

Oceanography Badge

Submitted by Annetta Vitale (Modeled after the Columbia River Council Oceanography Badge)

Oceanography is the science that studies the oceans. It includes the study of the geology or sea floor, biology or living things, chemistry, and physics or motion, of the ocean. Ocean water covers over 70% of our planet. Water is crucial for our survival and even controls our weather. Learn more about this interesting field by doing this badge.

To earn this badge, complete FOUR of the following eight activities:

1. Identify and label a map showing the oceans of the world.
2. Make a poster or discuss the different things that oceanographers study.
3. Explore ocean circulation with an experiment using water of different densities. Observe how these mix and describe what you see. (*Littlefield reference*)
4. Discuss different local marine habitats. Identify animals or plant life you would most likely see there.
5. Define endangered species. Identify at least one local example that is dependent on the marine environment. Discuss ways we could make a difference.
6. Discuss how the ocean affects our weather. Talk about global warming and climate change.
7. Access and explore the website <http://www.womenoceanographers.org>
Discuss the different jobs these women have.
8. Do one of the following:
 - a) Visit the beach. Make a poster or write in a field book about at least one animal and one plant found there. Make diagrams with labels and share your findings with the troop.- OR -
 - b) Visit the Theodore Roosevelt Nature Center at Jones Beach
<http://nysparks.state.ny.us/parks/info.asp?parkID=84> and answer the following:
 - 1) Name four marine habitats
 - 2) For each habitat, name an animal or plant that can be found there.
 - 3) Define endangered species.
 - 4) What did you like most about the Center and why?- OR -
 - c) Visit the Coney Island Aquarium <http://www.nyaquarium.com>
Identify three different examples of marine life and describe two things about the environment they inhabit.

RECOMMENDED REFERENCES

Heilegman, Deborah, *The Mysterious Ocean Highway*, Raintree Steck-Vaughn Publishers, 2000.
(p.30 - 31 shows Amy Bower a woman oceanographer at work)

Lambert, David. *The Kingfisher Young People's Book of Oceans*, Kingfisher, 1997.

Littlefield, Cindy A. *Awesome Ocean Science*, Williamson Publishing Company, 2003.
(this reference has directions for many experiments that can be used)

Pike, Katy and Maureen O'Keefe, *Oceans*, Chelsea Clubhouse, 2003.
(particularly good for the younger girls)

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Scholastic Atlas of Oceans, Scholastic Inc. 2004.

