

Online Ocean Studies Investigations

1A OCEAN IN THE EARTH SYSTEM

Investigates the Online Ocean paradigm and introduces the ocean in the Earth system

1B OCEAN IN THE GLOBAL WATER CYCLE

Examines the ocean reservoir of the global water cycle

2A "SEEING" THE BOTTOM OF THE OCEAN

Examines the ocean floor and evidence of plate tectonics

2B OCEAN BOTTOM TOPOGRAPHY

Compares the topography of the ocean floor and the continents

3A SEAWATER TEMPERATURE, SALINITY, AND DENSITY

Determines the behavior of seawater from its properties

3B FRESH WATER, OCEAN WATER, AND SEA ICE

Examines the properties of ocean water and sea ice

4A WHAT GOES DOWN

Considers the origin and distribution of marine sediments

4B SEDIMENT FROM LAND TO SEA

Investigates the major source of ocean sediments

5A OCEAN - ATMOSPHERE CONNECTIONS

Examines the interactions between the ocean and atmosphere

5B INCOMING SOLAR RADIATION AND SEA SURFACE TEMPERATURE

Relates the energy input to the ocean's temperature distribution

6A WIND-DRIVEN OCEAN CIRCULATION AND OCEAN GYRES

Investigates the response of the ocean's surface circulation to winds

6B DENSITY-DRIVEN CIRCULATION AND WATER MASSES

Examines the sub-surface circulation of the ocean

7A DEEP- AND SHALLOW-WATER WAVES

Follows the motion of waves in various depths of water and their impact

7B TIDES

Examines the causes and prediction of astronomical tides

8A COASTAL PROCESSES

Investigates the oceanic processes that alter the shoreline

8B OPEN OCEAN AND COASTAL IMPACTS OF TROPICAL CYCLONES

Develops an awareness of the hazards of tropical cyclone and mitigation procedures

9A UPWELLING AND OCEAN PRODUCTIVITY

Examines the linkage between ocean circulation and life habitats

9B CHESAPEAKE BAY ESTUARY

Investigates a particular coastal habitat and its oceanic interactions

10A MARINE FOOD WEBS

Considers the interactions of various types of organisms in the ocean

10B OCEAN LIFE

Examines the physical and chemical conditions that influence life in the ocean

11A SEAWATER TEMPERATURE, PRESSURE, AND SURFACE OCEAN CURRENTS

Relates the physical mechanisms producing ocean currents

11B EL NIÑO/LA NIÑA: THE OCEAN- ATMOSPHERE CONNECTION

Examines the variability of the tropical Pacific ocean/atmosphere and its impacts

12A CHANGE IN EARTH'S CLIMATE SYSTEM

Models the oceanic subsystem and the impacts on the Earth system

12B THE OCEAN AND CLIMATE CHANGE

Investigates the role of the ocean in global climate change

AA THE SEA AND THE SHORE

Investigates the observations available to ships on entering or leaving port

AB SENSING THE TOP 2 KM OF THE OCEAN IN NEAR REAL TIME

Explores the temperature and salinity measured in the upper levels of the ocean

BA FISHERIES AND OVERFISHING

Examines the model for fish populations and its use in regulating fisheries

BB FISHERIES AND BYCATCH

Considers the problem of catching unwanted species and its impact on the ecosystem

CA OIL SPILLS AND THE MARINE ENVIRONMENT

Investigates the *Exxon Valdez* oil spill and its effects on local salmon numbers

CB OCEAN POLICY - DETERMINING THE BOUNDARIES

Examines the state of national policies regarding the ocean

