Conchology

1. Measurement

Common Core Standards

2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.

2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

3.MD.2 Measure and estimate liquid volumes and masses of objects using standards units of grams (g), kilograms (kg), and liters (l). Add subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units-whole numbers, halves, or quarters.

4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 1 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...

4.MD.2 Use the four operations to solve word problems involving distances, intervals problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

5.MD.3.a A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.

5.MD.3.b A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.

<u>Oceans</u>

1. Geometry
   Common Core Standards
   5.NF.5 Interpret multiplication as scaling (resizing).

   6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.

   A. How do you locate something in an ocean?
      (ordered pairs)

2. Percent
   Common Core Standards
   6.RP.3.c Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part and the percent.

   A. What percent of the earth is water?
   Percent of different forms of water?

   Common Core for Mathematical Practices

1. Make sense of problems and preserve in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique
4. Model with mathematics
5. Use of appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure- patterns
8. Look for and express regularity in repeated reasoning.

Resources

Sea Squares- Joy Hulme

Counting on Frank- Rod Clement

Books by David Swartz, David Jenkins

http://illuminations.nctm.org/ActivityDetail.aspx?ID=207

Go to Intranet-Teacher Shared Resources-Humanities for individual lessons.