

GLOSSARY

SALT = Any class of compounds derived from acids by replacement of part or all of the acid hydrogen by a metal or metal like radical; NaHSO and Na₂SO₄ are sodium salts of sulfuric acid (H₂SO₄).

HALITE = Common salt; sodium chloride, NaCl.

SALINITY = Total salt content in the seas.

FORAMINIFERA = Small one-celled sea animals.

OCEAN & SEA = Used inter changeably. Today's seas are the North and South Pacific; The North & South Atlantic; Indian and Arctic Oceans and the Antarctic waters or seas.

OCEANOGRAPHERS = Scientists who study the oceans.

HYDROLOGIC CYCLE = A continual exchange of water between the earth and the atmosphere.

QUIZ

1) If all the salt in the seas could be removed and spread evenly over the surface of the earth it would form a layer:

- A) One inch thick.
- B) One foot thick.
- C) 500 feet thick.
- D) Over a mile thick.

2) Scientists believe that the oceans are this old:

- A) 1 million years old.
- B) 10 million years old.
- C) 500 million years old.
- D) Less than a million years old.

3) Oceans cover this percentage of the earth:

- A) 25%
- B) 50%
- C) 70%
- D) 95%

4) The saltiest water on earth occurs in:

- A) Antarctica
- B) The Red Sea & the Persian Gulf.
- C) The Gulf of Mexico.
- D) The Pacific Ocean

5) The average salinity of sea water is:

- A) 10%
- B) 20%
- C) 35%
- D) 50%

6) 85% of the dissolved soils in sea water are:

- A) Sodium & chloride
- B) Hydrogen & oxygen
- C) Iron & copper
- D) Calcium and oxygen

7) Most of the ocean's salts were derived from:

- A) Decaying plants and animals.
- B) The breaking up of cooled igneous.
- C) Pollution.
- D) Meteorite collision on earth.

8) If the salinity of ocean water is 35% this means that in 1000 pounds of salt water you will have:

- A) 10 ounces of salt
- B) 35 lbs of salt
- C) 35 tons of salt
- D) 35 ounces of salt

9) Which of the following does not affect the salinity of ocean water:

- A) The melting of ice
- B) The inflow or river water
- C) Evaporation or rain
- D) None of the above

TEACHER'S ACTIVITIES:

1) Take three glasses of water. Add nothing to glass # 1; Add one pinch of salt to glass # 2; Add 1 teaspoon of salt to glass # 3. Taste each one. Glass # 3 has about the same salt content as the sea.

2) Make a list of factors which cause the salinity in the ocean to change from area to area.

These factors include:

- 1) The melting of ice
- 2) Inflow of River water
- 3) Evaporation
- 4) Rain
- 5) Snowfall
- 6) Wind
- 7) Wave Motion
- 8) Ocean currents

3) Discuss why the ocean is salty. What is the origin of the salts? Compare river water to ocean water.

4) Make a list of the principal constituents of seawater. (The major elements are calcium, magnesium, sodium, potassium, bicarbonate, sulfate, chloride and bromide.

5) Discuss how sea life affects the the Sea Water's composition.

QUIZ ANSWERS

- 1) C
- 2) C
- 3) C
- 4) B
- 5) C
- 6) A
- 7) B
- 8) B
- 9) D

Physical Geography II Series

WHY IS THE OCEAN SALTY?

KG1166VD

PROGRAM DESCRIPTION

All water, even rain water contains dissolved chemicals which scientists call "salts". These salts eventually wash down into rivers and streams and eventually find their way into oceans and seas.

This informative program looks at:

THE ORIGIN OF THE SEA

THE SOURCES OF SALT

THE COMPONENTS OF SEA WATER

THE SALINITY OF THE SEA AND ITS VARIABILITY

HOW SEA LIFE AFFECTS SEA WATER'S COMPOSITION

TEACHER / STUDENT GUIDE

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