

Lesson 1.1

History and Socio-economics

Grades: 9-12

Integrated Subjects: History, Science, Reading, Geography, Language Arts

Essential Skills: Research, Inferring, Compare/Contrast, Writing

Sunshine State Standards: SC.G.2.4.5, SC.G.2.4.6, SC.D.2.4.1, SC.H.3.4.5

National Science Education Standards: Meets Content Standards in 1) Science in personal and social perspectives; 2) History and nature of science; and 3) Science and technology

Duration: 1 – 2 class periods

Objectives:

Students will be introduced to the ways queen conch were used and how the fishery impacted Caribbean countries throughout history. In particular, students will learn:

- 🍷 how Indians utilized conch for their everyday activities
- 🍷 about the history of the queen conch
- 🍷 about today's conch market
- 🍷 about the different ways to fish for conch

Preparation:

Teacher Preparation:

- 🍷 Duplicate appropriate materials

Support materials:

- 🍷 Tribal tool pictures (if available)
- 🍷 Lecture module with pictures/slides
- 🍷 Map of the Caribbean

Information Sheets:

- 🍷 No. 1 – Queen Conch Vocabulary List
- 🍷 No. 2 – The Arawak Indians
- 🍷 No. 3 – History of the Queen Conch Fishery
- 🍷 No. 4 – How are Queen Conch Used

Activity Sheets:

- 🍷 No. 1 – Queen Conch Pre-test
- 🍷 No. 2 – Animals as Tools
- 🍷 No. 3 – Fishing Methods

Lesson Plan

Activity 1. Introduction (20 minutes)

Give the students the pre-test (Activity Sheet No. 1) in order to evaluate their understanding and knowledge of queen conch. Collect the tests and do not return them to the students until the end of lesson plans.

Ask the students to define some of the vocabulary words prior to distributing the list. Ask the students what other words they think are associated with queen conch. Hand out Information Sheet No. 1, the list of vocabulary words relevant to the queen conch lessons. Discuss the vocabulary words in class. You may choose to quiz them at the end of the lessons.

Activity 2. The Arawak Indians (30 minutes)

Long before Christopher Columbus discovered the West Indies, native Arawak Indians resided in many of the Caribbean islands. They were the first people to utilize queen conch for their every day needs.

Distribute and discuss Information Sheet No. 2 about the Arawak Indians. Discuss what native Indians were once present where the school is located. Have the students make a list of other animals that had been used as tools or food in other native Indian cultures throughout the world and compare to Activity Sheet No. 2.

Activity 3. Queen Conch Fishery Economics (45 – 60 minutes)

Distribute and discuss Information Sheet No. 3, about the queen conch fishery. Hang up a map of the Caribbean islands in your classroom. You may choose to have the students make the map themselves. Discuss what other species are fished throughout the world.

Ask the students to make a list of fishing methods that are used today or have been used in history. Distribute Activity Sheet No. 3 and compare. Distribute and discuss Information Sheet No. 4. Discuss what methods are used when fishing for queen conch and why some methods have been banned.

Assign students (groups or individual) a Caribbean country and have them research the status of the queen conch fishery. Have them examine the annual catch, quotas, regulations, and problems the fishery may be facing. Have the students put this info on an index card and attach it to the appropriate country on the map.

Activity 4. What are Queen Conch used for? (20 minutes)

Have the students list products that come from queen conch. Distribute Information Sheet No. 4 and discuss. Have students bring in pictures or objects that were made from queen conch.

Conclusion

Discuss the importance of queen conch throughout history.

Bibliography

- Appeldoorn, R.S. 1994. Queen conch management and research: status, needs and priorities. *In*: Appeldoorn, R.S. and B. Rodríguez Q. (eds). Queen conch biology, fisheries and mariculture. Fundación Científica Los Roques, Caracas, Venezuela. pp 145-147.
- Brownell, W.N. and J.M. Stevely 1981. The biology, fisheries, and management of the queen conch, *Strombus gigas*. *Marine Fisheries Review*. 43(7): 1-12.
- IUCN. 1983. Commercially threatened queen or pink conch. *In*: S.M. Wells , R.M. Pyles, and N.M. Collins (eds). The IUCN invertebrate red data book. Pp 79-90. IUCN publications.
- Stoner, A.L. 1997. The status of queen conch, *Strombus gigas*, research in the Caribbean. *Marine Fisheries Review*. 59(3): 14-22.
- Stoner, A.L. 1997. Shell middens as indicators of long-term distributional patten in *Strombus gigas*, a heavily exploited marine gastropod. *Bulletin of Marine Science*. 61(3): 559-570.