2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Biology

**Question Text:**
Why do corals, which are animals, require high light levels?

**Correct Answer:**
The endosymbiotic alga, zooxanthellae (ZOO-zan-theh-lay) in the animals need light for photosynthesis.

Question #: 0000002906
Competition: Regional Competition 3
Round: sample bonus
Pair: 1
What name is given to the area where the northeast and southeast trade winds converge?

Intertropical Convergence Zone
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Social Sciences

**Question Text:**
What effect does the El Nino Southern Oscillation have on the fishing industries in the Northern Hemisphere?

**Correct Answer:**
It can disrupt upwelling in the Pacific by bringing warmer water to the coast that consequently affects fish species.

Question #: 0000004266
Competition: Regional Competition 3
Round: sample bonus
Pair: 3
What are two stressors that affect rocky coast, intertidal organisms?

Accept any 2 of the following: dessication, temperature variation, salinity extremes, high wave energy, sun exposure, predation, log battering, or ice scour
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geography

**Question Text:**
What ocean basin is the smallest?

**Correct Answer:**
Arctic OR Arctic Ocean

Question #: 0000004516
Competition: Regional Competition 3
Round: sample bonus
Pair: 5
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

Question Text:
Why is electric propulsion desirable for use in submarine vehicles?

Correct Answer:
Electric propulsion/power does not depend on combustion so it is air-independent. Also acceptable: it is more compact

Question #: 0000003227
Competition: Regional Competition 3
Round: sample bonus
Pair: 6
How do snapping shrimp make their characteristic noise?

Collapse of the bubble created by the shrimp's claw. (Must say that there is a bubble collapse)
Who was the scientist who proposed a new theory of sea floor spreading in 1962, based on a set of new charts of the ocean floor?

Correct Answer:
Harry Hess
What study used resources from nearly 30 countries to make unprecedented in-situ and satellite observations of the global ocean between 1990 and 1998 and to observe poorly understood but important physical processes?

Correct Answer:
World Ocean Circulation Experiment OR WOCE
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

**Question Text:**
What submarine was used in the discovery of the Galapagos hydrothermal vents in the late 1970's?

**Correct Answer:**
Alvin

Question #: 0000003679
Competition: Regional Competition 3
Round: sample bonus
Pair: 10
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geography

**Question Text:**
What is the longest coral reef system in the world?

**Correct Answer:**
Great Barrier Reef

Question #: 0000004660
Competition: Regional Competition 3
Round: sample bonus
Pair: 11
What are two reasons why non-native species are harmful to marine ecosystems?

Accept any 2 of the following: they may carry diseases; they may compete with natives; they may have no natural predators; they may consume important native species
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geography

**Question Text:**
Which river connects Lake Erie and Lake Ontario?

**Correct Answer:**
Niagara River OR Niagara

Question #: 0000004661
Competition: Regional Competition 3
Round: sample bonus
Pair: 13
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Social Sciences

**Question Text:**
What is the primary function of a boom during an oil spill?

**Correct Answer:**
To contain or collect oil from surface waters

Question #: 000005033
Competition: Regional Competition 3
Round: sample bonus
Pair: 14
Which U.S. state has the greatest amount of oceanic coastline, with more miles of coastline than all the rest of the United States combined?

Correct Answer:
Alaska
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Biology

**Question Text:**
What are two human ailments caused by phytoplanktonic toxins which become concentrated in the tissues of edible shellfish?

**Correct Answer:**
Accept any 2 of the following: Paralytic shellfish poisoning, amnesic shellfish poisoning, neurotoxic shellfish poisoning, diarrhetic shellfish poisoning

Question #: 0000004630
Competition: Regional Competition 3
Round: sample bonus
Pair: 16
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Social Sciences

Question Text:
What is the name of the ship used by the Ocean Drilling Program or ODP?

Correct Answer:
JOIDES Resolution (or just Resolution)

Question #: 0000005034
Competition: Regional Competition 3
Round: sample bonus
Pair: 17
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

**Question Text:**
What type of thermometer is used to measure temperature in deep water?

**Correct Answer:**
A reversing thermometer.

Question #: 0000004739
Competition: Regional Competition 3
Round: sample bonus
Pair: 18
2016 Buzzer Question
Question Type: Bonus
Question Format: Short Answer
Category: Geography

**Question Text:**
The knot, a unit of speed, is equal to how many nautical miles?

**Correct Answer:**
One

Question #: 0000003900
Competition: Regional Competition 3
Round: sample bonus
Pair: 19
Aside from the fact that it makes less noise than does an open circuit SCUBA system, what is another major advantage to divers of the 'rebreather' system?

The rebreather system requires much smaller gas supplies OR is less bulky
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Biology

**Question Text:**
What is the second largest whale in the world?

**Correct Answer:**
Fin Whale OR Fin

Question #: 0000004786
Competition: Regional Competition 3
Round: sample bonus
Pair: 21
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

Question Text:
What is the most accurate navigational system in the south Indian Ocean?

Correct Answer:
Satellite navigation

Question #: 0000004741
Competition: Regional Competition 3
Round: sample bonus
Pair: 22
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Biology

**Question Text:**
How many appendages does a decapod have?

**Correct Answer:**
10

Question #: 000004922
Competition: Regional Competition 3
Round: sample bonus
Pair: 23
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geography

**Question Text:**
When navigating at sea one must be aware of the difference between true north and magnetic north. What is the term given to this difference?

**Correct Answer:**
The difference (or correction) is called the magnetic declination.

Question #: 0000004804
Competition: Regional Competition 3
Round: sample bonus
Pair: 24
2016 Buzzer Question

Question Type: Bonus  
Question Format: Short Answer  
Category: Technology

**Question Text:**
What is the major difference between a jetty and a groin?

**Correct Answer:**
Groins protect beaches, jetties protect entrances to bays, rivers, and harbors

Question #: 0000004895  
Competition: Regional Competition 3  
Round: sample bonus  
Pair: 25
The salt marsh grass Spartina alterniflora is an example of which type of plant that grows in highly saline waters?

Correct Answer:

Halophyte
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Chemical

**Question Text:**
In the deepest ocean basins, there is no light for photosynthesis, but there is plenty of dissolved oxygen. Where does that oxygen come from?

**Correct Answer:**
In high latitudes, oxygen dissolves into surface cold waters which subsequently sink and become bottom waters of the ocean basins.
(Note to Judge: Need to say high latitude and or cold)

Question #: 0000002940
Competition: Regional Competition 3
Round: sample bonus
Pair: 27
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Biology

**Question Text:**
What type of tissue, filled with air spaces for buoyancy in the water, is found in hydrophytes?

**Correct Answer:**
Aerenchyma
**2016 Buzzer Question**

**Question Type:** Bonus  
**Question Format:** Short Answer  
**Category:** Technology

**Question Text:**  
What would you measure with a CTD?

**Correct Answer:**  
conductivity (salinity), temperature, pressure (not depth)

Question #: 0000005037  
Competition: Regional Competition 3  
Round: sample bonus  
Pair: 29
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Biology

**Question Text:**
What three factors regulate primary production?

**Correct Answer:**
Sunlight, grazing (consumption by herbivores), Nutrient /trace element availability
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

**Question Text:**
What type of vessel, used in the 1960s and 1970s, evolved from the design of a catamaran and was used as oceanographic research vessels or submarine rescue ships?

**Correct Answer:**
SWATH OR Small Waterplane Area Twin Hull

Question #: 0000003229
Competition: Regional Competition 3
Round: sample bonus
Pair: 31
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Chemical

**Question Text:**
What is the traditional unit of ocean water salinity?

**Correct Answer:**
parts per thousand by weight or grams/kilogram

Question #: 0000002950
Competition: Regional Competition 3
Round: sample bonus
Pair: 32
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Biology

**Question Text:**
What is one way that an algal bloom can cause fish die-offs?

**Correct Answer:**
By releasing toxins which are ingested by the fish OR by using up all the oxygen in water, so that the fish die from lack of oxygen (either answer is acceptable)

Question #: 0000004632
Competition: Regional Competition 3
Round: sample bonus
Pair: 33
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geography

Question Text:
About 41 percent of U.S. marine waters are protected in some way, but what percent is considered highly protected in no-take MPAs to protect sensitive species and habitats?

Correct Answer:
Three

Question #: 0000004972
Competition: Regional Competition 3
Round: sample bonus
Pair: 34
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

**Question Text:**
Why are small current meters sometimes attached to sampling nets?

**Correct Answer:**
To measure the volume of water that passed through the net OR to determine the distance the net was towed

Question #: 000003538
Competition: Regional Competition 3
Round: sample bonus
Pair: 35
2016 Buzzer Question

Question Text:
After a centric diatom has divided several times, a daughter cell reaches a critical size that is too small for further division. How then do they reproduce?

Correct Answer:
They reproduce sexually (This is the ONLY right answer).
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Physical

**Question Text:**
What are the names for the two glacial periods in an ice age?

**Correct Answer:**
Stadials (STEY-dee-uhls) AND Interstadials

Question #: 0000003092
Competition: Regional Competition 3
Round: sample bonus
Pair: 37
What type of relationship exists when both organisms benefit, such as the cleaner shrimp and large reef fish?

Correct Answer:
Mutualism
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Chemical

Question Text:
What is one potential anthropogenic source of nitrogen to a coastal marine environment?

Correct Answer:
Accept any of the following: Power plant exhaust, Automobile emissions, Sewage treatment plant, Stormwater Runoff, CAFO (concentrated animal feeding operations) OR Flooding

Question #: 0000004796
Competition: Regional Competition 3
Round: sample bonus
Pair: 39
Which science predicts and tabulates positions of heavenly bodies so as to be useful in celestial navigation?

Correct Answer:
Nautical astronomy
What is one function of marine bacteria in a food web?

Accept any of the following: they recycle nutrients; they are decomposers; they are a food source for other organisms
The telemetry and power to the Hawaii-2 Observatory were made available via a retired telephone cable from what company?

Correct Answer:
AT & T
Question Text:
How does an increase in pressure affect sound velocity?

Correct Answer:
As pressure (or depth) increases, sound velocity increases.
Why does water boil and freeze at temperatures very different from other substances having similar molecular weights?

Hydrogen bonding between water molecules
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

Question Text:
What does a transmissometer measure?

Correct Answer:
Water clarity or transparency

Question #: 0000003207
Competition: Regional Competition 3
Round: sample bonus
Pair: 45
How do capillary waves aid in the formation of larger waves?

Capillary waves increase the roughness (hence increase the surface area for wind contact) of the ocean surface.
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geography

Question Text:
What body of water lies between Saudi Arabia and Egypt?

Correct Answer:
Red Sea OR Gulf of Aqaba

Question #: 0000004971
Competition: Regional Competition 3
Round: sample bonus
Pair: 47
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

**Question Text:**
What is surimi?

**Correct Answer:**
It is a processed fish product

Question #: 0000003208
Competition: Regional Competition 3
Round: sample bonus
Pair: 48
The depletion, and ultimately the collapse, of a limited resource, such as fish stocks, when individuals act selfishly to maximize personal gains.
2016 Buzzer Question
Question Type: Bonus
Question Format: Short Answer
Category: Geology

Question Text:
What process often occurs on the seaward side of seawalls?

Correct Answer:
Erosion

Question #: 0000004979
Competition: Regional Competition 3
Round: sample bonus
Pair: 50
In which ocean would you find the Gulf Stream?

Correct Answer:
The North Atlantic
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

**Question Text:**
What was invented in the late 1700's that allowed explorers to calculate their longitude?

**Correct Answer:**
Marine Chronometer

Question #: 000003209
Competition: Regional Competition 3
Round: sample bonus
Pair: 52
New sea floor is created by what kind of major tectonic process?

Correct Answer:
Sea-floor spreading
2016 Buzzer Question
Question Type: Bonus
Question Format: Short Answer
Category: Geography

Question Text:
Which country has the longest continuous coastline?

Correct Answer:
Canada

Question #: 0000004659
Competition: Regional Competition 3
Round: sample bonus
Pair: 54
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Chemical

**Question Text:**
What process distributes heat in water when said water is heated from below?

**Correct Answer:**
Convection

Question #: 0000004508
Competition: Regional Competition 3
Round: sample bonus
Pair: 55
What are two types of divergent plate boundaries?

-Oceanic (Mid-ocean ridge)
-Continental (rift valley)
2016 Buzzer Question

Question Type:  Bonus
Question Format:  Short Answer
Category:  Technology

**Question Text:**
Place the following FIVE navigational advances in correct chronological order of discovery: magnetic compass, chronometer, Global Positioning System, astrolabe, gyrocompass

**Correct Answer:**
1- magnetic compass, 2- astrolabe, 3- chronometer, 4- gyrocompass, 5- Global Positioning System (GPS)

Question #:  0000003212
Competition:  Regional Competition 3
Round:  sample bonus
Pair:  57
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Chemical

**Question Text:**
How does the pH change as one goes from fresh water to the marine environment?

**Correct Answer:**
The pH increases

Question #: 0000004653
Competition: Regional Competition 3
Round: sample bonus
Pair: 58
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geology

Question Text:
What is the term for the deepest zone of the benthic province?

Correct Answer:
Hadal (hey-dahl) zone

Question #: 0000004821
Competition: Regional Competition 3
Round: sample bonus
Pair: 59
What are two sources of NEW nutrients to the ocean?

Accept any 2 of the following: River inputs, Atmospheric inputs (dust, fixed nitrogen from lightning), In-situ nitrogen fixation, Underwater volcanoes, Nitrification
In which ocean is the Beaufort gyre located?

Arctic Ocean OR Arctic
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geology

**Question Text:**
What process caused worldwide sea levels to rise starting 18,000 years ago?

**Correct Answer:**
Melting of large ice sheets at the end of the last ice age

Question #: 0000004822
Competition: Regional Competition 3
Round: sample bonus
Pair: 62
What are two disadvantages of present-day moored ocean buoy observatories compared to observatories linked to shore via cables?

Accept any 2 of the following: They can't supply as much power to instruments; they can't transmit as much data; they require more frequent servicing
What geologic period do we currently live in?

Quaternary
Which NOAA office is responsible for productive and sustainable fisheries, safe sources of seafood, the recovery and conservation of protected resources, and healthy ecosystems?

Correct Answer:
National Marine Fisheries Service OR NMFS
What is one major difference between a gabbro and a basalt?

A basalt has smaller crystals OR is cooled more quickly than a gabbro. The difference lies in the crystal size resulting from different cooling rates.
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geography

Question Text:
What is one of the three government agencies responsible for researching, drafting, and publishing nautical charts?

Correct Answer:
Accept any of the following: National Oceanic and Atmospheric Administration (NOAA); National Ocean Service (NOS); OR Department of Commerce

Question #: 0000004967
Competition: Regional Competition 3
Round: sample bonus
Pair: 67
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Chemical

**Question Text:**
What effect is the increase in atmospheric carbon dioxide concentration likely to have on pH?

**Correct Answer:**
pH will decrease

Question #: 0000004960
Competition: Regional Competition 3
Round: sample bonus
Pair: 68
What causes the flat top of a guyot?

A forming volcano rises above the sea level and its top gets eroded as it is exposed to wave action above the sea surface.
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Social Sciences

**Question Text:**
What was the name of Captain Robert Falcon Scott's ship which was trapped in Antarctic ice for two years?

**Correct Answer:**
The HMS Discovery

Question #: 0000004886
Competition: Regional Competition 3
Round: sample bonus
Pair: 70
What are the two taxonomic superfamilies of nudibranchs?

Dorids (or Doridoidea) AND aeolids (or Aeolidioidea)
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geography

**Question Text:**
What caused the east-west distortion on early maps?

**Correct Answer:**
Difficulty in accurately measuring time

Question #: 0000004964
Competition: Regional Competition 3
Round: sample bonus
Pair: 72
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Geology

**Question Text:**
What are isolated volcanic peaks in the ocean called?

**Correct Answer:**
Seamounts

Question #: 000004991
Competition: Regional Competition 3
Round: sample bonus
Pair: 73
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Technology

**Question Text:**
Can the Advanced Very High Resolution Radiometer, which measures sea surface temperature by detecting electromagnetic radiation from the ocean, measure it at night? Why or Why not?

**Correct Answer:**
Yes, the AVHRR senses temperature by the infrared energy emitted passively from the ocean. Because passive infrared emissions are not dependent on visible solar illumination, SSTs can be determined at night.

Question #: 0000003219
Competition: Regional Competition 3
Round: sample bonus
Pair: 74
The surface waters of the ocean are frequently supersaturated with regard to oxygen. What two processes might account for oxygen supersaturation?

Accept any 2 of the following: Photosynthetic production of oxygen; injection of air bubbles during storm mixing; water has warmed, oxygen content has not resumed equilibrium
Why are areas of high primary and secondary production associated with upwelling zones?

These are areas where cold, nutrient-rich waters are brought up from the depths and essentially fertilize the surface waters.
What are the two major types of deep-sea oozes?

Calcareous AND siliceous
Greenwich Mean Time was formerly used as the international civil time standard. What has officially superseded GMT in that function?

Correct Answer:
Coordinated Universal Time or UTC
The fiery phenomenon sailors saw glowing on ship masts and riggings during an electrical storm is named after what Saint?

Elmo OR Saint Elmo
What is the name of the vessel that was first used to dive to the bottom of the Marianas Trench?

The Trieste.
Question Type: Bonus
Question Format: Short Answer
Category: Chemical

Question Text:
What two chemical species are principally responsible for buffering seawater?

Correct Answer:
Carbonate and Bicarbonate
2016 Buzzer Question

Question Type: Bonus
Question Format: Short Answer
Category: Physical

Question Text:
What two forces result in the theoretical surface current pattern known as an Ekman spiral?

Correct Answer:
friction (drag) and the Coriolis "force"

Question #: 0000003108
Competition: Regional Competition 3
Round: sample bonus
Pair: 82
2016 Buzzer Question
Question Type: Bonus
Question Format: Short Answer
Category: Geography

Question Text:
Who is known as the "Father of Oceanography"?

Correct Answer:
Matthew Fontaine Maury

Question #: 0000003056
Competition: Regional Competition 3
Round: sample bonus
Pair: 83
2016 Buzzer Question

Category: Biology
Question Type: Bonus
Question Format: Short Answer

Question Text:
Zooxanthellae, which have a symbiotic relationship with coral polyps, provide energy for the algae through which process?

Correct Answer:
Photosynthesis

Question #: 0000002928
Competition: Regional Competition 3
Round: sample bonus
Pair: 84