GAME/ACTIVITY

MARIANA TRENCH: THE DEEPEST SPOT ON EARTH

AGES

Children 8+ years

PROGRAM DESCRIPTION

Dig deep into the Mariana Trench! As a group, children try to place locations according to depth on a Mariana Trench wall display. Watch YouTube videos, and use Milky Way candy bars, or a non-food option, to demonstrate the plate tectonics that created the Mariana Trench. Suggested runtime: 45 min.

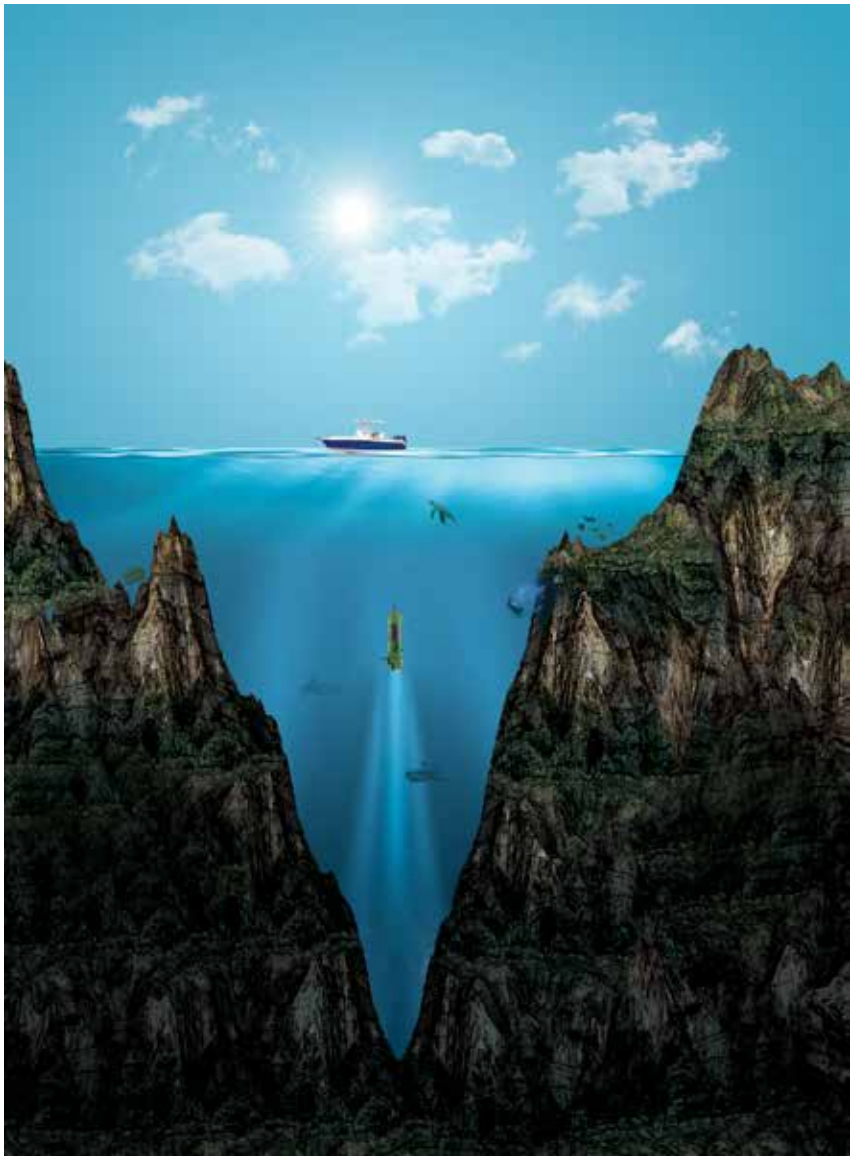

Image source: Shutterstock

ADAPTATION:

For older children and teens, replace one of the activities (or add on) with an activity about water pressure. Two great ideas here: https://bit.ly/3bVSYs4

MATERIALS AND PREPARATION

Materials:

- World map or globe
- Yard sticks
- Paper plates
- Milky Way bars, or graham crackers and frosting, or cardboard and glue
- White board and magnets, or painter's tape, or butcher paper and markers
- Tables and chairs for plate tectonics and coloring

Make a Mariana Trench depth display using a wall, magnetic white board, or strips of butcher paper. Mark off lines with distances, from 0 ft. to 35,000 ft. If you are short on space, include only the specific depths needed.

Some images to consider laminating, for attaching with magnets or painter's tape to your display: The "midnight zone" (1000 ft.), great white shark (4500 ft), black dragonfish (6600 ft), deep sea coral reefs (9900 ft), average ocean depth (12100 ft), angler fish (15000 ft), SS Rio Grande shipwreck (18900 ft), Trench begins (19700 ft), snailfish (26000 ft), Challenger Deep (35853 ft).

Program outline:

- Show a world map and ask if anyone can locate the Mariana Trench.
- Use National Geographic Interactive map to look at the depths surrounding the trench (if you have access to multiple devices, let kids do this themselves):
- Bring out your premade Mariana Trench depths display with stick ons and

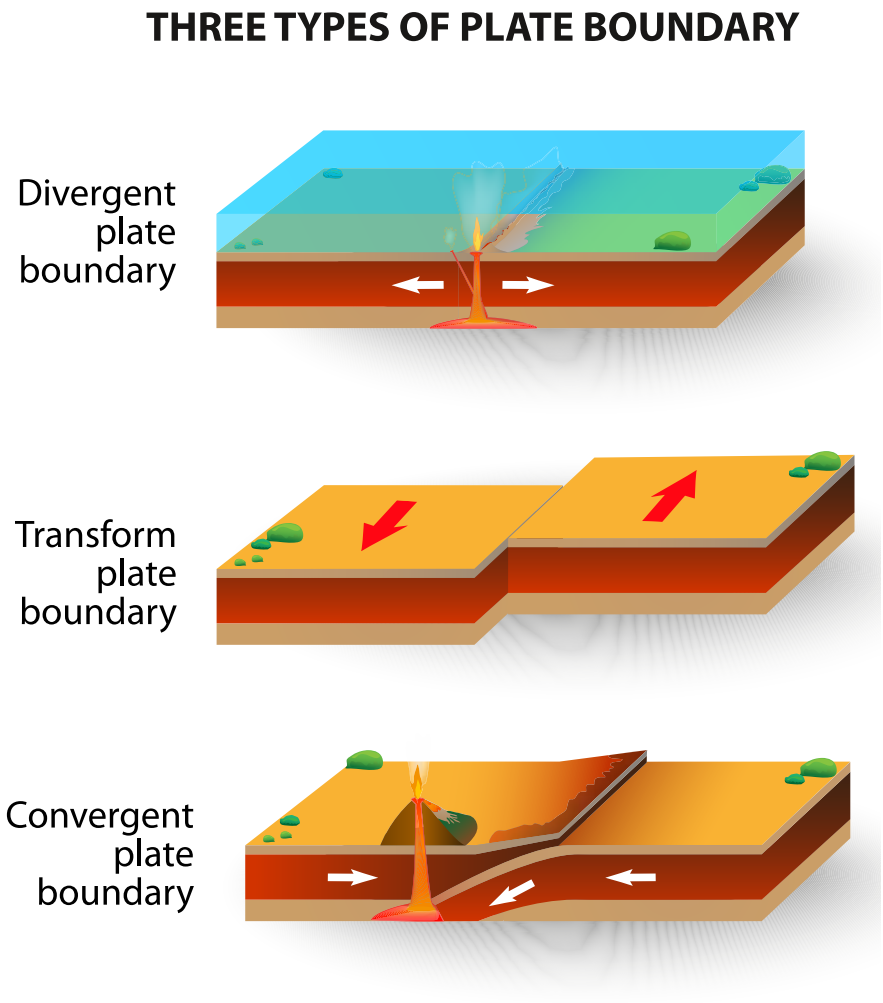

Image source: Shutterstock

have kids decide where they think the items go. When they've made a guess, tell them how many are right and give them the option of rearranging. Finally, give them the correct answers.

- 35,000 ft is approximately 7 miles. Using a map, show them things that are 7 miles from the library so they can get an idea of how deep it is.
- Talk about tectonic plates. Lead a tectonics demonstration using mini Milky Way bars (not bite sized), or use a non-food substitute. Make a crack in the top layer of chocolate with a plastic knife. Pull the candy bar apart a tiny bit (this makes a divergent boundary). Push the candy bar together (this makes a convergent boundary and is what created the subduction and the Mariana Trench). Push the two sides in opposite directions (this is a transform boundary).
- Finally, watch a video about the Mariana Trench on Youtube. Give kids paper and crayons to color an ocean scene while watching.

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly.

RESOURCES

Web

"MapMaker Interactive" from *National Geographic*: https://bit.ly/3fOr6Hs

"What is Tectonic Shift?" from *National Ocean Service*: https://bit.ly/3g5DO4P

"Plate Tectonics" from *National Geographic*: https://bit.ly/3fO6bnK

Books

Non-fiction

Mapping the Deep: The Extraordinary Story of Ocean Science (2000) by Robert Kunzig (adult)

Fiction

The Young Captain Nemo series (2019–2021) by Jason Henderson (children's)

The Beast of Cretacea (2015) by Todd Strasser (YA)

Meg (2005) by Steve Altern (adult)

TIP:

For more children's deep sea non-fiction titles, see programs in Chapter 02: Explore New Depths.