach out to local cosplayers, theaters, and school theater departments to see if they have any items to donate or someone willing to teach the basics of sewing, costume design, and/or make-up effects.

Instructions:

- Advertise the cosplay event on social media, display cosplay and sewing/crafting books, and gather materials (if hosting a sewing program in the library).
- If not hosting the creation in your library, make sure teens, tweens, and adults know when to come dressed up! Hang an ocean backdrop, or set up a photo booth with props.
- Invite patrons to come dressed as their cleverest, watern-est selves. Optional: hold a vote for Best Cosplay, expand the event to an ocean-themed festival, or scale down to just encourage patrons to post photos on social media in their cosplay outfits with your library tagged.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

For an in-person program, you will need several volunteers to help with design and sewing. For an event, create a wide open space for characters to gather.

GAME/ACTIVITY

RESOURCES**Books**Fiction

You Brought Me the Ocean (2020) by Alex Sanchez and Julie Maroh (YA)

Fangirl (2013) by Rainbow Rowell (YA)

Rick (2020) by Alex Gino (YA)

Geekerella (2017) by Ashley Poston (YA)

Non-fiction

The Costume Making Guide: Creating Armor and Props for Cosplay (2016) by Svetlana Quindt (YA)

1,000 Incredible Costume and Cosplay Ideas: A Showcase of Creative Characters from Anime, Manga, Video Games, Movies, Comics, and More (2013) by Yaya Han, Allison DeBlasio, and Joey Marsocci (YA)

The Hero's Closet: Sewing for Cosplay and Costuming (2017) by Gillian Conahan (YA)

The Fangirl's Guide to the Universe (2020) by Sam Maggs (YA)

OUTSIDE PRESENTER

NESSIE AND OTHER LAKE AND SEA CURIOSITIES

AGES

Multigenerational

PROGRAM DESCRIPTION

Learn about the legends and lore of our local lakes and rivers! A presentation could be geared to any age group. You could also make sea creature crafts or hold a drawing contest. Easily adapted to a virtual program, or prerecord the talk to share on the library's website. See Printables for a coloring sheet that could be completed while listening to an in-person presentation. Suggested runtime: 60 min.

MATERIALS AND PREPARATION

Materials: Projector, screen, laptop with PowerPoint, large gathering space, audience chairs

Sea and Lake Legends

The Kraken

According to Scandinavian folklore, the kraken is an enormous tentacled sea monster. Some people theorize that stories of the kraken may have originated from sightings of giant squids, which may be 40–50 feet long.

Mermaids

In Greek mythology, Triton is usually represented as a merman, with the upper body of a human and the tailed lower body of a fish.

Moby Dick/Leviathan

Possibly a giant sperm whale, described as having “a peculiar snow-white wrinkled forehead, and a high, pyramidal white hump” (from *Moby Dick* by Herman Melville).

Loch Ness Monster

The Loch Ness monster, also known as Nessie, is said to be a large marine creature similar to a plesiosaur, a marine reptile that went extinct some 65.5 million years ago. It's believed by some people to inhabit Loch Ness, Scotland.

OUTSIDE PRESENTER

Bessie, or The Lake Erie Monster

A lake monster in Lake Erie (OH/MI), reported by multiple people between 1817–1993. Bessie has varying descriptions, but is generally considered to be serpentine, at least 30–40 ft long, at least a foot in diameter, with a grayish or brownish color.

Tahoe Tessie

Tessie is a large, snake-like creature that allegedly resided in Lake Tahoe (NV/CA). Multiple sightings over the years have produced varying reports; Tessie ranges in color from turquoise to black, sometimes has scales and sometimes not, and has been reported as being between 10–80 feet long.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Invite a speaker from a nearby aquarium or university (possibly a crypto-zoologist) to talk about myths related to local bodies of water.

RESOURCES**Web**

“The Lake Monsters of America” from *Atlas Obscura*:

<https://bit.ly/2SBu35Z>

“Native American Lake Mythology” from *Native Languages*:

<https://bit.ly/34orQ08>

“Mythical Lake Monsters of the Northwest” from *Seattle Magazine*:

<https://bit.ly/3urWm47>

“Kraken” from *Wikipedia*: <https://bit.ly/34kl0bc>

and: <https://bit.ly/2Sz1o1q>

Mermaid facts and legends from *Live Science*: <https://bit.ly/3uql2cm>

“Triton” from *Britannica*: <https://bit.ly/3fO1IBF>

“Leviathan” from *Britannica*: <https://bit.ly/2Szp7Pi>

The story behind *Moby Dick* from the NOAA: <https://bit.ly/2QVetBM>

“Loch Ness Monster” from *Britannica*: <https://bit.ly/2Te7pB0>

“Bessie” from *Wikipedia*: <https://bit.ly/3fPRsSb>

“Tahoe Tessie” from *Fandom*: <https://bit.ly/3bZd3xp>

OUTSIDE PRESENTER

BooksNon-fiction

Forgotten Sea Serpents (2020) by Malcolm Smith (adult)

I Know What I Saw: Modern-Day Encounters with Monsters of New Urban Legend and Ancient Lore (2019) by Linda Godfrey (adult)

Cryptid Creatures: A Field Guide (2019) by Kelly Milner Halls (adult)

Chasing American Monsters: Over 250 Creatures, Cryptids & Hairy Beasts (2019) by Jason Offutt (adult)

People are Seeing Something: A Survey of Lake Monsters in the United States and Canada (2016) by Denver Michaels (adult)

When Monsters Come Ashore: Stories of the Loch Ness Monster on Land (2018) by Roland Watson (adult)

Nevada Myths and Legends: The True Stories behind History's Mysteries (2019) by Richard Moreno (adult)

Forgotten Sea Serpents (2020) by Malcolm Smith (adult)

Touching This Leviathan (2021) by Peter Wayne Moe (adult)

The Book of Mythical Beasts and Magical Creatures (2020) by Stephen Krensky (children's)

The Loch Ness Monster (Behind the Legend) (2017) by Erin Peabody (children's)

Sea Monsters: From Kraken to Nessie (2017) by Krystyna Poray Goddu (children's)

The Great Book of Monsters of the Deep (Volume 4) (2020) by Giuseppe D'Anna and Anna Láng (children's)

Giant Squid (2016) by Candace Fleming and Eric Rohmann (children's)

The Very Short, Entirely True History of Mermaids (2020) by Sarah Las-kow and Reimena Yee (children's)

Fiction

Moby Dick (1851) by Herman Melville (adult)

The Mermaid and Mrs. Hancock (2019) by Imogen Hermes Gowar (adult)

Sense and Sensibility and Sea Monsters (2009) by Ben H. Winters, Jane Austen (adult)

Into the Drowning Deep (2018) by Mira Grant (adult)

The Loch (2015) by Steve Alten (adult)

The Kraken Wakes (1953) by John Wyndham (adult)

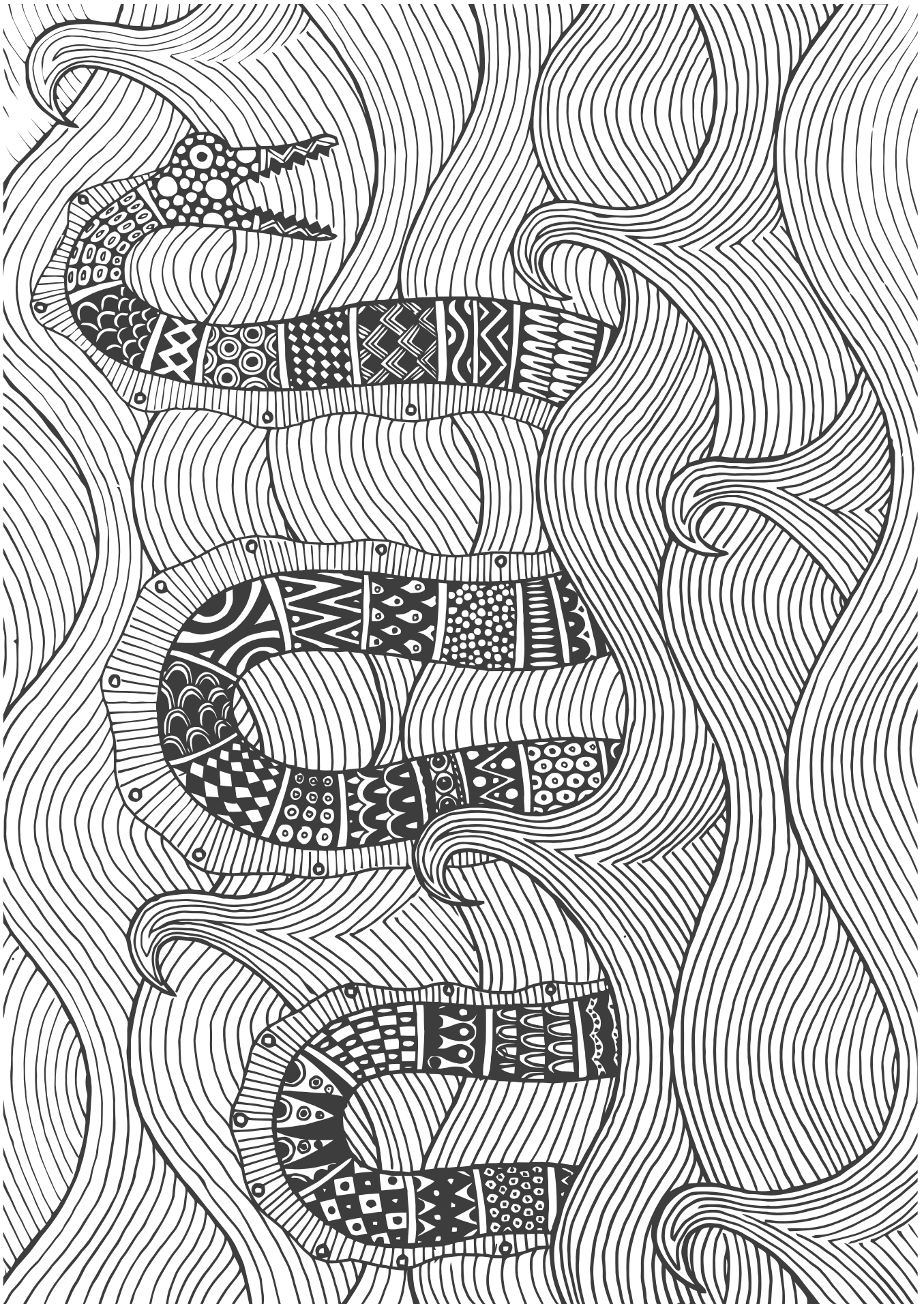
OUTSIDE PRESENTER

The Water Horse (2007) by Dick King-Smith (adult)
Bessie: The Monster in Lake Erie (2018) by Deborah Tadema (adult)
Mrs. Caliban (2017) by Rachel Ingalls (adult)
The Brides of Rollrock Island (2012) by Margo Lanagan (YA)
The Surface Breaks (2018) by Louise O'Neill (YA)
A Song Below Water (2020) by Bethany C. Morrow (YA)
The Kraken's Rules for Making Friends (2016) by Brittany R. Jacobs (children's)
The Mermaid Atlas (2020) by Anna Claybourne and Miren Asiain Lora (children's)
Malamander (2019) by Thomas Taylor (children's)
Spindlefish and Stars (2020) by Christiane M. Andrews (children's)
Sea Monster Surprise (Geronimo Stilton) (2016) by Geronimo Stilton (children's)
Let Sleeping Sea-Monsters Lie and Other Cautionary Tales (2012) by Eva Ibbotson (children's)

Printables

Kraken Coloring Sheet for Children
Sea Monster Coloring Sheet for Teens/Adults





WATER CYCLE RELAY RACE

AGES

Children 8+ years

Tweens

PROGRAM DESCRIPTION

This game helps patrons learn about the water cycle with a fun relay race that uses water cycle vocabulary. First describe the steps in the water cycle and show how it works. This game was originally created by Utah State University Water Quality Extension. Suggested run-time: 30 minutes.

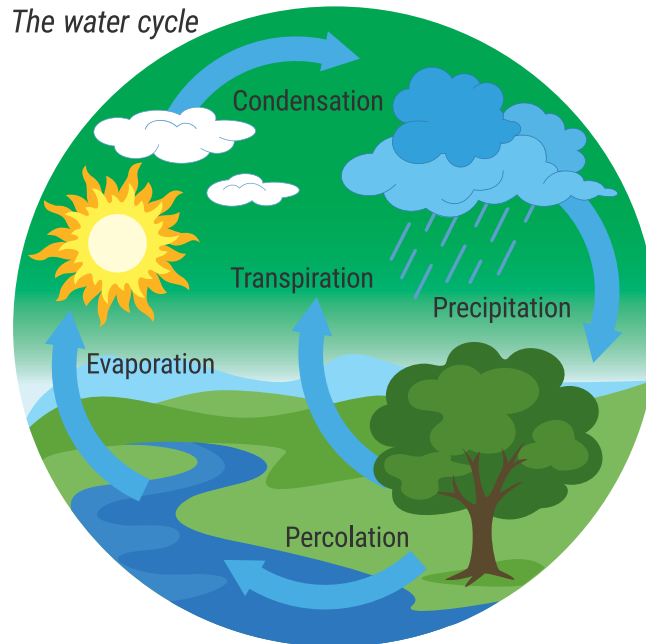


Image source: Shutterstock

ADAPTATIONS:

Allow participants to sit while playing, reduce the distance between lines, use spoons with ergonomic grips, increase size/font of water cycle poster, or read the definitions out loud and write them on poster board.

MATERIALS AND PREPARATION

Materials:

- 1 tray of ice cubes per team
- 1 set of vocabulary words on paper or index cards per team
- Tape for each team
- 1 spoon per team
- 1 set of definitions
- 1 or 2 buckets or large bowls
- Water cycle poster with lines for corresponding vocabulary (see Printables)

Before the program, create the water cycle poster. You can create a water cycle poster by enlarging and adding blank lines to the printable attached to this idea.

GAME/ACTIVITY | OUTDOORS

To start:

- Divide the group into two or more teams.
- Describe the steps in the cycle, and discuss how it works.
- Show the missing terms on the water cycle diagram. Explain that they will fill in the blanks with the missing words during the relay race.
- Pass out a spoon and a tray of ice cubes to each team.
- Optional: have the teams practice passing the spoon with the ice cube on it.
- Give each group a set of the following nine vocabulary words written on index cards or paper: evaporation, condensation, cloud, precipitation, river, infiltration, ground water, evapotranspiration, and water cycle.
- Have the teams attach a piece of tape to each slip of paper.
- Give the teams time to discuss the words and their definitions, and to look at the poster to begin thinking about where the vocab words go.

To play:

- After you read a definition from the water cycle, the team QUIETLY decides which word best fits the definition.
- The last person in line tapes the slip of paper with the matching word to the bottom of the spoon and places the ice cube in the spoon. They then pass the entire spoon to the next person, and so on down the line.
- The person at the head of the line walks quickly to the poster at the front of the room, places the ice cube in the bucket and tapes the word to the correct spot on the cycle, then returns to the end of the line. The race begins again with another definition.
- Teams score one point for each correctly placed vocabulary word. The team that finishes first gets an extra point (and wins!).

UNIQUE SPACE AND/OR PERSONNEL NEEDS

To prevent wet carpets, this program works best outside. Solo-librarian friendly.

RULES:

No one may touch the ice cube after it has been placed on the spoon. If an ice cube drops, teams must restart from the back of the line. They can use the fallen ice cube or start fresh with a new one.

RESOURCES

Non-fiction

The Great Big Water Cycle Adventure (2018) by Kay Barnham (children's)

Water is Water: A Book About the Water Cycle (2015) by Miranda Paul and Jason Chin (children's)

All the Water in the World (2011) by George Ella Lyon and Katherine Tiltson (children's)

When Cloud Became a Cloud (2021) by Rob Hodgson (children's)

Drop: An Adventure Through the Water Cycle (2021) by Emily Kate Moon (children's)

Printables

Water Cycle Poster

Water Cycle Vocabulary (two pages)



Image source: Shutterstock

PRINT AND CUT: WATER CYCLE VOCABULARY

EVAPORATION	CONDENSATION	CLOUD
PRECIPITATION	RIVER	INFILTRATION
GROUND WATER	EVAPOTRANSPIRATION	WATER CYCLE

PRINT AND CUT: WATER CYCLE DEFINITIONS

<p>EVAPORATION Heat from the sun makes water rise up.</p>	<p>CONDENSATION Was once a gas but then changed into a liquid able to be seen.</p>	<p>CLOUD Water vapor in the sky. We refer to them as cumulus, stratus, and cirrus.</p>
<p>PRECIPITATION Falls down as a crystal, drip, or even a ball</p>	<p>RIVER A large natural stream of water flowing in a channel to the sea, a lake, or another such stream.</p>	<p>INFILTRATION Movement of water into the ground from the surface.</p>
<p>GROUND WATER Is beneath the surface of the ground in the zone of saturation where every pore space between rock and soil particles is saturated with water.</p>	<p>EVAPOTRANSPIRATION Water evaporated from plants.</p>	<p>WATER CYCLE Movement of water into the ground from the surface.</p>

WATER BOTTLE SEA CREATURES DESIGN CHALLENGE

AGES

Children 5+ years

Tweens

PROGRAM DESCRIPTION

This is a contest you can run at the beginning of the summer reading program, or make it a take-home component of any program about plastic pollution or recycling. Each child receives a recycled plastic water bottle to turn into a sea creature of their choosing. Prepare take-and-make bags that include various art supplies, or tell them they must use recyclable materials found around their homes to make their creature. Optionally, children could build dioramas as well. One week later, they return entries to the library to be displayed. You can have a committee judge them by age group, or let it be a people's choice award. Offer prizes such as reusable water bottles, and display the entries all summer for easy, ocean-themed décor!

TIP:

Consider enlisting teen judges!



Image source: Sidnie Srader of Jones Public Library, Dayton, TX

MATERIALS AND PREPARATION

Preparation:

- Decide how you would like to run your contest and create a list of guidelines.
- Set out a box to collect donated plastic water bottles.
- When each child registers, give them a water bottle and contest guidelines.
- Display the entries when they are returned.
- Gather a panel of judges, or public vote, judge the entries.
- Give the winners a special homemade award, recognition on the website/socials/newsletter, or extra entries into the grand prize drawing.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

You will need a display area for the submissions. Solo-librarian friendly. If you choose to have a panel of judges, consider your local city council, library board, celebrities, or people who work in environmental stewardship.

RESOURCES

Books

A Crabby Book series (2019) by Jonathan Fenske (children's)

ENGINEERING CHALLENGE: BUILDING FOR HURRICANES

AGES

Tweens

PROGRAM DESCRIPTION

Children are given simple materials and design requirements, then build a tower as tall as possible that will hold up a tennis ball while resisting the force of wind from a fan. You can modify the materials and requirements based on whatever you have on hand. For example, omit the tennis ball and just see who can build the highest tower out of index cards and tape. Then see which one best withstand the forces of a “hurricane.” For an extra challenge, a spray bottle can be used to simulate rain. Consider running a background video on hurricanes or weather while the children build their towers. This program is based on the activity developed by NASA and Global Precipitation Measurement. See links under Resources to access Printables. Suggested runtime: 30–60 minutes.

MATERIALS AND PREPARATION

Materials:

- Index cards, paper straws, pipe cleaners, craft sticks, tape, string, newspaper, tennis ball, or whatever miscellaneous supplies you have on hand.
- A work table for each group.
- A table with a tablecloth, fan or blow dryer, and a spray bottle for testing.
- A shake table (see DIY links under Resources) increases the fun (optional).
- A laptop and projector if you want to show a background video.

Before the program, set up tables with your chosen materials for each team.

ADAPTATION:

This could also be a multigenerational activity in which families work together to meet the challenge.

ADAPTATION:

For an outside presenter, consider reaching out to a local engineer to present beforehand and test the structures, or reach out to the local weather station to see if one of the meteorologists can present on hurricanes.

GAME/ACTIVITY | LOW COST

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

“Building for Hurricanes” from NASA: <https://go.nasa.gov/3vp6bBc>

Weather activities from NASA: <https://go.nasa.gov/2SwoBBE>

“Build an Earthquake Shake Table” from QuadSquad:
<https://bit.ly/3bUX7w3>

Non-fiction

Hurricanes (Force of Nature) (2021) by Monika Davies

RECYCLED T-SHIRT BOOK BAG

AGES

Children 8+ years

Teens/tweens

PROGRAM DESCRIPTION

Do you have a beloved old t-shirt that is too small or worn? Repurpose it into a bookbag for all your library materials! Ask participants to bring their own t-shirts, but be sure to have some extras on hand. In the spirit of reuse, solicit donations from staff, patrons, or local businesses rather than buying new t-shirts. Suggested runtime: 45 min.

MATERIALS AND PREPARATION

Materials:

- T-shirts (one per participant)
- Scissors (sharp enough to cut fabric)
- Rulers
- Pencils (optional)

Before the program, set up a demonstration table at the front of the room and table space for each participant. Lay scissors, pencils, and rulers on each table. Once every participant has their t-shirt in front of them, lead them through step-by-step.

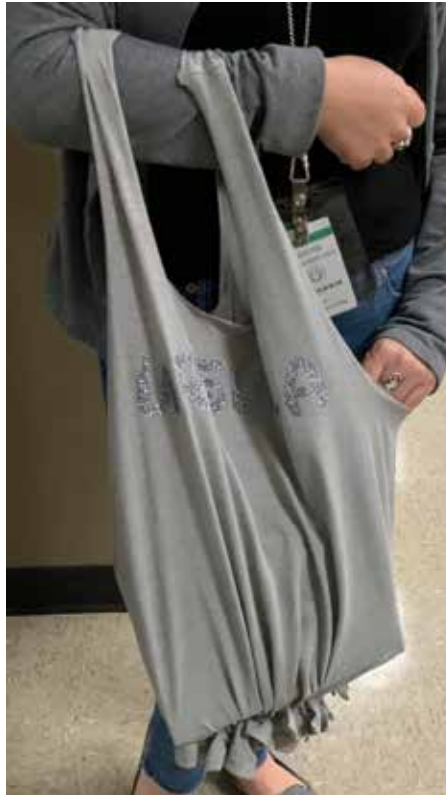


Image source: Sidnie Srader of Jones Public Library, Dayton, TX.

TIP:

Don't forget to test your scissors to make sure they're sharp enough to cut fabric. You might also consider asking participants to bring fabric scissors from home if they have them.

ADAPTATION:

Be sure to have adaptive or dual control scissors on hand.



Image source: Sidnie Srader of Jones Public Library, Dayton, TX.

CRAFT | LOW COST

1. Cut the arm holes out from the inside of the arm seam
2. Cut the neckline out by following the seam. You can make the hole small by sticking to the seam, or measure about an inch out from the seam and cut. If you use a pencil to measure make sure to turn the t-shirt inside out so you don't see the pencil markings.
3. If you haven't already, turn the t-shirt inside out.
4. Measure three inches from the bottom of the ruler and trace up with the pencil
5. Make the same marks all the way across the shirt. Use the width of the ruler for the width of the strips
6. Cut the pencil markings up to the three inch mark. Don't forget to cut the seams!
7. You can have the fringe on the outside for decoration or on the inside for a smooth bottom. If you want the fringe on the outside, turn your shirt right side out at this point.
8. Knot each set of strips together tightly.
9. Once you've knotted all the way across, the book bag is ready to use!

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Each participant will need half a table. Solo-librarian friendly. For younger children, volunteers or parents will need to help tying knots.

TIP:

You can also link this craft to the book *I Had a Favorite Dress* (2011) by Bonnie Ashburn and Julia Denos.

OUR BLUE LIBRARY

AGES

Children/Teens/Adults

Multigenerational

PROGRAM DESCRIPTION

What better way to celebrate our blue planet than by turning the library blue for a day/week/month/all summer long? Invite local patron-artists to create an underwater landscape right in your library. They could paint aquatic scenes, make abstract art in blues and greens, and/or create papier-mâché or other 3D sculptures of their favorite aquatic animals. You could drape paper

“seaweed” at entrances or suspend a massive whale from the ceiling. The possibilities are as vast as the ocean. Decorate the whole library or only children/teen areas, depending on how much artwork your patrons create. Make sure to create a photobooth area for blue library selfies! Tech-savvy teens might also want to create a green screen. Suggested runtime: 90–120 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Material ideas:

- Blue and green construction paper, butcher paper, poster boards, etc.
- Various types of paint and paintbrushes, markers, other art supplies
- Tacks, tape, nails, or other art-hanging materials
- Papier-mâché supplies (flour, water, newspaper/tissue) (optional)
- A variety of props (optional)
- Computer with video editing software, such as Canva Pro, OpenShot, or iMovie (optional, for green screens)

TIP:

See also Jellyfish Lanterns on page 281 for another fun ocean decoration.

TIP:

Some aquariums also have really interesting traveling exhibits! If you have an aquarium in your area, try reaching out to them to see.

TIP:

A great option for libraries without much wall space is to have patrons decorate the sidewalks around the library with chalk. Hairspray over the drawings helps to preserve them.

CRAFT | DECORATION/DISPLAY | PASSIVE

Beforehand: Clear the new temporary décor with management and cleaning staff. Take down any existing posters/artwork or plan to cover them without damage. For a book display, feature ocean books and/or books with blue covers.

Instructions:

- Send a call out for patron-artists young and old to create oceanic artwork and promote the idea on social media, in the library, etc. Patrons can work on their (pre-approved) artwork at home, or come to the library and work in groups. You could also pitch the idea to local high school and middle schools to see if they can work on them in classes before summer starts.
- Organize a day for hanging the materials. Run it as a kick-off party, or enlist the help of a teen advisory board or volunteers.
- Once the installation is complete, promote summer programming on social media and in newsletters with plenty of pictures!

UNIQUE SPACE AND/OR PERSONNEL NEEDS

1–2 extra staff members or volunteers to help hang the installation.

RESOURCES

Web

“11 Best Free Green Screen Software” from *Fix the Photo*:
<https://bit.ly/2TeCuVc>

Books

Non-fiction

Oceans & Seascapes (Oil & Acrylic) (2012) by Martin Clarke (YA/adult)

Watercolor with Me in the Ocean (2019) by Dana Fox (children’s)

Ocean Anatomy: The Curious Parts & Pieces of the World under the Sea (2020) by Julia Rothman and John Niekrasz (adult/all ages)

Learn to Draw Sea Creatures (2014) by Robbin Cuddy (children’s)

ADAPTATION:

You could also hold a prop-making contest. The prop that gets used the most (based on photos posted to the library’s social media) by the end of the summer wins!

TIP:

Create a space that is multisensory by including artwork that is tactile and touchable. Use recordings of whale songs or other oceanic sounds, and display various sea shells or other real aquatic artifacts.

CRAFT

AQUAMAN AND FRIENDS RECYCLED BEADED BRACELETS

AGES

Children 10+ years

Teens/tweens

PROGRAM DESCRIPTION

Aquaman loves the ocean and wants to keep it clean and healthy for every person and every animal to enjoy for years to come. One way we can help is to recycle and reduce single-use plastic, which often ends up in the ocean. Participants make beads out of recycled paper, then make jewelry or keychains out of their own beads! Older teens could also make beads out of plastic bottles, but this option is more complex and will have sharp edges (protective gloves required). For a shorter program, purchase beads made out of recycled materials and have children use those instead. Suggested runtime: 60–90 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Magazines
- Scissors
- Reusable straws or doweling
- Glue
- String
- Mod Podge (optional)

To make the beads, cut strips of paper into triangles approximately 12" long x 1" wide. Roll the strips around the straw, starting with the wide end of the triangle, and glue the end piece. Optionally, finish with Mod Podge for extra shine. When dry, string the beads together for jewelry or keychains.

ADDITIONAL FUN:

Watch Aquaman—or any other ocean-themed film to which your library has viewing rights—while making the beads.

CRAFT

UNIQUE STAFF AND PERSONNEL NEEDS

1-2 volunteers to help with bead-making.

RESOURCES**Web**

Video on DIY Paper Beads from Magazines from Red Ted Art:
<https://bit.ly/3oXKw0L>

Video on DIY Plastic Bag Beads: <https://bit.ly/3yMaf0n>

“How to Make Recycled Beads from Plastic Bottles” from *The Beading Gem*: <https://bit.ly/3oUQGyF>

Recycled beads for purchase from Etsy: <https://etsy.me/3wD6EjA>

BooksNon-fiction

Plastic Soup: An Atlas of Ocean Pollution (2019) by Michiel Roscam Abbing (YA)

Rachel Carson and Ecology for Kids (2020) by Rowena Rae (children's)

The Sea Around Us, 3rd ed. (2018) by Rachel Carson (YA/adult)

Climate Change: The Science Behind Melting Glaciers and Warming Oceans (2020) by Josh Sneiderman and Erin Twamley (children's)

Fiction

Mera: Tidebreaker (2019) by Danielle Paige and Stephen Byrne (YA)

The Highest Tide (2010) by Jim Lynch (YA)

OCEANS OF FUN TRIVIA

AGES

Multigenerational

PROGRAM DESCRIPTION

Give patrons a chance to learn and share how much they know about the ocean! For a virtual program, use Zoom (or any other live instruction format) and the virtual quiz platform, Kahoot! (or any other sequential presentation software). A Jeopardy-style game would also work well, especially for libraries whose patrons don't all have access to their own devices. This makes a fun family program. See Printables for quizzes for all age groups. Suggested runtime: 30 min.



Image source: Shutterstock

Outcomes:

- Participants will engage with each other in friendly competition
- Through gamifying learning, participants will learn important facts about the ocean, biodiversity, pollution, and climate change

MATERIALS AND PREPARATION

Materials:

- Computer (host)
- A virtual program hosting platform (e.g., Zoom, Google hangout, etc.) (host)
- The Kahoot quiz/es you will be using (host)
- Prizes, real or virtual (host)
- Access to the virtual platform (phone/tablet/computer) (participants)
- Access to www.kahoot.it or the Kahoot! App (participants)

GAME/ACTIVITY | LOW COST

Before the program, use the online quiz platform Kahoot, PowerPoint, or Google Slides to create a trivia contest. Tailor your contest to the topics that are most interesting to your teens, such as ocean animals, pirates, climate change, movie trivia, etc. See Resources for quizzes.

To run:

- Explain the procedure and rules to your participants. For example, “We’re going to be using the Kahoot! website on your phones/tablets/computers. Go to www.kahoot.it and enter the game pin. Answer the questions as quickly as you can to earn more points!”
- Offer prizes to the individual or teams that score the most points for guessing correct answers

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

Free trivia app Kahoot: www.kahoot.com

How to create learning games from Kahoot: <https://bit.ly/3vy1lw8>

Kahoot! Ocean Quizzes from National Geographic: <https://bit.ly/2SCn38U>

Trivia questions from Free the Ocean: <https://bit.ly/3fpQnZf>

Quiz scorekeeping spreadsheet from Table Quiz Helper: <https://bit.ly/2QYcFYV>

Books

Non-fiction

The Sea: Trivia, Crafts, and Recipes Inspired by the World’s Best Shorelines, Beaches, and Oceans (2019) by Isobel Carlson (YA)

Fun Facts About The Ocean For Kids (2019) by A.D. Largie and Sabrina Pichardo (children’s)

Oceans: Discover the Beauty of our Underwater World (2017) by Daniel Gilpin (adult)

Printables

Ocean Trivia

OCEAN TRIVIA

Trivia Questions: Ocean Tides and Weather

Children

1. What object in outer space is mainly responsible for the Earth's tides? **The Moon**
2. How often do tides usually happen? **Two high tides and two low tides per day.**
3. Why does the moon have a bigger effect on Earth's tides than the Sun? **Because it is closer.**
4. What is caused by the wind blowing over the surface of the water? **Waves**
5. What is the chemical formula for water? **H₂O**
6. A long, high sea wave caused by an earthquake, submarine landslide, or other disturbance is called what? **A tsunami**
7. Tides are caused because the moon's gravity is pulling the water (**up** or down), while the earth's gravity is pulling the water (up or **down**).
8. Where do jet streams form? **At the boundaries between hot and cold air masses.**
9. Where are jet streams found? **Six to nine miles above the Earth.**
10. Can a plane fly through a jet stream? **Yes**

Teens

1. Tides are affected by the Moon's what? **Gravitational pull**
2. What is a basic definition of a tide? **Tides are very long-period waves that move through the oceans in response to the forces exerted by the moon and sun.**
3. What is a strong, offshore current that is caused by the tide pulling water through an inlet along a barrier beach, at a lagoon or inland marina where tide water flows steadily out to sea during ebb tide. **A rip tide**
4. How do you spot a rip tide? **a) A gap in the waves. Not between one wave and the next but within the line of the waves, perpendicular to the shore; b) A channel of particularly choppy water or break in the waves. c) A channel of seaweed or other debris visibly moving away from the shore. d) Discolored water, caused by sand and other sediment picked up by the current.**
5. What astrologer, astronomer, and mathematician suggested that the moon was responsible for tides, in 1609? **Johannes Kepler.**
6. The tides which cause most damage to our beaches and occur at full and new moon phases are? **Spring tides**
7. What happens when a plane flies in the same direction as a jet stream? **When an airplane is flying in the same direction as the stream of air, it can travel very fast and use up less fuel.**
8. If you live in the United States, you are most affected by the _____jet stream because it flows across most of the land. **Polar jet stream**
9. The _____ jet stream tends to stay to the south of the U.S. border. **Subtropical**
10. Jet streams affect the path of what tropical weather occurrence? **Hurricanes**

Adults

1. Name three natural occurrences that affect water levels. **Rain, hurricanes, and tides**
2. What is a neap tide? **A less than average tide occurring at the first and third quarters of the moon.**
3. Where are the highest tides in the world found? **The Bay of Fundy**
4. The sun's gravitational effect on tides is ____ that of the moon. **50%**
5. What are the two principal factors that produce tides? **Gravitational attraction and centripetal force**
6. Where on Earth are tides the weakest? **At the Equator.**

Trivia Questions: Ocean Creatures

Children

1. What is the largest fish in the world? **Whale shark**
2. What creature has a secret pocket in their armpit to store food? **Sea otter**
3. Which species of sea creature does the male give birth and care for the babies? **Seahorse**
4. Which sea creature sleeps with one eye open? **Dolphin**
5. What color are clownfish? **Orange and white**
6. At 188 decibels, the call of what animal is the loudest sound made by any animal on the planet. **Blue whale**
7. Where is a shrimp's heart? **In its head**
8. What creatures have no head, mouth, eyes, feelers, bones, heart, lungs, or brain, yet they are alive? **Sea sponges**
9. What creature lives on every continent except Antarctica? **Turtles**
10. Do sharks have bones? **No, they have cartilage.**

Teens

1. Sharks are covered with tiny little teeth called? **Dermal denticles.**
2. About how long can a shark go without eating? **Six weeks**
3. What is the world's smallest known fish? **Tiny goby**
4. How do fish "breathe"? **Through their gills**
5. How many kinds of lobsters are there in the US? **Two: American and spiny**
6. What do oysters and clams eat? **Plankton**
7. What is the average size of a giant squid? **14 Meters**
8. How many species of starfish are there? **2,000**
9. How many hearts does an octopus have? **Three**
10. What fish is immune to the anemone's tentacles stinging cells called nematocysts? **Clownfish**

Adults

1. What fish produces its own antifreeze to keep the blood flowing? **Atlantic wolffish**
2. Which fish can literally turn itself inside out when under attack? **The deep sea cephalopod or the "vampire squid"**
3. What color is a lobster's blood? **Colorless**
4. How does a lobster grow? **Molting or shell-shedding.**
5. How does an oyster make a pearl? **When a foreign substance such as a grain of sand lodges in its shell, the oyster reacts by depositing layers of nacreous (pearl-like) material around the foreign body to wall it off and reduce irritation.**
6. Which fish possess venom that's 1,200 times more poisonous than cyanide? **Pufferfish or blowfish.**

COMMUNITY WATERWAY CLEANUP

AGES

Teens/tweens

Multigenerational

PROGRAM DESCRIPTION

Partner with a local park or conservation group to learn more about waterways in your community! Planet Earth is full of water, from freshwater streams to mighty rivers to vast oceans. Sadly, humans have had a negative impact on many waters. Pollution, littering, and overcrowding can hurt the fragile ecosystems of aquatic areas. But libraries can be leaders of conservation. After a guest speaker (optional), teens or families collect trash from a local waterway or park. Suggested runtime: 90 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Rubber gloves (one set per participant)
- Trash bags and recycling bags
- Grabbers or trash-pickers (optional but recommended)
- Snacks and drinks (individual water bottles discouraged, but if necessary, provide a place to collect and recycle the bottles).

TIP:

This is also a great way for teens to get in their volunteer hours, or a great event for a teen advisory board to organize and lead.

TIP:

You can also ask participants to bring their own gloves, bags, and reusable water bottles. Have a few extras on hand for those who forget.

GAME/ACTIVITY | OUTDOORS | OUTREACH

Prep beforehand:

- Identify local waterways (or parks) and the organizations that protect them. Invite a guest speaker from a local park or conservation group. If you aren't able to book a speaker, provide handouts with information on ecology and environmentalism, aquatic life, and local conservation.
- Make sure to clear your cleanup effort with the local parks and recreation department, or other authority.
- Prepare and be ready to share any rules for cleanup (i.e., areas that participants should not disturb).
- Arrange for someone to take the collected trash and recycling to the appropriate facility.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

You will need a local waterway in need of cleanup. Add 2+ extra staff members or volunteers.

RESOURCES

Web

"Teen's Project Helping To Clean The Ocean" from *Teaching Kids News*: <https://bit.ly/3p18rfx>

"The Dutch boy mopping up a sea of plastic" from BBC: <https://bbc.in/3wAQyXy>

"Action Center" from *Ocean Conservancy*: <https://bit.ly/3yJEzc3>

"Take Action" from *Surfrider Foundation*: <https://bit.ly/3oXxq3n>

Books

Non-fiction

Going Blue: A Teen Guide to Saving Our Oceans, Lakes, Rivers, & Wetlands (2010) by Cathryn Berger Kaye and Philippe Cousteau (YA)

Generation Green: The Ultimate Teen Guide to Living an Eco-Friendly Life (2008) by Linda Sivertsen and Tosh Sivertsen (YA)

101 Ways to Help the Planet: A One Year Challenge (2020) by Gaia Appello

How to Change Everything: The Young Human's Guide to Protecting the Planet and Each Other (2021) by Naomi Klein and Rebecca Steffoff (YA)

Into the Deep: Science, Technology, and the Quest to Protect the Ocean (2020) by Christy Peterson (YA)

GAME/ACTIVITY | LOW COST

CONSERVATION CLUB

AGES

Teens

Adults

PROGRAM DESCRIPTION

For a conservation book club, gather patrons around a common title to discuss how we can conserve our planet's waterways. The book club component is easily adapted to fit any age group or population by modifying book choices. A complementary activity is to invite a guest speaker to present on the importance of conservation efforts and provide helpful information that patrons can incorporate into letters to their representatives. After the presentation, patrons can ask questions and participate in a letter-writing effort to draw attention to an important environmental cause. Both Conservation Club activities are easily adapted to a virtual program. Suggested runtime: 90 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

To prepare for the book club, choose your book(s) and procure extra copies for patrons to check out. Prepare a list of discussion questions before an in-person or virtual meeting.

To prepare for the letter-writing campaign, gather paper, pens, envelopes, stamps, and a list of local representatives and their mailing addresses.

ADAPTATION:

For a passive program, simply create a conservation book display! You could lead an asynchronous discussion on social media about your featured books.

ADAPTATION:

This program can be adapted for outreach by partnering with a relevant organization (e.g., schools or conservation groups) and holding this event off site.

GAME/ACTIVITY | LOW COST

UNIQUE SPACE AND/OR PERSONNEL NEEDS

An enclosed meeting room works best for a book discussion. Solo-librarian friendly.

RESOURCES**Web**

“Citizen Science at NOAA” from National Ocean Service:
<https://bit.ly/3bZvq5w>

BooksNon-fiction

Future Sea: How to Rescue and Protect the World's Oceans (2020) by Deborah Rowan Wright (adult)

The Nature of Life and Humanity (2019) by Joseph Stadtmiller (adult)

The Future We Choose: Surviving the Climate Crisis (2020) by Christiana Figueres (adult)

The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of the Civilized World (2017) by Jeff Goodell (adult)

The Gulf: The Making of An American Sea (2017) by Jack E. Davis (non-fiction)

Oceana: Our Endangered Oceans and What We Can Do to Save Them (2011) by Ted Danson (adult)

Junk Raft: An Ocean Voyage and a Rising Tide of Activism to Fight Plastic Pollution (2017) by Marcus Eriksen (adult)

The Brilliant Deep (2018) by Kate Messner (children's)

Seaside Sanctuary series (2019) by Emma Carlson Berne (children's)

Fiction

Ocean Echoes: A Novel (2016) by Sheila Hurst (adult)

Nocturne, Opus 1: Sea Foam (2012) by Norene Moskalski (adult)

New York 2140 (2017) by Kim Stanley Robinson (adult)

Great Pacific (Graphic Novel) (2012–15) by Joe Harris (adult)

Low. Vol 1 (Graphic Novel) by Rick Remender (adult)

On Ocean Boulevard (2020) by Mary Alice Monroe (adult)

Tentacle (2018) by Rita Indiana Hernandez (adult)

The End of the Ocean (2020) by Maja Lunde (adult)

The Island of Sea Women by Lisa See (adult)

The Wall (2019) by John Lanchester (adult)

GAME/ACTIVITY | LOW COST

Whalesong (2016) by Robert Siegel (YA)

And the Ocean Was Our Sky (2018) by Patrick Ness (YA)

Pacifica (2018) by Kristen Simmons (YA)

The Light at the Bottom of the World (2019) by London Shah (YA)

Exodus (2003) by Julie Bertagna (YA)

A Whale of the Wild (2020) by Rosanne Parry (children's)

Stingray City (2016) by Ellen Prager (children's)

The Madre de Aguas of Cuba (The Unicorn Rescue Society) (2020) by Adam Gidwitz and Emma Otheguy (children's)

Journey Under the Arctic (2020) by James Fraioli, Fabien Cousteau, and Joe St. Pierre (children's)

Out of My Shell (2019) by Jenny Goebel (children's)

Hello from Renn Lake (2020) by Michele Weber Hurwitz (children's)

Garbage Island (2018) by Fred Koehler (children's)

Purrmaids: Quest for Clean Water (2019) by Sudipta Bardhan-Quallen (children's)

Emily Windsnap and the Tides of Time (Emily Windsnap) (2020) by Liz Kessler (children's)

Picture Books

Alba the Hundred Year Old Fish (2019) by Lara Hawthorne

A Planet Full of Plastic (2019) by Neal Layton

A Dolphin's Wish (2020) by Trevor McCurdie and Cinzia Battistel

Fish: A Tale about Ridding the Ocean of Plastic Pollution (2020) by DK and Brendan Kearney

Little Hector and the Big Blue Whale (2018) by Ruth Paul

Little Turtle and the Changing Sea (2020) by Becky Davies and Jennie Poh

Rocket Says Clean Up! (2020) by Nathan Bryon and Dapo Adeola

The Boy and the Whale (2017) by Mordicai Gerstein

GREAT TENTACLES! OCTOPUS STEAM

AGES

Children 6+ years

Tweens

PROGRAM DESCRIPTION

More than 150 species of octopuses exist in seas throughout the world. Famous for their bulbous bodies, bulging eyes, and eight arms with suckers, these “monsters of the sea” are invertebrates, solitary creatures, and highly intelligent with the ability to camouflage, move in and out of small nooks and crannies, and even the ability to expel ink. These group activities are designed to celebrate the unique cephalopod. You might also contact local marine biologists, aquariums, or other experts on octopuses and see if any can come present at your library. Suggested runtime: 60 minutes.



Image source: Shutterstock

MATERIALS AND PREPARATION

Optional: A projector, projector screen, and laptop if presenting examples of ocean environments and octopus camouflage.

TIP:

Due to copyright issues, you probably cannot screen *My Octopus Teacher* (Netflix) in your library, but you can recommend that tweens watch it at home before or after the program!

ADAPTATION:

For younger children, read *Inky's Amazing Escape* and make octopus slime together. You can also make a game out of matching an octopus to its environment, or create a “Where’s Waldo?” type game by asking for little ones to spot the camouflaged octopus.

ADAPTATION:

For teens, consider making no-sew octopus plushies! Tutorials available on Amy Glassenburg’s *While She Naps* blog, <https://bit.ly/3wJgO2d> or from Jennifer Maker, <https://bit.ly/2QYmqX3>

Activity #1: Octopus Locomotion

Materials: Balloon (1 per child), plastic straw (1 per racing station), small binder clip (1 per child), fishing line (various lengths for racing stations), crepe paper, construction paper, masking tape and regular tape, scissors, permanent markers

Optional: Octopus silhouettes on cardstock, air pump

An octopus can travel in two ways: When searching for prey, it will use its arms to slither over surfaces and feel for food; when it needs to move quickly, whether to attack prey or avoid danger, it will draw water into its muscular body cavity and then quickly force it out from a tube under its head. The force of the water squirting out pushes the octopus forward; this is called jet propulsion. In this activity, participants will design their own balloon octopus and demonstrate how they use jet propulsion to travel.

Instructions:

1. For each racing station, cut fishing line roughly the length of your activity room.
2. Thread the fishing line through the straw, then attach each end of the fishing line to the back of two chairs.
3. Make sure the chairs are pulled apart and the fishing line is stretched tightly.
4. Give each child a balloon and have them blow it up. (An air pump would also be useful to have.) Use a binder clip to keep the balloon nozzle closed so air cannot escape.
5. Optionally, let the children decorate octopus silhouettes on cardstock, which they can tape to their balloon when it's their turn.
6. To test the jet propulsion after the octopuses are complete, tape the threaded straw securely to the top of a completed balloon.
7. Carefully remove the binder clip and release the air.
8. The balloon will travel in the opposite direction from which the air escaped. Remind children that the balloons are using air for propulsion, whereas an octopus would use water.
9. Children can test how far their octopuses travel, make adjustments to their designs or the amount of air they use, and compete in races.

Activity #2: Octopus Camouflage

Materials: Air-dry clay in a variety of colors; items for creating texture, such as forks, combs, crinkled foil, and Legos; a variety of pictures of ocean environments and octopuses (printed or virtual)

Octopuses are masters of camouflage, seamlessly blending into their ocean surroundings or standing out in bright colors to startle their enemies. Octopuses are most unique because not only can they change their color to camouflage themselves, but they can also change their texture. In this activity, children create clay octopuses and see how well their camouflage blends into different habitats.

TIP:

Be sure to have a latex warning for parents (or buy latex-free balloons). Just being in the same room as latex can cause a reaction for those with an allergy.

TIP:

A less costly alternative to using air-dry clay is to have children color coffee filters instead.

GAME/ACTIVITY | STEAM | OUTREACH

Instructions:

1. Give each child a ball of air-dry clay and instruct them to sculpt an octopus with a unique texture, shape, size, and color to demonstrate their camouflage abilities.
2. You can give each child a printed picture of an ocean habitat they need to match, or provide pictures in a presentation for inspiration.
3. You can have a show and tell portion when they are finished creating their sculptures.
4. Think of the following while creating the octopuses:
 - **Shape:** Think of unique ways to mold your octopus. How could an octopus change its shape to look like something different when hiding?
 - **Texture:** Use a variety of items to give unique textures to your octopus. For example, if trying to blend in with a rock that looks very rough, how could octopus skin camouflage to look rough?
 - **Size:** Stretch the air-dry clay, or use small amounts depending upon whether or not you think the octopus would want to appear big or small in its environment.
 - **Color:** Use a variety of air-dry clay colors and blend them together to create the best camouflage. You could also use white clay and have children return to paint them at a later date or paint them at home.

Activity #3: Octopus Slime

Materials:

- 5 oz. clear glue
- ½ cup warm water
- 2–4 drops food coloring
- ½ tsp. baking soda
- 1–2 Tbsp. contact lens solution
- Mixing bowl
- Spoon
- A variety of small containers to test slime texture and shape, such as toilet paper tubes, ice cube containers, condiment cups, etc.

Octopuses have soft bodies, with the exception of their beaks, so they can fit into incredibly small spaces. In 2016, Inky, an octopus at New Zealand's National Aquarium, escaped his tank through a small opening, crawled across the floor, and then slid through a drainpipe that led directly to the sea. Inky was roughly the size of a soccer ball and the drainpipe was only a few inches wide. After making the slime, mimic Inky's escape and have children test what shapes and containers it can fill easily.

Instructions:

- Combine the glue and water.
- Add food coloring of your choice and mix well.
- Add the baking soda and stir.
- Now add the contact lens solution in a slow, steady stream. It is important to go carefully here. The chemicals in the contact lens solution activate the recipe, so make sure you don't go too fast or add too much.
- Stir it well, at first with a spoon, and then knead it with your hands. It will be sticky at first, but the longer you knead it the smoother it will become.

Activity #4: Suction Strength

Materials: A variety of suction cups (including those with hooks); a variety of materials to test, such as paper clips, keys, rubber bands, cups, plastic bags, and paper plates.

Octopuses have roughly 280 suckers located on their arms. They use them to grasp onto objects in their environment, such as rocks when they're moving or hiding, or onto food in order to guide it into their mouths to eat. Some of the large suckers near the octopus' beak can hold around 35 pounds of weight and crack open clams or other prey. When a suction cup latches onto an object, the pressure from the air or water outside is stronger than the pressure inside the suction cup. It pushes on the suction cup and creates the force we call suction, causing it to stick to whatever object it's attached to.

Instructions:

1. Stick a variety of suction cups to different surfaces and objects.
2. Test out different strategies for making the suction cups stick, such as adding water to the suction cup versus leaving it dry. What items do the suction cups stick to? Why do you think so?
3. Hang a variety of items from suction cup hooks of different sizes on the wall. Which suction cup hooks can hold the greatest amount of weight? The smallest amount of weight? Why might some be weaker than others?
4. You can also play Pin the Sucker on the Octopus on a window or whiteboard (see Resources for an octopus silhouette)

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Add extra staff or volunteers for large groups. Octopus locomotion is a great one to run outdoors.

TIP:

You can also make suction cup seascape prints by dipping the cups in green or blue paint, and pressing them onto paper.

RESOURCES

Web

“Cephalopod Locomotion Lab” from *New England Aquarium*:
<https://bit.ly/3cjg9fN>

Jet propulsion from *NASA*: <https://go.nasa.gov/3yGztxf>

Information about octopus camouflage from *Science Friday*:
<https://bit.ly/3vnueAx>

“How Do Octopuses Change Color?” from *Ocean Conservancy*:
<https://bit.ly/3yIKkH3>

Inky the Octopus from *National Geographic*: <https://on.natgeo.com/3frwRvs>

Coffee filter camouflage from *The Library as Incubator Project*:
<https://bit.ly/3yLchOz>

Slime recipe from *Natural Beach Living*: <https://bit.ly/2RRAiCH>

Suction cup strength tests from *Kids Soup*: <https://bit.ly/3fL5vQ2>

Suction cup printing from *Kids Soup*: <https://bit.ly/3bVRk9S>

“Eight Great Reasons To Be A Sucker For Octopuses: from *Oregon Coast Aquarium*: <https://bit.ly/3frv4GZ>

Books

Non-fiction

Obsessive About Octopuses (2020) by Owen Davey (children’s)

Inky’s Amazing Escape (2018) by Sy Montgomery and Amy Schimler-Safford (children’s)

The Octopus Scientists (2015) by Sy Montgomery and Keith Ellenbogen (children’s)

The Soul of an Octopus (2016) by Sy Montgomery (adult)

Fiction

Octopus Escapes Again (2016) by Laurie Ellen Angus (children’s)

Fourteen Animals (That Are Definitely Not an Octopus) (2018) by Gabe Pyle (children’s)

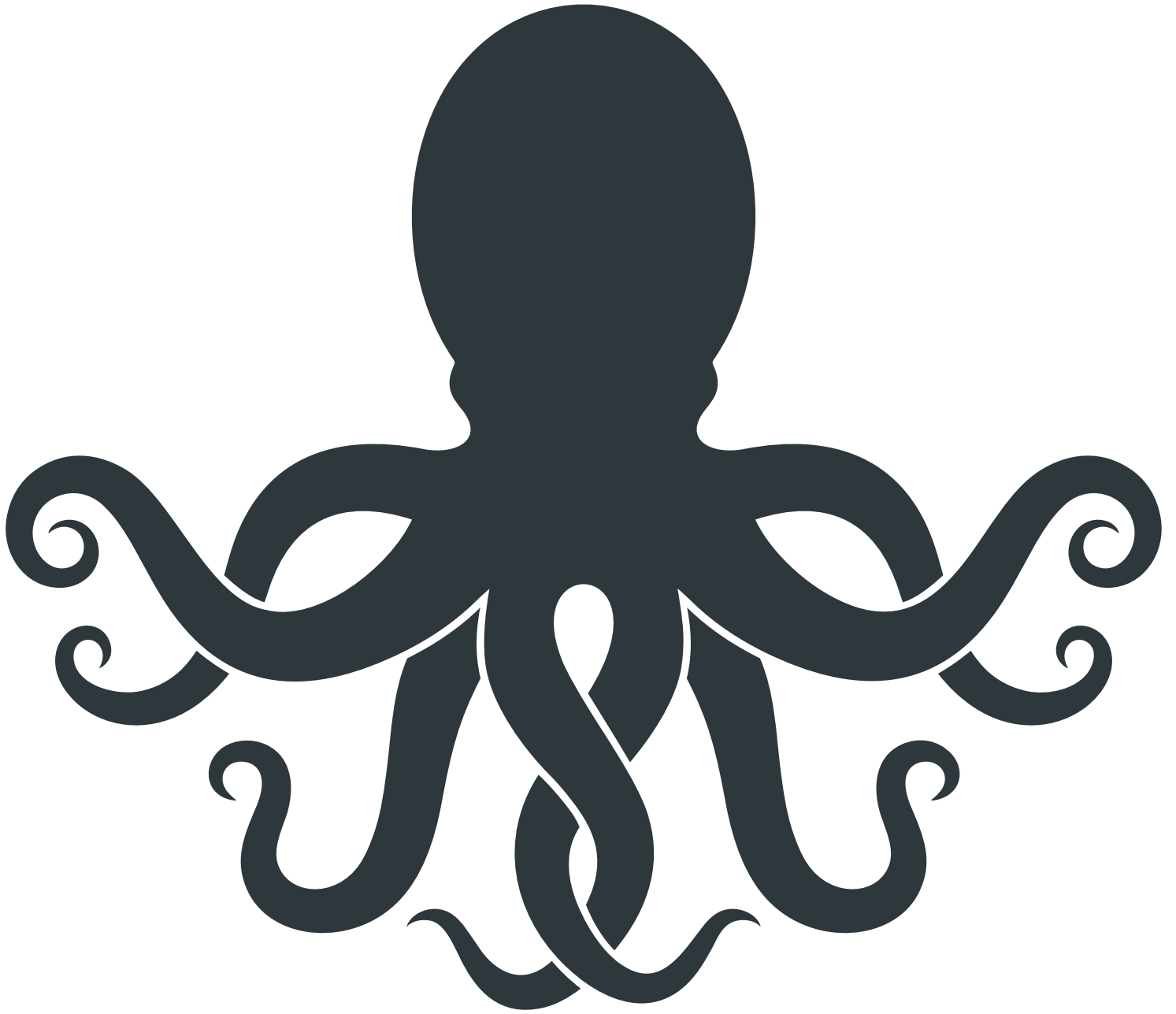
If I had an Octopus (2021) by Gabby Dawnay and Alex Barrow (children’s)

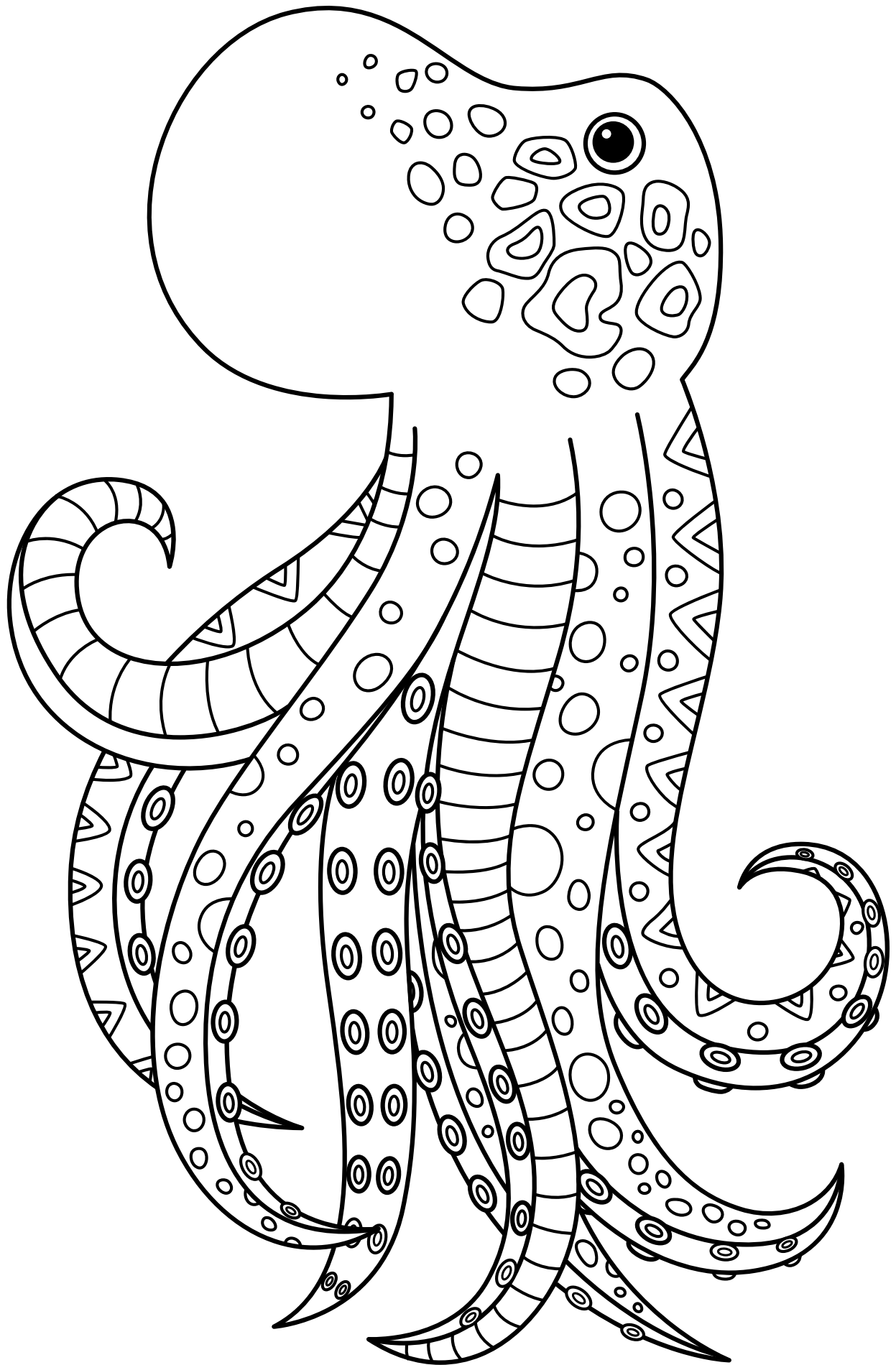
The Benefits of Being an Octopus (2018) by Ann Braden (children’s)

Printables

Octopus Silhouette

Octopus Coloring Sheet





TANGRAM FISH

AGES

Children 8+ years

Tweens

PROGRAM DESCRIPTION

A tangram is a puzzle in which different designs can be made by arranging geometric shapes. This can be a passive program, a filler for another program, or a game where the fish get progressively more difficult. Suggested runtime: 30 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials: Colored paper or construction paper, scissors, laminator (optional)

Instructions:

In advance, cut the geometric shapes out of the colored paper and laminate them if desired. You can also purchase foam tangrams for participants of all ages. A traditional set of tangram shapes includes two small triangles, one medium triangle, two large triangles, one square, and one parallelogram.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

About tangrams from *Study.com*: <https://bit.ly/3bV3JKT>

Tangram fish inspiration from *Class Playground*: <https://bit.ly/3utc5zS>

Tangram fish inspiration from *Scout Life Magazine*: <https://bit.ly/2SyHYd8>

Tangram fish inspiration from *Seesaw*: <https://bit.ly/3hY4ITT>

Tangram ideas for preschoolers from *Prekinders*: <https://bit.ly/2QYVzdt>

ADAPTATION:

Large foam tangrams also work well for early literacy.

ADAPTATIONS:

This can be a passive activity where children design their own tangram animals and have others guess what they are. Alternatively, you can create a game to see who can complete a tangram the quickest.

Books

Non-fiction

Math by the Ocean (Math is Everywhere!) (2017) by Kieran Shah (children's)

A Math Journey Under the Ocean (Go Figure!) (2016) by Hilary Koll (children's)

Grasping Mysteries: Girls Who Loved Math (2020) by Jeannine Atkins (children's)

Fiction

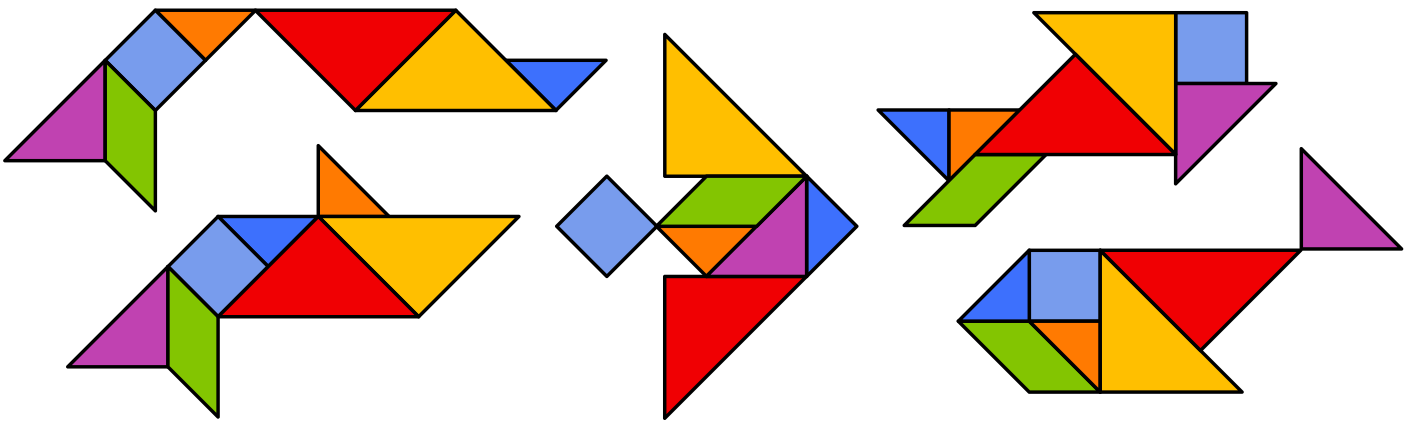
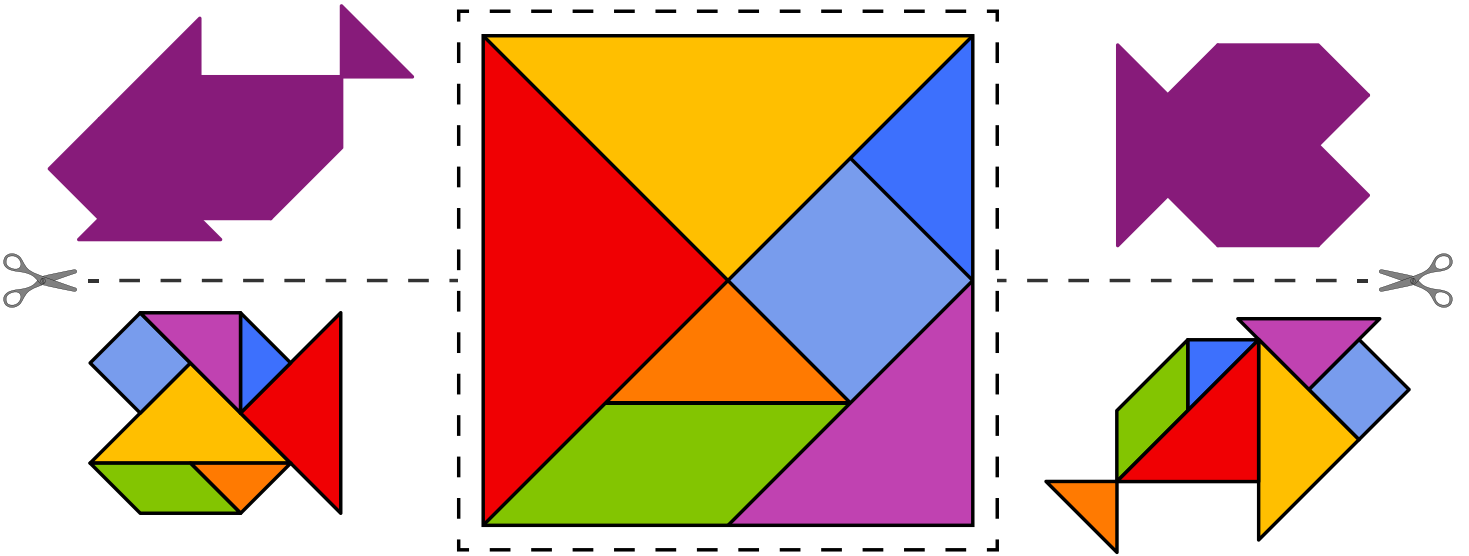
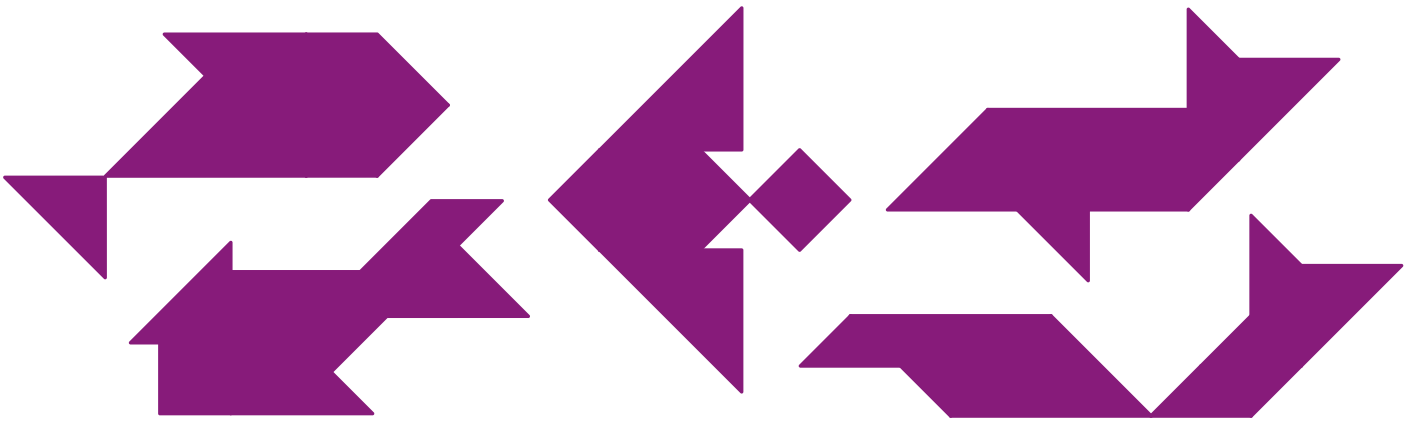
Color Zoo (1997) by Lois Ehlert (children's)

The Greedy Triangle (2008) by Marilyn Burns and Gordon Silveria (children's)

How to Code a Sandcastle (2018) by Josh Funk and Sarah Palacios (children's)

Printables

Tangram Template



LIGHT UP ANGLER FISH

AGES

Children 8+ years

Teens/tweens

PROGRAM DESCRIPTION

Create a circuit to emulate the angler fish's lure! To ensure that you have enough supplies for an in-library program, be sure to have a sign-up sheet with a limited number of participants. These also make great take-and-make kits. See Printables for an angler fish template by Christina Dorman of Maine State Library, Augusta, ME. Suggested runtime: 60 min.

MATERIALS AND PREPARATION

Materials: Cardstock, colored paper, glue, markers, pencils, transparent tape, copper tape (¼ inch width), LED lights (5mm or LED stickers), coin batteries, small binder clips

In advance, precut strips of copper tape approx. 6-8" long (two per participant). Create packets for each participant containing:

- 2 strips of copper tape
- 1 coin cell battery
- 1 LED
- 1 small binder clip
- Transparent tape
- Angler fish circuit template

During the program:

- Explain how circuits work, the etymology of the word, and how they are used.
- Introduce the idea of conductive vs. non-conductive materials
- Distribute materials to the participants and give them a primer on construction instructions.
- Invite each participant to use the angler fish template to guide placement of the copper tape and apply it.
- Tape the LED light in place with transparent tape.
- Place the coin cell battery in the designated spot on the template, fold the corner of the paper over it, and clip it in place with the binder clip.
- The LED will light up!

TIP:

To reduce costs, purchase AA batteries with battery holders instead of coin batteries. For take-home kits, use wrapped wire or alligator clips instead of copper tape.

ADAPTATION:

Create a 3-D angler fish using wrapped wire or alligator clips. Cut the fish out of cardboard or heavy paper, then tape or staple the circuit with the LED light dangling off the front. Caution: Wrapped wire is sharp!

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly for small groups. For large groups, add 1–2 volunteers or staff members to ensure that everyone gets their angler fish to light up.

RESOURCES

Web

About angler fish from SciShow Kids: <https://bit.ly/2SvQqKc>

60 second paper circuit tutorial video from Fawn Qiu:
<https://bit.ly/2TpeTRW>

Books

Non-fiction

Creatures of the Deep (2015) by Matthew Rake and Simon Mendez (children's)

The Anglerfish (2017) by Tanya Turner (children's)

Wire It! 6 Creative STEM Projects for Budding Engineers (2019) by Caroline Alliston and Tom Connell (children's)

Fiction

Anglerfish for Rent (2016) by Sarah Fox Anderson and Leo Silva (children's)

Nick and Tesla series (2013–2016) by Bob Pflugfelder (children's)

Printables

Angler Fish Template

TIP:

Be sure to watch “Folding Copper Tape for Paper Circuitry” from NexMap to understand how to correctly fold/turn the copper tape: <https://bit.ly/3vsobup>



TISSUE PAPER WATERCOLOR

AGES

Teens/tweens

PROGRAM DESCRIPTION

Participants use tissue paper to create watercolor backgrounds and place an ocean-themed silhouette on top. Easily modified to fit any ocean theme. This craft requires drying time, so be sure to plan a filler activity. Suggested runtime: 60–90 min.

MATERIALS AND PREPARATION

Materials: Stretched canvas; ocean animal silhouettes; bleeding tissue paper in blues, greens, yellows and purples (bleeding tissue paper is essential—regular tissue paper won't work); foam brushes; black permanent markers, paint pens or paint (or black paper cutouts); water; small cup or bowl for each person; pencils; plastic to cover the work surfaces; transfer paper; plastic gloves (optional, tissue paper will stain hands).

Preparation: Gather materials and, for younger children, cut out the silhouettes ahead of time. Cover work tables with plastic because the tissue paper will stain surfaces. Older children can experiment with more complex color mixing and cut out more complex animal silhouettes.

Instructions for the watercolor layer:

- Tear several colors of tissue paper into small irregular shapes. All the shapes and sizes should be different.
- Fill a small cup with water. Use the foam brush to spread water on the canvas.
- Place the tissue paper on the wet canvas. You can place the pieces in a random manner or in an ombre pattern (light color to dark color).
- Let the tissue paper dry (approx 30 min).

Filler activity ideas for drying time:

- Watching a video from underwater webcams
- Reading books about the ocean
- Moving station-to-station to learn about sea animals
- Set up a place for kids to watch a shadow puppet show or provide ocean animal cutouts to create their own shadow puppet show.

TIP:

See under Resources in the Ocean Animals program on page 243 for silhouettes.

CRAFT | LOW COST

- Have a collection of plastic ocean animal toys or fish tank decorations (as background/setting items) that kids could set in front of lights (or use shadows from the sun outside); then tape paper to the wall (or sidewalk) for kids to trace the silhouettes.

Instructions for finishing:

- Remove the tissue paper from the canvas (if the paper is still wet it can stain your fingers or other surfaces)
- Use transfer paper to transfer the outline of your silhouette onto the canvas, or trace the shape onto the background. Alternatively, you can cut out and glue black silhouettes onto your canvas.
- Use a black permanent marker, paint pen or paint to color in the silhouette. Draw the outline first by going over the faint pencil line with your marker.
- Take care not to get marker on your hand which may smudge the canvas. After drawing the outline, color the interior of the image. You will have the best results if you color using the side of the marker tip. You may have to color several times to get a nice solid black covering.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

Ocean Voyager Webcam from Georgia Aquarium: <https://bit.ly/3fpy6LG>

Indo-Pacific Barrier Reef Webcam from Georgia Aquarium:
<https://bit.ly/2SvQx8A>

Open Sea Cam from Monterey Bay Aquarium (there is a live narrated feeding every weekday at 11 a.m. PDT on this cam) : <https://bit.ly/3hX7y6g>

Live streams from The National Aquarium:
<https://aqua.org/explore/livestreams>

Other aquariums with live cams:

- Secret Reef from Tennessee Aquarium: <https://bit.ly/3oXNJ0b>
- Penguin Rock from Tennessee Aquarium: <https://bit.ly/2QWBswm>
- River Otter Falls from Tennessee Aquarium: <https://bit.ly/2Su3wHU>
- Aquarium of the Pacific: <https://bit.ly/2TrM5s9>
- Beluga Whales from Georgia Aquarium: <https://bit.ly/2SsSjY5>
- Seattle Aquarium: <https://bit.ly/2R3hWys>
- Sea Otters from Vancouver Aquarium: <https://bit.ly/3ft862k>

Books

Non-fiction

The Brilliant Deep: Rebuilding the World's Coral Reefs (2018) by Kate Messner (children's)

The Ocean (2020) by Miranda Krestovnikof (children's)

Kid Artists: True Tales of Childhood from Creative Legends (2016) by David Stabler and Doogie Horner (children's)

Fiction

I'm the Best Artist in the Ocean (2008) by Kevin Sherry (children's)

The Dot (2003) by Peter H. Reynolds (children's)

Drawn Together (2018) by Minh Lê and Dan Santat (children's)

OCEAN NAILED IT! CHALLENGE

AGES

Teens/tweens

PROGRAM DESCRIPTION

Hold a passive *Nailed It!* ocean challenge for teens! This is a simple passive program where participants recreate an ocean scene or creature based on an image they've picked out. Depending on your audience, you can provide large cookies to frost and decorate at home, or have them bake their own cakes to decorate with the candy you provide. For a non-food challenge, have them use modelling clay or recycled materials that you've gathered into take-and-make bags. Provide samples or links to ideas to get them started. When they submit their photo, make sure they also submit the image they were trying to match. Have other staff vote on the best, or have a vote on social media. Don't forget prizes for the winners, and feature them on the library's social media!



Image source: Shutterstock



Image source: Shutterstock

MATERIALS AND PREPARATION

To prepare:

- Decide whether you want the challenge to include food, taking into account community needs.
- Write up the rules for your unique challenge.
- Find or make samples for inspiration.
- Prepare the take-and-make bags.

TIP:

For the cake/candy take-and-make option, decorative candies might include Pixie Stix for sand/sparkle, Swedish Fish, gummy worms, Laughy Taffy, rock candy, shark candy, toothpicks, Rice Krispies, or M&M's.

CRAFT | PASSIVE

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Books

Non-fiction

Magical Animal Cakes: 45 bakes for unicorns, sloths, llamas and other cute critters (2020) by Angela Romero and Annie Rigg (YA/adult)

Mermaid Food: 50 Deep Sea Desserts to Inspire Your Imagination (2019) by Cayla Gallagher (YA/adult)

CRAFT

JELLYFISH LANTERNS

AGES

Teens

PROGRAM DESCRIPTION

Show teens how to bring the wonder of the ocean into their décor by making jellyfish lanterns! Create large lanterns for a library reading space and/or small ones for cool night lights that teens can take home. Blowfish lanterns are another fun variation of this craft. Suggested runtime: 45 min.

For more complex, STEAM-oriented LED light programs, see Eurekus.org for kits.



Image source: Angela German of West Baton Rouge Parish Library, Port Allen, LA

MATERIALS AND PREPARATION

Materials:

- Round paper lanterns (Oriental Trading), any color, with or without light sockets
- LED lights, battery-operated tea lights, or fairy lights (Amazon) (optional)
- Tissue paper, assorted colors
- Streamer paper, assorted colors
- Hot glue, fishing line, or wire to attach the LED lights
- Ribbon, stringed beads, or feathers for volume (optional)

CRAFT

Assembly:

- Cut spirals of tissue paper for a spiral effect.
- Cut streamer paper to similar lengths.
- Fold spirals and streamers in half and glue the middle parts to the lantern. Attach roughly 2–3 inches from the bottom, all the way around.
- Once dry, attach the tea lights with a wire/fishing line inside the lantern. If using fairy lights, attach with hot glue or fishing line. You can dangle the fairy lights like tentacles or coil them inside the lantern.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Add one extra volunteer or staff member for large groups.

RESOURCES

Web

Jellyfish Lantern craft from *Blog a la Cart*: <https://bit.ly/2RU9WzY>

“How to Make Jellyfish Paper Lantern” from *Paper Lanterns Store*: <https://bit.ly/3umrvpG>

Books

Fiction

The Thing About Jellyfish (2017) by Ali Benjamin (YA)

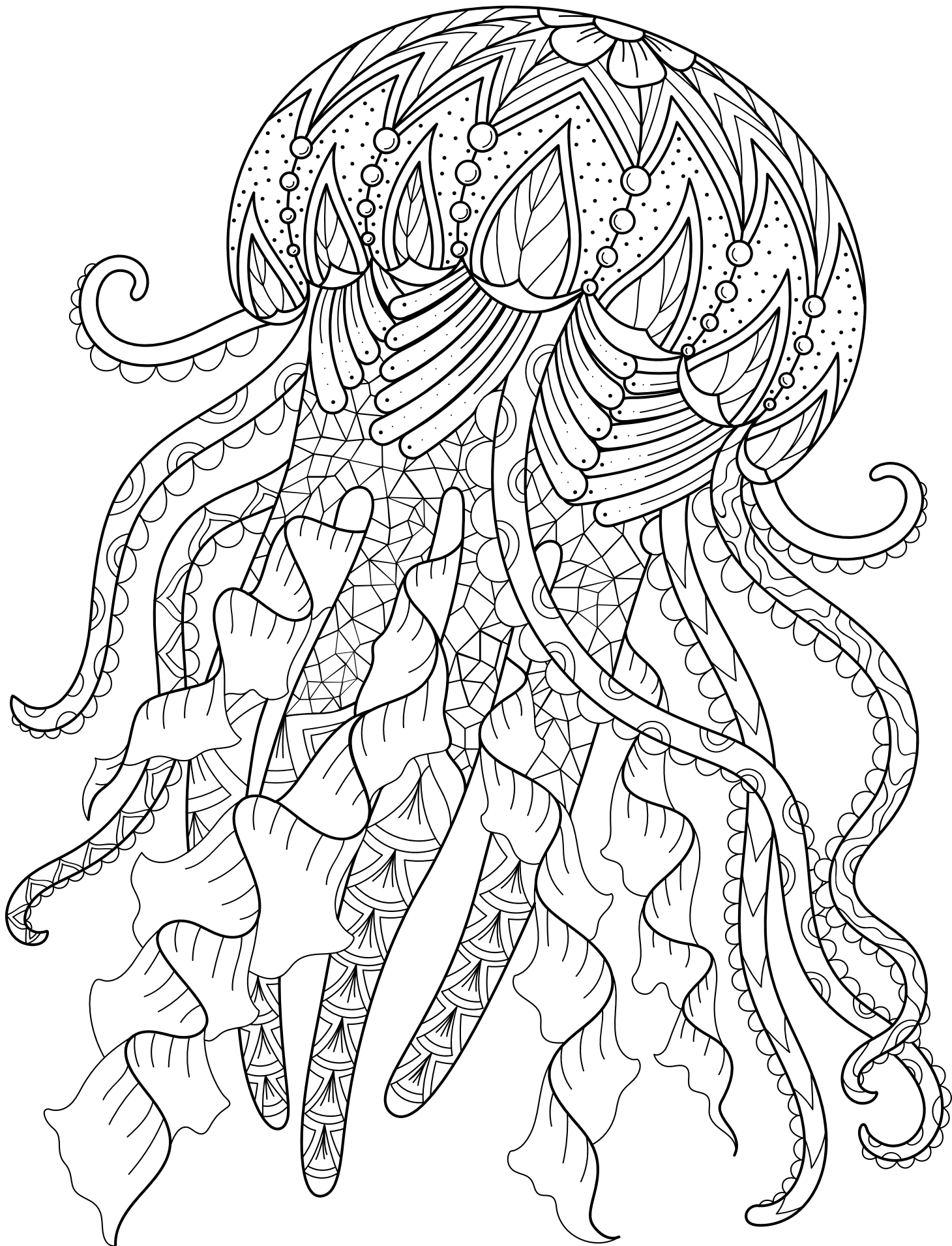
Jelly (2021) by Clare Rees (YA)

Non-fiction

Wisdom from a Humble Jellyfish: And Other Self-Care Rituals from Nature (2020) by Rani Shah (YA)

Printables

Jellyfish Coloring Sheet



SURVIVAL ISLAND: CAN YOU SURVIVE?

AGES

Children 8+ years

Teens/tweens

PROGRAM DESCRIPTION

Test your patrons' ability to survive on a deserted island! Adapt this program for any age group or runtime target by running fewer stations and/or modifying station activities. It would also make a fun kick-off party for summer programming, especially if you invite participants to wear costumes. Suggested runtime: 60–90 min.



Image source: Shutterstock

ADAPTATION:

For a passive program, display resources and create “Can You Survive?” cards depicting various scenarios. Patrons see the correct answers along with resources for each scenario.

TIP:

The Worst-Case Scenario Survival Game has lots of fun trivia questions about different survival scenarios. The board game could be played as part of the program, or ideas/questions for the program can be pulled from the game.

ADAPTATION:

For an online program, you can also have children build “I survived” catastrophes in Minecraft.

MATERIALS AND PREPARATION

Station #1: Make Your Own Water Filter

Materials:

- Empty 2 liter soda bottles (1 per filter)
- Exacto knife
- Rubber bands
- Spoons
- Assortment of layering materials, such as rocks of various sizes, gravel, charcoal, sand, cotton balls, or clay
- Coffee filters, napkins, or socks

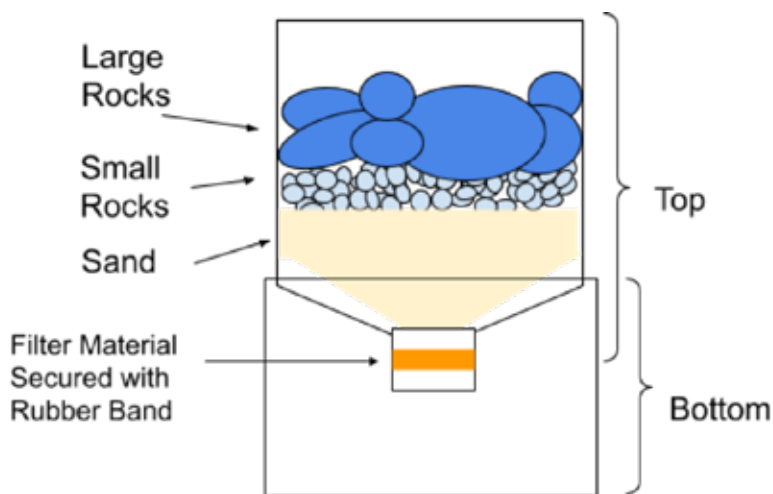


Image source: Christina Dorman of Maine State Library, Augusta, ME

Before the program, precut the soda bottles into two pieces. The cap section, or top of the bottle, should be shorter than the bottom section. Prepare the “dirty” water (with dirt and cooking oil) that participants will use to test their filters.

Assembly:

- Place top section upside down in the bottom section.
- Participants layer filter components into the upside down cap section.
- The finest layers (such as sand) should be at the bottom to catch the finest particulates. Larger materials are layered on top.
- Place filter or napkin around the bottom of the mouth of the bottle and secure it with a rubber band.
- Give them time to test their filters with the dirty water.

GAME/ACTIVITY | CRAFT

Station #2: Make a Friend

Materials:

- Small rubber balls or ping-pong balls
- Markers

Participants draw a friendly face for themselves (think Tom Hanks's Wilson volleyball.)



Image source: Shutterstock

Station #3: Build a Raft

Materials:

- Popsicle sticks or gathered sticks
- Yarn or string
- Large leaves (optional)
- Small items of different weights

Challenge participants to make a small raft from the gathered materials. Provide a tub or pool to test out their rafts. Try increasingly heavier objects on the rafts to see how much they can hold.



Image source: Shutterstock

Station #4: Build a Shelter

Materials:

- Recyclable materials
- Any craft materials
- Any blocks
- Lego minifigures
- Blankets and pillows (optional)

Challenge kids to build a shelter for Lego minifigures from recycled materials or blocks. Alternatively, they could make blanket forts.

Station #5: Send an SOS

See Lighthouse STEAM challenge for a Morse Code Printable. Cut a flashlight-sized hole from a cardboard box, behind which children can stand to send their SOS.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

A large space if you plan to run all the stations. Extra volunteers will be helpful.

RESOURCES

Web

“Make a Water Filter” from *National Geographic Kids*: <https://bit.ly/3urxh9l>

Resources for natural disasters/extreme weather from CDC:
<https://bit.ly/3fs1VeQ>

“How to Survive in Ocean/Open Water” from *Survive Nature*:
<https://bit.ly/2TrPmHX>

“Survival skills” from *Wikipedia*: <https://bit.ly/3ur9CGl>

Worst Case Scenario board game: <https://amzn.to/3p89V85>

Books

Non-fiction

I Survived (True Stories) (2013–2020) by Lauren Tarshis (children’s)

Adrift at Sea: A Vietnamese Boy’s Story of Survival (2016) by Marsha Skrypuch Tuan Ho and Brian Deines (children’s)

Fiction

Overboard! (Survivor Diaries) (2017) by Terry Lynn Johnson and Jani Orban (children’s)

The Adventures of John Blake (2017) by Philip Pullman and Fred Fordham (children’s)

The Living (2015) by Matt de la Peña (YA)

GEOCACHING IN YOUR COMMUNITY

AUDIENCE

Multigenerational

PROGRAM DESCRIPTION

This is a two-part program that includes an introductory session and an activity in which patrons look for geocaches in and around the library, or out in the community. Patrons can find caches, add to existing caches, or create new caches to be found by others. Use Geocaching.com to log your geocache locations (or look for any other geocaches that might already be in your area). Give each geocache location a nautical name and connect it with a fun fact about oceans or ocean animals. You can also make this into a contest where patrons who find all the geocache locations are entered for a big prize. A great multigenerational program, but younger children will need assistance to play. Suggested runtime: 60–90 min per session.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- Containers
- Items to be geocached
- Log book
- Printed instructions
- A Geocache.com account
- GPS device or geocaching app (for each participant)

WHAT IS GEOCACHING?

Geocaching is a popular pastime for those who enjoy treasure hunts and the great outdoors. Using GPS coordinates, caches are hidden, found, added to, and found again. Be sure to check for local geocaching organizations, who might be willing to lead the introductory session.

TIP:

For a passive program, have patrons share their findings on the library's Facebook page!

TIP:

Be sure to record audio of the geocache clues and directions for those who cannot read or have low vision.

TIP:

A letterboxing activity would be similar, with participants crafting ocean-themed clues and rubber stamps. <https://www.letterboxing.org/>

GAME/ACTIVITY | PASSIVE

To prepare:

- Purchase or create the items to be geocached, and create a set of instructions.
- Choose locations around town that are points of interest, such as viewpoints or historic landmarks.
- Log your caches on the website. Be sure to follow the guidelines on how to hide them and how far apart they must be.
- Create a document listing the names of the caches that you created so patrons will know when they've found them all and which ones are yours.
- Have multiple options for people to record the caches, such as noting in a log book or submitting pictures.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

You may need permission to place things in certain areas in your community. Consider partnering with recreation centers, churches, or local businesses.

Solo-librarian friendly.

RESOURCES

Web

Guidelines and tutorials from Geocaching.com:

<https://www.geocaching.com/>

Accessibility ratings of geocache locations: www.handicaching.com

“Navigation: Latitude and Longitude” from *Sultana Education*:

<https://bit.ly/3fpCYQY>

Books

The Complete Idiot's Guide to Geocaching, 3rd Edition (2012) by Geocaching.com

Geocaching Challenges: The Game Within the Game (2019) by Jesse Lunsford and Kristi Lunsford

How to Puzzle Cache Second Edition (2019) by Cully Long

Geocaching Handbook: The Guide for Family-Friendly, High-Tech Treasure Hunting (2017) by Layne Cameron

CRAFT

DRIP, SPLATTER, SPLASH: CORAL REEF CREATIONS

AGES

Children 6+ years

Tweens

PROGRAM DESCRIPTION

Frequently called “rainforests of the sea,” coral reefs are some of the most diverse ecosystems in the world! They serve as a primary habitat, breeding area, and food source for all types of marine life. Show participants pictures or videos of coral reefs, then discuss what lives there. You might also show on a map where the biggest coral reef in the world, the Great Barrier Reef, is located. Choose from four different craft ideas inspired by the colors, shapes, and creatures of coral reefs. See Printables for an ocean floor coloring sheet. Suggested runtime: 45–60 min.



Image source: Shutterstock

FUN FACT:

Coral reefs get their signature shapes from tiny organisms called coral polyps. Polyps often live together in large colonies and protect themselves by building hard tubes, fans, and other shapes. Sea turtles, clownfish, sponges, and more live in coral reefs.

ADAPTATION:

For older children, talk about coral bleaching and why it is happening. Focus on what children can do to protect coral reefs.

ADAPTATION:

Teens or adults might enjoy the interactive documentary *Lost Cities* produced by CaracanLab and Ruth Gates: <http://lostcities.org/#/>

CRAFT

MATERIALS AND PREPARATION

Craft #1: Grow Your Own Coral Reefs

Materials:

- Dolomite rocks, or dolomite powder and small pieces of sponge (try garden supply stores or Amazon)
- Household vinegar
- Small, clear containers



Image source: Shutterstock

Coral reefs are made out of calcium carbonate crystals (aragonite), and children can grow their own! Children place a dolomite rock (or a piece of sponge mounded with dolomite powder) in a small container, then cover the rock/sponge about three-quarters of the way with household vinegar. Keep the rocks in the library where they will not be disturbed for 5 days to 2 weeks, at which point they will be ready to remove or display.

Craft #2: Blow Painted Coral Reefs

Materials:

- Cardstock or watercolor paper
- Non-toxic, washable paint in glass jars or plastic cups
- Paper/reusable straws, or spray bottles, turkey basters, or pipettes
- Water
- Paper towels
- Making tape

TIP:

Make sure you leave the top part of the rock or sponge uncovered! Otherwise, the calcium carbonate cannot grow.

FUN FACT:

Like coral reefs, sea shells and pearls are also made of calcium carbonate.

CRAFT

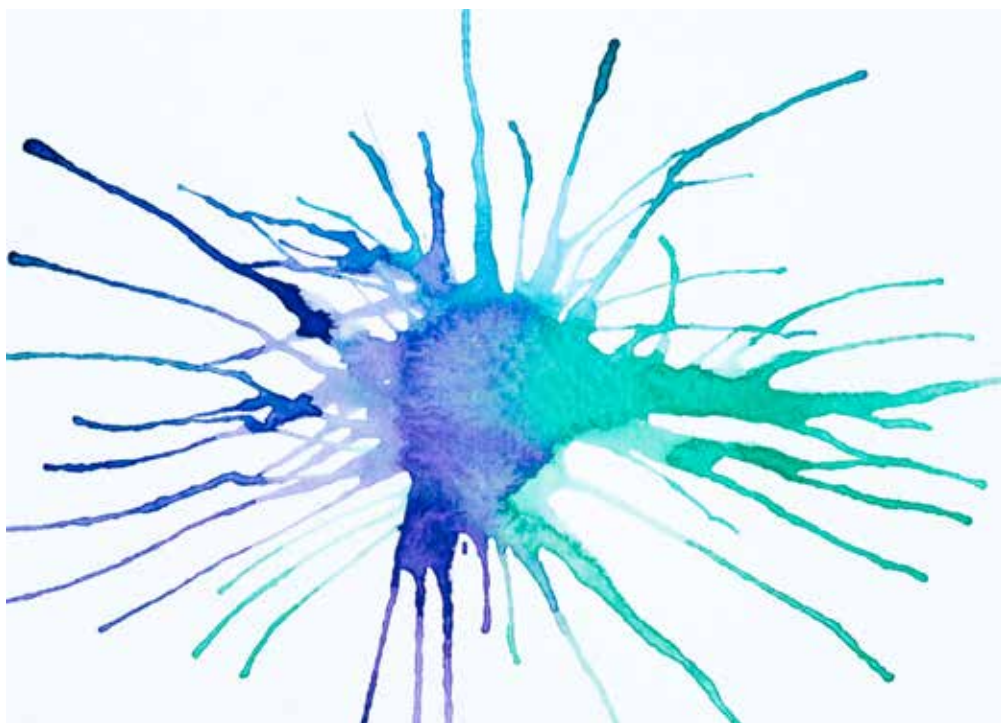


Image source: Shutterstock

To make:

- Dilute paints with a small amount of water. You want paint that is thin enough to go in and out of a straw easily.
- Fix the paper to the table with masking tape.
- Show children how to dip their straws into the diluted paint containers, with a finger over the top to add suction. They release the paint over their paper, then gently blow on the wet paint through the straw.
- Repeat with multiple colors. If using straws, each participant will need a separate straw for each color.
- Optionally, provide animal silhouettes and/or magazines for children to make collages on top of their dried paintings.

TIP:

Instead of straws, you can also use reusable turkey basters or pipettes. Children can also finger paint, or flick paint onto the paper with paint brushes Jackson Pollock-style.

CRAFT

Craft #3: Coral Reef Sculptures

Materials:

- 8–10” cardboard circle or a floral foam half sphere for each participant
- Glue
- Pipe cleaners
- Scissors
- Various recycled materials and craft supplies, such as paper tubes, paper egg cartons, coffee filters, seashells, burlap pieces, beads, colored moss, acrylic or tempera paint, glitter Mod Podge, scissors, paintbrush, beads, pom-poms, rocks, pipe cleaners, coffee filters, fusilli pasta, pool noodles, and any other textured materials (optional).

The simplest version of this craft is to provide floral foam and pipe cleaners precut into various sizes and lengths. Children roll and twist the pipe cleaners into various shapes, then glue them into the floral foam. Depending on budget and/or supplies on hand, consider expanding material options for more detailed and layered sculptures. A coating of glitter and Mod Podge, or seashells or rocks, makes a good base layer.



Source: Joelle Wake of Whiting Public Library, Whiting, IN

CRAFT

Craft #4: Coral Reef Prints

Materials:

- Paint. Crayola Project Paint is recommended because it's a non-toxic washable tempera paint and comes in plenty of fun colors, such as neon.
- Wide paintbrushes
- Wood stylus, dull pencil, or pen
- Scratch foam paper or pieces of recycled Styrofoam
- Cardstock or other heavy paper

During the program:

Children sketch coral reef shapes (or a clownfish, sea turtle, or sea anemone). When they have one they like, they etch it into a piece of foam paper with a wood stylus. Remember that their design will be flipped or reversed when it's stamped. To stamp, cover the etching with a generous layer of paint, then stamp the design onto a piece of paper. Continue stamping and experimenting with multiple colors and sizes.



Image source: Shutterstock

CRAFT

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Single crafts are solo-librarian friendly; add volunteers if running multiple stations.

RESOURCES

Web

Get a free Coral Heroes comic from *Secore International*:

<https://bit.ly/3yGTeF1>

Protecting coral reefs infographic from *National Ocean Service*:

<https://bit.ly/2SsWUtj>

Coral reef week from *Art Project Memphis*: <https://bit.ly/3wv9rey>

“How to Grow Aragonite Crystals” from *Tinker Lab*: <https://bit.ly/3chdS59>

Coral reef blow painting from *Wool!Jr*: <https://bit.ly/3yIOezH>

“Coral Reef Week!” from *The Art Project*: <https://bit.ly/3wv9rey>

Pipe cleaner coral reef craft from *Powerful Mothering*:

<https://bit.ly/2Su8x3c>

Books

Non-fiction

Looking Into the Ocean (2020) by Martha London (children’s)

The Coral Kingdom (2018) by Laura Knowles and Jennie Webber (children’s)

What Do You Find in a Coral Reef? (2016) by Megan Kopp (children’s)

Dive In: Swim With Sea Creatures at Their Actual Size (2020) by Roxie Munro (children’s)

Coral Reefs: Cities of the Ocean (2016) by Maris Wicks (children’s)

Fiction

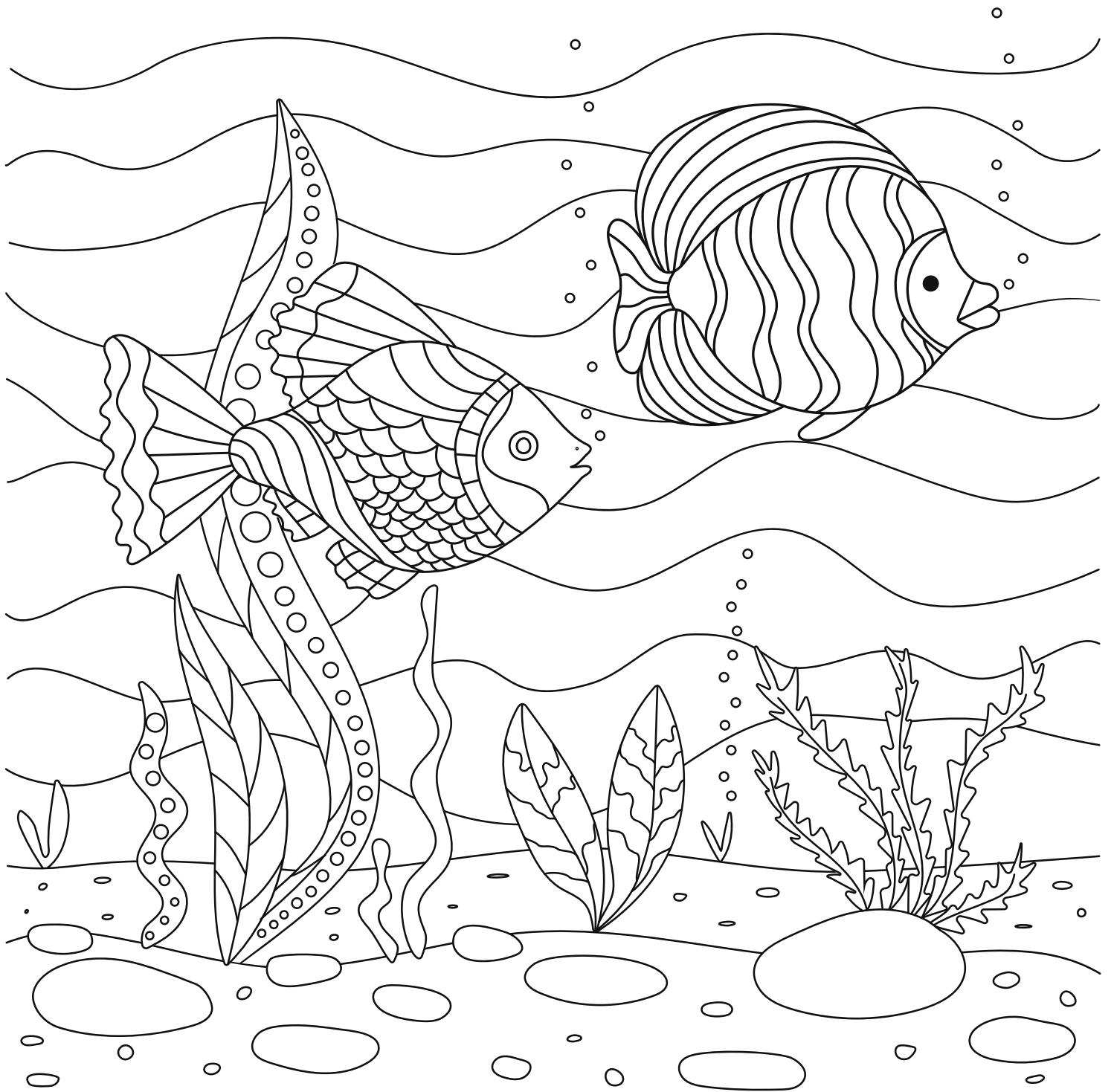
The Mystery at the Coral Reef (2015) by Harper Paris and Marco Calo (children’s)

One White Dolphin (2013) by Gill Lewis and Raquel Aparicio (children’s)

Professor Astro Cat’s Deep Sea Voyage (2020) by Dominic Walliman and Ben Newman (children’s)

Printables

Coral Reef/Ocean Floor Coloring Sheet



HERE BE MONSTERS: FAMILY MAP-MAKING NIGHT

AGES

Children 6+ years

Tweens/teens

Multigenerational

PROGRAM DESCRIPTION

Introduce cartography by hosting an all-ages map-making event! Show maps of real and fictional worlds, then let participants create their own. You could have them map their bedrooms, houses, neighborhoods, or towns, or remake a map from a book or movie. Show old maps that depict sea monsters and uncharted areas, and encourage map-makers to add their own fantastical elements to give them a historical nautical feel. See Resources for map elements, backdrops, and coloring sheets. Don't forget to discuss what a map key is and why it's important! A fun all-ages event. Suggested runtime: 60–90 minutes.

Outcomes for teens:

- Teens will become aware of the technologies and techniques used in map making;
- If partnering with a local GIS professional or government agency, teens will be introduced to potential careers in map making and other related fields;
- Teens will be able to articulate how artistic expression can be used in a practical way;
- Teens will practice communication skills by presenting their work to the group.



Image source: Shutterstock

TIP:

Local museums will likely have a number of maps in their collection (and many such map collections are digitized).

ADAPTATION:

Focus on fictional explorers of the seven seas, such as the Kidd siblings (*Treasure Hunters*), the Swiss Family Robinson, or Captain Nemo (*Twenty Thousand Leagues Under the Sea*). Children can make maps that depict these stories.

ADAPTATIONS FOR TEENS:

- For a pre-event craft, teens could make map paper by browning white paper in a tea bath and adding texture.
- Add a role-playing component. World-building and visuals are great to add to gameplay!
- Focus on map-making technology. Partner with a local GIS agency to introduce potential careers.

MATERIALS AND PREPARATION

Map-making supplies:

- Brown grocery bags, large sheets of butcher paper, or printed templates
- Crayons and markers
- Printed icons
- Scissors and glue
- Examples of real and fictional maps
- Laptop/projector (optional)
- Poster tubes (optional)
- Dowels and string for hanging (optional)

Participants make maps from memory, as fantastical or realistic as they desire. For extra fun, streets and highways can be painted blue and referred to as waterways. Don't forget the map key so others can interpret it!

UNIQUE SPACE AND/OR PERSONNEL NEEDS

For outreach, try to find a local cartographer or historical society member. Local GIS agencies or professionals, fantasy authors, illustrators, or graphic designers might also be great guest presenters.

RESOURCES

Web

Map collection from *Library of Congress*: <https://bit.ly/3vygjHW>

Map collection from *New York Public Library*:
<https://www.nypl.org/node/80186>

Tutorial for tea-stained paper from *How Stuff Works*:
<https://bit.ly/3oUNcMk>

"Introduction to Cartography" from *GIS for Youth Empowerment*:
<https://bit.ly/3uqNmMH>

"A Brief History of Cartography and Maps" from *KnowledgeHub*:
<https://bit.ly/2QYrtqt>

Map Making Resources from *National Geographic*: <https://bit.ly/2Rlikmp>

"Map-Making 101: Drawing the Map" from *Go Teen Writers*:
<https://bit.ly/3vsuCO5>

"Draw Your Own Fantasy Maps" from *Instructables*: <https://bit.ly/3p3q1j5>

"How to Draw a Fantasy Map" from *WASD20*: <https://bit.ly/3hYCQtG>

"The Seven Seas" from *World Atlas*: <https://bit.ly/3yHOyhX>

"Old Maps of the Seven Seas" from *Old Maps Online*: <https://bit.ly/2RPor8l>
10 famous explorers from *Biography*: <https://bit.ly/3fpNhEQ>

Books

Non-fiction

How to Make Hand-Drawn Maps (2018) by Helen Cann (children's/YA)

Ultimate Mapping Guide for Kids (2016) by Justin Miles (children's)

Otis and Will Discover the Deep (2018) by Barb Rosenstock and Katherine Roy (children's)

Flying Deep (2018) by Michelle Cusolito and Nicole Wong (children's)

Solving the Puzzle Under the Sea: Marie Tharp Maps the Ocean Floor (2016) by Robert Burleigh and Raúl Colón (children's)

Atlas of Ocean Adventures (2019) by Emily Hawkins and Lucy Letherland (children's)

Fiction

The Writer's Map: An Atlas of Imaginary Lands (2018) edited by Huw Lewis-Jones (children's)

The Atlas of Fairy Tales (2017) by Claudia Bordin (children's)

Cheesie Mack Is Not Exactly Famous (Cheesie Mack series) (2014) by Steve Cotler and Douglas Holgate (children's)

20,000 Leagues Under the Sea (*Graphic Revolve: Common Core Editions*) (2014) by Jules Verne, Carl Bowen, Benny Fuentes, and Jose Alfonso Ruiz (YA)

Mice of the Seven Seas (*Mice of the Herring Bone*) (1999) by Tim Davis (children's)

Swiss Family Robinson (1813) by Johann David Wyss (children's)

Ocean Meets Sky (2018) by Terry Fan and Eric Fan (children's)

Printables

Vintage Sea Monsters

Nautical Map Icons

Historical Boats

Old Map Paper

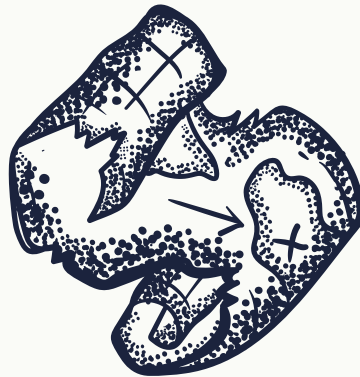
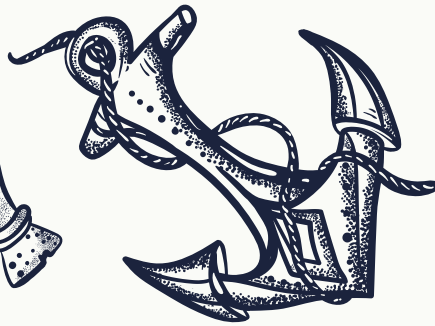
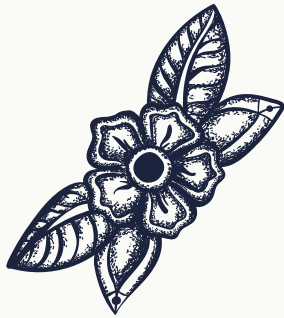
Map of World Coloring Sheet

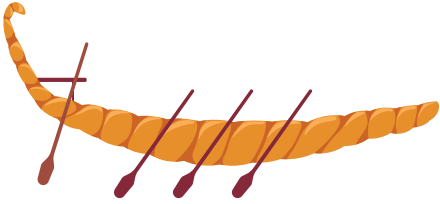
TIP:

You could also pull books with maps from your fantasy collection, such as those of *Eragon*, *The Illustrated Wizard of Oz*, *The Lord of the Rings*, or *Winnie the Pooh*. More fantasy book map ideas here: <https://bit.ly/3vuMZCf>

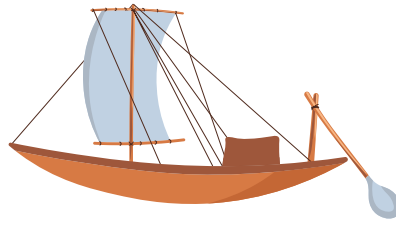


VINTAGE SEA MONSTER
HAND-DRAWN SKETCH VECTOR

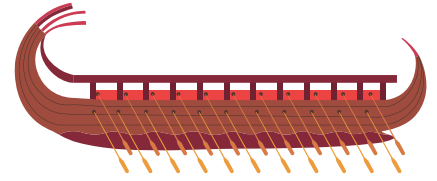




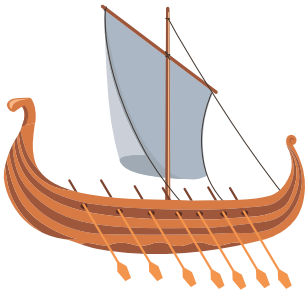
3200 BC



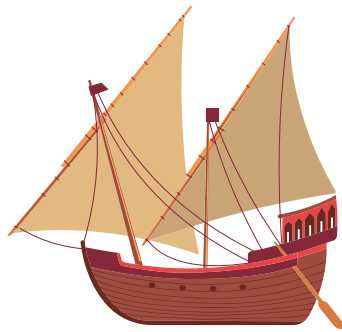
2000 BC



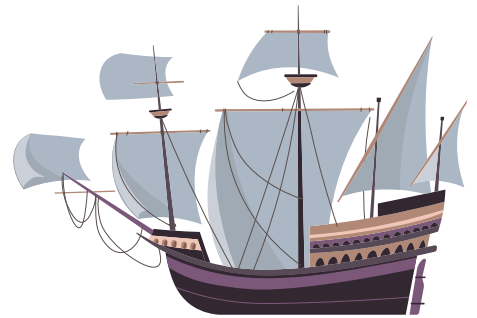
1500 BC



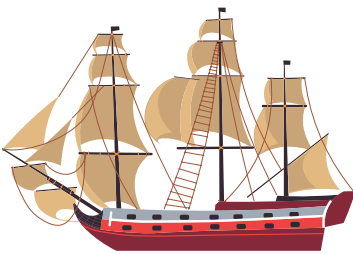
X



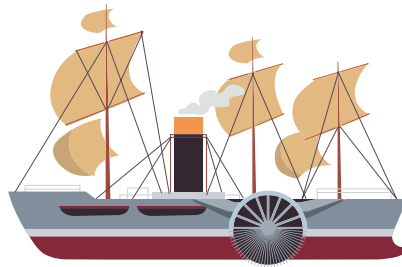
XIII



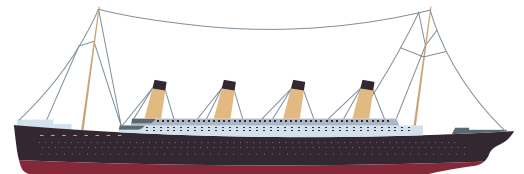
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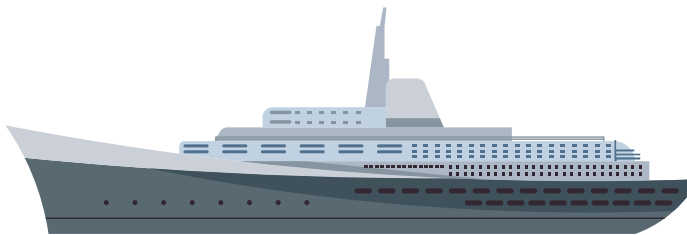
XVIII



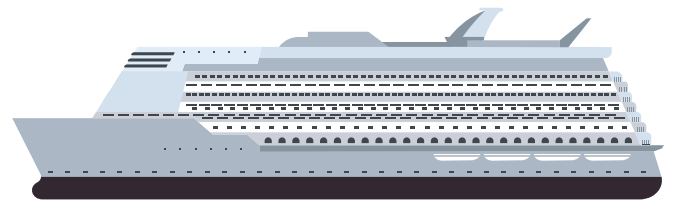
1850



1910

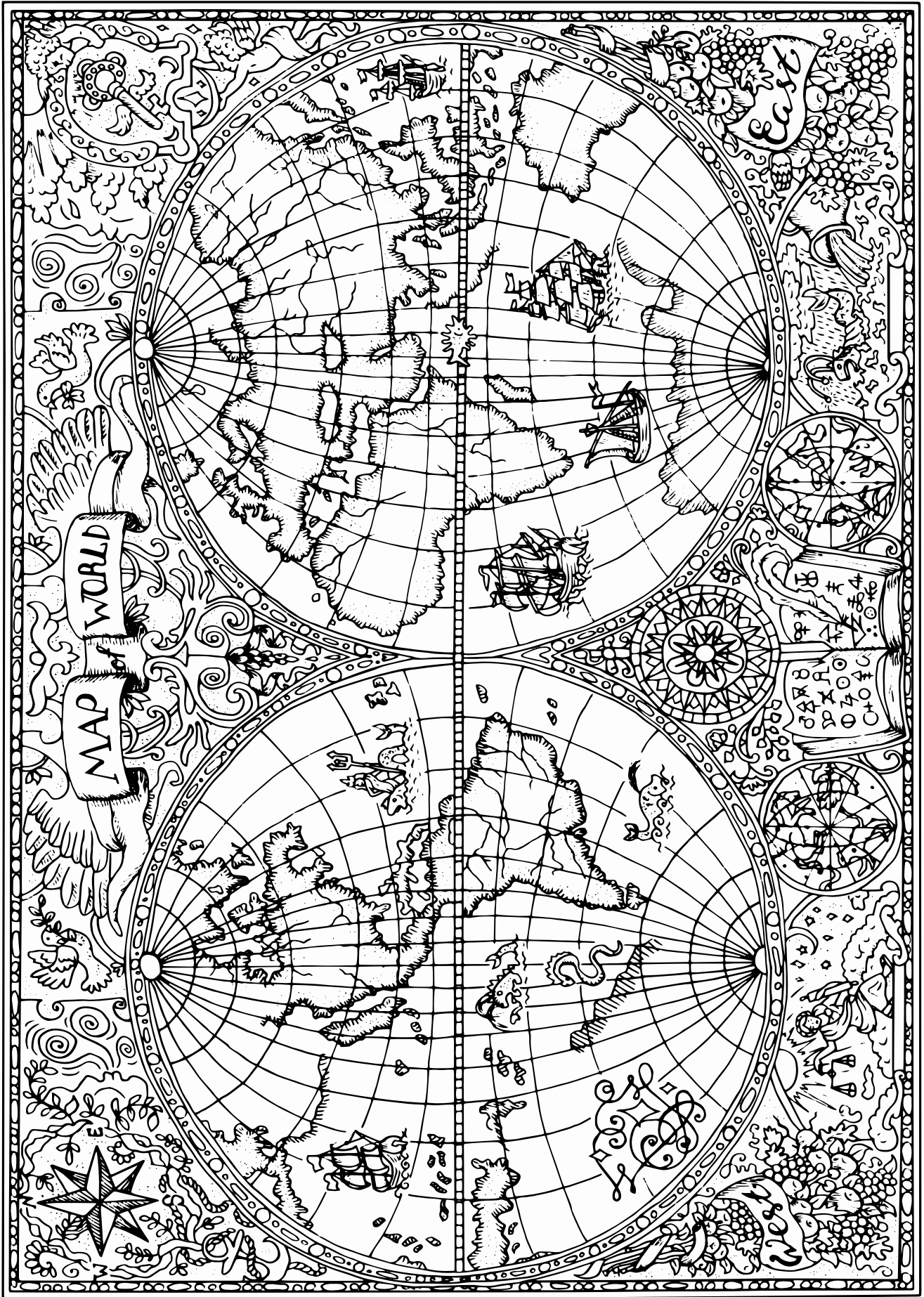


1960



2010





GAME/ACTIVITY

BERMUDA TRIANGLE ESCAPE ROOM

AGES

Children 8+ years

Teens/tweens

Multigenerational

PROGRAM DESCRIPTION

The Bermuda Triangle is a space in the North Atlantic where ships, planes, and people have allegedly gone missing. Roughly, its borders run from Florida to Bermuda to Puerto Rico. Set up your own Bermuda Triangle Escape Room, and challenge your patrons to make it through! Modify clues with more or less complexity for different age groups. Puzzles created by Kara Reiman of Maine State Library, Augusta, ME. Suggested runtime: 60 min.

ADAPTATION:

For a digital version, use this escape room link: <https://bit.ly/3fq5q5b>. Share the link directly with patrons, or screen share over Zoom.



Image source: Shutterstock

GAME/ACTIVITY

MATERIALS AND PREPARATION

Materials:

- A map that shows latitudes and longitudes in the Caribbean
- Image of airplane dashboard
- Black poster board
- White paint or white gel pen
- 5-digit word lock
- GO button
- Lockbox with padlock (and key)
- Compass (real or fake)
- Black light
- Invisible ink
- Magnifying glass

To prepare the puzzles:

- Blow up a map of the Caribbean and mark the following locations, printing the names as follows: waShington dc, bermUda, miaMi, cubA, puerto riCo.
- Map a night sky map by painting or drawing stars on black poster board. Draw a yellow streak and write “meteor” in tiny letters underneath.
- Set the word lock to SUMAC.
- Create or buy a button that says GO.
- Print out or draw your own airplane dashboard, use invisible ink to draw N, E, W, S in the correct diamond pattern somewhere on it. (To be more accurate, have the N facing toward the back of the plane.) Set up the dashboard at the front of the room on a table or desk.
- Set up a table or desk at the front with a few rows of 2x2 chairs for airplane seats.
- Put the maps up on the walls, and place the locks and clues.

Before letting a group enter the room, explain the guidelines and rules, and give them a short description of the mysteries of the Bermuda Triangle. Read the intro letter and each announcement as they have accomplished the tasks.

Introduction letter: Welcome, travelers! I'm so glad you decided to embark on this journey with us. This is a non-stop flight from Washington, DC to San Juan, Puerto Rico. We're looking at a smooth journey over the Bermuda Triangle today, but if anything goes wrong, we'll be looking to you to help out. Make sure you look all around you as you board the plane so you know where everything is. Let's go!

TIP:

Have someone run through the game once before you go live to make sure everything works smoothly and you haven't forgotten something.

TIP:

To ensure smooth gameplay, require registration and keep the groups small.

GAME/ACTIVITY

ANNOUNCEMENT #1:

Oh, dear. I have forgotten the code I need to enter our destination into the computer. It's something about a tree that's also a spice. Can you see if you can help me remember it? Once you have it, just enter it into the lock there to access the GO button.

PUZZLE #1:

A map of BT with some locations labeled, some letters capitalized (SUMAC). Those letters, from N to S, will be the code to unlock a box with the "GO" button (this can be a piece of paper with "go" written on it, or it can be an actual button). Additionally, they may figure it out if they can figure out the clue.

ANNOUNCEMENT #2:

What's this? We seem to be flying into some fog. Oh no! Our directional system is not responding. I'm going to need a compass. Has anyone found one for me? Could you bring me one?

PUZZLE #2:

A compass (real or fake) locked in a box with a key lock. Hide the key and the locked box.

ANNOUNCEMENT #3:

The compass is going wild! Something is throwing it off. How will we ever figure out which direction is true north? I wish someone would SHINE SOME LIGHT on it.

PUZZLE #3:

Hide a black light somewhere in the room or in another locked box. The black light needs to be shined on the control panel which indicates NSWE in invisible ink.

ANNOUNCEMENT #4:

Good! We're back on track! Woah! Did anyone see that? It was a streak of light in the distance. I wonder what it was. Can you do some research and see if you can figure it out? I'm just gonna keep the plane in a holding pattern until we figure out what that was! I'd hate to bump into a UFO!

PUZZLE #4:

Hide a magnifying glass somewhere in the room. A map of the night sky will show a tiny yellow meteor somewhere on it and in tiny letters it will say meteor next to it.

GAME/ACTIVITY

ANNOUNCEMENT #5.

Ah, so it was just a meteor! Strange. Well, we're just about ready to start our descent into Puerto Rico. I just have to double check our coordinates. Oh, dear. I seem to have lost the paper with the Puerto Rico coordinates on it. Can somebody help me find them? I sure hope they didn't get separated. I need two coordinates.

PUZZLE #5:

Hide four slips of paper with the coordinates listed separately (18.4655° N, 66.1057° W, 59.9311° N, and 30.3609° E) in different places, such as in a flight-related book or taped to the bottom of an "airplane" seat. Have a map that shows latitude and longitude so that they can figure out the correct two coordinates (18.4655° N and 66.1057° W). They win if they bring you the correct two coordinates in time.

ANNOUNCEMENT #6 (SUCCESS):

Awesome job! We're coming in for a landing in Puerto Rico thanks to your hard work. Looks like the whole Bermuda Triangle thing is just a myth!

ANNOUNCEMENT #6 (FAILURE):

(Maybe play spooky music, like the X-Files theme song.) Hmm...this doesn't seem right. We've been flying forever. I think, despite your best efforts, we've gotten lost in the Bermuda Triangle, never to return. Better luck next flight!

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Set up the room with clues before the program. Solo-librarian friendly.

RESOURCES**Books**Non-fiction

Where Is the Bermuda Triangle? (2018) by Megan Stine and Tim Foley (children's)

Bermuda Triangle (Eyewitness Books) (2000) by Andrew Donkin (children's)

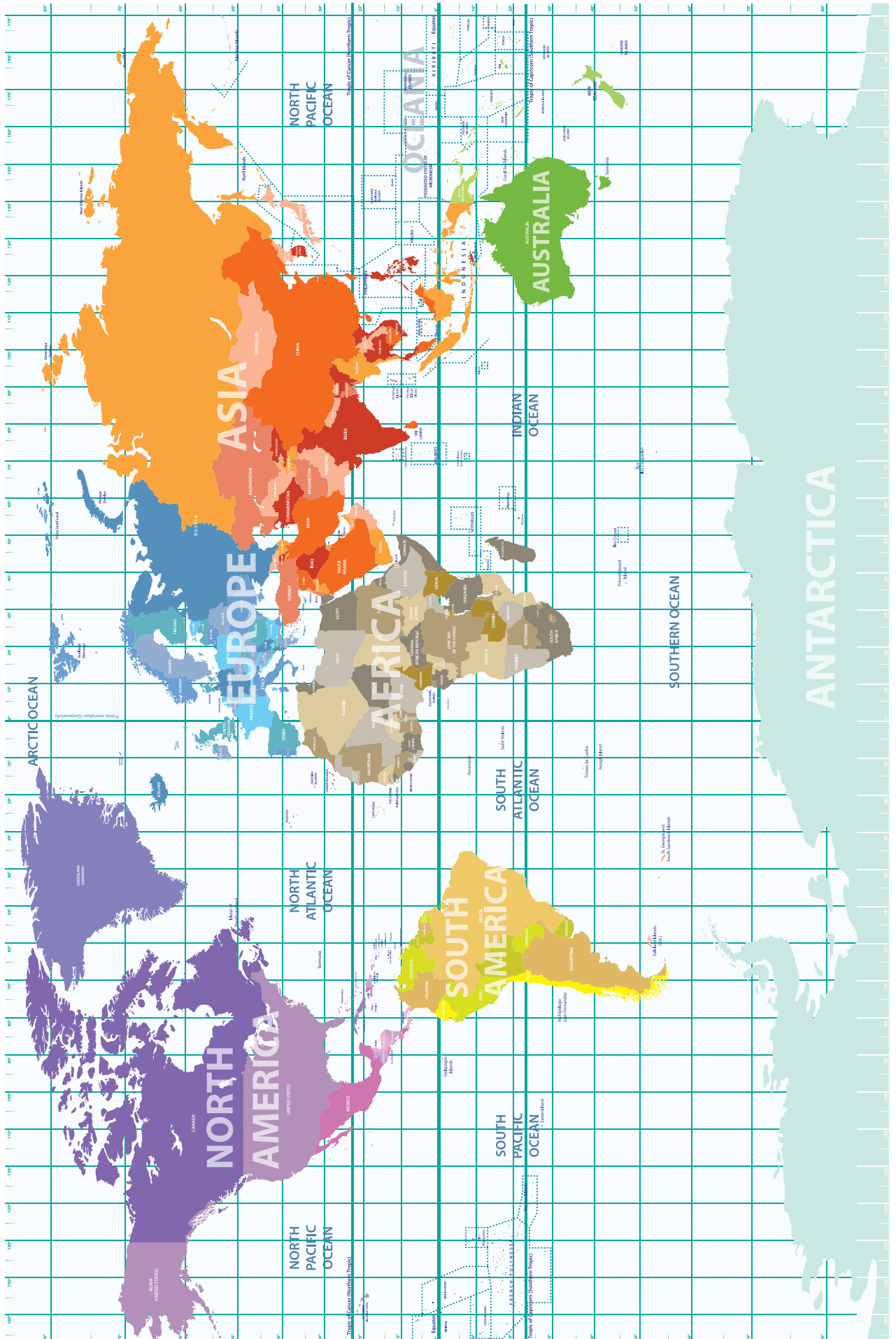
Fiction

The Treasure Of The Bermuda Triangle (2014) by Steve Stevenson and Stefano Turconi (children's)

Printables

Printable: World Map

Printable: Airplane Dashboard





SUNKEN CITIES

AGES

Teens/tweens

PROGRAM DESCRIPTION

Explore the mysteries of the ocean floor with this fun program all about ancient (or mythical) sunken cities. Stories of Atlantis and other “lost cities” can be found throughout history, and can be recreated on a small scale in your library today! Suggested runtime: 60–90 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- LEGOs, oil-based clay, or other building materials
- Doll house décor or fairy garden supplies
- Large clear storage tubs, sealed plastic boxes, or fish tanks
- Tables and chairs
- Water

To prepare, gather materials and books to display on Atlantis, sunken cities, and ancient civilizations.

TIP:

If your library has screening rights, consider showing the 2001 animated movie *Atlantis: The Lost Empire* while participants build their underwater cities.

Instructions:

1. Speak about the legend of Atlantis, real-world archeological finds under the sea, and show photos and artistic renditions of such sites.
2. Teens/tweens work individually or in groups, and choose their own materials.
3. Put the cities in clear plastic tubs and fill with water to create sunken worlds!
4. If space allows, display the cities in the library.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

List of underwater cities to explore from *The Travel*: <https://bit.ly/3yDUpVP>

“Legend of Atlantis” from *National Geographic*: <https://bit.ly/3yICm0z>

Books

Non-fiction

Atlantis (2019) By Paige V. Polinsky (children’s)

Meet Me in Atlantis: Across Three Continents in Search of the Legendary Sunken City (2016) by Mark Adams (YA/adult)

Into the Planet: My Life as a Cave Diver (2020) by Jill Heinerth (YA/adult)

Fiction

Imaginary Girls (2011) by Nova Ren Suma (YA)

New York 2041 (2017) by Kim Stanley Robinson (YA)

Dark Life (2010) by Kat Falls (YA)

RIDE THE WAVES MOOD TRACKER

AGES

Teens

PROGRAM DESCRIPTION

Discovering new worlds is tough, and it's important for teens to take care of themselves! Mindfulness helps them to be aware of thoughts and emotions without getting caught up in them, reducing stress in everyday life. One way teens can practice mindfulness is to track their moods. Once they know what stresses them out, they can better respond to those situations. Teens ride the waves of life with this ocean-themed craft so that they can get back to exploring. You could also modify this program to focus on gratitude journals or bullet journals, or create an ocean-themed Zen garden or labyrinth to walk together. See Printables for a meditative mandala to color. Suggested runtime: 60 min.

Outcomes:

- Teens will learn about the basic concepts of mindfulness;
- Teens will express themselves creatively;
- Teens will learn about library resources that can help them manage their mental health.

MATERIALS AND PREPARATION

Materials:

- Paper or blank journals (dot grid is best but any will do)
- Fine point markers
- Magic markers
- Colored pencils
- Mini rulers
- Ocean themed stickers/washi tape (optional)

During the program:

- Explain the basic concepts of mindfulness,
- Explain what a mood tracker is and show examples,
- Have teens draw and decorate their own ocean-themed mood tracker.
- Share library and local resources that could help them manage their mental health.

TIP:

The apps Headspace or Calm both have seven-day free trials. You could also use recordings of rain, the ocean, birdsong, or desert winds as background sound while drawing. *Liminal* by Sigur Ros is atmospheric/ambient, much like Headspace sleep sounds, and is available on Hoopla.

TIP:

Any of the sensory bottles used in early literacy programs could also be turned into a craft project/meditative object for teens.

ADAPTATION:

You could also pair this program with a mood ring/necklace! Add a nautical pendant to suit the theme. See <https://bit.ly/3un3yPb> for a tutorial.

TIP:

While not necessarily mindfulness focused, the Bullet Journal Method could be helpful as prep work.

GAME/ACTIVITY | PASSIVE OPTION | LOW COST

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly. Consider partnering with a local social worker or mental health organization.

RESOURCES

Web

Mood tracker ideas from *Positive Psychology*: <https://bit.ly/34oli00>

Printable ocean mood tracker from *Twinkl*: <https://bit.ly/3ylZ88A>

“Teaching Mindfulness to Teenagers” from *Huffpost*: <https://bit.ly/3hYsJoz>

“Moodtracker 101” from *Beautiful Grey Mouse*: <https://bit.ly/2Tmt5v0>

Mindfulness/meditation podcasts for kids from *PlayerFM*:

<https://bit.ly/3bYv5Qw>

Create a rainstorm with your hands from *Boy Scout Trail*:

<https://bit.ly/2SwFn3A>

Five senses calming activity from *Coping Skills for Kids*:

<https://bit.ly/3vFARl0>

“Ocean Themed Yoga” from *Pink Oatmeal*: <https://bit.ly/3foPuQK>

Books

Non-fiction

Mindful Me: Mindfulness and Meditation for Kids (2018) By Whitney Stewart and Stacy Peterson (children’s)

I am Peace: A Book of Mindfulness (2017) by Susan Verde and Peter H. Reynolds (children’s)

The Book of Moods: How I Turned My Worst Emotions Into My Best Life (2020) by Lauren Martin (YA/adult)

My Anxious Mind: A Teen’s Guide to Managing Anxiety and Panic (2009) by Michael A. Tompkins, Katherine A. Martinez, and Michael Sloan (YA)

One Year Wiser: An Illustrated Guide to Mindfulness (2017) by Mike Medaglia (YA)

Fiction

The Rest of the Story (2019) by Sarah Dessen (YA)

Made You Up (2015) by Francesca Zappia (YA)

Underwater (2016) by Marisa Reichardt (YA)

We Are Okay (2017) by Nina Lacour (YA)

Printables

Sea Waves Mandala Coloring Sheet

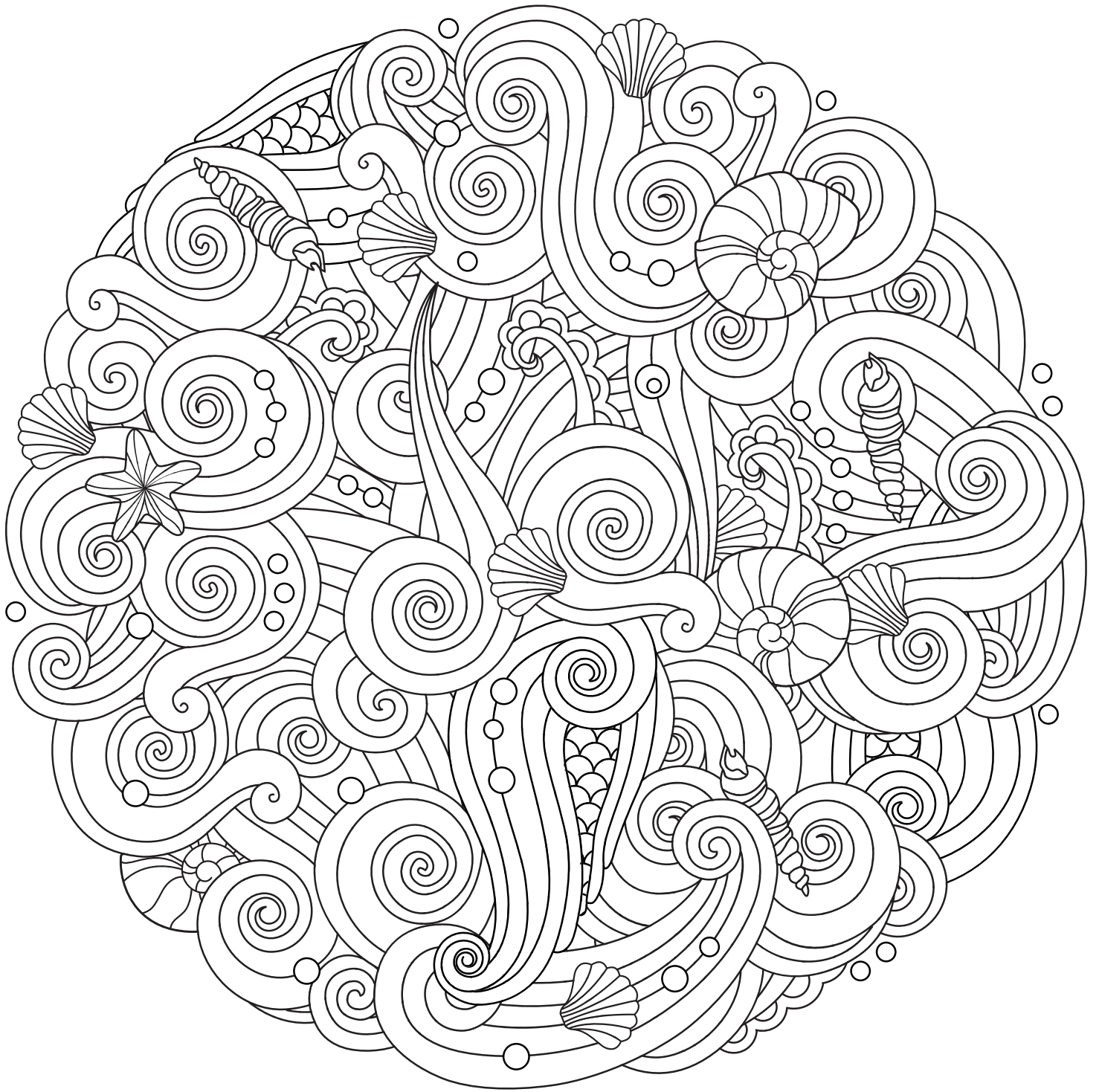


Image source: Shutterstock

LOST AT SEA

AGES

Teens

PROGRAM DESCRIPTION

Partner with an engaging guest speaker from your community to talk about wilderness/ocean survival! The activity portion of this program is based on a popular team building exercise in which participants imagine that they have been stranded on an unpopulated island. When their ship sinks, they've had to disperse in three rafts. Luckily, they each have a box of emergency supplies that will help keep them alive. Teens work together to decide which items are most valuable. The team with the best score at the end will survive. Easily adapted to a virtual program. Suggested runtime: 45 min.



Image source: Shutterstock

Outcomes:

- Teens will have the opportunity to practice critical thinking as individuals;
- Teens will “experience pressure to go along with the crowd and see the consequences” (PACEsetters, see Resource list);
- Teens will practice persuasion, negotiation, and learn how to function in a collaborative environment;
- Teens will learn about the importance of emergency preparedness.

TIP:

You can also combine this program with activities from Survival Island: Can You Survive? on page 311, such as practicing Morse Code or building a water filter.

MATERIALS AND PREPARATION

Materials:

- Survival items checklist (see Resources)
- Pencils
- Props to represent survival items (optional)

Instructions:

- Introduce yourself and do 1–2 icebreaker activities. Teens will be doing lots of communicating with one another (and you) during this activity and it's important that they feel comfortable.
- Split teens randomly into groups. The size of the group doesn't matter so long as groups are roughly even.
- Explain that the teens are stranded at sea and will need to use their emergency items to get out alive. Individuals take a few minutes to rank the items in terms of importance, without sharing with the group.
- Then the group comes to a consensus about their group's rankings. Groups must be careful not to share their thoughts with other groups. Remember: Only one group will survive.
- After each group has shared their lists, present the actual item rankings as defined by the United States Coast Guard. The group with the best score survives!

TIP:

Make sure to state clearly that no cell phones are allowed. Otherwise, someone will look up the list in advance.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly. Consider outreach to first responders, emergency awareness groups, park rangers, or coast guards to present on this theme.

RESOURCES

Web

"Teambuilding: Lost at Sea" from PACE: <https://bit.ly/2ROA67e>

Team-building exercises from Mind Tools: <https://bit.ly/3oYA2hG>

Books

Fiction

Adrift (2015) by Paul Griffin (YA)

Song of the Current (2017) by Sarah Tolcser (YA)

A Map for Wrecked Girls (2018) by Jessica Taylor (YA)

Non-fiction

To the Sea: Sagas of Survival and Tales of Epic Challenge on the Seven Seas (2000) by Tony Meisel (YA/adult)

Sea Survival Handbook: The Complete Guide to Survival at Sea (2009) by Keith Colwell (adult)

438 Days: An Extraordinary True Story of Survival at Sea (2016) by Jonathan Franklin (adult)

Survive the Savage Sea (2020) by Dougal Robertson (adult)

The Complete Guide to Medical Skills, Tactics, and Techniques (U.S. Army Survival series) (2016) by Jay McCullough (adult)

The Sea Survival Manual (2005) by Michael and Frances Howorth (adult)

Basic Wilderness Survival Skills (2018) by Bradford Angier (adult)

100 Deadly Skills: Survival Edition: the SEAL Operative's Guide to Surviving in the Wild and Being Prepared for Any Disaster (2016) by Clint Emerson (adult)

The Worst-Case Scenario Survival Handbook: Expert Advice for Extreme Situations (2019) by Joshua Piven and David Borgenicht (adult)

AQUANAUTS: LIVING ON THE OCEAN FLOOR

AGES

Adults
Multigenerational

PROGRAM DESCRIPTION

Show the American Experience documentary *Sealab* (2019) (available on Hoopla, 54 min), which explains the early history of research into living on the ocean floor. Discuss some of the topics shown in the film. Optionally, show online content about the modern deep sea lab *Aquarius* and/or the proposed *Searorbiter*. Discuss the differences between *Sealab* and *Aquarius*. Suggested runtime: 60–90 min.



Image source: Shutterstock

MATERIALS AND PREPARATION

Materials:

- *Sealab* (2019) (available on Hoopla)
- Laptop/projector and screen
- Audience chairs

ADAPTATION:

This program can be adapted for outreach to Senior Centers as long as they have access to a DVD player and/or internet/screen access. Residents may remember the original *Sealab* experiments!

ADAPTATION:

The *Sealab* video is closed captioned and has SDH captions for deaf and hard of hearing populations.

ADAPTATION:

For children and tweens, show the first chapter of *Sealab* (which is only nine minutes long). Include hands-on examples of underwater living conditions.

STEAM | OUTREACH | LOW COST

To prepare, set up the screening, prepare audience-appropriate discussion questions, and print historic Sealab III schematics for each participant (optional).

Discussion questions for *Sealab* (2019)

- Sealab I was situated in relatively clear and warm water. Do you think the success of this mission led the scientists of Sealab II and III to underestimate the difficulties the divers would face living at lower depths in colder water?
- Why do you think the Navy forced Sealab III to be at a depth of 600 feet which was much lower than the 200-foot depth as originally planned? Why didn't the Sealab III scientists refuse?
- Do you think the naval divers who volunteered to repair Sealab III fully understood the dangers they faced in the extreme depth of Sealab III?
- Have you ever been scuba diving? How deep did you dive? Did you ever get disoriented or afraid?

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly. A scuba instructor or local teacher could facilitate discussion related to the documentary.

RESOURCES

Web

SeaLab documentary from PBS: <https://to.pbs.org/3wCWbo3>

Printable Sealab III schematics from Wikimedia: <https://bit.ly/3ibsG9d>

Mission Aquarius video from One World One Ocean: <https://bit.ly/3fu4tJs>

"Medina Aquarius Program" from Florida International University: <https://bit.ly/3un4Dqd>

"The Story of Sealab" from How Stuff Works: <https://bit.ly/2RleTMv>

Article on remembering Sealab from Naval History and Heritage Command: <https://bit.ly/3wGJFns>

The future of ocean exploration? from SeaOrbiter: <http://www.seaorbiter.com/>

Books

Sealab: America's Forgotten Quest to Live and Work on the Ocean Floor (2012) by Ben Hellwarth

In Oceans Deep: Courage, Innovation and Adventure Beneath the Waves (2019) by Bill Streever

Sea Change: A Message of the Oceans Revised Edition (2020) by Sylvia Earle

AQUANAUT:

Anyone who remains at depth under water for more than 24 hours.

DECOMPRESSION SICKNESS (A.K.A. "THE BENDS"):

When bubbles form in tissues of the body caused by a reduction in surrounding pressure. Most commonly occurs during the ascent from deep diving. Symptoms vary, as bubbles can form in and travel to any part of the body.

SATURATION DIVING:

Divers stay at a certain depth for a length of time, which saturates their tissues with the inert gasses that they are breathing in. Once in equilibrium with the pressure around them, aquanauts can stay at this depth indefinitely.