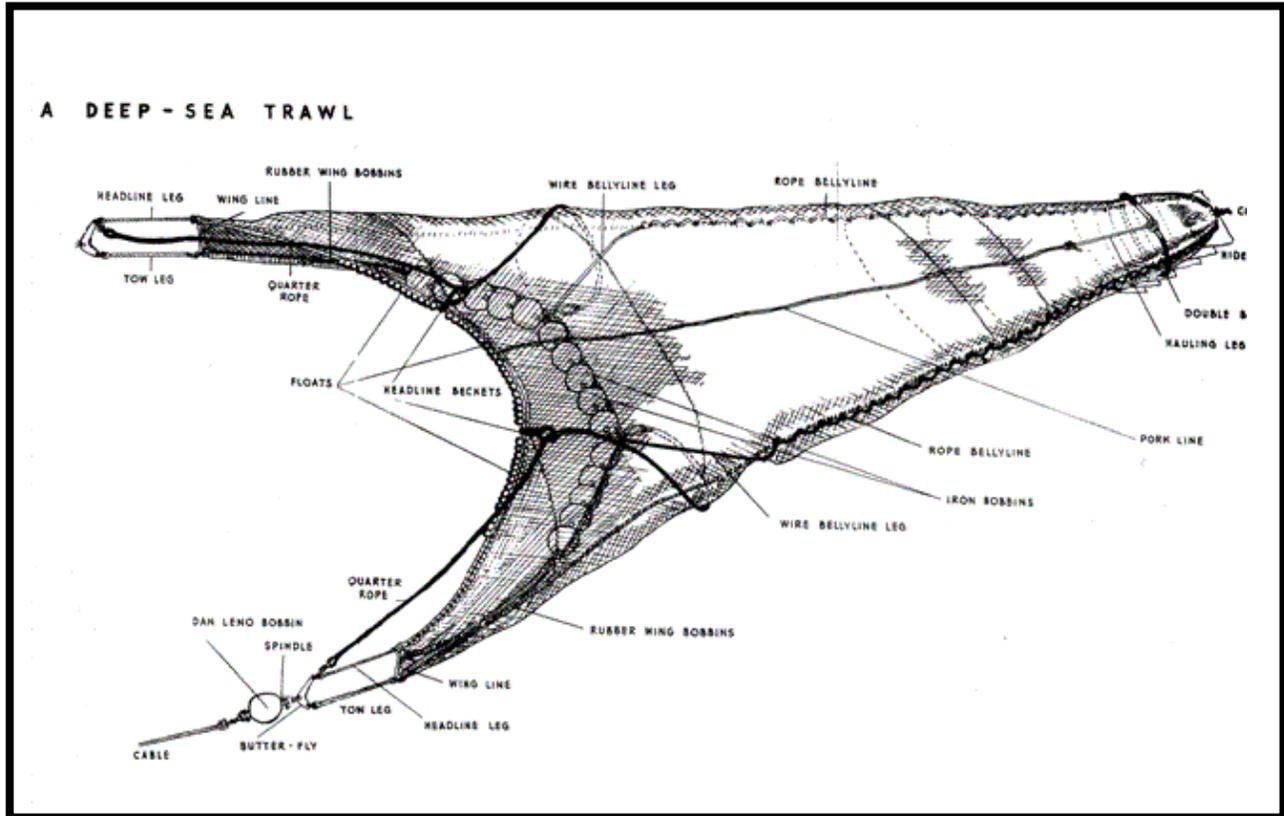




# Transit Trawl

2020- Driftwood Education Center



## **Class Description:**

*Throw out the net mates! Let's see what we can haul in and study, as we head out on a pontoon boat and look at interesting organisms. Led by a boat captain and his crew, students will learn about trawling nets, trawl boats, and investigate the organisms that we catch. We will also look for marine mammals that sometimes like to visit the Frederica River. There is an additional fee per student for this class.*

**This class is appropriate for all grade levels and abilities.**

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# Transit Trawl

## Table of contents and outline:

### I. Pre-class Intro

1. Be prepared for weather conditions

### II. Introduction, overview, and assessment (5 min)

1. What do the students know about trawling
2. Why do we trawl?
3. Hypothesize about what we will find

### III. Out to the Boat

1. Working with the captains
2. Your job and objectives
3. Additional talking points

### IV. Conclusions and Wrap-up

1. What did you find?
2. Why is it important?

### V. Additional Information and help

1. Different types of nets: pictures

### South Carolina Performance Standards met:

**4.S.1, 5.S.1, 6.S.1.** The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content.

**3.L.5, 4.L.5, 5.L.4, 6.L.4.** The student will demonstrate an understanding of relationships among biotic and abiotic factors within aquatic ecosystems and how the structures, processes, behaviors, and adaptations of animals allow them to survive.

### Florida Performance Standards met:

**SC.4.N.1, SC.5.N.1, SC.6.N.1, SC.7.N.1.** The Practice of Science  
**SC.4.N.2, SC.5.N.2, SC.6.N.2.** The Characteristics of Scientific Knowledge

**SC.4.L.17.3.** Students will explain that animals obtain energy from the plants and/or animals they eat.

**SC.4.L.17.4.** Recognize ways plants and animals, including humans, can impact the environment.

**SC.5.L.14.2.** Compare and contrast the function of organs and other physical structures of animals

**SC.5.L.17.1.** Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

**SC.7.L.17.1.** Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.

**SC.7.L.17.3.** Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.

## Concepts:

Focal points of this class are:

1. Trawling is a commercial fishing practice used primarily to catch shrimp & fish for consumption.
2. Intra-coastal waterways and intertidal zones are nurseries for young organisms.
3. Human demand for ocean fish and shrimp outweighs the cost of the by-catch monetarily.

## Outcomes:

Upon completion of this class, students will be able to:

1. Understand how a trawl net works and why the seafood industry is important in Georgia.
2. Understand and identify the species found in the intertidal zone.
3. Examine different methods to reduce by-catch from trawling.

### Georgia Performance Standards met:

**S4L1.** Students will describe the roles of organisms and the flow of energy within an ecosystem.

**S4CS8, S5CS8, S6CS9.** Students will understand important features of the process of scientific inquiry.

**S7L1.** Students will investigate the diversity of living organisms and how they can be compared scientifically.

### NEXT GENERATION science standards met:

**K-LS1-1 From Molecules to Organisms:** Structures and Processes

- Use observations to describe patterns of what animals need to survive.

**3-LS2-1 Ecosystems:** Interactions, Energy, and Dynamics

- Construct an argument that some animals form groups that help members survive.

**3-LS4-2 Biological Evolution:** Unity and Diversity

- Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

**3-LS4-3 Biological Evolution:** Unity and Diversity

- Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

**4-LS1-1 From Molecules to Organisms:** Structures and Processes

- Construct an argument that animals have internal and external structures that function to support survival, growth, behavior, and reproduction.