

Complete sentences are NOT required. _____ / 38 pts

<http://www.divediscover.whoi.edu/history-ocean/index.html>

I. Home Page: Dive and Discover's Deeper Discovery [____ / 3 pts]

1. Oceanography is considered one of the _____ fields of science. However, the study of oceanography began _____ of years ago when people began to venture from their coastlines in _____.

2. What did these adventurers observe about the ocean (list 4)?

3. Why did these adventurers seek out the ocean? _____

4. The science of modern oceanography is only a little less than _____ years old. This field of science began in the _____ century when Americans, British, and Europeans launched a few expeditions to explore ocean currents, life, and the seafloor.

5. Name the first scientific expedition to explore the world's oceans and sea floor. _____

6. When did modern oceanography really begin to "take off" and why?

In the boxes, list the four main branches of oceanography. You may use your notes or Google.

| | | | |
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II. Polynesian Seafarers (beginning 30,000 years ago) [____ / 3 pts]

1. List at least 4 factors that led the Polynesians to begin migrating eastward across the Atlantic Ocean.

2. Beginning about 25,000 years ago, the Polynesians began to colonize the islands of _____ . These islands included _____ in the west, as well as _____ and _____ in the middle. They moved on to _____ and _____ Island in the eastern south Pacific.

3. The Polynesians colonized Hawaii about _____ years ago. What tools did these people lack while they were traveling so far across the Pacific Ocean (list 3)?

4. List at least 4 observations made by the Polynesians that helped them to survive these long migrations.

5. What were “stick charts” and why were they called stick charts?

III. The Mediterranean Sea [____ / 3 pts]

1. When did exploration of the areas around the Mediterranean Sea begin?

2. What 3 groups were responsible for originally mapping the areas around the Mediterranean Sea?

3. Define the word “cartographer.”

4. When did the Greeks begin traveling into the area known as the Straits of Gibraltar? _____

Where is the Straits of Gibraltar located?

Use Google Maps on your phone or laptop to find the Strait of Gibraltar, show me, and have me initial here

_____ [____ / 3 pts]

5. Why did these sailors mistake the “great body of water” on the other side of the Straits for a river?

IV. Voyages of Exploration and Science [____ / 3 pts]

Prince Henry recognized the importance of the ocean to trade and commerce, and that's why he established a center of learning for marine sciences. This was the first oceanographic institution.

1. When and where were the "Dark Ages?"

2. What brought about an increase in ocean exploration during the early 1700's?

3. In addition to exploring the Atlantic, Pacific, and Indian oceans, what other 2 oceans were explored?

4. Captain James Cook, beginning in _____, circumnavigated the globe 3 times over 10 years. Cook also prevented what disease among his crew? _____

How? _____

5. John Harrison's 1728 invention of the first marine chronometer used a _____ instead of a pendulum in order to give accurate _____ on rolling ships. What specifically did this allow sailors to do better?

Draw/Sketch a chronometer and show me when done →

[____ / 3 pts]

V. Benjamin Franklin: Discovering the Gulf Stream [____ / 3 pts]

1. What did Ben Franklin observe off the East Coast of the United States? _____

2. How fast does this current move? _____

VI. Charles Darwin and the Voyage of the Beagle [____ / 3 pts]

1. Charles Darwin led an expedition on the British warship, named the _____, in the year _____ to the _____ islands. While there, his observations led him to his famous theory of _____. According to Darwin's theory, variations within species occur _____ and survival or extinction of an organism is determined by the organisms ability to _____.

VI. The Challenger Expedition [____ / 3 pts]

1. The Challenger expedition was from _____ to _____ (years).
2. This great ship had its own _____, _____, and other scientific equipment on board.
3. The ship had different types of samplers to _____
_____, and nets to capture animals from different depths. Winches-
mechanical engines- were used to lower and hoist _____ lines to
_____.
4. The Challenger crew discovered the deepest parts of the ocean. _____
_____ is located in the _____. The sea floor in this area is more than
_____ miles deep.
5. How did other countries react to the discoveries of the HMS Challenger?

VIII. The Oceans as a Battlefield [____ / 3 pts]

1. Why was SONAR first developed?
2. SONAR is an acronym for _____, _____, and _____.
3. How was SONAR helpful to oceanographers?

IX. Continental Drift and Seafloor Spreading [____ / 3 pts]

1. Less than _____ years ago, German scientist _____ discovered evidence which led him to believe that all of the continents were once _____ but had later _____.
2. List 3 pieces of evidence cited by him which led to his findings.
-
-
-

3. His theory, proposed in the year _____, was called the _____

_____.

4. What evidence was discovered during the 1950s and 60s that helped prove Wegener's theory?

5. What equipment was used to make this discovery?

Google "Pangea" in Google Images, and provide a rough sketch. When done, have me initial it here _____

[____ / 3 pts]

X. Optional: Ocean Drilling (skip to XI if you want to skip Ocean Drilling.) [BONUS ____ / 2 pts]

1. What are core samples?

2. These cores provide evidence of what two theories?

3. Cores also provide evidence of how the Earth's _____ has changed during its history.

4. Why are scientists better able to obtain information about Earth's history from these rocks that have been found on or below the seafloor than from rocks on Earth's surface?

XI. Oceanography in the 21st Century [____ / 2 pts]

1. What are the two types of vehicles (not boats) used in ocean exploration? List the acronym AND the full name:

_____ : _____

_____ : _____

Max Score: 40/38 with bonus.