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 Seaorbiter. 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.

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/2RIeTMv

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.