

PROJECT OCEANOLOGY – EIFE SCIENCE CURRICULUM

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>ADAPTATIONS OF ORGANISMS</p> <p>◆ Organisms from Long Island Sound are used to compare and contrast adaptations for survival.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3 3.2 4.2 5.2 6.2 7.2 8.2 10.1, 10.4, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 B INQ.1, 2, 5, 6, 7 C INQ.1, 2, 3, 5, 8, 9, 10 D INQ.1, 2, 3, 4, 6, 7, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 15, 16 B:4, 10, 11, 21 C:4, 5, 6, 16, 17, 26 D:27, 30, 36, 39, 40, 41, 42, 43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function of Living Systems Reproduction and Heredity Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization of Living Systems Biological Evolution Transfer of Energy Understanding About Science and Technology</p>	<p>4 a, b 5 a, b, c, d, e, f, g, 5 h, i 6 b, c, d, e, g 7 a, b, c, d, f</p>
<p>ALGAE PRESSING</p> <p>◆ Identification of different species of local seaweeds.</p> <p>◆ Permanent mounting of seaweeds for classification purposes.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3 3.2 4.2 6.2 10.4, 10.5</p>	<p>A INQ.1, 2, 3, 4, 5, 6, 9 B INQ.1, 2, 5, 6, 9 C INQ.1, 2, 5, 8, 9, 10 D INQ.2, 6, 7, 9, 10 A:1, 3, 4, 6, 13, 16 B:3, 4, 10, 11 C:4, 5, 6 D:36, 40, 42</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function of Living Systems Reproduction and Heredity Populations and Ecosystems Diversity and Adaptations of Organisms Natural Resources Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>5 a, c, d, e, f, h, i 6 b, c, d, e, f, g 7 b, c, f</p>

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<p>BLUEFISHING STUDY</p> <ul style="list-style-type: none"> ◆ Collect recreationally important pelagic species and discuss fisheries management concerns. ◆ Observe external and internal characteristics. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 2.4 3.2, 3.4 4.2 5.2 6.2 7.2, 7.4 10.4, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 16, 17, 23, 24 B:4, 7, 10, 11, 21 C:4, 5, 6, 16, 17, 21 D:36, 39, 40, 42, 43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Populations, Resources and Environments Population Growth Natural Resources Environmental Quality Science, Technology and Society Science and Technology in Local, Natural and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>5 a, d, e, f, i 6 b, c, d, e, g 7 b, c, e, f</p>

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<p>CAPTURE/RECAPTURE</p> <ul style="list-style-type: none"> ◆ Quantitative analysis of population abundance of snails and/or crabs ◆ Mark and recapture of organisms along the shoreline. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 5.2 6.2 10.6</p>	<p>A INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 15, 16, 17 B:4, 10, 11, 21 C:4, 5, 6 D:43, 44</p>	<p>Evidence, Models and Investigations Change, Constancy and Measurement Evolution and Equilibrium Organisms and Environments Populations and Ecosystems Regulation and Behavior Interdependence of Organisms Behaviors of Organisms Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Changes in Environments Populations, Resources and Environments Population Growth Environmental Quality Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>5 a, c, d, e, f, h, i 6 b, c, d, f, g 7 b, c, e, f</p>
<p>CHLOROPHYLL ANALYSIS</p> <ul style="list-style-type: none"> ◆ Collect and quantitatively analyze water samples for concentration of chlorophyll. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.1, 1.2, 1.3, 1.4 3.2 4.2 5.1, 5.2 6.2 8.2 9.7, 9.8, 9.9 10.2, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 6, 13, 16, 17 B:4, 10, 11, 19, 21 C:4, 5, 6 D:22, 23, 24, 25, 26, 31</p>	<p>Evidence, Models and Investigation Change, Constancy and Measurement Populations and Ecosystems Interdependence of Organisms Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Changes in Environments Science, Technology and Society Populations, Resources and Environments Environmental Quality Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>1 a, g 3 e 4 a 5 f, g, i 6 a, b, c, d, e, g 7 b, c, d, e, f</p>

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<p>CLASSIFICATION OF ORGANISMS</p> <ul style="list-style-type: none"> ◆ Organisms from Long Island Sound are used for taxonomic identification. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 5.2 6.2 7.2 8.2 10.1, 10.2, 10.4, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 B INQ.1, 2, 5, 6, 7 C INQ.1, 2, 3, 5, 8, 9, 10 D INQ.1, 3, 4, 6, 7, 9, 10 A:1, 3, 4, 5, 6, 12, 13, 14, 15, 16, 17 B:4, 10, 11, 21 C:4, 5, 6, 16, 17, 26 D:27, 32, 36, 39, 40, 41, 42, 43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function of Living Systems Reproduction and Heredity Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization of Living Systems Biological Evolution Transfer of Energy Understanding About Science and Technology</p>	<p>4 a, b 5 a, b, c, d, e, f, g, h, i 6 b, c, d, e, g 7 a, b, c, d, f</p>
<p>COLIFORM BACTERIA</p> <ul style="list-style-type: none"> ◆ Quantitative measurement and analysis of coliform bacteria concentrations in water samples. ◆ Discuss sources of coliform bacteria and human impacts on the environment. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 6.4 9.6, 9.8, 9.9 10.2</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 6, 12, 16, 17 B:3, 4, 10, 11 D:18, 24, 25, 26, 31, 32</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Science as Human Endeavor Nature of Scientific Knowledge Changes in Environments Science and Technology in Local, National and Global Challenges Populations, Resources and Environments Risks and Benefits Science, Technology and Society Personal and Community Health Population Growth Environmental Quality Abilities of Technological Design Understanding About Science and Technology</p>	<p>1 g 5 i 6 a, b, c, d, e, g 7c</p>

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<p>CRAB HABITAT STUDY</p> <p>◆ Inquiry-based activity to explore habitat preference of various crab species.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3 3.2 4.2 5.2 6.2 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 7, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 16 B:3, 4, 10, 11, 21 C:4, 5, 6 D:43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Populations, Resources and Environments Population Growth Natural Resources Environmental Quality Science, Technology and Society Science and Technology in Local, Natural and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>2 c 5 a, c, d, e, f, h, i 6 e, f 7 b, e, f</p>

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<p>DISSECTIONS</p> <p>◆ External and internal anatomy of organisms are explored to understand relationships between organisms and structures used for survival.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3 3.2 4.2 5.2 6.2 7.2 8.2 10.1, 10.3, 10.4, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 8, 9 B INQ.1, 2, 4, 5, 6, 9 C INQ.1, 3, 5, 8, 9, 10 D INQ.1, 3, 4, 6, 7, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 16 B:3, 4, 10, 11, 21 C:4, 5, 6, 16, 17, 26 D:27, 36, 39, 40, 42, 43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function of Living Systems Reproduction and Heredity Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization of Living Systems Biological Evolution Transfer of Energy Understanding About Science and Technology</p>	<p>4 a 5 a, c, d, e, f, i 6 b, c, d, e, g 7 b, c, f</p>
<p>DIVING ADAPTATIONS</p> <p>◆ Inquiry based activity designed to explore factors that trigger physiological “dive reflex” in mammals.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 5.2 7.2</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 12, 14, 16, 17 B:3, 4, 10, 11, 21 C:16, 17 D:42</p>	<p>Systems, Order and Organization Evidence, Models and Investigations Change, Constancy and Measurement Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function in Living Systems Regulation and Behavior Diversity and Adaptations of Organisms Behavior of Organisms Biological Evolution</p>	<p>3 f 5 d, f</p>

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<p>FISH RESPIRATION</p> <p>◆ The effects of temperature on breathing and metabolic rates of fish are studied and explained.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 5.2 7.2 10.1, 10.5</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 7, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 6, 12, 16, 17 B:4, 10, 11, 21 C:16 D:29, 30</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Diversity and Adaptations of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Science as Human Endeavor Nature of Scientific Knowledge Abilities of Technological Design Understanding About Science and Technology</p>	<p>3 b 4 a 5 f, i</p>

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<p align="center">GULL ROOKERY STUDY</p> <ul style="list-style-type: none"> ◆ Population study of shore birds in Long Island Sound (including nests, eggs, chicks) to establish number of breeding pairs on island. ◆ Discuss geologic history of Long Island Sound. ◆ Discuss history of gull population fluctuation. 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2, 3.4 4.2 5.2 6.2 7.2 8.2 10.4, 10.5, 10.6	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 16, 17 B:3, 4, 10, 11, 21 C:4, 5, 6, 15, 16, 17, 26 D:36, 37, 40, 42, 43, 44	Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Populations, Resources and Environments Population Growth Natural Resources Environmental Quality Science, Technology and Society Science and Technology in Local, Natural and Global Challenges Abilities of Technological Design Understanding About Science and Technology	5 a, d, e, f, i 6 b, c, d, e, g 7 b, c, f

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<p>INFUANA ANALYSIS</p> <ul style="list-style-type: none"> ◆ Utilize oceanographic technology to quantitatively and qualitatively measure important organisms in marine food webs. ◆ Identify and discuss environmental and ecological impacts from human activity. 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 5.2 6.2 7.2 10.5, 10.6	A INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 B INQ.1, 2, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 16, 17 B:3, 4, 10, 11, 21 C:4, 5, 6 D:40, 42, 43, 44	Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Populations, Resources and Environments Environmental Quality Science as Human Endeavor Natural of Scientific Knowledge Abilities of Technological Design Understanding About Science and Technology	2 d 5 a, b, c, d, e, f, g, i 6 b, e, g 7 b, d, f
<p>LIGHT/DARK BOTTLES</p> <ul style="list-style-type: none"> ◆ Quantitatively measure primary productivity in estuarine waters. 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2, 3.4 4.2 5.2 6.2 7.2 9.1, 9.7, 9.8, 9.9 10.1, 10.2, 10.6	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 6, 12, 13, 16, 17 B:4, 7, 10, 11, 21 C:4, 5, 6, 16 D:22, 23, 24, 25, 26, 31, 43, 44	Evidence, Models and Investigation Change, Constancy and Measurement Organisms and Environments Populations and Ecosystems Interdependence of Organisms Transfer of Energy Changes in Energy and Increase in Disorder Science as Human Endeavor Natural of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Changes in Environments Risks and Benefits Environmental Quality Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology	1 g 3 b, e, f 4 a 5 a, d, e, f, g, i 6 a, d, e, g 7 b, c, d, e, f

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<p>LOBSTER POPULATIONS</p> <p>◆ Population study of commercially important organisms (lobsters) in Long Island Sound.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 2.4 3.2, 3.4 4.2 5.2 6.2 7.2 8.2 9.8 10.2, 10.4, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 15, 16, 17, 23, 24 B:4, 7, 10, 11, 21 C:4, 5, 6, 16, 17, 26 D:24, 32, 36, 39, 40, 41, 42, 43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Populations, Resources and Environments Population Growth Natural Resources Environmental Quality Science, Technology and Society Science and Technology in Local, Natural and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>5 a, d, e, f, i 6 b, c, d, e, g 7 b, c, e, f</p>

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<p>NEARSHORE FISH POPULATIONS</p> <p>◆ Use seine nets to collect, identify, count and measure fish that live close to the shore and are near the base of the food web in Long Island Sound.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 2.4 3.2 4.2 5.2 6.2 7.2 8.2 9.8 10.4, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 15, 16, 17, 23, 24 B:3, 4, 10, 11, 21 C:4, 5, 6, 16, 17, 26 D:24, 36, 40, 42, 43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Populations, Resources and Environments Population Growth Natural Resources Environmental Quality Science, Technology and Society Science and Technology in Local, Natural and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>1 g 4 a 5 a, d, e, f, h, i 6 b, c, e, g 7 b, c, f</p>
<p>OSMOREGULATION</p> <p>◆ Inquiry based activity demonstrating diffusion by osmosis using marine organisms in varying salinities.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 5.2 7.2 10.1, 10.5</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 6, 12, 14, 16, 17 B:4, 10, 11, 21 C:16 D:30, 40, 42</p>	<p>Systems, Order and Organization Evidence, Models and Investigations Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Organisms and Environments Life Cycles of Organisms Structure and Function in Living Systems Regulation and Behavior Diversity and Adaptations of Organisms</p>	<p>1 e 5 a, c, d, f 7 b</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>PINNIPED LAB</p> <ul style="list-style-type: none"> ◆ Characteristics of marine mammals are explored using resident harbor seals as a model animal. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 5.2 6.2 7.2 8.2 10.4, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 16, 17, 24 B:3, 4, 10, 11, 21 C:4, 5, 6, 16, 26 D:36, 40, 42, 43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Science as Human Endeavor Nature of Scientific Knowledge Populations, Resources and Environments</p>	<p>5 a, d, e, f, h, i 6 b, c, d, e, g</p>
<p>PLANKTON</p> <ul style="list-style-type: none"> ◆ Observe microscopic organisms using microscopes and understand their importance in the food web. ◆ Create plankton models. ◆ Quantitatively measure plankton abundance in water samples. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 5.1, 5.2 6.2 10.1, 10.2, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 B INQ.1, 2, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 16, 17 B:3, 4, 10, 11, 19, 21 C:4, 5, 6 D:27, 31, 40, 41, 42, 43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Science as Human Endeavor Nature of Scientific Knowledge Populations, Resources and Environments Natural Resources Environmental Quality Science, Technology and Society Science and Technology in Local, Natural and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>3 e 4 a, b 5 a, c, d, e, f, g, i 6 a, b, e, g 7 b, c, d, e, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>SEAL POPULATIONS</p> <p>◆ Characteristics of marine mammals are explored using resident harbor seals as a model animal.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 2.4 3.2 4.2 5.2 6.2 7.2 8.2 10.4, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A: 12, 14, 16, 17, 24 B: 3, 4, 10, 11, 21 C:4, 5, 6, 16, 26 D:36, 40, 41, 42, 43, 44</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Functions in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Populations, Resources and Environments Population Growth Natural Resources Environmental Quality Science, Technology and Society Science and Technology in Local, Natural and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>1 a 5 a, d, e, f, h, i 6 b, c, d, e, g 7 b, c, d, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>URCHIN EMBRYOLOGY</p> <ul style="list-style-type: none"> ◆ Demonstrate reproductive strategies of marine invertebrates. ◆ Compare and contrast asexual and sexual reproduction. ◆ Discuss mechanisms for biological diversity. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2 5.2, 5.4 6.2 7.2 8.2 10.1, 10.3, 10.4, 10.5</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 14, 16, 17 B:3, 4, 10, 11, 21 C:4, 5, 6, 26 D:27, 36, 37, 40, 42</p>	<p>Systems, Order and Organization Evidence, Models and Investigation Evolution and Equilibrium Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structures and Function in Living Systems Reproduction and Heredity Regulation and Behavior Population and Ecosystems Diversity and Adaptations of Organisms Biological Evolution Matter, Energy and Organization in Living Systems Molecular Basis of Heredity Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Abilities of Technological Design Understanding About Science and Technology</p>	<p>5 a, c, d, f, h, i 6 b</p>

PROJECT OCEANOLOGY – EPHYSICAL SCIENCE CURRICULUM

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>COLOR/CLARITY OF WATER</p> <p>◆ Measure and analyze the effect of different suspended particles on color and turbidity of water.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.2, 1.3, 1.4 2.3, 2.4 3.1, 3.2, 3.3 4.2, 4.3 5.4 6.2, 6.4 7.3 9.1, 9.7, 9.8, 9.9 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 12, 13, 14, 15, 16, 17 B:1, 4, 5, 10, 11, 12, 13, 25 C:4, 5, 6, 10, 11, 19 D:2, 3, 19, 20, 21, 22, 23, 24, 25, 26, 43, 44</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Properties of Earth Materials Geochemical Cycles Organisms and Environments Diversity and Adaptations of Organisms Matter, Energy and Organization in Living Systems Types of Energy Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Changes in Environments Science, Technology in Society Population Growth Environmental Quality Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>1 g 2 c 4 a 5 a, b, c, d, e, f, g, i 6 a, c, d, e, g 7 b, c, d, e, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">CURRENTS</p> <ul style="list-style-type: none"> ◆ Measure and analyze current speeds and direction using oceanographic technology. ◆ Discuss forces acting upon water that affect current speed/direction. 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 4.2, 4.3 6.3, 6.4 7.3 8.1, 8.4	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 2, 3, 17 B:10, 11, 12, 13 C:7, 8, 9, 10, 11, 19, 20, 22, 23	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Properties of Objects and Matter Position and Motion of Objects Motions and Forces Transfer of Energy Conservation in Energy and Increases in Disorder Science as Human Endeavor Nature of Scientific Knowledge Types of Resources Science and Technology in Local, National and Global Challenges Risks and Benefits Science, Technology and Society Life Cycles of Organisms Organisms and Environments	1 a, c, e, f, g 2 c, d 5 f 7 b, d, e, f
<p style="text-align: center;">LAYERED OCEAN</p> <ul style="list-style-type: none"> ◆ An inquiry-based approach to exploring density changes in water with varying temperature and salinity. 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 2.1 3.1 4.2, 4.3 5.1 6.1, 6.3, 6.4 9.1, 9.7, 9.8	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 2, 3, 17, 18 B:1, 2, 10, 11, 12, 13, 18, 19 C:3, 7, 11 D:1, 2, 3, 19, 20, 21, 22	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Properties of Earth Materials Energy in the Earth System Geochemical Cycles Properties of Objects and Materials Transfer of Energy Structure and Properties of Matter Chemical Reactions Science as Human Endeavor Nature of Scientific Knowledge Environmental Quality Abilities of Technological Design Understanding About Science and Technology	1 a, c, e, f, g, h 3 a, b, d, f, g 6 a, e 7 b, d, e, f

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">LIGHT</p> <p>◆ Measure and analyze the amount of surface light to the amount of light penetrating to various depths.</p>	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 4.2 5.1, 5.2, 5.4 6.3 9.1, 9.8	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 17 B:10, 11, 19, 20, 21, 25 C:7, 8 D:1, 2, 3, 24	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Evidence, Models and Investigation Change, Constancy and Measurement Light, Heat, Electricity and Magnetism Properties and Changes of Properties in Matter Transfer of Energy Chemical Reactions Science as Human Endeavor Nature of Scientific Knowledge Changes in Environments Environmental Quality Abilities of Technological Design Understanding About Science and Technology	3 b 4 a 6 a 7 d, e, f
<p style="text-align: center;">LIGHTHOUSE TECHNOLOGY</p> <p>◆ Tour New London Ledge Lighthouse.</p> <p>◆ Discuss the origins and functions of lighthouses.</p> <p>◆ Discuss how lighthouses work.</p>	Scientific Inquiry Scientific Literacy Scientific Numeracy K.3 5.1, 5.4 8.4	A INQ.1, 2, 3, 4, 5, 7 B INQ.1, 2, 6, 7, 8 C INQ.2, 5, 9, 10 D INQ.2, 6, 9, 10 A:7, 8 B:17, 18, 19, 25 C:30	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Natural Hazards Natural and Human-Induced Hazards Made by Humans Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology	1 g 6 b, c, d, e, f, g 7 d

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">NAVIGATION/ METEOROLOGY</p> <p>◆ Utilize simple and advanced technologies to determine latitude/longitude and describe ambient weather conditions.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.3 1.4 4.2, 4.3 6.3 7.3 8.3, 8.4</p>	<p>A INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 B INQ.1, 2, 3, 4, 5, 6, 8, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 7, 17 B:11, 12, 13 C:8, 9, 19, 29, 30</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Objects in the Sky Energy in the Earth System Science as Human Endeavor Nature of Scientific Knowledge Science, Technology and Society Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>1a, b, c 3 a, b, c, d, e, f, g 6 a, b, c, d, e, f, g 7 b, c, d, e, f</p>
<p style="text-align: center;">NUTRIENT ANALYSIS</p> <p>◆ Quantitative measurements and analysis of dissolved nitrogen and phosphorous; critical nutrients in photosynthesis and often related to runoff and wastewater treatment concerns.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 4.2, 4.3 6.4 9.8, 9.9</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 17 B:10, 11, 13 C:10, 11 D:24, 25, 26</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Properties of Objects and Matter Geochemical Cycles Properties and Changes of Properties in Matter Transfer of Energy Structure and Properties of Matter Chemical Reactions Interactions of Energy and Matter Science as Human Endeavor Nature of Scientific Knowledge Types of Resources Changes in Environments Science, Technology and Society Populations, Resources and Environments Environmental Quality Population Growth Natural and Human-Induced Hazards Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>1 f, g, h 5 g, f, i 6 a, d, e, g 7 b, c, d, e, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">POROSITY/ PERMEABILITY</p> <p>◆ Hydrologic concepts measured and analyzed to understand effects of sediment size on subsurface water flow.</p>	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 2.1, 2.3 3.3 4.3 6.1, 6.4 7.3 8.4 9.7	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 17, 18, 21, 22 B:5, 13 C:19, 30 D:21	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Properties of Earth Materials Geochemical Cycles Structure and Properties of Matter Science as Human Endeavor Nature of Scientific Knowledge Changes in Environments Science, Technology and Society Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology	1 b 2 a, c, d
<p style="text-align: center;">PROPERTIES OF WATER</p> <p>◆ The unique properties of water are explored, including density, surface tension and heat capacity.</p>	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 2.1 3.1 4.3 6.1, 6.3, 6.4 7.3 9.7	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 2, 3, 17, 18 B:1, 2, 12, 13 C:3, 7, 8, 19 D:20	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Properties of Earth Materials Structure of the Earth System Energy in the Earth System Geochemical Cycles Properties of Objects and Materials Properties and Changes of Properties in Matter Structure and Properties of Matter Chemical Reactions Science as Human Endeavor Nature of Scientific Knowledge Understanding About Science and Technology	1 a, e, f, g, h 3 a, b, e, f 6 a

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">SEDIMENT ANALYSIS</p> <ul style="list-style-type: none"> ◆ Qualitative measurement and analysis of sediment characteristics (texture, color, odor). ◆ Quantitative measurement and analysis of sediment characteristics (grain size, percent of organic carbon). ◆ Discussion of impacts on sediment environment due to human-induced pollution. 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 2.1, 2.3 3.1, 3.3 4.2, 4.3 5.1 6.1, 6.4 7.3 9.5, 9.6, 9.7, 9.8, 9.9	A INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 17, 18, 21, 22 B:1, 5, 6, 10, 11, 13, 19 C:1, 11, 19, 20 D:13, 18, 19, 24, 25, 26	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Properties of Earth Materials Structure of the Earth System Energy in the Earth System Geochemical Cycles Chemical Reactions Science as Human Endeavor Changes in Environments Environmental Quality Natural and Human-Induced Hazards Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology	1 b, g 2 a, c, d, e 6 a, e 7 b, d, e, f
<p style="text-align: center;">SUBMARINES</p> <ul style="list-style-type: none"> ◆ Explore forces acting upon diving structures. 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 2.1 3.1 4.1 5.4 7.1 8.1, 8.4 9.1	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 2, 3, 17, 18 B:1, 2, 8, 9, 25 C:14, 22, 23 D:2, 3	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Properties of Objects and Materials Position and Motion of Objects Properties and Changes of Properties in Matter Motions and Forces Science as Human Endeavor Nature of Scientific Knowledge Science and Technology in Local, National and Global Challenges Made by Humans Abilities of Technological Design Understanding About Science and Technology	1 a, e, g 6 b, e, g 7 a, b, d, f

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>THERMAL POLLUTION</p> <ul style="list-style-type: none"> ◆ Quantitative and qualitative measurement and analysis of biological, chemical, geological and physical effects on the environment due to the presence of nuclear power plant. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy 4.2, 4.3 5.4 6.2, 6.3, 6.4 8.4 9.1, 9.3, 9.7, 9.8, 9.9</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 B: 10, 11, 12, 13, 25 C:4, 5, 6, 7, 8, 11 D:2, 3, 7, 8, 9, 21, 22, 23, 24, 25, 26</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Evidence, Models and Investigation Change, Constancy and Measurement Geochemical Cycles Organisms and Environments Risks and Benefits Light, Heat, Electricity and Magnetism Properties and Changes in Properties of Matter Transfer of Energy Types of Resources Populations, Resources and Environments Conservation in Energy and Increases in Disorder Science as Human Endeavor Nature of Scientific Knowledge Environmental Quality Natural Resources Science, Technology and Society Population Growth Natural and Human-Induced Hazards Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>3 a, b, c, f 6 a, b, d, e, g 7 c, d, e, f</p>
<p>TITRATIONS</p> <ul style="list-style-type: none"> ◆ Utilize chemical titrations to measure salinity, dissolved oxygen and/or organic carbon in water samples. ◆ Compare and contrast results to alternate techniques. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 2.1 6.4 9.7, 9.8, 9.9</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9,10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 17, 18 C:10, 11 D:19, 24</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Evidence, Models and Investigation Change, Constancy and Measurement Properties of Objects and Materials Properties of Earth Materials Geochemical Cycles Chemical Reactions Science as Human Endeavor Nature of Scientific Knowledge Changes in Environments Science and Technology in Local, National and Global Challenges Environmental Quality Abilities in Technological Design Understanding About Science and Technology</p>	<p>1 e, f, g 2 a, c, d 3 d, e, f 6 a, e 7 b, d, e, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">TOPOGRAPHY</p> <p>◆ Quantitatively measure and analyze changes in seafloor depth due to natural and human-induced causes.</p>	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 4.2, 4.3 5.1, 5.4 7.3 8.4 9.7	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 2, 3, 4, 5, 6, 8, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 17 B:10, 11, 13, 25 C:18, 19, 20, 30 D:21	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Changes in Earth Systems Changes in Environments Science and Technology in Local, National and Global Challenges Environmental Quality Natural and Human-Induced Hazards Abilities of Technological Design Understanding About Science and Technology	1 a, b, d 2 a, b, c, d, e 6 e 7 b, c, d, e, f
<p style="text-align: center;">WASTE WATER TREATMENT</p> <p>◆ Quantitative measurement and analysis of chemical and physical effects (including coliform bacteria concentration) on environmental quality due to the presence of a waster water treatment facility.</p>	Scientific Inquiry Scientific Literacy Scientific Numeracy 4.3 5.4 6.4 8.4 9.6, 9.7, 9.8, 9.9 10.2	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 B:13, 25 C:10, 11, 18 D:19, 24, 25, 26	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Evidence, Models and Investigation Change, Constancy and Measurement Geochemical Cycles Organisms and Environments Properties and Changes in Properties of Matter Types of Resources Conservation in Energy and Increases in Disorder Natural Resources Science as Human Endeavor Nature of Scientific Knowledge Environmental Quality Risks and Benefits Science, Technology and Society Population Growth Personal and Community Health Natural and Human-Induced Hazards Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology	1 f, g, h 6 b, d, e, g 7 c, d, e, f

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>WATER CHEMISTRY</p> <ul style="list-style-type: none"> ◆ Quantitative measurement and analysis of temperature, salinity, dissolved oxygen, pH, carbon dioxide and density. 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 2.1 4.2 5.2 6.1, 6.2, 6.3, 6.4 9.1, 9.7, 9.8, 9.9	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 17, 18 B:10, 11, 20, 21 C:2, 3, 4, 5, 6, 7, 8, 9, 10, 11 D:2, 3, 19, 20, 22, 23, 24, 25, 26	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Properties of Objects and Materials Properties of Earth Materials Energy in the Earth System Geochemical Cycles Light, Heat, Electricity and Magnetism Properties and Changes of Properties in Matter Transfer of Energy Structure and Properties of Matter Chemical Reactions Motions and Forces Interactions of Energy and Matter Science as Human Endeavor Nature of Scientific Knowledge Changes in Environments Environmental Quality Abilities of Technological Design Understanding About Science and Technology	1 a, b, c, e, f, g 3 b, d, e, f 6 a, d, e 7 a, b, c, d, e, f, g
<p>WAVE FORMATIONS</p> <ul style="list-style-type: none"> ◆ Quantitative measurement and analysis of wave height and wavelength utilizing a variety of oceanographic techniques. ◆ Discuss forces acting upon water to generate waves. 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1 1.4 4.3 5.1, 5.4 6.3 7.3 8.1, 8.4	A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 17 B:12, 13, 25 C:7, 8, 9, 19, 22, 23, 30	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Energy in Earth Systems Position and Motion of Objects Motions and Forces Transfer of Energy Interactions of Energy and Matter Science as Human Endeavor Nature of Scientific Knowledge Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology	1 a, c 2 e 3 a 6 d, f 7 b, d, e, f

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>DREDGE DUMP SITE STUDY</p> <p>◆ Investigate the effects of dumping dredge spoils from local waters on the environment; includes biological, chemical, geological and physical parameters.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 2.3 3.1, 3.2, 3.3, 3.4 4.2, 5.2, 5.4 6.2, 6.4 7.3 8.1, 8.4 9.7, 9.8, 9.9 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 13, 14, 15, 16, 17, 21, 22 B:1, 3, 4, 6, 7, 10, 11, 21, 25 C:4, 5, 6, 11, 19, 23, 30, D:19, 24, 25, 26, 43, 44</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Properties of Earth Materials Geochemical Cycles Characteristics of Organisms Organisms and Environments Structure and Function in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Properties of Materials Chemical Reactions Conservation in Energy and Increases in Disorder Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Changes in Environments Science and Technology in Local, National and Global Challenges Populations, Resources and Environments Natural and Human-Induced Hazards Risks and Benefits Science, Technology and Society Personal and Community Health Population Growth Natural Resources Environmental Quality Abilities of Technological Design Understanding About Science and Technology</p>	<p>2 a, c, d 5 b, c, d, e, f, i 6 b, c, d, e, g 7 b, c, e, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">FISH PRINTING</p> <ul style="list-style-type: none"> ◆ Compare and contrast external anatomy and adaptations of marine and aquatic organisms. ◆ Multidisciplinary - art 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2, 3.4 4.2 5.2 6.2 7.2 10.5, 10.6	A INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 B INQ.1, 2, 3, 4, 5, 6, 9 C INQ.1, 5, 6, 9, 10 D INQ.1, 5, 6, 9, 10 A:1, 2, 3, 4, 5, 6, 12, 14, 15, 16, 17 B:7, 10, 11, 21 C:5, 6, 16, 17 D:40, 42, 43, 44, 45	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function in Living Systems Reproduction and Heredity Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Populations, Resources and Environments Types of Resources	5 a, b, c, d, e, f, i 6 b, c, d, e, g 7 b, c, f

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">INTRODUCTION TO OCEANOGRAPHY</p> <ul style="list-style-type: none"> ◆ Introduce oceanographic science techniques and equipment. ◆ Use scientific method to measure, analyze and evaluate chemical, geological and physical properties of Long Island Sound. ◆ Use scientific method to measure, analyze and evaluate biological diversity of Long Island Sound. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2, K.3, K.4 1.1, 1.2, 1.3, 1.4 2.1, 2.3, 2.4 3.1, 3.2, 3.3, 3.4 4.1, 4.2, 4.3 5.1, 5.2, 5.3, 5.4 6.1, 6.2, 6.3, 6.4 7.1, 7.2, 7.3, 7.4 8.1, 8.2, 8.3, 8.4 9.1, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9 10.2, 10.4, 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 B INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 24 B:1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 18, 19, 21, 21, 22, 23, 25 C:2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 26, 29, 30 D:1, 2, 3, 7, 8, 9, 11, 12, 13, 15, 18, 19, 20, 21, 22, 23, 24, 25, 26, 31, 32, 39, 40, 41, 42, 43, 44, 45</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Properties of Earth Materials Changes in Earth Systems Structure of Earth Systems Earth's History Energy in Earth Systems Origin and Evolution of the Earth System Geochemical Cycles Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function in Living Systems Reproduction and Heredity Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Properties of Materials Properties and Changes in Properties of Materials Motions and Forces Types of Energy Structure and Properties of Matter Chemical Reactions Conservation in Energy and Increases in Disorder Interactions of Energy and Matter Science as Human Endeavor Nature of Scientific Knowledge History of Science Historical Perspectives Characteristics and Changes in Populations Types of Resources Changes in Environments</p>	<p>1 a, b, c, d, e, f, g, h 2 a, b, c, d, e 3 a, b, c, d, e, f, g 4 a, b 5 a, b, c, d, e, f, g, h, i 6 a, b, c, d, e, f, g 7 a, b, c, d, e, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">INTRODUCTION TO OCEANOGRAPHY</p> <p style="text-align: center;">CONT.</p>	<p style="text-align: center;">INTRODUCTION TO OCEANOGRAPHY</p> <p style="text-align: center;">CONT.</p>	<p style="text-align: center;">INTRODUCTION TO OCEANOGRAPHY</p> <p style="text-align: center;">CONT.</p>	<p>Science and Technology in Local, National and Global Challenges Populations, Resources and Environment Natural Hazards Risks and Benefits Science, Technology and Society Personal and Community Health Population Growth Natural Resources Environmental Quality Natural and Human-Induced Hazards Made by Humans Abilities of Technological Design Understanding About Science and Technology</p>	<p style="text-align: center;">INTRODUCTION TO OCEANOGRAPHY</p> <p style="text-align: center;">CONT.</p>
<p style="text-align: center;">LAND & RESOURCE USE</p> <ul style="list-style-type: none"> ◆ Investigate human impact on waterfront (commercial, residential, etc.). ◆ Create picture/drawing illustrating observed uses. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy 4.2, 4.3 5.4 6.2, 6.4 7.3, 7.4 8.4 9.1, 9.3, 9.6, 9.7, 9.8, 9.9 10.2, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 8 B INQ.1, 2, 3, 4, 5, 6, 7, 8, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 B:10, 11, 12, 13, 25 C:4, 5, 6, 10, 11, 19, 21, 30 D:2, 3, 7, 8, 9, 18, 19, 20, 21, 22, 23, 24, 25, 26, 31, 32, 43, 44, 45</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Organisms and Environments Types of Resources Changes in Environments Populations, Resources and Environments Natural Hazards Risks and Benefits Science, Technology and Society Personal and Community Health Population Growth Natural Resources Environmental Quality Natural and Human-Induced Hazards Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>1 a, b 2 b, c, d, e 3 a, f, g 6 a, b, c, d, e, f, g 7 b, c, d, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">MARSH HABITATS</p> <ul style="list-style-type: none"> ◆ Explore a tidal wetlands area gathering data on elevation, peat depth, water chemistry and vegetation type. ◆ Discuss importance of tidal marshes as nursery grounds for important commercial and recreational organisms and as a storm barrier. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 2.2 3.2 4.2, 4.3 5.2 6.2 7.3 9.8, 9.9 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 7, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 2, 3, 4, 5, 6, 12, 13, 14, 15, 16, 17, 19, 20 B:3, 4, 10, 11, 13, 21 C:4, 5, 6, 18, 19 D:22, 23, 24, 25, 26, 40, 41, 42, 43, 44</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Transfer of Energy Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Changes in Environments Populations, Resources and Environments Population Growth Natural Resources Environmental Quality Science and Technology in Local, National and Global Challenges Abilities of technological Design Understanding About Science and Technology</p>	<p>1 e, f, g 2 b, c, d, e 3 e 5 a, b, c, d, e, f, h, i 6 a, b, c, d, e, f, g 7 b, c, d, e, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>OVERVIEW OF BLUFF POINT</p> <ul style="list-style-type: none"> ◆ Discuss geological history of Bluff Point Coastal Reserve, Connecticut and Long Island Sound. ◆ Discuss weathering and erosion effects on land; physical changes of coastline. ◆ Discuss environmental importance of tidal marshes, estuarine rivers, barrier beaches and upland forests. 	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 2.3 3.1, 3.2, 3.3, 3.4 4.2, 4.3 5.2 6.2, 6.4 7.2, 7.3 8.2 9.7, 9.8, 9.9 10.6, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 10 A:1, 2, 3, 4, 5, 6, 12, 13, 14, 15, 16, 17, 21, 22 B:2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 21 C:4, 5, 6, 10, 11, 16, 17, 26 D:19, 20, 22, 23, 24, 25, 26, 40, 42, 43, 44</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Form and Function Properties of Earth Materials Changes in Earth Systems Structure of Earth Systems Earth's History Energy in Earth Systems Origin and Evolution of the Earth System Geochemical Cycles Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function in Living Systems Reproduction and Heredity Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Properties of Materials Properties and Changes in Properties of Materials Motions and Forces Types of Energy Structure and Properties of Matter Chemical Reactions Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Changes in Environments Populations, Resources and Environments Risks and Benefits Science, Technology and Society Population Growth Natural Resources Environmental Quality</p>	<p>1 d, g 2 b, c, d, e 4 a 5 d, e, f, h, i 6 a, b, c, d, e, f, g 7 b, c, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p>OVERVIEW OF BLUFF POINT</p> <p>CONT.</p>	<p>OVERVIEW OF BLUFF POINT</p> <p>CONT.</p>	<p>OVERVIEW OF BLUFF POINT</p> <p>CONT.</p>	<p>Natural and Human-Induced Hazards Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>OVERVIEW OF BLUFF POINT</p> <p>CONT.</p>
<p>ROCKY INTERTIDAL</p> <p>◆ Explore the intertidal zone on a rocky beach. Collect animals that live in this dynamic environment and discuss how they are adapted to survive there.</p>	<p>Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3, 1.4 3.2 4.2, 4.3 5.2 6.2 7.3 10.5, 10.6</p>	<p>A INQ.1, 2, 3, 4, 6, 7, 8, 9, 10 B INQ.1, 3, 4, 5, 6, 7, 9, 10 C INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 D INQ.1, 3, 4, 5, 6, 7, 8, 9, 10 A:1, 3, 4, 5, 6, 12, 13, 14, 15, 16, 17 B:3, 4, 10, 11, 21 C:4, 5, 6, 18, 19 D:40, 42, 43, 44</p>	<p>Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Change, Constancy and Measurement Evolution and Equilibrium Characteristics of Organisms Life Cycles of Organisms Organisms and Environments Structure and Function in Living Systems Regulation and Behavior Populations and Ecosystems Diversity and Adaptations of Organisms Interdependence of Organisms Behavior of Organisms Matter, Energy and Organization in Living Systems Biological Evolution Transfer of Energy Science as Human Endeavor Nature of Scientific Knowledge Characteristics and Changes in Populations Types of Resources Changes in Environments Populations, Resources and Environments Population Growth Natural Resources Environmental Quality Science and Technology in Local, National and Global Challenges Abilities of Technological Design Understanding About Science and Technology</p>	<p>1 a, b, d 2 a, b, c, d, e 5 a, c, d, e, f, h, i 6 c, d, e, f, g 7 b, c, d, e, f</p>

<u>CURRICULUM ACTIVITY</u>	<u>CT CONTENT STANDARD</u>	<u>CT EXPECTED PERFORMANCES</u>	<u>NSES</u>	<u>OCEAN LITERACY EP/FCs</u>
<p style="text-align: center;">SEAFOOD</p> <ul style="list-style-type: none"> ◆ Ocean as a resource for much of the world and has an important local economic value. ◆ Study vital commercial and recreational fisheries (lobster, bluefish, etc.). 	Scientific Inquiry Scientific Literacy Scientific Numeracy K.1, K.2 1.2, 1.3 2.4 3.4 5.4 7.2, 7.4 9.8 10.4, 10.5, 10.6	A INQ.1, 2, 3, 4, 5, 6, 9 B INQ.1, 2, 7, 8 C INQ.1, 2, 3, 10 D INQ.1, 2, 3, 10 A:1, 3, 4, 5, 6, 12, 13, 14, 15, 16, 23, 24 B:7, 25 C:16, 17, 21 D:22, 24, 39, 40, 42, 43, 44	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Types of Resources Science, Technology and Society Natural Resources Science and Technology in Local, National and Global Challenges Made by Humans Abilities of Technological Design Understanding About Science and Technology	5 a, c, e, f, i 6 b, c, d, e, g 7 b, c, f
<p style="text-align: center;">WATERSHEDS</p> <ul style="list-style-type: none"> ◆ Explore land use decisions and their impact on watersheds leading to Long Island Sound; including point and non-point sources of pollution and discuss their potential effects on coliform bacteria and nutrient concentrations in the water. 	Scientific Inquiry Scientific Literacy Scientific Numeracy 4.2, 4.3 6.2, 6.3, 6.4 7.3 8.4 9.3, 9.6, 9.7, 9.8, 9.9 10.2, 10.6	A INQ.1, 3, 4, 5, 6 B INQ.1, 2, 5, 6, 7, 8 C INQ.1, 2, 9, 10 D INQ.1, 2, 9, 10 B:10, 11, 12, 13 C:4, 5, 6, 8, 9, 10, 11, 19, 30 D:7, 8, 9, 18, 19, 20, 22, 23, 24, 25, 26, 31, 32, 43, 44, 45	Abilities Necessary to do Scientific Inquiry Understanding About Scientific Inquiry Systems, Order and Organization Evidence, Models and Investigation Geochemical Cycles Organisms and Environments Chemical Reactions Science as Human Endeavor Nature of Scientific Knowledge Types of Resources Changes in Environments Populations, Resources and Environments Risks and Benefits Science, Technology and Society Personal and Community Health Population Growth Natural Resources Environmental Quality Natural and Human-Induced Hazards Science and Technology in Local, National and Global Challenges Made by Humans Abilities of Technological Design Understanding About Science and Technology	1 a, f, g, h 3 a, b, d, e, f 6 a, b, c, d, e, g 7 b, c, f