

## 2021-22 Academic Pentathlon Science Resource Guide Outline

Section I. The Ocean Planet.....37%

- A. Introduction
- B. An Introduction to Marine Biology
- C. How Do We Study Marine Life?
- D. The Geography and Geology of the Ocean
- E. Water and Seawater
- F. Interactions of the Ocean and the Atmosphere
- G. Water
- H. Tides

Section II. Marine Life.....31%

- A. Introduction
- B. The Origins of Life
- C. Defining Marine Life
- D. The Building Blocks of Life
- E. Photosynthesis and Chemosynthesis
- F. Biogeochemical Cycles
- G. Classifying Marine Life
- H. The Microbial World
- I. Plankton
- J. Seaweed and Plants
- K. Invertebrates: Animals without a Backbone
- L. Vertebrates

Section III. Marine Ecosystems.....17%

- A. Introduction
- B. What is Marine Ecology?
- C. Environmental Factors Limiting
- D. Organismal Distribution
- E. Ecological Principles
- F. Habitats
- G. Feeding and Food Webs

Section IV. Humans and the Ocean.....15%

- A. Introduction
- B. Resources and the Ocean
- C. Anthropogenic Impacts
- D. Conservation and Protection