Oceans

Reading Comprehension

Waves

The ocean is an incredible sight! The waves are fun to splash in, but have you ever wondered what causes waves and how they work? Waves can be quite gentle and lap onto the shore, or they can roll in and crash onto the shore. What makes the difference?

When you are sitting on the beach, it looks like the waves are rushing straight at you. However, that is really not true. The water of the wave is actually just rising further up in the water and then coming back down. It usually comes back down in the same or a very similar position.

Out in the open ocean, a wave can travel a great distance. Waves can move large ships and other large objects. Once the wave gets closer to the shore, it does not have as much power. It begins to slow down and drag. The top part of the wave keeps going though. When you see a white "cap" on a wave, it means that the wave is "breaking" before it has a chance to go down to the water again.

The wind is the primary cause of surface waves. The more intense the wind is, the higher the wave will be because the wind pushes the water.

Story Questions:

1. Which paragraph does not explain how waves work?
   a. first paragraph
   b. second paragraph
   c. third paragraph
   d. fourth paragraph

2. What is the author's opinion of oceans?
   a. Oceans need to be cleaned up.
   b. There is not enough research about how waves work.
   c. The ocean is filled with wondrous animals.
   d. The ocean and its waves are incredible.

3. Based on the clues in the passage, what can you infer about waves with white "caps"?
   a. The waves are quite short.
   b. There is no wind blowing.
   c. The waves are quite steep.
   d. The wave has travelled a short distance.

Poem Writing

4. **Write** a poem, in the style of your choice, using the following title.

The Ocean is Never Still

Math Worksheet

5. **Practise** calculating the volume and surface area of rectangular prisms. If you don't remember the formulas needed, find them on this page.

Word Problems

6. **Read** the word problems below and **write** the answers.
   - ★ Josh has 1 000 building blocks that he uses to design bridges and other structures over water. Each block is exactly 1 cm wide, 1 cm long, and 1 cm high. His mom gave him a box to store his blocks in. The box is 12 cm long, 8 cm wide, and 10 cm high. What is the volume of the box? WIll all of the blocks fit into the box?

   - ★ Josh wants to fit all 1 000 blocks into a large cube that has the same length, width, and height. What will the length, width, and height of the cube be?

Fun Stuff!

7. Collect all of your markers, paints, and crayons in shades of blue, and follow along to **draw** some waves of your own.

