

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)

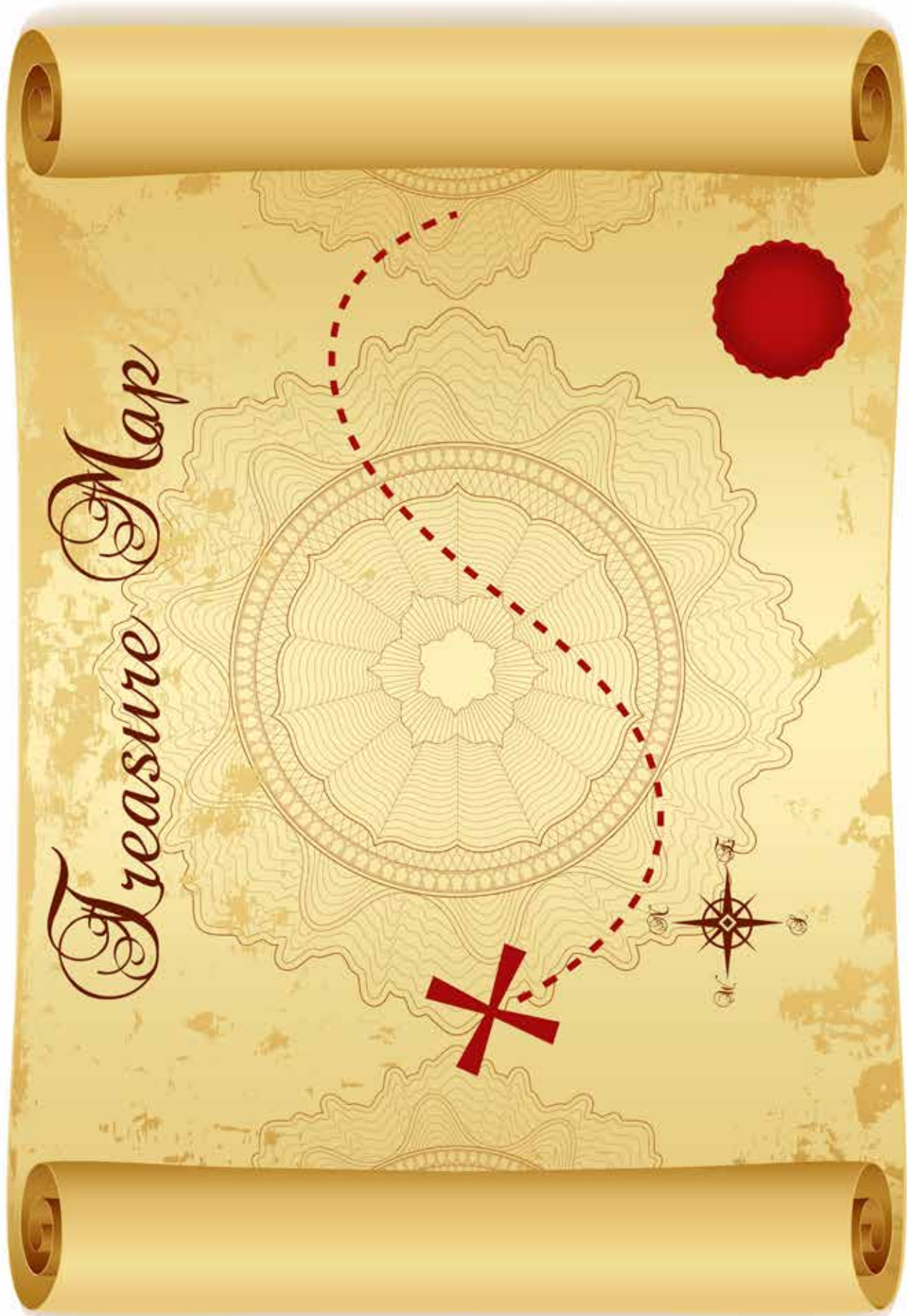
Printables

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.



Treasure Map

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 _____

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.

GAME/ACTIVITY | LOW COST

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

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)

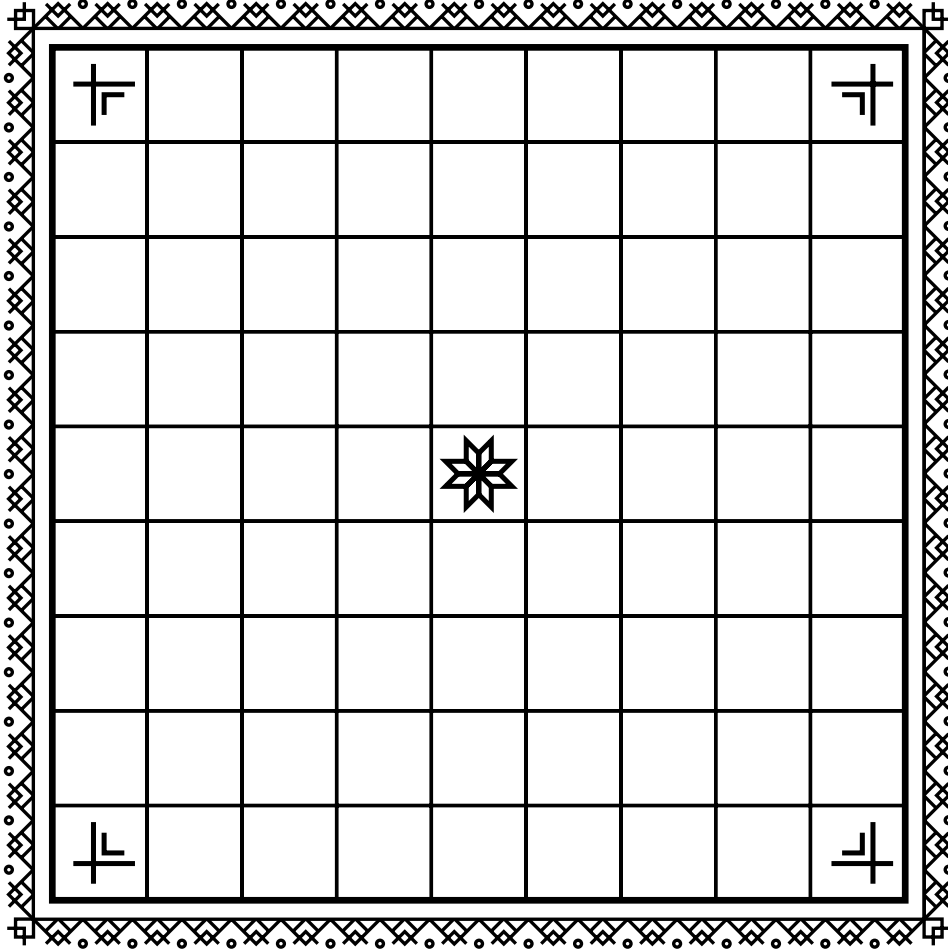
Odd and the Frost Giants (2010) by Neil Gaiman (children's)

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

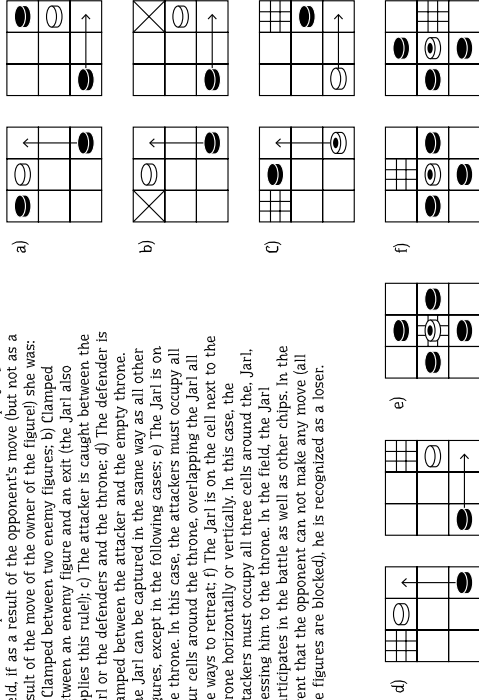
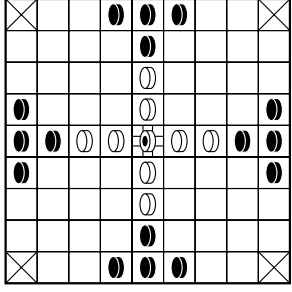
Tablut Game and Instructions



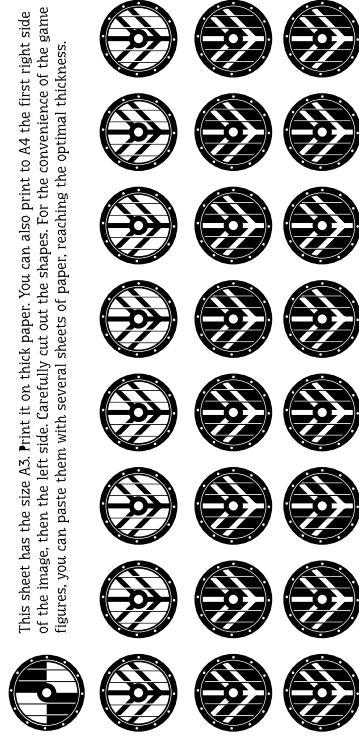
RULES

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.



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/3fPReSb>

“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)

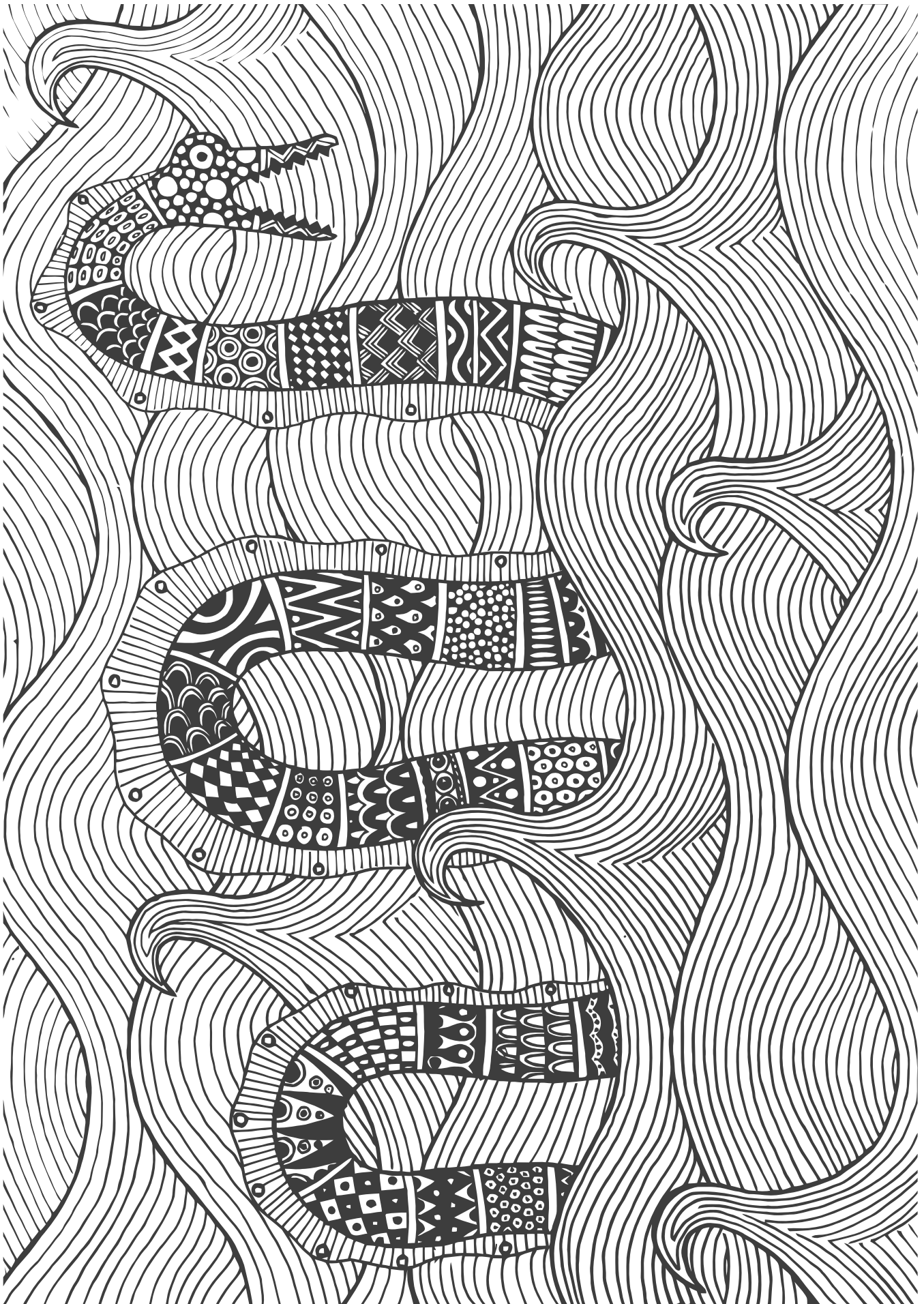
OUTSIDE PRESENTER

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





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

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.

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)

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

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

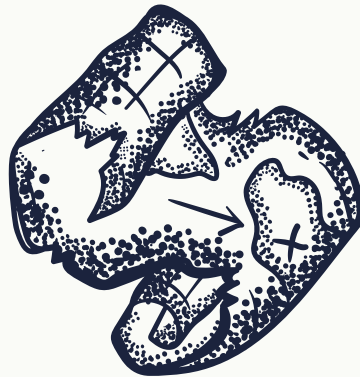
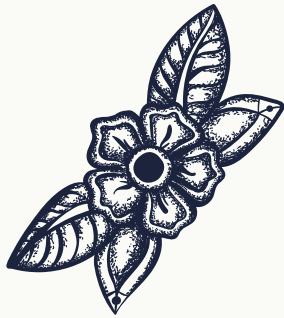
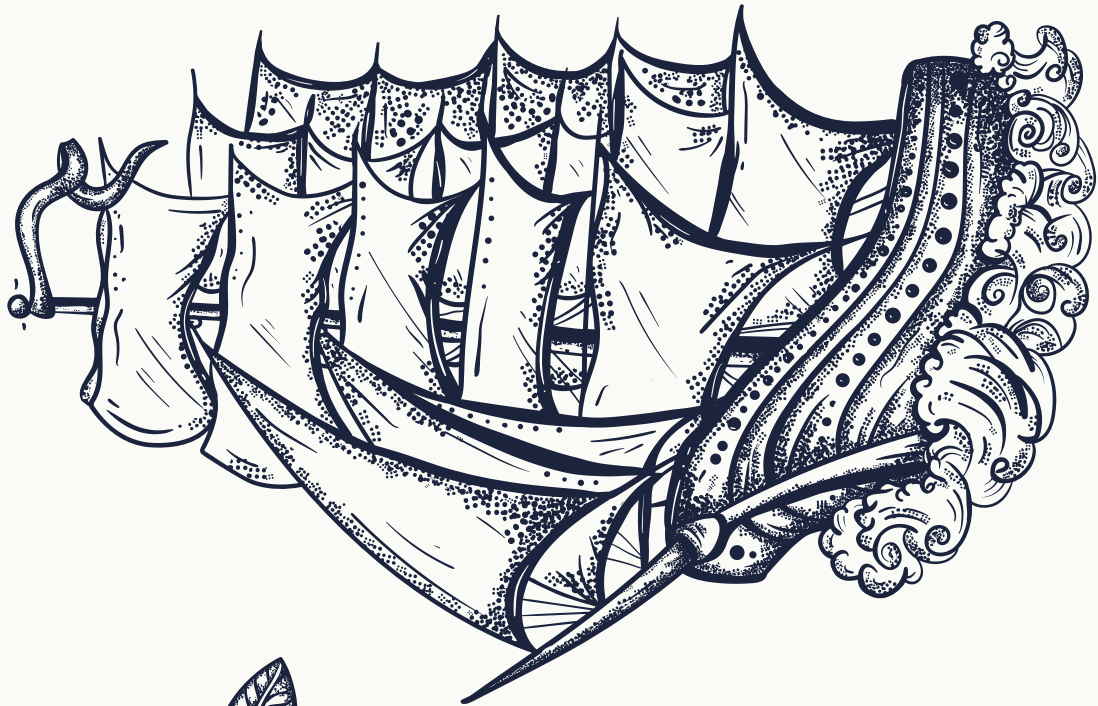
Old Map Paper

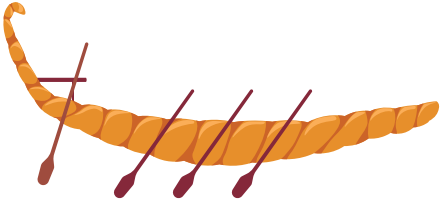
Map of World Coloring Sheet

TIP:

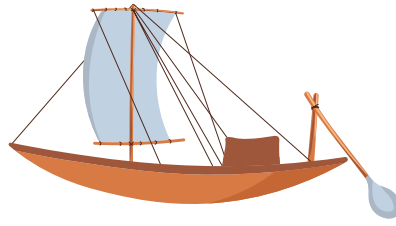
You could also pull books with maps from your fantasy collection, such as those of *Eragon*, *The Illustrated Wizard of Oz*, *The Lord of the Rings*, or *Winnie the Pooh*. More fantasy book map ideas here: <https://bit.ly/3vuMZCf>



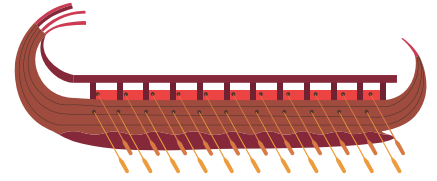




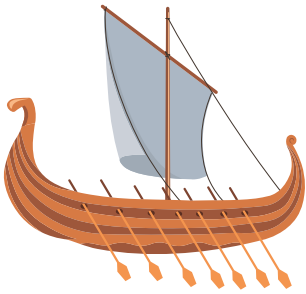
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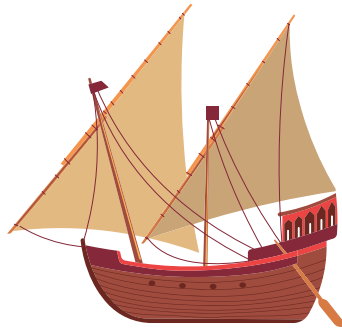
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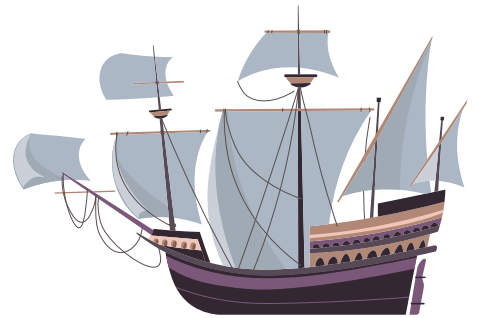
1500 BC



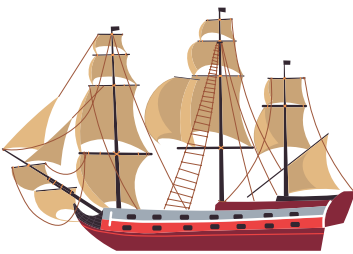
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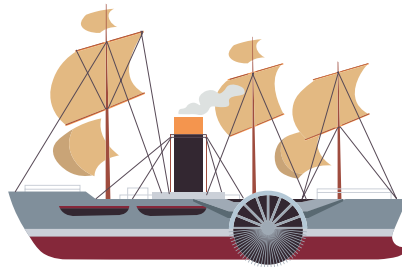
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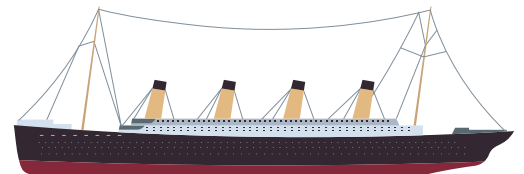
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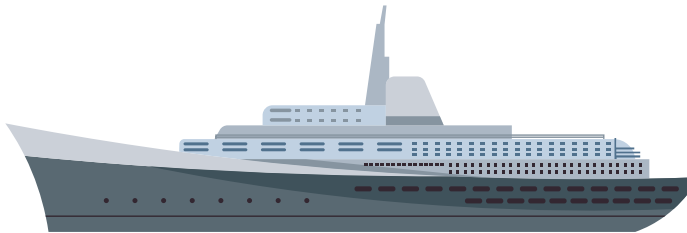
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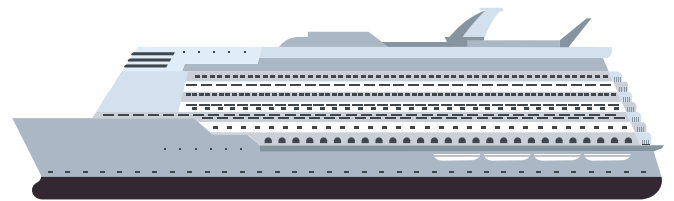
1850



1910

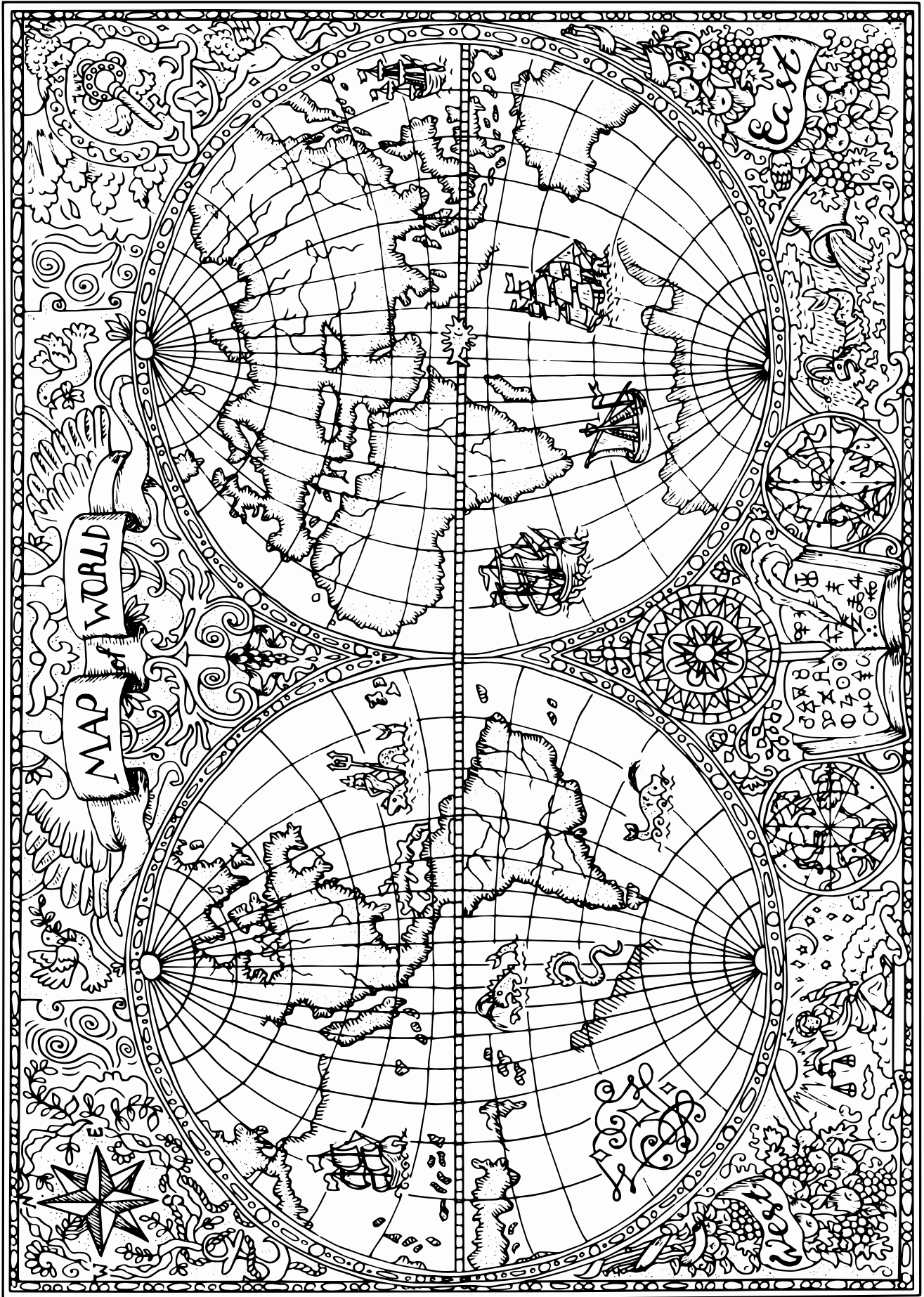


1960



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)

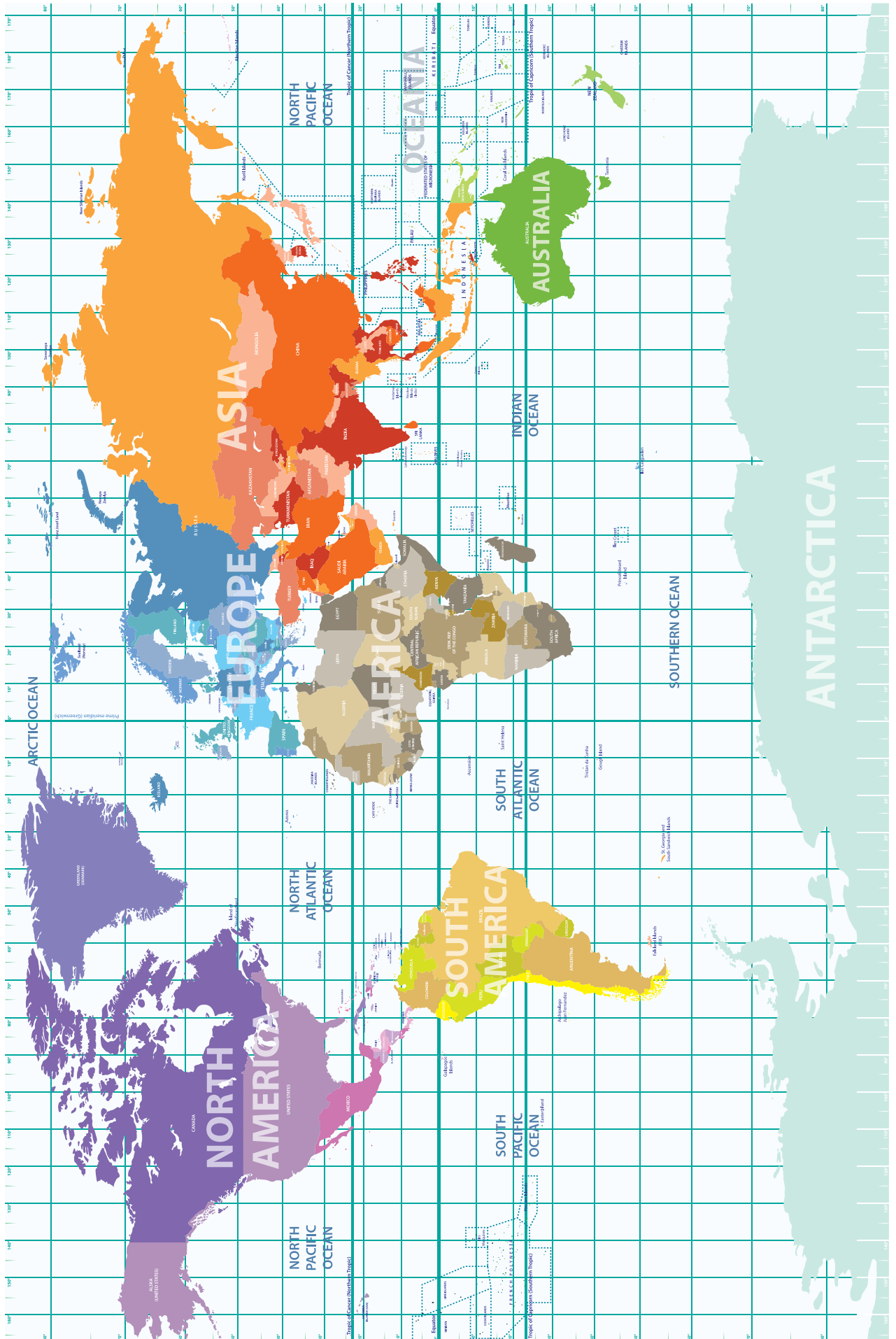
Fiction

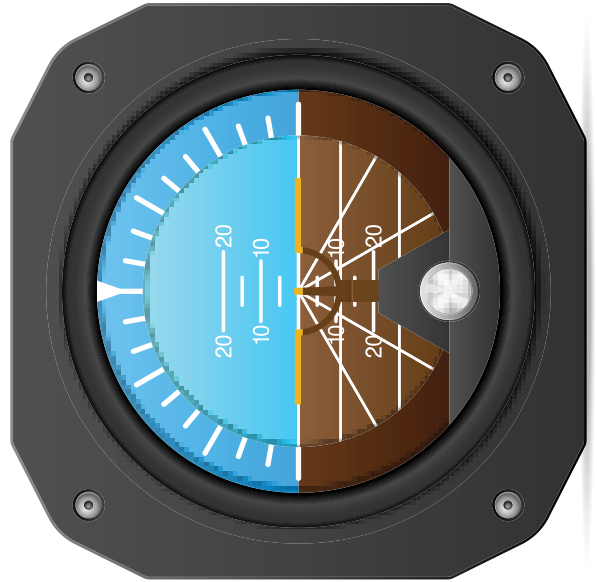
The Treasure Of The Bermuda Triangle (2014) by Steve Stevenson and Stefano Turconi (children's)

Printables

Printable: World Map

Printable: Airplane Dashboard





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.