

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

How do most corals spawn?

**Answer W:**

---

Seasonally timed release of both gametes

**Answer X:**

---

Continuous release of both gametes

**Answer Y:**

---

Parent polyps divide upon reaching a certain size

**Answer Z:**

---

Sporadic unpredictable release of both gametes

**Correct Answer:**

---

W

Question #: 0000033447

Competition: Regional Competition 1

Round: Round 01

Pair: 1

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What is the distance between two adjacent wave crests or troughs called?

**Correct Answer:**

---

Wavelength

Question #: 0000033740

Competition: Regional Competition 1

Round: Round 01

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

What is NOT a desirable characteristic for mariculture species?

**Answer W:**

---

Desirability as food

**Answer X:**

---

Uncomplicated reproduction

**Answer Y:**

---

Disease resistance

**Answer Z:**

---

Low growth rate per unit area

**Correct Answer:**

---

Z

Question #: 0000033756

Competition: Regional Competition 1

Round: Round 01

Pair: 2

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is one benefit that marine plants and algae provide to a juvenile fish?

**Correct Answer:**

---

Habitat complexity OR food resources OR shelter OR increased oxygen

Question #: 0000033527

Competition: Regional Competition 1

Round: Round 01

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

What two factors are primarily responsible for driving global surface and thermohaline ocean circulation?

**Answer W:**

---

Temperature and density differences

**Answer X:**

---

Wind and temperature

**Answer Y:**

---

Wind and density differences

**Answer Z:**

---

Tides and density differences

**Correct Answer:**

---

Y

Question #: 0000022287

Competition: Regional Competition 1

Round: Round 01

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology

**Question Text:**

---

What does SONAR stand for?

**Correct Answer:**

---

Sound Navigation and Ranging

Question #: 0000033669

Competition: Regional Competition 1

Round: Round 01

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

What is the most likely method of introduction for invasive sessile invertebrate species like zebra mussels?

**Answer W:**

---

Pet trade smuggling

**Answer X:**

---

Ballast exchange

**Answer Y:**

---

As a hitchhiker on a bird

**Answer Z:**

---

Introduced as a biological control species

**Correct Answer:**

---

X

Question #: 0000033483

Competition: Regional Competition 1

Round: Round 01

Pair: 4

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What is the world's largest ocean basin?

**Correct Answer:**

---

Pacific Ocean

Question #: 0000033654

Competition: Regional Competition 1

Round: Round 01

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Theme

**Question Text:**

---

According to the National Hurricane Center, which of the following lists classifications of tropical cyclones from least to most severe?

**Answer W:**

---

Hurricane, major hurricane, tropical storm, tropical depression

**Answer X:**

---

Tropical depression, tropical storm, hurricane, major hurricane

**Answer Y:**

---

Hurricane, major hurricane, tropical depression, tropical storm

**Answer Z:**

---

Tropical storm, tropical depression, hurricane, major hurricane

**Correct Answer:**

---

X

Question #: 0000034130

Competition: Regional Competition 1

Round: Round 01

Pair: 5

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What environmental phenomenon was responsible for the Great Barrier Reef die-off in 2015-2016?

**Correct Answer:**

---

El Nino OR ocean warming

Question #: 0000033545

Competition: Regional Competition 1

Round: Round 01

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

Which of the following dissolved gases is most abundant in seawater?

**Answer W:**

---

Oxygen

**Answer X:**

---

Carbon dioxide

**Answer Y:**

---

Argon

**Answer Z:**

---

Nitrogen

**Correct Answer:**

---

Z

Question #: 0000034465

Competition: Regional Competition 1

Round: Round 01

Pair: 6

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

What is the largest estuary in North America?

**Correct Answer:**

---

The Chesapeake Bay

Question #: 0000033750

Competition: Regional Competition 1

Round: Round 01

Pair: 6

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following is NOT an adaptation of deep-sea organisms?

**Answer W:**

---

Slowed metabolism

**Answer X:**

---

Large eyes

**Answer Y:**

---

Bioluminescence

**Answer Z:**

---

Fast continuous swimming speed

**Correct Answer:**

---

Z

Question #: 0000033518

Competition: Regional Competition 1

Round: Round 01

Pair: 7

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

In what ocean is the Sargasso Sea located?

**Correct Answer:**

---

Atlantic Ocean

Question #: 0000033791

Competition: Regional Competition 1

Round: Round 01

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography

**Question Text:**

---

Which of the following is NOT one of the U.S. Great Lakes?

**Answer W:**

---

Lake Minnesota

**Answer X:**

---

Lake Huron

**Answer Y:**

---

Lake Ontario

**Answer Z:**

---

Lake Erie

**Correct Answer:**

---

W

Question #: 0000033802

Competition: Regional Competition 1

Round: Round 01

Pair: 8

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

**Question Text:**

---

What is the average salinity of the ocean?

**Correct Answer:**

---

35 parts per thousand OR 35 ppt OR 35 PSU OR 35 g/kg OR 35 OR 3.5%

Question #: 0000033762

Competition: Regional Competition 1

Round: Round 01

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy

**Question Text:**

---

In what year was the Magnuson-Stevens Fishery Conservation and Management Act first passed?

**Answer W:**

---

1969

**Answer X:**

---

1976

**Answer Y:**

---

1982

**Answer Z:**

---

1985

**Correct Answer:**

---

X

Question #: 0000033753

Competition: Regional Competition 1

Round: Round 01

Pair: 9

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Sea Floor Features

**Question Text:**

---

What is a submerged, flat-topped seamount called?

**Correct Answer:**

---

Guyot [ghee-oh] (also accept: tablemount (U.S. Navy nomenclature))

Question #: 0000022399

Competition: Regional Competition 1

Round: Round 01

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - History

**Question Text:**

---

Who led the first Western expedition to successfully circumnavigate the globe?

**Answer W:**

---

Vasco da Gama

**Answer X:**

---

Ferdinand Magellan

**Answer Y:**

---

Sir Francis Drake

**Answer Z:**

---

Olivier van Noort

**Correct Answer:**

---

X

Question #: 0000033597

Competition: Regional Competition 1

Round: Round 01

Pair: 10

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Fishing gear and vessels

**Question Text:**

---

Shrimp trawlers use what technology to prevent sea turtle mortality by allowing turtles to escape from nets?

**Correct Answer:**

---

Turtle Excluder Devices OR TEDs (accept: excluder devices)

Question #: 0000034339

Competition: Regional Competition 1

Round: Round 01

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Plate Tectonics

**Question Text:**

---

Which of the following is NOT known to cause tsunamis?

**Answer W:**

---

Earthquakes

**Answer X:**

---

Volcanic eruptions

**Answer Y:**

---

Spring tides

**Answer Z:**

---

Submarine landslides

**Correct Answer:**

---

Y

Question #: 0000033598

Competition: Regional Competition 1

Round: Round 01

Pair: 11

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy

**Question Text:**

---

What North Atlantic fish species famously collapsed in 1992 after years of overfishing, leading to a moratorium?

**Correct Answer:**

---

Cod OR Atlantic cod OR Gadus morhua

Question #: 0000033754

Competition: Regional Competition 1

Round: Round 01

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Remote Sensing

**Question Text:**

---

Which of the following parameters is not directly studied using satellite measurements?

**Answer W:**

---

Sea surface temperature

**Answer X:**

---

Deep sea chemistry

**Answer Y:**

---

Ocean color

**Answer Z:**

---

Sea surface height

**Correct Answer:**

---

X

Question #: 0000034154

Competition: Regional Competition 1

Round: Round 01

Pair: 12

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences

### Question Text:

---

What does it mean when tuna is marketed with a dolphin-safe label?

### Correct Answer:

---

It shows compliance with U.S. laws and regulations of tuna fishing operations to limit the take of dolphins as bycatch

Question #: 0000033590

Competition: Regional Competition 1

Round: Round 01

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sediments

**Question Text:**

---

Where are offshore oil and gas deposits primarily found?

**Answer W:**

---

In the oceanic crust

**Answer X:**

---

In sediment deposits on continental shelves

**Answer Y:**

---

Beneath mid-ocean ridges

**Answer Z:**

---

Adjacent to subduction zones

**Correct Answer:**

---

X

Question #: 0000033622

Competition: Regional Competition 1

Round: Round 01

Pair: 13

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Salinity

**Question Text:**

---

Which principle states that regardless of variability in salinity varies, the ratios between the amounts of the major ions in the waters of the open ocean are nearly constant?

**Correct Answer:**

---

The Rule of Constant Proportions OR Marcet's Principle OR Forchhammer's Principle

Question #: 0000023926

Competition: Regional Competition 1

Round: Round 01

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Which of the following would be a reasonable period for a tsunami wave?

**Answer W:**

---

1 minute

**Answer X:**

---

30 minutes

**Answer Y:**

---

5 hours

**Answer Z:**

---

12 hours

**Correct Answer:**

---

X

Question #: 0000034239

Competition: Regional Competition 1

Round: Round 01

Pair: 14

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Human Impacts

**Question Text:**

---

In addition to drowning, what is the most likely serious threat to people who fall overboard into temperate waters?

**Correct Answer:**

---

Hypothermia

Question #: 0000023208

Competition: Regional Competition 1

Round: Round 01

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

Which ocean zone is the deepest?

**Answer W:**

---

Hadal

**Answer X:**

---

Abyssal

**Answer Y:**

---

Bathyal

**Answer Z:**

---

Littoral

**Correct Answer:**

---

W

Question #: 0000033673

Competition: Regional Competition 1

Round: Round 01

Pair: 15

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Research Vessels

**Question Text:**

---

Which oceanographic research tool was used to discover the first hydrothermal vents in the Pacific Ocean off the coast of the Galapagos Islands in 1977?

**Correct Answer:**

---

Alvin (Accept: Deep Ocean Research Submersible (DRV) OR Deep Diving Submersible OR Human Occupied Vehicle (HOV))

Question #: 0000034390

Competition: Regional Competition 1

Round: Round 01

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - Human Impacts

**Question Text:**

---

What is the popular name for the large concentrations and accumulation of marine debris in the North Pacific Ocean?

**Answer W:**

---

Garbage dump

**Answer X:**

---

Area of contamination

**Answer Y:**

---

Garbage patch

**Answer Z:**

---

Divergence zone

**Correct Answer:**

---

Y

Question #: 0000034197

Competition: Regional Competition 1

Round: Round 01

Pair: 16

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Waves

**Question Text:**

---

Tides are an example of what kind of wave?

**Correct Answer:**

---

A long (OR shallow water) wave generated by gravitational forces

Question #: 0000022353

Competition: Regional Competition 1

Round: Round 01

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

Which region of the Earth's interior is liquid?

**Answer W:**

---

Inner core

**Answer X:**

---

Outer core

**Answer Y:**

---

Crust

**Answer Z:**

---

Mantle

**Correct Answer:**

---

X

Question #: 0000022285

Competition: Regional Competition 1

Round: Round 01

Pair: 17

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - Coastal Law

**Question Text:**

---

Which states have territorial waters that extend to 9 nautical miles from the shore?

**Correct Answer:**

---

Florida AND Texas

Question #: 0000034309

Competition: Regional Competition 1

Round: Round 01

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Currents

**Question Text:**

---

Which of the following is NOT one of the five major ocean gyres?

**Answer W:**

---

North Atlantic

**Answer X:**

---

Indian

**Answer Y:**

---

South Pacific

**Answer Z:**

---

Southern

**Correct Answer:**

---

Z

Question #: 0000033829

Competition: Regional Competition 1

Round: Round 01

Pair: 18

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Human Impacts

**Question Text:**

---

Due to the high biodiversity they support, coral reefs are often likened to what terrestrial ecosystem?

**Correct Answer:**

---

Rainforests

Question #: 0000022513

Competition: Regional Competition 1

Round: Round 01

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

What highly toxic compound can be released from anoxic bottom waters in conditions of strong vertical mixing?

**Answer W:**

---

Sulfide

**Answer X:**

---

Ammonium

**Answer Y:**

---

Nitrate

**Answer Z:**

---

Hydroxide

**Correct Answer:**

---

W

Question #: 0000033743

Competition: Regional Competition 1

Round: Round 01

Pair: 19

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Plate Tectonics

**Question Text:**

---

The city of Los Angeles is located on which tectonic plate?

**Correct Answer:**

---

Pacific Plate

Question #: 0000023020

Competition: Regional Competition 1

Round: Round 01

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - Human Impacts

**Question Text:**

---

What is the term for small plastic pieces less than 5 millimeters long which can be harmful to ocean and aquatic life?

**Answer W:**

---

Monofilaments

**Answer X:**

---

Flotsam

**Answer Y:**

---

Jetsam

**Answer Z:**

---

Microplastics

**Correct Answer:**

---

Z

Question #: 0000034225

Competition: Regional Competition 1

Round: Round 01

Pair: 20

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

**Question Text:**

---

What is the term for water with a depleted concentration of dissolved oxygen (about 2 milligrams per liter)?

**Correct Answer:**

---

Hypoxic (hypoxia) OR suboxic

Question #: 0000022619

Competition: Regional Competition 1

Round: Round 01

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

What features on the seafloor emit hydrocarbon-rich water that is approximately the same temperature as the surrounding seawater?

**Answer W:**

---

Cold seeps

**Answer X:**

---

Black smokers

**Answer Y:**

---

White smokers

**Answer Z:**

---

Neutral plumes

**Correct Answer:**

---

W

Question #: 0000022275

Competition: Regional Competition 1

Round: Round 02

Pair: 1

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What is the term to describe the distance over which the wind blows uninterrupted over a water surface?

**Correct Answer:**

---

Fetch

Question #: 0000033733

Competition: Regional Competition 1

Round: Round 02

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - Human Impacts

**Question Text:**

---

Which of the following coastal environmental disasters, occurring in 2010, was anthropogenic in origin?

**Answer W:**

---

Chilean Earthquake

**Answer X:**

---

Gulf of Mexico Oil Spill

**Answer Y:**

---

Haitian Earthquake

**Answer Z:**

---

Sumatran Tsunami

**Correct Answer:**

---

X

Question #: 0000022209

Competition: Regional Competition 1

Round: Round 02

Pair: 2

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What river has the highest water discharge into the ocean?

**Correct Answer:**

---

Amazon

Question #: 0000034543

Competition: Regional Competition 1

Round: Round 02

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following species does NOT perform ecological services that slow erosion?

**Answer W:**

---

Seagrass

**Answer X:**

---

Cordgrass

**Answer Y:**

---

Oysters

**Answer Z:**

---

Clams

**Correct Answer:**

---

Z

Question #: 0000033506

Competition: Regional Competition 1

Round: Round 02

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - History

**Question Text:**

---

The U.S. works with the indigenous communities in which two states to ensure that established catch limits meet their cultural and subsistence whaling needs?

**Correct Answer:**

---

Alaska AND Washington

Question #: 0000023140

Competition: Regional Competition 1

Round: Round 02

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

What primarily drives equatorial surface currents?

**Answer W:**

---

Trade winds

**Answer X:**

---

Earth's rotation

**Answer Y:**

---

Sea level differences

**Answer Z:**

---

Thermohaline conditions

**Correct Answer:**

---

W

Question #: 0000022273

Competition: Regional Competition 1

Round: Round 02

Pair: 4

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Instrumentation

**Question Text:**

---

Why is a CTD sensor technically named incorrectly?

**Correct Answer:**

---

It does not directly measure depth, it measures pressure

Question #: 0000033975

Competition: Regional Competition 1

Round: Round 02

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - International laws and treaties

**Question Text:**

---

The United States is not a signatory on which international Ocean Treaty?

**Answer W:**

---

The Polar Code

**Answer X:**

---

Law of the Sea

**Answer Y:**

---

The London Convention

**Answer Z:**

---

Port State Measures on IUU Fishing

**Correct Answer:**

---

X

Question #: 0000033843

Competition: Regional Competition 1

Round: Round 02

Pair: 5

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Rocks and Minerals

**Question Text:**

---

What do we call the physical, chemical or biological breakdown of rocks?

**Correct Answer:**

---

Weathering

Question #: 0000033933

Competition: Regional Competition 1

Round: Round 02

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Laboratory Analysis

**Question Text:**

---

Winkler titrations [tie-tray-shuns] are used to determine the concentration of which substance in seawater?

**Answer W:**

---

Nitrate

**Answer X:**

---

Iodine

**Answer Y:**

---

Carbon dioxide gas

**Answer Z:**

---

Oxygen gas

**Correct Answer:**

---

Z

Question #: 0000022316

Competition: Regional Competition 1

Round: Round 02

Pair: 6

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Currents

**Question Text:**

---

In what direction does the Coriolis Effect divert winds and currents in the Southern Hemisphere?

**Correct Answer:**

---

To the left

Question #: 0000033913

Competition: Regional Competition 1

Round: Round 02

Pair: 6

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following is NOT true about nudibranchs?

**Answer W:**

---

They are both male and female

**Answer X:**

---

They can incorporate defenses from their prey into their bodies

**Answer Y:**

---

They can eat members of their own species

**Answer Z:**

---

None can swim

**Correct Answer:**

---

Z

Question #: 0000033459

Competition: Regional Competition 1

Round: Round 02

Pair: 7

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

What is the world's largest island?

**Correct Answer:**

---

Greenland

Question #: 0000033769

Competition: Regional Competition 1

Round: Round 02

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology

**Question Text:**

---

What are the structures used to maintain the spread of a fish trawl as it is pulled through the water?

**Answer W:**

---

Birds

**Answer X:**

---

Lobs

**Answer Y:**

---

Doors

**Answer Z:**

---

Risers

**Correct Answer:**

---

Y

Question #: 0000022279

Competition: Regional Competition 1

Round: Round 02

Pair: 8

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

**Question Text:**

---

What is the most abundant dissolved inorganic carbon species in the sea?

**Correct Answer:**

---

H-C-O-3 minus (also accept Hydrogen carbonate OR Bicarbonate)

Question #: 0000022254

Competition: Regional Competition 1

Round: Round 02

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography - Place Names

**Question Text:**

---

Which country is the largest archipelago in the world?

**Answer W:**

---

Vietnam

**Answer X:**

---

Japan

**Answer Y:**

---

Indonesia

**Answer Z:**

---

Belize

**Correct Answer:**

---

Y

Question #: 0000022997

Competition: Regional Competition 1

Round: Round 02

Pair: 9

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the largest burrowing clam in the world?

**Correct Answer:**

---

Geoduck [goo-ee-duck] OR Pacific geoduck OR Panopea generosa

Question #: 0000033584

Competition: Regional Competition 1

Round: Round 02

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Water Masses

**Question Text:**

---

Over what time-scale, in years, does the great ocean conveyor mix the world's oceans?

**Answer W:**

---

1,000

**Answer X:**

---

14,000

**Answer Y:**

---

7,000

**Answer Z:**

---

17,000

**Correct Answer:**

---

W

Question #: 0000033896

Competition: Regional Competition 1

Round: Round 02

Pair: 10

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences

**Question Text:**

---

Who is known as the "Father of Oceanography?"

**Correct Answer:**

---

Matthew Fontaine Maury [MOW-riy] (Accept: Matthew Maury OR Maury)

Question #: 0000033774

Competition: Regional Competition 1

Round: Round 02

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Plate Tectonics

**Question Text:**

---

Which of these provided early evidence for seafloor spreading and the Vine-Matthews-Morley hypothesis?

**Answer W:**

---

GPS data

**Answer X:**

---

The fossil record

**Answer Y:**

---

Continental drift

**Answer Z:**

---

Seafloor magnetic anomalies

**Correct Answer:**

---

Z

Question #: 0000033596

Competition: Regional Competition 1

Round: Round 02

Pair: 11

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Instrumentation

**Question Text:**

---

What is the name of the global array of approximately 3800 floats that measure the temperature and salinity of the ocean?

**Correct Answer:**

---

Argo

Question #: 0000034393

Competition: Regional Competition 1

Round: Round 02

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Of the following habitat types, where would a hypoxia-tolerant species most likely be found?

**Answer W:**

---

Open ocean

**Answer X:**

---

Kelp forest

**Answer Y:**

---

Seagrass bed

**Answer Z:**

---

Marsh mudflat

**Correct Answer:**

---

Z

Question #: 0000033490

Competition: Regional Competition 1

Round: Round 02

Pair: 12

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What term is used for a submerged ocean mountain crowned with a ring of actively growing coral reefs?

**Correct Answer:**

---

Atoll

Question #: 0000033766

Competition: Regional Competition 1

Round: Round 02

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Chemical species

**Question Text:**

---

Runoff from farm fields, feed lots, yards, and city streets contribute most directly to which of the following environmental issues?

**Answer W:**

---

High levels of oxygen in the ocean

**Answer X:**

---

Subsidence

**Answer Y:**

---

Eutrophication

**Answer Z:**

---

Global Warming

**Correct Answer:**

---

Y

Question #: 0000023142

Competition: Regional Competition 1

Round: Round 02

Pair: 13

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

All members of which phylum possess a mantle?

**Correct Answer:**

---

Mollusca (molluscs also acceptable)

Question #: 0000022282

Competition: Regional Competition 1

Round: Round 02

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Currents

**Question Text:**

---

Ocean transport is measured in which units?

**Answer W:**

---

Newtons

**Answer X:**

---

Meters per second

**Answer Y:**

---

Sverdrups [suh-ver-drups]

**Answer Z:**

---

Fathoms

**Correct Answer:**

---

Y

Question #: 0000022920

Competition: Regional Competition 1

Round: Round 02

Pair: 14

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Salinity

**Question Text:**

---

Conservative elements in the ocean have concentrations that tend to vary with what property of seawater?

**Correct Answer:**

---

Salinity

Question #: 0000034492

Competition: Regional Competition 1

Round: Round 02

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

Which month is National Oceans Month in the U.S?

**Answer W:**

---

May

**Answer X:**

---

June

**Answer Y:**

---

July

**Answer Z:**

---

August

**Correct Answer:**

---

X

Question #: 0000023132

Competition: Regional Competition 1

Round: Round 02

Pair: 15

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Waves

## Question Text:

---

What are the three aspects of wind that influence wave size?

## Correct Answer:

---

1. Wind speed OR wind velocity
2. Duration OR length of time the wind blows over the water
3. Fetch OR the upwind distance along open water over which the wind blows

Question #: 0000022222

Competition: Regional Competition 1

Round: Round 02

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

Which type of boundary is the Mid-Atlantic Ridge?

**Answer W:**

---

Oceanic-oceanic convergent

**Answer X:**

---

Continental-oceanic convergent

**Answer Y:**

---

Transform

**Answer Z:**

---

Divergent

**Correct Answer:**

---

Z

Question #: 0000022669

Competition: Regional Competition 1

Round: Round 02

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the definition of eurythermal?

**Correct Answer:**

---

High tolerance for a wide range of temperatures

Question #: 0000033529

Competition: Regional Competition 1

Round: Round 02

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy

**Question Text:**

---

Which of the following does NOT fall under the definition of "taking" a marine mammal under the Marine Mammal Protection Act of 1972?

**Answer W:**

---

Hunting

**Answer X:**

---

Capturing

**Answer Y:**

---

Harassing

**Answer Z:**

---

Researching

**Correct Answer:**

---

Z

Question #: 0000034376

Competition: Regional Competition 1

Round: Round 02

Pair: 17

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What is the largest underwater tectonic plate?

**Correct Answer:**

---

Pacific plate

Question #: 0000034599

Competition: Regional Competition 1

Round: Round 02

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

What is the mutualistic fish that suctions onto sharks?

**Answer W:**

---

Lamprey

**Answer X:**

---

Mola mola

**Answer Y:**

---

Remora

**Answer Z:**

---

Hagfish

**Correct Answer:**

---

Y

Question #: 0000033465

Competition: Regional Competition 1

Round: Round 02

Pair: 18

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Reactions in Seawater

**Question Text:**

---

What fluid did the ancient Romans use to give their concrete strength?

**Correct Answer:**

---

Salt water

Question #: 0000033895

Competition: Regional Competition 1

Round: Round 02

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Instrumentation

**Question Text:**

---

Which region of the environment would be sampled by a dredge?

**Answer W:**

---

Pelagic Zone

**Answer X:**

---

Pycnocline [Pik-noe-kline]

**Answer Y:**

---

Benthos

**Answer Z:**

---

Troposphere

**Correct Answer:**

---

Y

Question #: 0000022327

Competition: Regional Competition 1

Round: Round 02

Pair: 19

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Human Impacts

**Question Text:**

---

What venomous, invasive species is actively being hunted in Bermuda, and being marketed as a delicacy to eat, in order to reduce their population?

**Correct Answer:**

---

Lionfish OR Pterois spp.(Accept: Pterois volitans OR Pterois miles)

Question #: 0000033977

Competition: Regional Competition 1

Round: Round 02

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography - Oceanic Zones

**Question Text:**

---

How far do exclusive economic zones extend beyond a country's territorial sea baseline?

**Answer W:**

---

No more than 200 statute miles

**Answer X:**

---

No more than 200 kilometers

**Answer Y:**

---

No more than 200 leagues

**Answer Z:**

---

No more than 200 nautical miles

**Correct Answer:**

---

Z

Question #: 0000034307

Competition: Regional Competition 1

Round: Round 02

Pair: 20

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

According to the Marine Mammal Commission, what is the number one direct, anthropogenic cause of death and injury for marine mammals?

**Correct Answer:**

---

Fishing gear OR fishing by-catch

Question #: 0000033539

Competition: Regional Competition 1

Round: Round 02

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Instrumentation

**Question Text:**

---

Which of the following instruments has been used by the U.S. Government for over 150 years to show sea level rise?

**Answer W:**

---

ADCPs [A-D-C-Ps]

**Answer X:**

---

Tide Gauges

**Answer Y:**

---

Refractometer

**Answer Z:**

---

LIDAR [lie-dar]

**Correct Answer:**

---

X

Question #: 0000022352

Competition: Regional Competition 1

Round: Round 03

Pair: 1

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the term for the feet, or lateral appendages, of a polychaete [POLLY-keet]?

**Correct Answer:**

---

Parapodia [pare-ah-POH-dee-ah]

Question #: 0000022300

Competition: Regional Competition 1

Round: Round 03

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology - Anatomy and Physiology

**Question Text:**

---

Which of the following organisms are NOT in the phylum Cnidaria [ny-DARE-ee-uh]?

**Answer W:**

---

Corals

**Answer X:**

---

Jellyfish

**Answer Y:**

---

Hydroids

**Answer Z:**

---

Sponges

**Correct Answer:**

---

Z

Question #: 0000022348

Competition: Regional Competition 1

Round: Round 03

Pair: 2

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Waves

**Question Text:**

---

What is the term for a standing wave in a lake, bay, or estuary?

**Correct Answer:**

---

Seiche [say-shh]

Question #: 0000022389

Competition: Regional Competition 1

Round: Round 03

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Salinity

**Question Text:**

---

Which ocean has the highest average salinity?

**Answer W:**

---

Atlantic

**Answer X:**

---

Pacific

**Answer Y:**

---

Indian

**Answer Z:**

---

Southern

**Correct Answer:**

---

W

Question #: 0000022354

Competition: Regional Competition 1

Round: Round 03

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What is another name for the intertidal zone?

**Correct Answer:**

---

Littoral zone OR Foreshore OR Seashore

Question #: 0000022393

Competition: Regional Competition 1

Round: Round 03

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography

**Question Text:**

---

The Northwest Passage is a sea route between which two regions?

**Answer W:**

---

Northern Bering Sea and Gulf of Alaska

**Answer X:**

---

Canadian Maritime Provinces and the U.S.

**Answer Y:**

---

Arctic Ocean and Baltic Sea

**Answer Z:**

---

North Atlantic and North Pacific

**Correct Answer:**

---

Z

Question #: 0000022435

Competition: Regional Competition 1

Round: Round 03

Pair: 4

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Waves

**Question Text:**

---

Waves that hit the shore at an angle other than 90 degrees drive what type of current?

**Correct Answer:**

---

Longshore current

Question #: 0000022414

Competition: Regional Competition 1

Round: Round 03

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - Ecosystem based resource management

**Question Text:**

---

Which of the following is an example of bioremediation?

**Answer W:**

---

An oil clean up method that uses microbes to break up oil

**Answer X:**

---

A process that counteracts bioaccumulation

**Answer Y:**

---

A treatment to prevent non-point pollution

**Answer Z:**

---

A treatment that helps pelicans with DDT poisoning

**Correct Answer:**

---

W

Question #: 0000022339

Competition: Regional Competition 1

Round: Round 03

Pair: 5

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

Excluding very large lakes, why do most lakes not have extensive beaches?

**Correct Answer:**

---

Most lakes do not have enough wave action to create beaches.

Question #: 0000022306

Competition: Regional Competition 1

Round: Round 03

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

What color light penetrates the deepest in clear ocean water?

**Answer W:**

---

Blue

**Answer X:**

---

Red

**Answer Y:**

---

Green

**Answer Z:**

---

Violet

**Correct Answer:**

---

W

Question #: 0000033920

Competition: Regional Competition 1

Round: Round 03

Pair: 6

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Reactions in Seawater

**Question Text:**

---

What is the primary, flammable component of gas hydrates in the ocean?

**Correct Answer:**

---

Methane (CH<sub>4</sub>)

Question #: 0000022318

Competition: Regional Competition 1

Round: Round 03

Pair: 6

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sediments

**Question Text:**

---

Manganese nodules are an example of which type of sediment?

**Answer W:**

---

Lithogenic

**Answer X:**

---

Biogenic

**Answer Y:**

---

Cosmogenic

**Answer Z:**

---

Authigenic

**Correct Answer:**

---

Z

Question #: 0000022418

Competition: Regional Competition 1

Round: Round 03

Pair: 7

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - Coastal Law

### **Question Text:**

---

What international agreement established Exclusive Economic Zones?

### **Correct Answer:**

---

UN Convention on the Law of the Sea (UNCLOS and Law of the Sea also acceptable)

Question #: 0000022417

Competition: Regional Competition 1

Round: Round 03

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology - Classification

**Question Text:**

---

Which of the following organisms do NOT have calcareous structures?

**Answer W:**

---

Foraminifera [fore-am-eh-NIFF-er-ah]

**Answer X:**

---

Coccolithophores [cock-oh-LITH-oh-fours]

**Answer Y:**

---

Radiolarians [radio-LAR-eh-ans]

**Answer Z:**

---

Corals

**Correct Answer:**

---

Y

Question #: 0000022358

Competition: Regional Competition 1

Round: Round 03

Pair: 8

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Earth Structure

**Question Text:**

---

What are the names of the two land masses that resulted from the Triassic breakup of Pangaea [pan-GEE-ah]?

**Correct Answer:**

---

Laurasia [lar-ASIA] AND Gondwanaland [gond-WAH-nah-land] (Accept: Gondwana)

Question #: 0000022421

Competition: Regional Competition 1

Round: Round 03

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

The Coriolis acceleration is directed at what angle to the motion of a moving object in the northern hemisphere?

**Answer W:**

---

90 degrees to the left

**Answer X:**

---

90 degrees to the right

**Answer Y:**

---

45 degrees to the left

**Answer Z:**

---

45 degrees to the right

**Correct Answer:**

---

X

Question #: 0000022289

Competition: Regional Competition 1

Round: Round 03

Pair: 9

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy

**Question Text:**

---

Which U.S. federal law established the national Marine Mammal Health and Stranding Response Program?

**Correct Answer:**

---

Marine Mammal Protection Act

Question #: 0000022302

Competition: Regional Competition 1

Round: Round 03

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

What was the name of the Cuban fisherman who hooks the marlin of a lifetime in Hemingway's classic novella, The Old Man and the Sea?

**Answer W:**

---

Santiago

**Answer X:**

---

Emilio

**Answer Y:**

---

Alberto

**Answer Z:**

---

Eduardo

**Correct Answer:**

---

W

Question #: 0000022293

Competition: Regional Competition 1

Round: Round 03

Pair: 10

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What three variables determine the speed of sound in water?

**Correct Answer:**

---

Pressure (also accept depth); temperature; salinity

Question #: 0000022308

Competition: Regional Competition 1

Round: Round 03

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Salinity

**Question Text:**

---

According to the Law of Constant Proportions, which of the following ratios remains constant?

**Answer W:**

---

The ratio between dissolved nitrogen gas and argon gas

**Answer X:**

---

The ratios among the major ions in the open ocean

**Answer Y:**

---

The ratio between chlorophyll and productivity in the water column

**Answer Z:**

---

The ratio between biocarbonate and carbonate

**Correct Answer:**

---

X

Question #: 0000022423

Competition: Regional Competition 1

Round: Round 03

Pair: 11

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

Which multicellular animal phylum has the oldest fossils?

**Correct Answer:**

---

Porifera [Pore-if-or-ah] (sponges also acceptable)

Question #: 0000022298

Competition: Regional Competition 1

Round: Round 03

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Geochemistry

**Question Text:**

---

Which of the following elements is NOT a major component of manganese nodules?

**Answer W:**

---

Copper

**Answer X:**

---

Nickel

**Answer Y:**

---

Cobalt

**Answer Z:**

---

Argon

**Correct Answer:**

---

Z

Question #: 0000022319

Competition: Regional Competition 1

Round: Round 03

Pair: 12

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Water Properties

**Question Text:**

---

The density of a water parcel at a given pressure can change due to what two variables?

**Correct Answer:**

---

Temperature and salinity

Question #: 0000022315

Competition: Regional Competition 1

Round: Round 03

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following animals has placoid [PLAH-koid] scales?

**Answer W:**

---

Beaked sea snake

**Answer X:**

---

Tarpon

**Answer Y:**

---

Mako shark

**Answer Z:**

---

Saltwater crocodile

**Correct Answer:**

---

Y

Question #: 0000022309

Competition: Regional Competition 1

Round: Round 03

Pair: 13

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What is an isthmus?

**Correct Answer:**

---

A narrow strip of land bordered on two sides by water that connects two larger land masses.

Question #: 0000022262

Competition: Regional Competition 1

Round: Round 03

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Fishing gear and vessels

**Question Text:**

---

Which of the following fishing gear captures the LEAST amount of bycatch?

**Answer W:**

---

Gillnet

**Answer X:**

---

Otter Trawl

**Answer Y:**

---

Longline

**Answer Z:**

---

Harpoon

**Correct Answer:**

---

Z

Question #: 0000022342

Competition: Regional Competition 1

Round: Round 03

Pair: 14

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemical Cycles

**Question Text:**

---

What term describes how long, on average, a given compound remains in seawater?

**Correct Answer:**

---

Residence time

Question #: 0000022403

Competition: Regional Competition 1

Round: Round 03

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Plate Tectonics

**Question Text:**

---

What is the name of the submarine trench lying immediately offshore of the west coast of Central America?

**Answer W:**

---

Middle America Trench

**Answer X:**

---

Marianas Trench

**Answer Y:**

---

Atacama [ah-tah-CALM-ah] Trench

**Answer Z:**

---

Juan de Fuca Trench

**Correct Answer:**

---

W

Question #: 0000022314

Competition: Regional Competition 1

Round: Round 03

Pair: 15

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology

**Question Text:**

---

What specifically does a salinometer measure to determine salinity?

**Correct Answer:**

---

Electrical conductivity OR salt grains per gallon OR salt content (if the salinometer consists of a hydrometer or refractometer vs. a conductivity meter)

Question #: 0000022258

Competition: Regional Competition 1

Round: Round 03

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Chemical species

**Question Text:**

---

Conversion of nitrogen gas to ammonia by cyanobacteria [sigh-an-oh-bacteria] is an example of which biogeochemical process?

**Answer W:**

---

Nitrification

**Answer X:**

---

Denitrification

**Answer Y:**

---

Nitrogen fixation

**Answer Z:**

---

Anammox

**Correct Answer:**

---

Y

Question #: 0000022335

Competition: Regional Competition 1

Round: Round 03

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology - Human defined/caused problems

**Question Text:**

---

What is the name of the marine algae that is expelled from corals during bleaching?

**Correct Answer:**

---

Zooxanthellae [Zoh-zan-thel-ay] (Accept: symbiodinium OR dinoflagellate)

Question #: 0000022218

Competition: Regional Competition 1

Round: Round 03

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography

**Question Text:**

---

The Suez Canal links the Gulf of Suez with which body of water?

**Answer W:**

---

Gulf of Aden

**Answer X:**

---

Indian Ocean

**Answer Y:**

---

Mediterranean Sea

**Answer Z:**

---

Arabian Sea

**Correct Answer:**

---

Y

Question #: 0000022259

Competition: Regional Competition 1

Round: Round 03

Pair: 17

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What is the term for the layer of the ocean where density rapidly increases with depth?

**Correct Answer:**

---

Pycnocline

Question #: 0000022425

Competition: Regional Competition 1

Round: Round 03

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which process do scientists use to age seals?

**Answer W:**

---

Counting rings on otoliths

**Answer X:**

---

Biopsying body tissue

**Answer Y:**

---

Counting growth rings in teeth

**Answer Z:**

---

Measuring hormonal concentrations

**Correct Answer:**

---

Y

Question #: 0000022313

Competition: Regional Competition 1

Round: Round 03

Pair: 18

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Human Impacts

**Question Text:**

---

In the 1950s and 1960s, many people who ate shellfish from Minamata Bay in Japan were afflicted with what?

**Correct Answer:**

---

Mercury poisoning

Question #: 0000023365

Competition: Regional Competition 1

Round: Round 03

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sea Floor Features

**Question Text:**

---

The term "white smokers" refers to which of the following?

**Answer W:**

---

Ice-capped volcanoes

**Answer X:**

---

Hydrothermal vent chimneys made of iron sulfides

**Answer Y:**

---

River plumes carrying light-colored sediments

**Answer Z:**

---

Hydrothermal vent chimneys made of barium, calcium, and silicon

**Correct Answer:**

---

Z

Question #: 0000033612

Competition: Regional Competition 1

Round: Round 03

Pair: 19

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology - Behavior/Adaptations

**Question Text:**

---

Some organisms, such as certain species of copepods [cope-eh-pods], swim to the sea surface at night and to depths during the day. What is the term for this process?

**Correct Answer:**

---

Diel vertical migration OR Diurnal vertical migration

Question #: 0000022427

Competition: Regional Competition 1

Round: Round 03

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Currents

**Question Text:**

---

Which of the following causes surface currents to shift at 45 degrees relative to the wind direction?

**Answer W:**

---

Geostrophic balance

**Answer X:**

---

The Coriolis effect

**Answer Y:**

---

Gravity

**Answer Z:**

---

The pressure gradient

**Correct Answer:**

---

X

Question #: 0000033614

Competition: Regional Competition 1

Round: Round 03

Pair: 20

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Sea Floor Features

**Question Text:**

---

In general, during which season of the year are beaches the narrowest?

**Correct Answer:**

---

Winter

Question #: 0000022229

Competition: Regional Competition 1

Round: Round 03

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

On the Atlantic Flyway, where do birds stopping in the Beaufort [BWEW-fort] Barrier Islands originate?

**Answer W:**

---

Arctic

**Answer X:**

---

Antarctic

**Answer Y:**

---

Northern United States

**Answer Z:**

---

Mexico

**Correct Answer:**

---

W

Question #: 0000033505

Competition: Regional Competition 1

Round: Round 04

Pair: 1

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemistry of Water

**Question Text:**

---

What is the specific heat capacity of water in joules per kilogram per degree Celsius?

**Correct Answer:**

---

4000 joules per kilogram per degree Celsius

Question #: 0000033945

Competition: Regional Competition 1

Round: Round 04

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Tides

**Question Text:**

---

Which of the following describes neap tides?

**Answer W:**

---

Strong tides that occur when Mercury is in retrograde

**Answer X:**

---

Low tides in shellfishing season

**Answer Y:**

---

Weak tides that occur when the sun and moon form a right angle with the Earth

**Answer Z:**

---

Freak low tides that strand fish on the beach

**Correct Answer:**

---

Y

Question #: 0000033617

Competition: Regional Competition 1

Round: Round 04

Pair: 2

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the name of the system that drives tube feet movement in sea stars?

**Correct Answer:**

---

Water vascular system OR hydrovascular system (Accept: vascular system)

Question #: 0000033560

Competition: Regional Competition 1

Round: Round 04

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography - Place Names

**Question Text:**

---

What serves as the geographical line of demarcation between two consecutive calendar dates?

**Answer W:**

---

Prime Meridian

**Answer X:**

---

Tropic of Cancer

**Answer Y:**

---

International Date Line

**Answer Z:**

---

Tropic of Capricorn

**Correct Answer:**

---

Y

Question #: 0000034235

Competition: Regional Competition 1

Round: Round 04

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What is the difference in direction of motion between a westerly wind and a westward current?

**Correct Answer:**

---

The wind is coming FROM the west, but the current is flowing TO the west.

Question #: 0000033982

Competition: Regional Competition 1

Round: Round 04

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Reactions in Seawater

**Question Text:**

---

What is the depth at which the dissolution of carbonate begins to rapidly increase?

**Answer W:**

---

Carbonate compensation depth

**Answer X:**

---

Dissolution initiation depth

**Answer Y:**

---

Lysocline

**Answer Z:**

---

Carbonate saturation horizon

**Correct Answer:**

---

Y

Question #: 0000034104

Competition: Regional Competition 1

Round: Round 04

Pair: 4

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

In which hemisphere are the "Roaring Forties," "Furious Fifties," and "Screaming Sixties" located?

**Correct Answer:**

---

The Southern Hemisphere

Question #: 0000034140

Competition: Regional Competition 1

Round: Round 04

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which group of organisms has the largest diel migration on the planet?

**Answer W:**

---

Zooplankton

**Answer X:**

---

Whales

**Answer Y:**

---

Sardines

**Answer Z:**

---

Sea stars

**Correct Answer:**

---

W

Question #: 0000033474

Competition: Regional Competition 1

Round: Round 04

Pair: 5

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - History

**Question Text:**

---

In the mid-1920's, the German Meteor expedition explored which ocean basin?

**Correct Answer:**

---

South Atlantic (Accept: Atlantic)

Question #: 0000033941

Competition: Regional Competition 1

Round: Round 04

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology

**Question Text:**

---

As of 2017, which of the following is the only currently operating undersea research laboratory in the world?

**Answer W:**

---

Poseidon

**Answer X:**

---

Nautilus

**Answer Y:**

---

Neptune

**Answer Z:**

---

Aquarius

**Correct Answer:**

---

Z

Question #: 0000034107

Competition: Regional Competition 1

Round: Round 04

Pair: 6

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

If a warming climate causes a decrease in downwelling of deep waters in the polar regions, what effect must this have on the upwelling of nutrient rich waters?

**Correct Answer:**

---

Upwelling must also decrease.

Question #: 0000034246

Competition: Regional Competition 1

Round: Round 04

Pair: 6

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy

**Question Text:**

---

Which of the following conventions and laws does NOT apply to endangered species?

**Answer W:**

---

Endangered Species Act

**Answer X:**

---

Convention on International Trade in Endangered Species of Wild Fauna and Flora

**Answer Y:**

---

Marine Mammal Protection Act

**Answer Z:**

---

The Species Survival Convention

**Correct Answer:**

---

Z

Question #: 0000034312

Competition: Regional Competition 1

Round: Round 04

Pair: 7

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What environmental driver is predicted to shift species ranges poleward?

**Correct Answer:**

---

Climate change OR increasing average temperature OR temperature

Question #: 0000033561

Competition: Regional Competition 1

Round: Round 04

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

Approximately, what is the average depth of the ocean?

**Answer W:**

---

4 km

**Answer X:**

---

5 km

**Answer Y:**

---

6 km

**Answer Z:**

---

7 km

**Correct Answer:**

---

W

Question #: 0000033773

Competition: Regional Competition 1

Round: Round 04

Pair: 8

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

**Question Text:**

---

What is the process by which dissolved metal particles come out of a solution, creating a mineral deposit?

**Correct Answer:**

---

Precipitation

Question #: 0000034111

Competition: Regional Competition 1

Round: Round 04

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

By about how much has sea level risen over the past one hundred years?

**Answer W:**

---

15 millimeters

**Answer X:**

---

50 millimeters

**Answer Y:**

---

15 centimeters

**Answer Z:**

---

50 centimeters

**Correct Answer:**

---

Y

Question #: 0000034285

Competition: Regional Competition 1

Round: Round 04

Pair: 9

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Geologic Processes

**Question Text:**

---

Why is sea level falling, not rising, in places like Finland and Sweden?

**Correct Answer:**

---

Post-glacial uplift OR glacial rebound (Accept: isostatic rebound or crustal rebound)

Question #: 0000034367

Competition: Regional Competition 1

Round: Round 04

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following sharks does not have typical large sharp teeth?

**Answer W:**

---

Nurse shark

**Answer X:**

---

Basking shark

**Answer Y:**

---

Black-tipped reef shark

**Answer Z:**

---

Hammerhead shark

**Correct Answer:**

---

X

Question #: 0000033466

Competition: Regional Competition 1

Round: Round 04

Pair: 10

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

In what gyre – located near Chile and Easter Island-was an accumulation of plastic recently discovered?

**Correct Answer:**

---

South Pacific Gyre

Question #: 0000033905

Competition: Regional Competition 1

Round: Round 04

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - Fisheries Management

**Question Text:**

---

According to NOAA, in 2016, what were the 3 US states with the highest total values of seafood landings?

**Answer W:**

---

Alaska, Massachusetts, Louisiana

**Answer X:**

---

Maine, Alaska, California

**Answer Y:**

---

Alaska, Maine, Massachusetts

**Answer Z:**

---

Alaska, Florida, California

**Correct Answer:**

---

Y

Question #: 0000033860

Competition: Regional Competition 1

Round: Round 04

Pair: 11

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Water Properties

### **Question Text:**

---

Why does a freshwater lake not typically freeze solid through full depth in the winter?

### **Correct Answer:**

---

Fresh water is densest at 4 deg C, so when the ice layer forms at the surface, it insulates the denser, warmer water from further cooling

Question #: 0000033953

Competition: Regional Competition 1

Round: Round 04

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

As of 2010, approximately what percent of the United States's population lives in counties directly on the shoreline?

**Answer W:**

---

40

**Answer X:**

---

80

**Answer Y:**

---

5

**Answer Z:**

---

20

**Correct Answer:**

---

W

Question #: 0000034202

Competition: Regional Competition 1

Round: Round 04

Pair: 12

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the name of the hard structural components found in sponges?

**Correct Answer:**

---

Spicules

Question #: 0000033521

Competition: Regional Competition 1

Round: Round 04

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Instrumentation

**Question Text:**

---

In the 1950s, what were ocean bottom seismometers developed to do?

**Answer W:**

---

Give early warnings for tsunamis

**Answer X:**

---

Study the structure of the oceanic crust

**Answer Y:**

---

Monitor clandestine nuclear tests

**Answer Z:**

---

Track whale pod movements

**Correct Answer:**

---

Y

Question #: 0000033636

Competition: Regional Competition 1

Round: Round 04

Pair: 13

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Human Impacts

**Question Text:**

---

What country's government convened an underwater cabinet meeting to raise awareness about climate change and the threat of sea level rise?

**Correct Answer:**

---

Maldives

Question #: 0000034353

Competition: Regional Competition 1

Round: Round 04

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following marine invertebrate lifecycles does NOT contain a trochophore [TROW-coe-four] larval stage?

**Answer W:**

---

Gastropods

**Answer X:**

---

Bivalves

**Answer Y:**

---

Annelids

**Answer Z:**

---

Nematodes

**Correct Answer:**

---

Z

Question #: 0000033848

Competition: Regional Competition 1

Round: Round 04

Pair: 14

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What would be a visible sign of a shallowly submerged obstacle like a sandbar or a coral reef?

**Correct Answer:**

---

Wave breaking (will also accept a decrease in wave velocity OR a decrease in wavelength OR a change in water color)

Question #: 0000034178

Competition: Regional Competition 1

Round: Round 04

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

Which of the following elements is NOT macronutrient in seawater?

**Answer W:**

---

Nitrogen

**Answer X:**

---

Hydrogen

**Answer Y:**

---

Phosphorous

**Answer Z:**

---

Silicon

**Correct Answer:**

---

X

Question #: 0000033758

Competition: Regional Competition 1

Round: Round 04

Pair: 15

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the function of the dorsal fin in dolphins?

**Correct Answer:**

---

Stability

Question #: 0000033583

Competition: Regional Competition 1

Round: Round 04

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - History

**Question Text:**

---

Which of the following is NOT one of the ocean liners that sank in the early 20th century?

**Answer W:**

---

HMHS Britannic

**Answer X:**

---

RMS Lusitania

**Answer Y:**

---

HMS Hood

**Answer Z:**

---

RMS Titanic

**Correct Answer:**

---

Y

Question #: 0000034274

Competition: Regional Competition 1

Round: Round 04

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Sea Floor Features

**Question Text:**

---

The sea floor is divided into what two major regions?

**Correct Answer:**

---

Continental margins (OR submerged edges of continent) AND Deep Sea Plain (OR Deep Sea Floor OR Deep Ocean Basin OR Abyssal Plain)

Question #: 0000033916

Competition: Regional Competition 1

Round: Round 04

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following is NOT a product of chemosynthesis?

**Answer W:**

---

Formaldehyde

**Answer X:**

---

Sulfur

**Answer Y:**

---

Water

**Answer Z:**

---

Oxygen

**Correct Answer:**

---

Z

Question #: 0000033486

Competition: Regional Competition 1

Round: Round 04

Pair: 17

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What is the name of the large-scale, low-latitude overturning circulations where warm air rises at the equator and sinks at 30 degrees north or south latitude?

**Correct Answer:**

---

Hadley cells

Question #: 0000033730

Competition: Regional Competition 1

Round: Round 04

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Geologic Processes

**Question Text:**

---

Gradual settling or sudden sinking of the Earth's surface caused by underground material movement describes what process?

**Answer W:**

---

Faulting

**Answer X:**

---

Subduction

**Answer Y:**

---

Slipping

**Answer Z:**

---

Subsidence

**Correct Answer:**

---

Z

Question #: 0000034044

Competition: Regional Competition 1

Round: Round 04

Pair: 18

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Research Vessels

**Question Text:**

---

What is the primary difference between an AUV and a ROV?

**Correct Answer:**

---

An ROV is connected to a research vessel by a cable (tethered), while an AUV operates independently (no cable, untethered)

Question #: 0000022436

Competition: Regional Competition 1

Round: Round 04

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following changes is an indirect effect of climate change on a snail?

**Answer W:**

---

Heart rate

**Answer X:**

---

Growth rate

**Answer Y:**

---

Behavior

**Answer Z:**

---

Body temperature

**Correct Answer:**

---

Y

Question #: 0000033475

Competition: Regional Competition 1

Round: Round 04

Pair: 19

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemistry of Water

**Question Text:**

---

What mineral compound is responsible for the black-colored seawater that is released from some hydrothermal vents?

**Correct Answer:**

---

Iron sulfides

Question #: 0000023052

Competition: Regional Competition 1

Round: Round 04

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Waves

**Question Text:**

---

Gravity is NOT the restoring force for which of the following waves?

**Answer W:**

---

Internal waves

**Answer X:**

---

Tsunamis

**Answer Y:**

---

Tides

**Answer Z:**

---

Capillary waves

**Correct Answer:**

---

Z

Question #: 0000022364

Competition: Regional Competition 1

Round: Round 04

Pair: 20

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the distinguishing feature of chondrichthyes [con-DRICK-thees] skeletal structures?

**Correct Answer:**

---

Cartilage instead of true bones

Question #: 0000033524

Competition: Regional Competition 1

Round: Round 04

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

During an Arctic expedition, which scientist noticed that drifting ice moved in a direction about 20 to 40 degrees to the right of wind?

**Answer W:**

---

Fridtjof [FREED-yoff] Nansen

**Answer X:**

---

James Clark Ross

**Answer Y:**

---

Harald Sverdrup [suh-VER-drup]

**Answer Z:**

---

Jacques Cousteau

**Correct Answer:**

---

W

Question #: 0000033735

Competition: Regional Competition 1

Round: Round 05

Pair: 1

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology - Ecology

**Question Text:**

---

What organism is considered to be the keystone species in the Southern Ocean?

**Correct Answer:**

---

Krill OR Euphausia superba

Question #: 0000022375

Competition: Regional Competition 1

Round: Round 05

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

Which of the following ions or elements is abundant in river water and has a long residence time in the ocean?

**Answer W:**

---

Sodium

**Answer X:**

---

Phosphorus

**Answer Y:**

---

Strontium

**Answer Z:**

---

Iron

**Correct Answer:**

---

W

Question #: 0000022711

Competition: Regional Competition 1

Round: Round 05

Pair: 2

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Sea Floor Features

**Question Text:**

---

What feature of the oceanic crust gives it sufficient permeability for seawater to circulate?

**Correct Answer:**

---

Faults AND/OR fractures

Question #: 0000034002

Competition: Regional Competition 1

Round: Round 05

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - Notable Scientists

**Question Text:**

---

What was Nathaniel Bowditch's biggest contribution to modern maritime navigation?

**Answer W:**

---

He designed and built ship's clocks

**Answer X:**

---

He founded America's first insurance company

**Answer Y:**

---

He pioneered the use of limes to ward off scurvy at sea

**Answer Z:**

---

He wrote and published The New American Practical Navigator

**Correct Answer:**

---

Z

Question #: 0000033603

Competition: Regional Competition 1

Round: Round 05

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology - Evolution

**Question Text:**

---

What is the largest extant bony fish species in the world?

**Correct Answer:**

---

Ocean sunfish (Accept: Southern ocean sunfish OR bump-head sunfish OR mola alexandrini (larger than mola mola species))

Question #: 0000022345

Competition: Regional Competition 1

Round: Round 05

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Of the water that is evaporated from the world's ocean, what approximate percentage returns to the ocean as precipitation?

**Answer W:**

---

30%

**Answer X:**

---

45%

**Answer Y:**

---

65%

**Answer Z:**

---

90%

**Correct Answer:**

---

Z

Question #: 0000033626

Competition: Regional Competition 1

Round: Round 05

Pair: 4

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Sediments

**Question Text:**

---

What are terrigenous sediments?

**Correct Answer:**

---

Sediments originating from land masses

Question #: 0000022707

Competition: Regional Competition 1

Round: Round 05

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology - Ecology

**Question Text:**

---

Levels of productivity in the Arctic Ocean are generally limited by what?

**Answer W:**

---

Nutrients

**Answer X:**

---

Primary producers

**Answer Y:**

---

Light

**Answer Z:**

---

Oxygen

**Correct Answer:**

---

Y

Question #: 0000022326

Competition: Regional Competition 1

Round: Round 05

Pair: 5

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemistry of Water

**Question Text:**

---

What are the six major ionic constituents of seawater?

**Correct Answer:**

---

Sodium, chloride, sulfate, magnesium, calcium, and potassium

Question #: 0000022802

Competition: Regional Competition 1

Round: Round 05

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography - Place Names

**Question Text:**

---

What is the name of the largest tidal whirlpool in the western hemisphere?

**Answer W:**

---

Maelstrom [MILE-strom]

**Answer X:**

---

Naruto

**Answer Y:**

---

Corryvreckan [corry-VRECK-an]

**Answer Z:**

---

Old Sow

**Correct Answer:**

---

Z

Question #: 0000034072

Competition: Regional Competition 1

Round: Round 05

Pair: 6

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Air-sea Interface

**Question Text:**

---

As a consequence of sea level rise, coastal cities are expected to flood more frequently due to what storm-related phenomenon?

**Correct Answer:**

---

Storm surge

Question #: 0000022810

Competition: Regional Competition 1

Round: Round 05

Pair: 6

## 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - Coastal Law

---

### Question Text:

What was the "three-mile limit" in maritime law?

---

### Answer W:

The minimum distance within which passing ships were required to hail one another

---

### Answer X:

The extent of territorial waters traditionally claimed by coastal nations before the UN Convention on the Law of the Sea

---

### Answer Y:

The distance ships were required to stand offshore while in quarantine

---

### Answer Z:

The minimum visibility distance for a coastal lighthouse

---

### Correct Answer:

X

Question #: 0000033609

Competition: Regional Competition 1

Round: Round 05

Pair: 7

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

Based on body symmetry, to which two classification groups do diatoms belong?

**Correct Answer:**

---

Pennate (OR bilateral) AND Centric (OR centrate OR radial)

(Both answers required for correct answer)

Question #: 0000022284

Competition: Regional Competition 1

Round: Round 05

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Water Properties

**Question Text:**

---

Which of the following is not a location for deep water formation in our oceans?

**Answer W:**

---

Southern Ocean

**Answer X:**

---

Labrador Sea

**Answer Y:**

---

North Atlantic Ocean

**Answer Z:**

---

Pacific Ocean

**Correct Answer:**

---

Z

Question #: 0000033818

Competition: Regional Competition 1

Round: Round 05

Pair: 8

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - International laws and treaties

**Question Text:**

---

What is the name of the 1997 agreement amongst 192 nations to voluntarily limit greenhouse gas emissions?

**Correct Answer:**

---

Kyoto Protocol

Question #: 0000022684

Competition: Regional Competition 1

Round: Round 05

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Bathymetry

**Question Text:**

---

Ocean Bottom Contours are mapped by which of the following instruments?

**Answer W:**

---

Integrated Microwave Imagery

**Answer X:**

---

Multi Beam Echosounder

**Answer Y:**

---

Magnetometer

**Answer Z:**

---

Moored Profiler

**Correct Answer:**

---

X

Question #: 0000022867

Competition: Regional Competition 1

Round: Round 05

Pair: 9

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

### Question Text:

---

What is the term for a narrow inlet that has been eroded by a glacier?

### Correct Answer:

---

Fjord

Question #: 0000022921

Competition: Regional Competition 1

Round: Round 05

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology - Biochemistry

**Question Text:**

---

What does the Redfield Ratio describe?

**Answer W:**

---

The ratio of carbon, nitrogen, and phosphorous in phytoplankton throughout the oceans

**Answer X:**

---

The ratio of carbon to nitrogen in the atmosphere

**Answer Y:**

---

The ratios between CO<sub>2</sub>, carbonic acid, bicarbonate, and carbonate in seawater

**Answer Z:**

---

The ratio between organic and inorganic nitrogen in seawater

**Correct Answer:**

---

W

Question #: 0000033608

Competition: Regional Competition 1

Round: Round 05

Pair: 10

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Research Vessels

**Question Text:**

---

The Bathyscaphe Trieste-II was launched in what year?

**Correct Answer:**

---

1964

Question #: 0000022634

Competition: Regional Competition 1

Round: Round 05

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

The Amoco Cadiz oil spill in 1989 occurred off the coast of what nation?

**Answer W:**

---

Portugal

**Answer X:**

---

Namibia

**Answer Y:**

---

France

**Answer Z:**

---

Spain

**Correct Answer:**

---

Y

Question #: 0000033752

Competition: Regional Competition 1

Round: Round 05

Pair: 11

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the term used when algal propagules populate beach sediments throughout the cold months?

**Correct Answer:**

---

Overwintering

Question #: 0000033572

Competition: Regional Competition 1

Round: Round 05

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Which of the following refers to the region near the equator where sailing ships are sometimes trapped on windless waters?

**Answer W:**

---

Jet Stream

**Answer X:**

---

Trade Winds

**Answer Y:**

---

Gyre

**Answer Z:**

---

Doldrums

**Correct Answer:**

---

Z

Question #: 0000033813

Competition: Regional Competition 1

Round: Round 05

Pair: 12

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Geologic Processes

**Question Text:**

---

What is the English translation of the Japanese word tsunami?

**Correct Answer:**

---

Harbor wave

Question #: 0000022212

Competition: Regional Competition 1

Round: Round 05

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - History

**Question Text:**

---

Who made the first map of the Gulf Stream by using information collected from mail ships sailing between New England and England?

**Answer W:**

---

Edmund Halley

**Answer X:**

---

Charles Darwin

**Answer Y:**

---

Benjamin Franklin

**Answer Z:**

---

Henry Stommel

**Correct Answer:**

---

Y

Question #: 0000034018

Competition: Regional Competition 1

Round: Round 05

Pair: 13

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What type of corals are sea pens?

**Correct Answer:**

---

Octocorals OR Octocorallia (also accept: Alcyonaria)

Question #: 0000033593

Competition: Regional Competition 1

Round: Round 05

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Sampling Techniques

**Question Text:**

---

Holey socks, Argo floats, and dye tracers are all types of what kind of measurement technique?

**Answer W:**

---

Lagrangian [lah-grahn-GEE-an]

**Answer X:**

---

Eulerian [oy-LEHR-ian]

**Answer Y:**

---

Newtonian

**Answer Z:**

---

Darwinian

**Correct Answer:**

---

W

Question #: 0000034028

Competition: Regional Competition 1

Round: Round 05

Pair: 14

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - Fisheries Management

### **Question Text:**

---

The Shark Conservation Act of 2010 was passed to improve the conservation of sharks. What does this Act require?

### **Correct Answer:**

---

That sharks in the United States be brought to shore with their fins naturally attached/not removed

Question #: 0000034335

Competition: Regional Competition 1

Round: Round 05

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

At which latitude is the horizontal Coriolis force equal to zero?

**Answer W:**

---

90 degrees

**Answer X:**

---

45 degrees

**Answer Y:**

---

23.5 degrees

**Answer Z:**

---

0 degrees

**Correct Answer:**

---

Z

Question #: 0000022424

Competition: Regional Competition 1

Round: Round 05

Pair: 15

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology

**Question Text:**

---

What does a hydrometer measure?

**Correct Answer:**

---

Relative density of liquids OR specific gravity

Question #: 0000022846

Competition: Regional Competition 1

Round: Round 05

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography - Place Names

**Question Text:**

---

What is the name of the location in the ocean that is farthest from land?

**Answer W:**

---

Atlantis

**Answer X:**

---

Point Nemo

**Answer Y:**

---

Pacific Remote Island Area

**Answer Z:**

---

North Pole

**Correct Answer:**

---

X

Question #: 0000034205

Competition: Regional Competition 1

Round: Round 05

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What is the term to describe areas of the ocean where seawater oxygen saturation is at its lowest?

**Correct Answer:**

---

Oxygen minimum zone OR shadow zone

Question #: 0000033763

Competition: Regional Competition 1

Round: Round 05

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

Typically, which of the following is NOT true about deep ocean water in comparison to surface water?

**Answer W:**

---

It has more oxygen

**Answer X:**

---

It has more nutrients

**Answer Y:**

---

It is more dense

**Answer Z:**

---

It is colder

**Correct Answer:**

---

W

Question #: 0000034153

Competition: Regional Competition 1

Round: Round 05

Pair: 17

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

In places where sea otters have been hunted to extinction, sea urchin populations often increase, exponentially destroying kelp forests. This is an example of which ecological interaction?

**Correct Answer:**

---

Trophic cascade OR top down control OR keystone species

Question #: 0000022269

Competition: Regional Competition 1

Round: Round 05

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Currents

**Question Text:**

---

Which ocean current transports the largest volume of water?

**Answer W:**

---

Gulf Stream

**Answer X:**

---

Kuroshio Current [cur-oh-shee-o]

**Answer Y:**

---

Antarctic Circumpolar Current

**Answer Z:**

---

Benguela Current [ben-gway-la]

**Correct Answer:**

---

Y

Question #: 0000022347

Competition: Regional Competition 1

Round: Round 05

Pair: 18

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Sediments

**Question Text:**

---

What are the two most abundant sources of marine sediments?

**Correct Answer:**

---

Biogeneous AND lithogeneous OR terrigenous

Question #: 0000033908

Competition: Regional Competition 1

Round: Round 05

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - History

**Question Text:**

---

What did the U.S. claim in the Truman Proclamation of 1945?

**Answer W:**

---

Legal jurisdiction within 12 miles of the US coast

**Answer X:**

---

The right to occupy any uninhabited island more than 200 miles from a coast.

**Answer Y:**

---

Fishing rights over all of Georges Bank

**Answer Z:**

---

Mineral rights over the US continental shelf

**Correct Answer:**

---

Z

Question #: 0000033637

Competition: Regional Competition 1

Round: Round 05

Pair: 19

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What is the term for surface gravity waves with wavelengths that are much shorter than the water depth?

**Correct Answer:**

---

Deep-water waves

Question #: 0000033667

Competition: Regional Competition 1

Round: Round 05

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography

**Question Text:**

---

What is the deepest point in the Atlantic Ocean?

**Answer W:**

---

Puerto Rico Trench

**Answer X:**

---

Marianas Trench

**Answer Y:**

---

Mid-Atlantic Ridge

**Answer Z:**

---

Flemish Cap

**Correct Answer:**

---

W

Question #: 0000022607

Competition: Regional Competition 1

Round: Round 05

Pair: 20

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemical Cycles

**Question Text:**

---

Which element is mined to produce food, but when the supply increases to excess in surface waters, leads to dead zones in the ocean?

**Correct Answer:**

---

Phosphorus

Question #: 0000034389

Competition: Regional Competition 1

Round: Round 05

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

Which bioavailable element does NOT stimulate algal blooms?

**Answer W:**

---

Phosphorus

**Answer X:**

---

Nitrogen

**Answer Y:**

---

Iron

**Answer Z:**

---

Calcium

**Correct Answer:**

---

Z

Question #: 0000023251

Competition: Regional Competition 1

Round: Round 06

Pair: 1

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology - Human defined/caused problems

**Question Text:**

---

Why is ocean acidification due to increased atmospheric carbon dioxide particularly problematic for reef-building corals?

**Correct Answer:**

---

The calcium carbonate for their skeletons becomes more difficult to form.

Question #: 0000022563

Competition: Regional Competition 1

Round: Round 06

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sediments

**Question Text:**

---

The White Cliffs of Dover were formed primarily by deposits of which marine organisms?

**Answer W:**

---

Copepods

**Answer X:**

---

Diatoms

**Answer Y:**

---

Veliger

**Answer Z:**

---

Coccolithophores

**Correct Answer:**

---

Z

Question #: 0000033854

Competition: Regional Competition 1

Round: Round 06

Pair: 2

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What is the name for a shallow water wave balanced by Coriolis force and a topographic boundary, such as a coastline?

**Correct Answer:**

---

A Kelvin wave

Question #: 0000025782

Competition: Regional Competition 1

Round: Round 06

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology - Behavior/Adaptations

**Question Text:**

---

Which of the following is an example of a parasitic relationship?

**Answer W:**

---

Lampreys and fish

**Answer X:**

---

Zooxanthellae and corals

**Answer Y:**

---

Chemosynthetic bacteria and tubeworms

**Answer Z:**

---

Sea anemones and crabs

**Correct Answer:**

---

W

Question #: 0000022360

Competition: Regional Competition 1

Round: Round 06

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Geologic Processes

**Question Text:**

---

How is a kettle lake formed?

**Correct Answer:**

---

By the melting of a block of buried glacial ice to form a ground surface depression

Question #: 0000022623

Competition: Regional Competition 1

Round: Round 06

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Chemical Cycles

**Question Text:**

---

In the marine nitrogen cycle, which of the following processes is NOT biologically mediated?

**Answer W:**

---

Nitrogen fixation

**Answer X:**

---

Burial

**Answer Y:**

---

Denitrification

**Answer Z:**

---

Annamox

**Correct Answer:**

---

X

Question #: 0000022366

Competition: Regional Competition 1

Round: Round 06

Pair: 4

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Human Impacts

**Question Text:**

---

Most scientists agree that the burning of fossil fuels is contributing to climate change. What energy-related sector releases the most CO<sub>2</sub> into the atmosphere?

**Correct Answer:**

---

Transportation

Question #: 0000023017

Competition: Regional Competition 1

Round: Round 06

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Across latitudes of higher precipitation, how is heat predominantly transported?

**Answer W:**

---

It is added to the ocean

**Answer X:**

---

It is subtracted from the ocean

**Answer Y:**

---

It is added into space

**Answer Z:**

---

It is added to the atmosphere

**Correct Answer:**

---

Z

Question #: 0000034269

Competition: Regional Competition 1

Round: Round 06

Pair: 5

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy

**Question Text:**

---

What Central American country has implemented a total ban on shark fishing in their waters?

**Correct Answer:**

---

Honduras

Question #: 0000034336

Competition: Regional Competition 1

Round: Round 06

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - History

**Question Text:**

---

Who led the famous 1914 Imperial Trans-Antarctic Expedition, wherein all crew members survived despite being stranded for months when their ship, the Endurance, was trapped in ice?

**Answer W:**

---

Ernest Shackleton

**Answer X:**

---

Edward Smith

**Answer Y:**

---

William Turner

**Answer Z:**

---

Charles Bartlett

**Correct Answer:**

---

W

Question #: 0000033443

Competition: Regional Competition 1

Round: Round 06

Pair: 6

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

**Question Text:**

---

What law states that the pressure of a given mass of a gas is inversely proportional to the volume?

**Correct Answer:**

---

Boyle's Law

Question #: 0000025704

Competition: Regional Competition 1

Round: Round 06

Pair: 6

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - International laws and treaties

**Question Text:**

---

Which of the following is NOT a type of pollution regulated by MARPOL [mar-poll]?

**Answer W:**

---

Oil pollution

**Answer X:**

---

Agricultural runoff causing dead zones

**Answer Y:**

---

Air Pollution from ships

**Answer Z:**

---

Garbage from ships

**Correct Answer:**

---

X

Question #: 0000034352

Competition: Regional Competition 1

Round: Round 06

Pair: 7

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography - Place Names

**Question Text:**

---

What is the world's largest, completely landlocked body of water?

**Correct Answer:**

---

The Caspian Sea

Question #: 0000022590

Competition: Regional Competition 1

Round: Round 06

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following methods of propagation is NOT used by seagrass species?

**Answer W:**

---

Flowering

**Answer X:**

---

Clonal budding

**Answer Y:**

---

Spore formation

**Answer Z:**

---

Drift seedlings

**Correct Answer:**

---

Y

Question #: 0000033493

Competition: Regional Competition 1

Round: Round 06

Pair: 8

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Phase Change

**Question Text:**

---

What term describes the breaking of a piece of ice from a parent glacier?

**Correct Answer:**

---

Calving

Question #: 0000022433

Competition: Regional Competition 1

Round: Round 06

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Reactions in Seawater

**Question Text:**

---

Which seawater constituent has the shortest residence time?

**Answer W:**

---

Silicate

**Answer X:**

---

Iron

**Answer Y:**

---

Calcium

**Answer Z:**

---

Fluoride

**Correct Answer:**

---

X

Question #: 0000023297

Competition: Regional Competition 1

Round: Round 06

Pair: 9

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - Fisheries Management

**Question Text:**

---

In the United States, what marine aquaculture species has the largest total product value?

**Correct Answer:**

---

Oysters

Question #: 0000033862

Competition: Regional Competition 1

Round: Round 06

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

On which side of Australia would you expect to find dust blown into the oceans from the continent?

**Answer W:**

---

Northeast

**Answer X:**

---

Northwest

**Answer Y:**

---

Southeast

**Answer Z:**

---

Southwest

**Correct Answer:**

---

Y

Question #: 0000034257

Competition: Regional Competition 1

Round: Round 06

Pair: 10

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

Majorca [ma-YORKA], one of the Balearic [bal-e-air-ick] Islands, is found in which body of water?

**Correct Answer:**

---

Mediterranean Sea

Question #: 0000022303

Competition: Regional Competition 1

Round: Round 06

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

Who founded the first Norse settlement in Greenland?

**Answer W:**

---

Erik Thorvaldsson [therr-vold-SEN]

**Answer X:**

---

Bjarni Herjolfsson [bah-YAR-knee her-JOLF-sen]

**Answer Y:**

---

Leif Eriksson

**Answer Z:**

---

Thorfinn Karlsefni [carl-seff-KNEE]

**Correct Answer:**

---

W

Question #: 0000033800

Competition: Regional Competition 1

Round: Round 06

Pair: 11

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology - Anatomy and Physiology

**Question Text:**

---

What type of cells capture food particles in simple and complex sponges?

**Correct Answer:**

---

Collar cells

Question #: 0000033936

Competition: Regional Competition 1

Round: Round 06

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Geologic Processes

**Question Text:**

---

What caused the raised beaches around Hudson Bay, Canada?

**Answer W:**

---

Sea level rise

**Answer X:**

---

Fault motion

**Answer Y:**

---

Isostatic rebound

**Answer Z:**

---

Volcanic uplift

**Correct Answer:**

---

Y

Question #: 0000022246

Competition: Regional Competition 1

Round: Round 06

Pair: 12

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

**Question Text:**

---

What term describes the progressive oxidation of ammonia to nitrite, and eventually to nitrate?

**Correct Answer:**

---

Nitrification

Question #: 0000022307

Competition: Regional Competition 1

Round: Round 06

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology - Classification

**Question Text:**

---

What is the most defining characteristic of the newest identified Lantern Shark species?

**Answer W:**

---

It's the smallest

**Answer X:**

---

It has the biggest mouth

**Answer Y:**

---

It's the heaviest

**Answer Z:**

---

It's bioluminescent

**Correct Answer:**

---

Z

Question #: 0000034061

Competition: Regional Competition 1

Round: Round 06

Pair: 13

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Currents

**Question Text:**

---

What is the name for a high-velocity density current that carries suspended matter?

**Correct Answer:**

---

Turbidity current

Question #: 0000022361

Competition: Regional Competition 1

Round: Round 06

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology

**Question Text:**

---

What was the name of the first and only nuclear-powered U.S. cargo ship, launched in 1962?

**Answer W:**

---

Savannah

**Answer X:**

---

Henry Hyde

**Answer Y:**

---

Eisenhower

**Answer Z:**

---

MacArthur

**Correct Answer:**

---

W

Question #: 0000022260

Competition: Regional Competition 1

Round: Round 06

Pair: 14

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What type of plate boundary typically generates the largest magnitude earthquakes?

**Correct Answer:**

---

Convergent

Question #: 0000025940

Competition: Regional Competition 1

Round: Round 06

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - Fisheries Management

**Question Text:**

---

Which of the following is NOT a national standard that must be followed in a fishery management plan to ensure sustainable and responsible fishery management?

**Answer W:**

---

Scientific Information

**Answer X:**

---

Food Security

**Answer Y:**

---

Bycatch

**Answer Z:**

---

Optimum Yield

**Correct Answer:**

---

X

Question #: 0000034332

Competition: Regional Competition 1

Round: Round 06

Pair: 15

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Human Impacts

**Question Text:**

---

What event is responsible for the largest death toll from a natural disaster in U.S. history, killing over 6,000 people?

**Correct Answer:**

---

The 1900 Hurricane that struck Galveston, Texas. (Must have "hurricane" and "Galveston")

Question #: 0000022235

Competition: Regional Competition 1

Round: Round 06

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Which of the following, in atmospheres, is closest to the ambient pressure experienced at an ocean depth of 4000 meters?

**Answer W:**

---

4

**Answer X:**

---

40

**Answer Y:**

---

400

**Answer Z:**

---

4000

**Correct Answer:**

---

Y

Question #: 0000034596

Competition: Regional Competition 1

Round: Round 06

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

There are approximately 30 different kinds of cnidarian nematocysts. What are two of their basic functions?

**Correct Answer:**

---

Accept two: defense, prey capture, adhesion

Question #: 0000033549

Competition: Regional Competition 1

Round: Round 06

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy

**Question Text:**

---

The U.S. Coast Guard is part of which federal department?

**Answer W:**

---

Department of Defense

**Answer X:**

---

Department of Homeland Security

**Answer Y:**

---

Department of Commerce

**Answer Z:**

---

State Department

**Correct Answer:**

---

X

Question #: 0000022270

Competition: Regional Competition 1

Round: Round 06

Pair: 17

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography - Oceanic Zones

**Question Text:**

---

Below what degree of latitude is the Southern Ocean found?

**Correct Answer:**

---

60 degrees south

Question #: 0000022885

Competition: Regional Competition 1

Round: Round 06

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology - Human defined/caused problems

**Question Text:**

---

What is the most pervasive source of low-frequency anthropogenic noise in the oceans?

**Answer W:**

---

Offshore drilling for oil and gas

**Answer X:**

---

Shipping

**Answer Y:**

---

Installation of offshore wind farms

**Answer Z:**

---

Sonar

**Correct Answer:**

---

X

Question #: 0000033606

Competition: Regional Competition 1

Round: Round 06

Pair: 18

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What are the names of the three cells found in each hemisphere which are responsible for a large component of atmospheric heat transport?

**Correct Answer:**

---

Hadley, Ferrel, and Polar cells

Question #: 0000033991

Competition: Regional Competition 1

Round: Round 06

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy

**Question Text:**

---

Which phrase in international maritime law refers to a ship's right to pass through a coastal state's territorial waters so long as it is not prejudicial to the peace, good order, or security of the coastal state?

**Answer W:**

---

Right of transit

**Answer X:**

---

Habeus corpus

**Answer Y:**

---

Admiralty law

**Answer Z:**

---

Right of innocent passage

**Correct Answer:**

---

Z

Question #: 000022310

Competition: Regional Competition 1

Round: Round 06

Pair: 19

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemical species

**Question Text:**

---

What is the theoretical ocean boundary at which the rate of calcium carbonate precipitation equals the rate of dissolution?

**Correct Answer:**

---

Calcium carbonate compensation depth (ACCEPT: Carbonate compensation depth, CCD)

Question #: 0000034461

Competition: Regional Competition 1

Round: Round 06

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Thermodynamics

**Question Text:**

---

How much sea ice, in meters, is needed to almost totally insulate the ocean below it?

**Answer W:**

---

1

**Answer X:**

---

2

**Answer Y:**

---

5

**Answer Z:**

---

10

**Correct Answer:**

---

W

Question #: 0000034050

Competition: Regional Competition 1

Round: Round 06

Pair: 20

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Remote Sensing

**Question Text:**

---

What ocean explorer is the honored namesake of a 1.5 m long-winged torpedo-shaped glider used to collect water property data?

**Correct Answer:**

---

Joshua Slocum (Also accept: Slocum)

Question #: 0000025289

Competition: Regional Competition 1

Round: Round 06

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following species forms monogamous pairs for life?

**Answer W:**

---

Striped parrotfish

**Answer X:**

---

French Angelfish

**Answer Y:**

---

Manta Ray

**Answer Z:**

---

Napoleon Wrasse

**Correct Answer:**

---

X

Question #: 0000033508

Competition: Regional Competition 1

Round: Round 07

Pair: 1

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Sediments

**Question Text:**

---

As sediment laden freshwater mixes with seawater, what process aids in the rapid deposition of fine grained sediments?

**Correct Answer:**

---

Flocculation

Question #: 0000034008

Competition: Regional Competition 1

Round: Round 07

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Water Properties

**Question Text:**

---

What is the typical Redfield Ratio of carbon to nitrogen to phosphorus in marine phytoplankton?

**Answer W:**

---

16 : 1 : 1000

**Answer X:**

---

100 : 20 : 5

**Answer Y:**

---

106 : 16 : 1

**Answer Z:**

---

3: 17 : 250

**Correct Answer:**

---

Y

Question #: 0000033832

Competition: Regional Competition 1

Round: Round 07

Pair: 2

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - History

### Question Text:

---

What was the name of the first offshore research drilling expedition in 1961, which was chronicled by John Steinbeck in Life Magazine?

### Correct Answer:

---

Project Mohole

Question #: 0000034445

Competition: Regional Competition 1

Round: Round 07

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

An ocean becomes cut-off from the global ocean, and the seawater begins to evaporate. Which of the following minerals will NOT form in the resulting evaporite deposit?

**Answer W:**

---

Halite

**Answer X:**

---

Muscovite

**Answer Y:**

---

Gypsum

**Answer Z:**

---

Calcite

**Correct Answer:**

---

X

Question #: 0000034517

Competition: Regional Competition 1

Round: Round 07

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Currents

**Question Text:**

---

Earth's rotation leads to currents on the western side of ocean gyres being stronger than the rest of the gyre. What is the name given to this process?

**Correct Answer:**

---

Western Intensification

Question #: 0000033943

Competition: Regional Competition 1

Round: Round 07

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following is NOT a component in a jellyfish sting?

**Answer W:**

---

Nematocysts

**Answer X:**

---

Porins

**Answer Y:**

---

Bioactive lipids

**Answer Z:**

---

Herpetotoxin [her-pet-OH-toxin]

**Correct Answer:**

---

Z

Question #: 0000033509

Competition: Regional Competition 1

Round: Round 07

Pair: 4

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

### **Question Text:**

---

What effect will increasing precipitation likely have on the Gulf of Mexico hypoxic zone?

### **Correct Answer:**

---

The hypoxic zone will grow in size/extent and severity due to increased runoff (causing increased eutrophication)

Question #: 0000033976

Competition: Regional Competition 1

Round: Round 07

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography

**Question Text:**

---

Which country has the largest exclusive economic zone?

**Answer W:**

---

The United States of America

**Answer X:**

---

France

**Answer Y:**

---

Australia

**Answer Z:**

---

Russia

**Correct Answer:**

---

X

Question #: 0000034305

Competition: Regional Competition 1

Round: Round 07

Pair: 5

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is one potential human application of cone snail venom?

**Correct Answer:**

---

Pain medication OR epilepsy medication

Question #: 0000033558

Competition: Regional Competition 1

Round: Round 07

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

A long, gradual bend or recess in the shoreline that forms a large, open bay describes what landform?

**Answer W:**

---

Spit

**Answer X:**

---

Estuary

**Answer Y:**

---

Bight

**Answer Z:**

---

Peninsula

**Correct Answer:**

---

Y

Question #: 0000034165

Competition: Regional Competition 1

Round: Round 07

Pair: 6

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

In which ocean is the Cosmonauts Sea?

**Correct Answer:**

---

The Southern Ocean

Question #: 0000034436

Competition: Regional Competition 1

Round: Round 07

Pair: 6

## 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

### Question Text:

---

Which statement is NOT true regarding temperature distribution at the surface of the open ocean?

### Answer W:

---

On average, isotherms run east-west

### Answer X:

---

Near coastal boundaries, isotherms may divert in a north-south direction

### Answer Y:

---

Surface temperatures are often higher along the eastern boundaries of the oceans due to upwellings

### Answer Z:

---

The distribution of sea surface temperature corresponds closely with the input of short-wave radiation

### Correct Answer:

---

Y

Question #: 0000033670

Competition: Regional Competition 1

Round: Round 07

Pair: 7

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the primary symptom of sea star wasting disease?

**Correct Answer:**

---

Melting limbs OR disintegrating limbs

Question #: 0000033559

Competition: Regional Competition 1

Round: Round 07

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology

**Question Text:**

---

In which underwater scenario is using an AUV preferable to using an ROV?

**Answer W:**

---

Collecting samples from the seafloor

**Answer X:**

---

Working in highly turbid environments

**Answer Y:**

---

Working in an unexplored area collecting visual data

**Answer Z:**

---

Large scale high resolution seafloor mapping

**Correct Answer:**

---

Z

Question #: 0000033223

Competition: Regional Competition 1

Round: Round 07

Pair: 8

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Notable Scientists

**Question Text:**

---

Who was the first woman to serve as the Administrator of NOAA?

**Correct Answer:**

---

Dr. Jane Lubchenco

Question #: 0000034440

Competition: Regional Competition 1

Round: Round 07

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following species is solely nocturnal?

**Answer W:**

---

Lobster

**Answer X:**

---

Barnacle

**Answer Y:**

---

Salmon

**Answer Z:**

---

Tuna

**Correct Answer:**

---

W

Question #: 0000033467

Competition: Regional Competition 1

Round: Round 07

Pair: 9

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Air-sea Interface

**Question Text:**

---

What is the lowest maximum sustained wind speed needed for a tropical cyclone to be classified as a hurricane?

**Correct Answer:**

---

74 mph or 64 knots

Question #: 0000023103

Competition: Regional Competition 1

Round: Round 07

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sediments

**Question Text:**

---

Which is not a source of marine sediment that would be restricted to a particular latitude range?

**Answer W:**

---

Glacial sediment

**Answer X:**

---

Volcanic debris

**Answer Y:**

---

Wind-blown dust

**Answer Z:**

---

Carbonate sediments

**Correct Answer:**

---

X

Question #: 0000034097

Competition: Regional Competition 1

Round: Round 07

Pair: 10

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - International laws and treaties

**Question Text:**

---

What is the name of the intergovernmental organization charged with the conservation of whales and the management of whaling?

**Correct Answer:**

---

International Whaling Commission OR IWC

Question #: 0000034313

Competition: Regional Competition 1

Round: Round 07

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography - Place Names

**Question Text:**

---

The Peru-Chile Trench is located at the edge of which lithospheric plate?

**Answer W:**

---

Juan de Fuca

**Answer X:**

---

Cocos

**Answer Y:**

---

Nazca

**Answer Z:**

---

Scotia Plate

**Correct Answer:**

---

Y

Question #: 0000023374

Competition: Regional Competition 1

Round: Round 07

Pair: 11

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

Often called the “splash zone,” what is another name for the region above the high tide line that is covered by water only during extremely high tides or storm surges?

**Correct Answer:**

---

Supralittoral zone OR supratidal zone OR spray zone

Question #: 0000033745

Competition: Regional Competition 1

Round: Round 07

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Why do the Christmas Island crabs migrate?

**Answer W:**

---

To eat

**Answer X:**

---

To breed

**Answer Y:**

---

To sleep

**Answer Z:**

---

To swim

**Correct Answer:**

---

X

Question #: 0000033500

Competition: Regional Competition 1

Round: Round 07

Pair: 12

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Air-sea Interface

**Question Text:**

---

After only ten minutes of a constant wind, windrows, or linear convergences, form on the ocean surface parallel to the wind. What is this circulation called?

**Correct Answer:**

---

Langmuir [LANG-myur] circulation OR Langmuir cells

Question #: 0000033967

Competition: Regional Competition 1

Round: Round 07

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - History

**Question Text:**

---

What year was the first successful descent to and from the Mariana Trench?

**Answer W:**

---

1950

**Answer X:**

---

1955

**Answer Y:**

---

1960

**Answer Z:**

---

1965

**Correct Answer:**

---

Y

Question #: 0000034441

Competition: Regional Competition 1

Round: Round 07

Pair: 13

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

What effect – often caused by topographic features like mountains – causes precipitation on the windward side, but dryness on the leeward side?

**Correct Answer:**

---

Rain-shadow effect

Question #: 0000033902

Competition: Regional Competition 1

Round: Round 07

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Currents

**Question Text:**

---

Which event is thought to have preceded the flow of the Antarctic Circumpolar Current, approximately 30 million years ago?

**Answer W:**

---

An ice sheet collapsed at high latitudes

**Answer X:**

---

The Isthmus of Panama closed

**Answer Y:**

---

The Tasmanian Seaway closed

**Answer Z:**

---

The Drake Passage opened

**Correct Answer:**

---

Z

Question #: 0000033605

Competition: Regional Competition 1

Round: Round 07

Pair: 14

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

### Question Text:

---

During which geologic era did Pangea break up and the Atlantic Ocean begin forming?

### Correct Answer:

---

Mesozoic

Question #: 0000034553

Competition: Regional Competition 1

Round: Round 07

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

Which is NOT a conservative tracer of seawater?

**Answer W:**

---

Salinity

**Answer X:**

---

Temperature

**Answer Y:**

---

Density

**Answer Z:**

---

Dissolved oxygen

**Correct Answer:**

---

Z

Question #: 0000033655

Competition: Regional Competition 1

Round: Round 07

Pair: 15

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the primary component in the trail of mucus secreted by slugs and snails?

**Correct Answer:**

---

Water

Question #: 0000033556

Competition: Regional Competition 1

Round: Round 07

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

In which of the following marine environments would you find graded beds resulting from turbidity currents?

**Answer W:**

---

Center of ocean gyres

**Answer X:**

---

Southern Ocean

**Answer Y:**

---

Along the shoreline

**Answer Z:**

---

Just below continental rise

**Correct Answer:**

---

Z

Question #: 0000034592

Competition: Regional Competition 1

Round: Round 07

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy

**Question Text:**

---

The National Ocean Council was established in 2010 to implement Executive Order 13547, which did what?

**Correct Answer:**

---

Established a National Ocean Policy

Question #: 0000034384

Competition: Regional Competition 1

Round: Round 07

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following is NOT a mineral produced by organisms in the ocean?

**Answer W:**

---

Apatite

**Answer X:**

---

Corundum

**Answer Y:**

---

Chert

**Answer Z:**

---

Aragonite

**Correct Answer:**

---

X

Question #: 0000034532

Competition: Regional Competition 1

Round: Round 07

Pair: 17

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography - Oceanic Zones

**Question Text:**

---

The California Current, Eastern Tropical Pacific region, and the coast of Namibia are all examples of what?

**Correct Answer:**

---

Upwelling zones

Question #: 0000023829

Competition: Regional Competition 1

Round: Round 07

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Arctic winter warming events are winter days when air temperatures peak above which value in degrees Celsius?

**Answer W:**

---

-30

**Answer X:**

---

-20

**Answer Y:**

---

-10

**Answer Z:**

---

1

**Correct Answer:**

---

Y

Question #: 0000034607

Competition: Regional Competition 1

Round: Round 07

Pair: 18

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What mammal has the densest fur?

**Correct Answer:**

---

Sea otter OR Enhydra lutris

Question #: 0000033541

Competition: Regional Competition 1

Round: Round 07

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Chemistry of Water

**Question Text:**

---

If the concentration of the sodium ion was found to be 11 grams per liter at the sea surface, what would you expect it to be at 1000m?

**Answer W:**

---

20 grams per liter

**Answer X:**

---

5 grams per liter

**Answer Y:**

---

0.011 grams per liter

**Answer Z:**

---

11 grams per liter

**Correct Answer:**

---

Z

Question #: 0000034100

Competition: Regional Competition 1

Round: Round 07

Pair: 19

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

A 2016 study published in Nature states that with increasing greenhouse gases in the atmosphere, clouds have shifted in which two directions?

**Correct Answer:**

---

Poleward and higher in the atmosphere

Question #: 0000033897

Competition: Regional Competition 1

Round: Round 07

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy

**Question Text:**

---

The U.S. Congress passed legislation in 2015 prohibiting the manufacturing, packaging, and distribution of rinse-off cosmetics containing plastic microbeads. Which act is this referring to?

**Answer W:**

---

The Federal Food, Drug, and Cosmetic Act

**Answer X:**

---

The Microbead-Free Waters Act

**Answer Y:**

---

Marine Debris Research, Prevention, and Reduction Act

**Answer Z:**

---

Marine Plastic Pollution Research and Control Act

**Correct Answer:**

---

X

Question #: 0000034451

Competition: Regional Competition 1

Round: Round 07

Pair: 20

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

**Question Text:**

---

Data collected by NASA's SeaWiFS satellite is used to make estimates of ocean productivity by measuring the color produced by what biomolecule?

**Correct Answer:**

---

Chlorophyll (ACCEPT: Chlorophyll-A)

Question #: 0000034470

Competition: Regional Competition 1

Round: Round 07

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Navigation

**Question Text:**

---

Who made navigational charts of Pacific Islands that Allies relied on during World War II?

**Answer W:**

---

Admiral DeBougainville

**Answer X:**

---

James Cook

**Answer Y:**

---

Ferdinand Magellan

**Answer Z:**

---

William Bligh

**Correct Answer:**

---

X

Question #: 0000033305

Competition: Regional Competition 1

Round: Round 08

Pair: 1

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemical species

**Question Text:**

---

What gas law is commonly used to determine the amount of dissolved gas in sea water for a given partial pressure?

**Correct Answer:**

---

Henry's law

Question #: 0000034474

Competition: Regional Competition 1

Round: Round 08

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

What is the function of the fronds at the tip of the pneumatocyst?

**Answer W:**

---

Act as a buoy

**Answer X:**

---

Act as an anchor

**Answer Y:**

---

Gather nutrients and sunlight

**Answer Z:**

---

Reproductive structure

**Correct Answer:**

---

Y

Question #: 0000033503

Competition: Regional Competition 1

Round: Round 08

Pair: 2

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Air-sea Interface

**Question Text:**

---

What is meant by an ocean basin that has positive water balance?

**Correct Answer:**

---

There is a net gain of freshwater from precipitation and river discharge (also accept:  $E < (R+P)$ , or evaporation is less than precipitation plus river discharge)

Question #: 0000033962

Competition: Regional Competition 1

Round: Round 08

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

Approximately what percent of the Earth's atmosphere is carbon dioxide?

**Answer W:**

---

10

**Answer X:**

---

4

**Answer Y:**

---

0.1

**Answer Z:**

---

0.04

**Correct Answer:**

---

Z

Question #: 0000033810

Competition: Regional Competition 1

Round: Round 08

Pair: 3

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Geologic Processes

**Question Text:**

---

Why would lava erupting underwater cool more quickly than if it erupted in air?

**Correct Answer:**

---

Water has greater specific heat (OR heat capacity) than air

Question #: 0000034005

Competition: Regional Competition 1

Round: Round 08

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography

**Question Text:**

---

Which of the following straits lies between Baffin Island and Greenland?

**Answer W:**

---

Hudson Strait

**Answer X:**

---

Strait of Karimata

**Answer Y:**

---

Strait of Belle Isle

**Answer Z:**

---

Davis Strait

**Correct Answer:**

---

Z

Question #: 0000022283

Competition: Regional Competition 1

Round: Round 08

Pair: 4

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

### **Question Text:**

---

What forms if a meander to the coastal-water side of the Gulf Stream breaks off and forms a spinning circulation of water?

### **Correct Answer:**

---

Warm-core ring OR warm core eddy

Question #: 0000033739

Competition: Regional Competition 1

Round: Round 08

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

What marine animal was hunted to extinction in 1768, only 30 years after being discovered by Europeans?

**Answer W:**

---

West Indian manatee

**Answer X:**

---

Steller's sea cow

**Answer Y:**

---

Mediterranean monk seal

**Answer Z:**

---

Great auk

**Correct Answer:**

---

X

Question #: 0000033764

Competition: Regional Competition 1

Round: Round 08

Pair: 5

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

How does the predatory sea slug, Navanax, find its prey?

**Correct Answer:**

---

Follow the slime trail of its prey

Question #: 0000033543

Competition: Regional Competition 1

Round: Round 08

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

Which is NOT an example of a coastal-plain estuary?

**Answer W:**

---

Pamlico Sound

**Answer X:**

---

Chesapeake Bay

**Answer Y:**

---

New York Harbor

**Answer Z:**

---

Delaware Bay

**Correct Answer:**

---

W

Question #: 0000033770

Competition: Regional Competition 1

Round: Round 08

Pair: 6

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Tides

**Question Text:**

---

What is the name given to a transition between vertically mixed and stratified water?

**Correct Answer:**

---

Tidal mixing front (accept: Front)

Question #: 0000033979

Competition: Regional Competition 1

Round: Round 08

Pair: 6

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following is an angiosperm?

**Answer W:**

---

Bull kelp

**Answer X:**

---

Bladder wrack

**Answer Y:**

---

Sea lettuce

**Answer Z:**

---

Surfgrass

**Correct Answer:**

---

Z

Question #: 0000033495

Competition: Regional Competition 1

Round: Round 08

Pair: 7

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - History

**Question Text:**

---

The first manned descent to Challenger deep was done with what deep-diving research vessel?

**Correct Answer:**

---

Trieste [Tree-EST]

Question #: 0000034484

Competition: Regional Competition 1

Round: Round 08

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Which of the following is NOT one of the three major low salinity intermediate waters?

**Answer W:**

---

Antarctic Intermediate Water

**Answer X:**

---

Labrador Sea Water

**Answer Y:**

---

North Pacific Intermediate Water

**Answer Z:**

---

Mediterranean Water

**Correct Answer:**

---

Z

Question #: 0000033665

Competition: Regional Competition 1

Round: Round 08

Pair: 8

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

In the same species, why might an intertidal individual have greater environmental tolerance than one that lives at a depth of 30 feet?

**Correct Answer:**

---

Exposure to greater environmental variability

Question #: 0000033552

Competition: Regional Competition 1

Round: Round 08

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - History

**Question Text:**

---

Which President extended U.S. control to all the natural resources of the subsoil and sea bed of the U.S. continental shelf?

**Answer W:**

---

Franklin Roosevelt

**Answer X:**

---

Theodore Roosevelt

**Answer Y:**

---

Harry S. Truman

**Answer Z:**

---

Woodrow Wilson

**Correct Answer:**

---

Y

Question #: 0000034321

Competition: Regional Competition 1

Round: Round 08

Pair: 9

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Instrumentation

**Question Text:**

---

What is the name of the device deployed by National Geographic to capture the "animal's eye view" in the water, in addition to collecting environmental data?

**Correct Answer:**

---

Crittercam

Question #: 0000023608

Competition: Regional Competition 1

Round: Round 08

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which organism do you expect to have the highest acute physiological stress response?

**Answer W:**

---

A limpet in the presence of a sea star

**Answer X:**

---

A temperate fish in 18°C water

**Answer Y:**

---

A temperate fish in 13°C water

**Answer Z:**

---

A limpet during high tide

**Correct Answer:**

---

W

Question #: 0000033497

Competition: Regional Competition 1

Round: Round 08

Pair: 10

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

Studies on the oldest identified zircons on earth suggest that the Earth's ocean formed during what geologic eon?

**Correct Answer:**

---

Hadean

Question #: 0000034569

Competition: Regional Competition 1

Round: Round 08

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

Which of the following pollutants is most likely to biomagnify in the marine food web?

**Answer W:**

---

Benzene

**Answer X:**

---

Styrene

**Answer Y:**

---

Ethyl Acetate

**Answer Z:**

---

Arsenic

**Correct Answer:**

---

Z

Question #: 0000023919

Competition: Regional Competition 1

Round: Round 08

Pair: 11

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

After they find the river mouth, how do salmon identify their natal stream?

**Correct Answer:**

---

Smell OR scent

Question #: 0000033553

Competition: Regional Competition 1

Round: Round 08

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Which of the following is NOT true regarding hurricanes?

**Answer W:**

---

They occur primarily during the summer or fall

**Answer X:**

---

They commonly move westward in the tradewinds

**Answer Y:**

---

They form in high pressure zones

**Answer Z:**

---

They lose energy in areas with cold water

**Correct Answer:**

---

Y

Question #: 0000033734

Competition: Regional Competition 1

Round: Round 08

Pair: 12

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

What two rivers in the United States carry the most fresh water to the sea from East of the Rocky Mountains and West of the Rocky Mountains?

**Correct Answer:**

---

The Mississippi and the Columbia

Question #: 0000022640

Competition: Regional Competition 1

Round: Round 08

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

How can CRISPR [KRIS-per] aid in marine conservation efforts?

**Answer W:**

---

Speed up evolution of traits

**Answer X:**

---

Increase true population size

**Answer Y:**

---

Artificially increase genetic diversity

**Answer Z:**

---

Increase species range

**Correct Answer:**

---

Y

Question #: 0000033499

Competition: Regional Competition 1

Round: Round 08

Pair: 13

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - Fisheries Management

**Question Text:**

---

What are two techniques to limit a fishery harvest?

**Correct Answer:**

---

Catch restrictions OR gear restrictions OR location restrictions OR time/seasonal restrictions

Question #: 0000034308

Competition: Regional Competition 1

Round: Round 08

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sea Floor Features

**Question Text:**

---

During the past million years the location of the eastern shoreline of the United States has been directly correlated to which of the following?

**Answer W:**

---

Extent of glacial ice

**Answer X:**

---

Frequency of earthquakes

**Answer Y:**

---

Volume of volcanic eruptions

**Answer Z:**

---

Number of submarine landslides

**Correct Answer:**

---

W

Question #: 0000022230

Competition: Regional Competition 1

Round: Round 08

Pair: 14

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography - Place Names

**Question Text:**

---

What is the world's oldest and deepest freshwater lake?

**Correct Answer:**

---

Lake Baikal [BYE-cull]

Question #: 0000022591

Competition: Regional Competition 1

Round: Round 08

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following is NOT an important spawning area for striped bass along the east coast of the United States?

**Answer W:**

---

Roanoke River in North Carolina

**Answer X:**

---

Housatonic River in Connecticut

**Answer Y:**

---

Potomac River in Maryland

**Answer Z:**

---

Hudson River in New York

**Correct Answer:**

---

X

Question #: 0000022304

Competition: Regional Competition 1

Round: Round 08

Pair: 15

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Currents

**Question Text:**

---

What is the definition of ocean ventilation rate?

**Correct Answer:**

---

The time taken for water to leave a surface formation site and move to the deep ocean

Question #: 0000033968

Competition: Regional Competition 1

Round: Round 08

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - Human Impacts

**Question Text:**

---

A northern migration of which freshwater invasive along the Mississippi River has recently prompted debates over closing the Chicago Canal?

**Answer W:**

---

Snakehead Fish

**Answer X:**

---

Asian Carp

**Answer Y:**

---

Delta Smelt

**Answer Z:**

---

Alewife

**Correct Answer:**

---

X

Question #: 0000022337

Competition: Regional Competition 1

Round: Round 08

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

Which non-climatic environmental variable can exacerbate heat stress in intertidal organisms?

**Correct Answer:**

---

Tidal height OR timing of low tide

Question #: 0000033564

Competition: Regional Competition 1

Round: Round 08

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Waves

**Question Text:**

---

Which of the following is the maximum possible height to length ratio for an unbroken water wave?

**Answer W:**

---

1 to 1

**Answer X:**

---

1 to 2

**Answer Y:**

---

1 to 7

**Answer Z:**

---

1 to 10

**Correct Answer:**

---

Y

Question #: 0000023796

Competition: Regional Competition 1

Round: Round 08

Pair: 17

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

**Question Text:**

---

What microbial process involves the reaction of nitrite and ammonium to yield nitrogen gas and water?

**Correct Answer:**

---

Anammox (Accept: Anaerobic Ammonium Oxidation)

Question #: 0000034577

Competition: Regional Competition 1

Round: Round 08

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

How is the marsh cordgrass especially adapted to brackish waters?

**Answer W:**

---

Greater photosynthetic capabilities

**Answer X:**

---

Deeper roots

**Answer Y:**

---

Roots filter out salts

**Answer Z:**

---

Shallower roots

**Correct Answer:**

---

Y

Question #: 0000033481

Competition: Regional Competition 1

Round: Round 08

Pair: 18

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What term describes photons with wavelengths between 400 and 700 nanometers?

**Correct Answer:**

---

Photosynthetically Active Radiation (also acceptable: PAR OR visible spectrum)

Question #: 0000022823

Competition: Regional Competition 1

Round: Round 08

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Chemical Cycles

**Question Text:**

---

Which two variables would you expect to have roughly parallel depth profiles in the open ocean during the summer?

**Answer W:**

---

Temperature and nitrate

**Answer X:**

---

Oxygen and carbon dioxide

**Answer Y:**

---

Phosphate and pH

**Answer Z:**

---

Nitrate and phosphate

**Correct Answer:**

---

Z

Question #: 0000022413

Competition: Regional Competition 1

Round: Round 08

Pair: 19

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

The coastline of Northern Namibia [nah-MIB-ee-ah] is known by what other name?

**Correct Answer:**

---

Skeleton Coast

Question #: 0000022251

Competition: Regional Competition 1

Round: Round 08

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Stokes Law is frequently used in oceanography to determine which of the following?

**Answer W:**

---

Density of seawater

**Answer X:**

---

Propagation rate of an internal wave

**Answer Y:**

---

Amplitude and periodicity of tides

**Answer Z:**

---

Settling rate of small particles in seawater

**Correct Answer:**

---

Z

Question #: 0000022450

Competition: Regional Competition 1

Round: Round 08

Pair: 20

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

The larvae of which class of flying animals are commonly found in streams?

**Correct Answer:**

---

Insecta OR insects

Question #: 0000033540

Competition: Regional Competition 1

Round: Round 08

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography - Oceanic Zones

**Question Text:**

---

What percentage of the ocean is deeper than 2000 meters?

**Answer W:**

---

65

**Answer X:**

---

75

**Answer Y:**

---

85

**Answer Z:**

---

95

**Correct Answer:**

---

Y

Question #: 0000034043

Competition: Regional Competition 1

Round: Round 09

Pair: 1

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Currents

**Question Text:**

---

According to Ekman theory, why is there typically upwelling along the equator?

**Correct Answer:**

---

The trade winds blow west along the equator. Ekman transport is to the left of the wind in the south, and to the right in the north, this wind induces a perpendicular flow of water away from the equator, in both hemispheres. This divergence creates upwelling.

Question #: 0000033966

Competition: Regional Competition 1

Round: Round 09

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following best describes a primary consumer?

**Answer W:**

---

Insectivorous

**Answer X:**

---

Omnivorous

**Answer Y:**

---

Piscavorous

**Answer Z:**

---

Herbivorous

**Correct Answer:**

---

Z

Question #: 0000033460

Competition: Regional Competition 1

Round: Round 09

Pair: 2

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What rock type is formed by the lithification of calcareous ooze?

**Correct Answer:**

---

Chalk or limestone

Question #: 0000034260

Competition: Regional Competition 1

Round: Round 09

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Approximately what percentage of incoming shortwave solar radiation is absorbed by ocean and land?

**Answer W:**

---

32

**Answer X:**

---

47

**Answer Y:**

---

58

**Answer Z:**

---

65

**Correct Answer:**

---

X

Question #: 0000033729

Competition: Regional Competition 1

Round: Round 09

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - International laws and treaties

**Question Text:**

---

What is the specialized agency of the United Nations for weather and climate?

**Correct Answer:**

---

World Meteorological Organization

Question #: 0000034314

Competition: Regional Competition 1

Round: Round 09

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

What researcher famously stated "Give me a half a tanker of iron and I will give you another ice age" in support of the idea of using iron fertilization to cool global temperatures?

**Answer W:**

---

John Martin

**Answer X:**

---

Sylvia Earle

**Answer Y:**

---

Jacques Cousteau

**Answer Z:**

---

Robert Ballard

**Correct Answer:**

---

W

Question #: 0000033631

Competition: Regional Competition 1

Round: Round 09

Pair: 4

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

In what ocean is the Mascarene Plateau?

**Correct Answer:**

---

The Indian Ocean

Question #: 0000034431

Competition: Regional Competition 1

Round: Round 09

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Currents

**Question Text:**

---

Which of the following currents is one of five major coastal currents affiliated with upwelling zones?

**Answer W:**

---

East Australia current

**Answer X:**

---

California current

**Answer Y:**

---

Gulf Stream

**Answer Z:**

---

Kuroshio current

**Correct Answer:**

---

X

Question #: 0000033643

Competition: Regional Competition 1

Round: Round 09

Pair: 5

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

Why is a clonal species an especially good invader?

**Correct Answer:**

---

They do not need a mate to reproduce OR they can dominate surface area; they outcompete other species for space.

Question #: 0000033530

Competition: Regional Competition 1

Round: Round 09

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sediments

**Question Text:**

---

How is grain size in turbidites organized?

**Answer W:**

---

Uniformly

**Answer X:**

---

Finer grains higher

**Answer Y:**

---

Coarser grains higher

**Answer Z:**

---

Randomly

**Correct Answer:**

---

X

Question #: 0000033594

Competition: Regional Competition 1

Round: Round 09

Pair: 6

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Sampling Techniques

**Question Text:**

---

What instrument measures velocity flow past a fixed point in the ocean that utilizes Eulerian [oy-LEHR-ian] frame of reference?

**Correct Answer:**

---

Moorings OR moored profiler OR Acoustic Doppler Current Profiler (ADCP) OR fixed current meters.

Question #: 0000033951

Competition: Regional Competition 1

Round: Round 09

Pair: 6

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which abiotic factor does NOT have a significant effect on the health of the feather boa kelp?

**Answer W:**

---

Temperature

**Answer X:**

---

Nutrient load

**Answer Y:**

---

Dissolved oxygen

**Answer Z:**

---

Low tide

**Correct Answer:**

---

Y

Question #: 0000033489

Competition: Regional Competition 1

Round: Round 09

Pair: 7

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Sediments

**Question Text:**

---

What process causes an estuarine turbidity maximum?

**Correct Answer:**

---

Strong tidal forces push salinity (or a salt water wedge) upriver beneath outflowing river water (resulting in the suspension of sediment or flocculation of dissolved material)

Question #: 0000033959

Competition: Regional Competition 1

Round: Round 09

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - Coastal Law

**Question Text:**

---

Which 1953 law grants state's rights to the natural resources of the seafloor in their jurisdictional waters?

**Answer W:**

---

Outer Continental Shelf Lands Act

**Answer X:**

---

Coastal Zone Management Act

**Answer Y:**

---

Submerged Lands Act

**Answer Z:**

---

States Offshore Lands Act

**Correct Answer:**

---

Y

Question #: 0000034310

Competition: Regional Competition 1

Round: Round 09

Pair: 8

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemistry of Water

**Question Text:**

---

What property of water enables it to be a universal solvent?

**Correct Answer:**

---

The polarity of the water molecule helps water dissociate ionic compounds into their positive and negative ions

Question #: 0000033954

Competition: Regional Competition 1

Round: Round 09

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

What method of coral reef seeding is proving to be more cost and time effective, enabling larger scale reef restoration?

**Answer W:**

---

Collecting coral fragments to replant

**Answer X:**

---

Moving coral boulders to restoration sites

**Answer Y:**

---

Distributing coral gametes over a restoration site

**Answer Z:**

---

Collecting coral gametes to culture in the lab

**Correct Answer:**

---

Z

Question #: 0000033444

Competition: Regional Competition 1

Round: Round 09

Pair: 9

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Research Vessels

**Question Text:**

---

What United States research vessel, launched in 2014, is named after a pioneering astronaut?

**Correct Answer:**

---

Sally Ride OR R/V Sally Ride

Question #: 0000033978

Competition: Regional Competition 1

Round: Round 09

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Which of the following produces a seasonal reversal of wind direction and changes in rainfall patterns?

**Answer W:**

---

Monsoon

**Answer X:**

---

Typhoon

**Answer Y:**

---

Tsunami

**Answer Z:**

---

Nor'easter

**Correct Answer:**

---

W

Question #: 0000033812

Competition: Regional Competition 1

Round: Round 09

Pair: 10

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

Why do larger fishes like tuna have higher levels of metals in their tissues?

**Correct Answer:**

---

Biomagnification OR bioaccumulation OR tuna are at the top of food chain

Question #: 0000033525

Competition: Regional Competition 1

Round: Round 09

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Earth Structure

**Question Text:**

---

From the seafloor to the top of the mantle, what are the layers of typical oceanic crust?

**Answer W:**

---

Pillow basalts, granite, sheeted dikes

**Answer X:**

---

Sheeted dikes, gabbros, peridotite

**Answer Y:**

---

Pillow basalts, sheeted dikes, gabbros

**Answer Z:**

---

Pillow basalts, gabbros, sheeted dikes

**Correct Answer:**

---

Y

Question #: 0000033645

Competition: Regional Competition 1

Round: Round 09

Pair: 11

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Human Impacts

**Question Text:**

---

What is lightering?

**Correct Answer:**

---

Lightering is the process of transferring cargo between vessels of different sizes while offshore. (Cargo is often transferred from a larger vessel to a smaller one for transport to shore. It may also refer to removal of petroleum from a disabled vessel to prevent spills or leakage.)

Question #: 0000033985

Competition: Regional Competition 1

Round: Round 09

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography - Place Names

**Question Text:**

---

Which of these seas is most likely to be the one of the present day remnants of the Tethys Sea?

**Answer W:**

---

Mediterranean

**Answer X:**

---

Sargasso

**Answer Y:**

---

Chukchi [chuck-chee]

**Answer Z:**

---

Red

**Correct Answer:**

---

W

Question #: 0000034087

Competition: Regional Competition 1

Round: Round 09

Pair: 12

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

To which phylum do shipworms belong?

**Correct Answer:**

---

Mollusca

Question #: 0000033542

Competition: Regional Competition 1

Round: Round 09

Pair: 12



## 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Which of the following statements about the coastal ocean is NOT true?

**Answer W:**

---

Salinity and temperature of coastal waters are more variable than waters in the open ocean

**Answer X:**

---

Coastal currents are generally independent of the open-ocean gyres

**Answer Y:**

---

Benthos of coastal oceans are less diverse and abundant than open ocean benthos

**Answer Z:**

---

The mixed layer has more sources of nutrients in coastal waters than in the open ocean

**Correct Answer:**

---

Y

Question #: 0000033749

Competition: Regional Competition 1

Round: Round 09

Pair: 13

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What name is given to the event resulting from a runaway positive feedback between formation of sea ice and land glaciers and increase in the Earth's albedo, leading to global glaciation?

**Correct Answer:**

---

Snowball earth

Question #: 0000034570

Competition: Regional Competition 1

Round: Round 09

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

When considering ocean acidification mitigation, why is it important to conserve seagrass habitats?

**Answer W:**

---

They attenuate water flow to make a barrier

**Answer X:**

---

They harbor most species with high tolerance of ocean acidification

**Answer Y:**

---

The photosynthetic grasses provide a pH buffer

**Answer Z:**

---

There are not enough seagrass beds in the world

**Correct Answer:**

---

Y

Question #: 0000033452

Competition: Regional Competition 1

Round: Round 09

Pair: 14

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - History

**Question Text:**

---

Which marine animal inspired European sailors to tell stories of mermaids?

**Correct Answer:**

---

Manatees OR dugongs

Question #: 0000033874

Competition: Regional Competition 1

Round: Round 09

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Chemical Cycles

**Question Text:**

---

In 2017, researchers in Germany published an article in Nature showing a global decline in which chemical oceanographic parameter?

**Answer W:**

---

Carbon dioxide

**Answer X:**

---

Dissolved oxygen

**Answer Y:**

---

Nitrogen

**Answer Z:**

---

Hydrogen

**Correct Answer:**

---

X

Question #: 0000034363

Competition: Regional Competition 1

Round: Round 09

Pair: 15

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

In which ocean are the Musicians Seamounts?

**Correct Answer:**

---

The Pacific Ocean (or the North Pacific Ocean)

Question #: 0000034433

Competition: Regional Competition 1

Round: Round 09

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - Fisheries Management

**Question Text:**

---

The sea lamprey is an invasive fish species targeted by an ongoing control program in order to maintain which regional American fishery?

**Answer W:**

---

Florida Everglades

**Answer X:**

---

Great Lakes

**Answer Y:**

---

Gulf of Alaska

**Answer Z:**

---

Gulf of Maine

**Correct Answer:**

---

X

Question #: 0000033857

Competition: Regional Competition 1

Round: Round 09

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What are the four major eastern boundary current systems?

**Correct Answer:**

---

California, Peru/Humboldt, Canary, and Benguela currents

Question #: 0000033690

Competition: Regional Competition 1

Round: Round 09

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography - Oceanic Zones

**Question Text:**

---

Approximately what percent of the Earth's surface is covered by the Atlantic Ocean?

**Answer W:**

---

37

**Answer X:**

---

27

**Answer Y:**

---

17

**Answer Z:**

---

7

**Correct Answer:**

---

Y

Question #: 0000034042

Competition: Regional Competition 1

Round: Round 09

Pair: 17

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the reproductive arm structure used by the male octopus?

**Correct Answer:**

---

Hectocotylus [heck-toe-CAW-tillus]

Question #: 0000033532

Competition: Regional Competition 1

Round: Round 09

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

The closure of which body of water prevented mixing between the Atlantic and Pacific Oceans; thus, allowing for differences in salinity, and the formation of the global ocean conveyor belt?

**Answer W:**

---

Drake Passage

**Answer X:**

---

Panama Passage

**Answer Y:**

---

Central American Seaway

**Answer Z:**

---

Paleo-Tethys Ocean

**Correct Answer:**

---

Y

Question #: 0000033891

Competition: Regional Competition 1

Round: Round 09

Pair: 18

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What is the name of the portion of the ocean, important to marine mammal communication, where low frequency sounds may travel for thousands of miles?

**Correct Answer:**

---

SOFAR (Sound Fixing and Ranging) channel or DSC (Deep Sound Channel)

Question #: 0000033629

Competition: Regional Competition 1

Round: Round 09

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

What are the main nitrogenous components of teleost fish excretion?

**Answer W:**

---

Ammonia and nitrogen gas

**Answer X:**

---

Ammonia and urea

**Answer Y:**

---

Ammonia and uric acid

**Answer Z:**

---

Ammonia and trimethylamine oxide

**Correct Answer:**

---

X

Question #: 0000033449

Competition: Regional Competition 1

Round: Round 09

Pair: 19

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Instrumentation

**Question Text:**

---

A frame carrying 10 nets, as well as sensors for chlorophyll and light, is towed behind a slow moving research vessel. What is it called?

**Correct Answer:**

---

MOCNESS (or: Multiple Opening and Closing Net and Environmental Sensing System)

Question #: 0000033974

Competition: Regional Competition 1

Round: Round 09

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Theme

**Question Text:**

---

What index is used to determine when the east-central tropical Pacific is in a period of El Nino or La Nina?

**Answer W:**

---

Nino Anomaly Index (NAI)

**Answer X:**

---

El Nino-Southern Oscillation Index (ENSOI)

**Answer Y:**

---

Nino Nina Index (NNI)

**Answer Z:**

---

Oceanic Nino Index (ONI)

**Correct Answer:**

---

Z

Question #: 0000033827

Competition: Regional Competition 1

Round: Round 09

Pair: 20

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

Which key predator in the Chesapeake Bay, also the state fish of Virginia and Maryland, is an important commercial and recreational fishery species?

**Correct Answer:**

---

Striped bass OR rockfish OR *Morone saxatilis*

Question #: 0000033588

Competition: Regional Competition 1

Round: Round 09

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sediments

**Question Text:**

---

Glauconite may be what kind of sediment?

**Answer W:**

---

Lithogenic

**Answer X:**

---

Biogenic

**Answer Y:**

---

Cosmogenic

**Answer Z:**

---

Authigenic

**Correct Answer:**

---

Z

Question #: 0000034422

Competition: Regional Competition 1

Round: Round 10

Pair: 1

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Instrumentation

**Question Text:**

---

A Flinder's Rod and Kelvin's Balls both serve a similar purpose on a ship. What is it?

**Correct Answer:**

---

Correcting a ship's compass

Question #: 0000022966

Competition: Regional Competition 1

Round: Round 10

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Waves

**Question Text:**

---

What is the general effect of wave refraction on the shape of a coastline?

**Answer W:**

---

Carve out irregular embayments

**Answer X:**

---

Smooth out headlands and fill in embayments

**Answer Y:**

---

Transport sediment uniformly along the coast

**Answer Z:**

---

Push the entire coastline back

**Correct Answer:**

---

X

Question #: 0000033647

Competition: Regional Competition 1

Round: Round 10

Pair: 2

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

Which large-bodied molluscan class has proliferated with recent environmental change?

**Correct Answer:**

---

Cephalopoda OR Cephalopods

Question #: 0000033534

Competition: Regional Competition 1

Round: Round 10

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Chemical species

**Question Text:**

---

Which two cations form significant complexes with bicarbonate in seawater?

**Answer W:**

---

Sodium and Potassium

**Answer X:**

---

Magnesium and Sodium

**Answer Y:**

---

Potassium and Magnesium

**Answer Z:**

---

Sodium and Calcium

**Correct Answer:**

---

X

Question #: 0000022355

Competition: Regional Competition 1

Round: Round 10

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - Coastal Law

**Question Text:**

---

Which U.S. coastal law protects coastal areas that serve as barriers against tidal forces caused by coastal storms and serve as habitat for aquatic species by limiting federal financial assistance for development-related activities within designated areas?

**Correct Answer:**

---

Coastal Barrier Resources Act

Question #: 0000023615

Competition: Regional Competition 1

Round: Round 10

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

What state is about the same size as the largest dead zone in the Gulf of Mexico?

**Answer W:**

---

New Jersey

**Answer X:**

---

Texas

**Answer Y:**

---

Colorado

**Answer Z:**

---

Alaska

**Correct Answer:**

---

W

Question #: 0000033450

Competition: Regional Competition 1

Round: Round 10

Pair: 4

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

How is isostatic change different from eustatic change?

**Correct Answer:**

---

Isostatic is related to a change in land levels rather than changes to ocean basins or volumes of waters within those basins

Question #: 0000033825

Competition: Regional Competition 1

Round: Round 10

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Instrumentation

**Question Text:**

---

The Vienna Standard Mean Ocean Water is an international reference standard for which of the following?

**Answer W:**

---

Salinity

**Answer X:**

---

Isotopic composition

**Answer Y:**

---

Temperature

**Answer Z:**

---

Ionic composition

**Correct Answer:**

---

X

Question #: 0000022441

Competition: Regional Competition 1

Round: Round 10

Pair: 5

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Currents

**Question Text:**

---

In the Southern Hemisphere, what type of eddy would lead to a raised sea surface height?

**Correct Answer:**

---

Warm-core OR Anti-cyclonic OR counter-clockwise

Question #: 0000033997

Competition: Regional Competition 1

Round: Round 10

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sediments

**Question Text:**

---

The peak in Cesium-137 typically observed in sediment cores corresponds to which event?

**Answer W:**

---

The Chernobyl disaster in 1986

**Answer X:**

---

A peak in global nuclear testing in 1963

**Answer Y:**

---

The Fukushima meltdown in 2011

**Answer Z:**

---

Early weapons tests at Bikini Atoll in 1946

**Correct Answer:**

---

X

Question #: 0000033642

Competition: Regional Competition 1

Round: Round 10

Pair: 6

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography - Place Names

**Question Text:**

---

What is the name of the two islands separated by only 4km, but 21 hours in time?

**Correct Answer:**

---

The Diomede Islands OR Diomedes [DIE-oh-meeds]

Question #: 0000033987

Competition: Regional Competition 1

Round: Round 10

Pair: 6

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

What is the initial impact of zebra mussels on invaded waterways?

**Answer W:**

---

Massive reduction of phytoplankton

**Answer X:**

---

Clogged sewer drains

**Answer Y:**

---

Boat fouling

**Answer Z:**

---

No major impact

**Correct Answer:**

---

W

Question #: 0000033482

Competition: Regional Competition 1

Round: Round 10

Pair: 7

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Air-sea Interface

**Question Text:**

---

In oceanographic terms, what does a positive net heat flux signify?

**Correct Answer:**

---

The ocean is warming OR heat is entering the ocean from the atmosphere

Question #: 0000033964

Competition: Regional Competition 1

Round: Round 10

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography

**Question Text:**

---

What is the depth, in meters, of the Indian Ocean's deepest point?

**Answer W:**

---

5608

**Answer X:**

---

6719

**Answer Y:**

---

7125

**Answer Z:**

---

8047

**Correct Answer:**

---

Z

Question #: 0000034430

Competition: Regional Competition 1

Round: Round 10

Pair: 8

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

Which type of muscle produces lactate in fishes?

**Correct Answer:**

---

White muscle

Question #: 0000033536

Competition: Regional Competition 1

Round: Round 10

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Sea Floor Features

**Question Text:**

---

What volcanic feature drives advective heat loss from sediment-covered ridge-flanks by providing permeable recharge and discharge sites?

**Answer W:**

---

Black smokers

**Answer X:**

---

Methane hydrates

**Answer Y:**

---

White smokers

**Answer Z:**

---

Seamounts

**Correct Answer:**

---

Z

Question #: 0000022812

Competition: Regional Competition 1

Round: Round 10

Pair: 9

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology

**Question Text:**

---

An expedition aboard what former naval vessel from 1872-1876 gave birth to the modern sciences of marine biology and oceanography?

**Correct Answer:**

---

HMS Challenger (or Challenger)

Question #: 0000023680

Competition: Regional Competition 1

Round: Round 10

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Salinity

**Question Text:**

---

What is meant by the constancy of composition of seawater?

**Answer W:**

---

Seawater is always salty

**Answer X:**

---

Salt is always sodium chloride

**Answer Y:**

---

The salinity of the ocean is constant

**Answer Z:**

---

The major ions that make up ocean salts are always in the same proportions

**Correct Answer:**

---

Z

Question #: 0000034080

Competition: Regional Competition 1

Round: Round 10

Pair: 10

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy - Marine Protected Areas

**Question Text:**

---

What groundbreaking 1999 state legislation directs the state of California to reevaluate and redesign its system of marine protected areas?

**Correct Answer:**

---

Marine Life Protection Act

Question #: 0000025697

Competition: Regional Competition 1

Round: Round 10

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

How can an ephemeral river lead to greater genetic differentiation between populations?

**Answer W:**

---

Reduced water and gene flow between different areas

**Answer X:**

---

Increased water and gene flow between different areas

**Answer Y:**

---

More habitats available

**Answer Z:**

---

Fewer habitats available

**Correct Answer:**

---

W

Question #: 0000033491

Competition: Regional Competition 1

Round: Round 10

Pair: 11

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemistry of Water

**Question Text:**

---

In the Arctic, what are two seasonal physical processes that alter the salinity of seawater without significantly affecting ion ratios?

**Correct Answer:**

---

Freezing and thawing (Accept: turbulent mixing between water masses of different salinities or water mass advection)

Question #: 0000033955

Competition: Regional Competition 1

Round: Round 10

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - Ecosystem based resource management

**Question Text:**

---

Which U.S. federal agency oversees the National Estuary Program?

**Answer W:**

---

National Oceanic and Atmospheric Administration

**Answer X:**

---

Environmental Protection Agency

**Answer Y:**

---

Fish and Wildlife Service

**Answer Z:**

---

Army Corps of Engineers

**Correct Answer:**

---

X

Question #: 0000023496

Competition: Regional Competition 1

Round: Round 10

Pair: 12

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences - Human Impacts

**Question Text:**

---

What is nuisance flooding?

**Correct Answer:**

---

High-tide flooding OR Flooding which causes public inconvenience (e.g. road closure, overwhelmed storm drains, compromised infrastructure)

Question #: 0000033983

Competition: Regional Competition 1

Round: Round 10

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography

**Question Text:**

---

Which country does NOT border the South China Sea?

**Answer W:**

---

Vietnam

**Answer X:**

---

Philippines

**Answer Y:**

---

Brunei

**Answer Z:**

---

Japan

**Correct Answer:**

---

Z

Question #: 0000034432

Competition: Regional Competition 1

Round: Round 10

Pair: 13

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

The North Atlantic Oscillation occurs when there is a change in the relative strengths of atmospheric pressure between which pressure regions at sea level?

**Correct Answer:**

---

Icelandic Low and Azores High

Question #: 0000033731

Competition: Regional Competition 1

Round: Round 10

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

What is one consequence of a blue-green algae bloom in a lake?

**Answer W:**

---

Hyperoxic waters

**Answer X:**

---

Good boating conditions

**Answer Y:**

---

Osmotic waters

**Answer Z:**

---

Anoxic waters

**Correct Answer:**

---

Z

Question #: 0000033484

Competition: Regional Competition 1

Round: Round 10

Pair: 14

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemical species

**Question Text:**

---

What is the carbonate concentration in micro-equivalents per kilogram of seawater with a carbonate concentration of 255 micromoles per kilogram?

**Correct Answer:**

---

510

Question #: 0000034512

Competition: Regional Competition 1

Round: Round 10

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

How do the currents on the western coast of the US make it a good place to study ocean acidification on nearshore animals?

**Answer W:**

---

Coastal upwelling results in high pH relative to average

**Answer X:**

---

Coastal upwelling results in low pH relative to average

**Answer Y:**

---

The California Current results in high temperatures relative to average

**Answer Z:**

---

The California Current results in low temperatures relative to average

**Correct Answer:**

---

X

Question #: 0000033451

Competition: Regional Competition 1

Round: Round 10

Pair: 15

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the term for algal or diatomaceous growth on any plant surfaces in the ocean?

**Correct Answer:**

---

Epiphytes OR epiphytic

Question #: 0000033538

Competition: Regional Competition 1

Round: Round 10

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences - Notable Scientists

**Question Text:**

---

Which Canadian biologist pioneered stock-recruitment relationships and predicted the maximum amount of biomass harvestable from the sea?

**Answer W:**

---

David Cushing

**Answer X:**

---

William Ricker

**Answer Y:**

---

Jacques Cousteau

**Answer Z:**

---

George Evelyn Hutchinson

**Correct Answer:**

---

X

Question #: 0000022445

Competition: Regional Competition 1

Round: Round 10

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Tides

**Question Text:**

---

What effect will a 30 millibar rise in atmospheric pressure have on the tidal range?

**Correct Answer:**

---

It would have no effect on the range (since the increase in air pressure would depress both the high and low tide equally)

Question #: 0000034009

Competition: Regional Competition 1

Round: Round 10

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - International laws and treaties

**Question Text:**

---

In 1609, Hugo Grotius wrote which book that dominated open ocean law for centuries?

**Answer W:**

---

Voice of the Sea

**Answer X:**

---

Moby Dick

**Answer Y:**

---

The Old Man and the Sea

**Answer Z:**

---

The Freedom of the Sea

**Correct Answer:**

---

Z

Question #: 0000022626

Competition: Regional Competition 1

Round: Round 10

Pair: 17

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Plate Tectonics

**Question Text:**

---

Where did an earthquake-created turbidity current break at least 12 submerged telegraph cables over a 12 hour period?

**Correct Answer:**

---

The Grand Banks OR Newfoundland (DO NOT accept the (North) Atlantic)

Question #: 0000034013

Competition: Regional Competition 1

Round: Round 10

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Laboratory Analysis

**Question Text:**

---

Which of the following seawater properties is NOT usually measured spectrophotometrically?

**Answer W:**

---

pH

**Answer X:**

---

Temperature

**Answer Y:**

---

Nitrate

**Answer Z:**

---

Phosphate

**Correct Answer:**

---

X

Question #: 0000023012

Competition: Regional Competition 1

Round: Round 10

Pair: 18

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What is the main morphological difference between stickleback fish populations?

**Correct Answer:**

---

Number of spines OR body armor

Question #: 0000033519

Competition: Regional Competition 1

Round: Round 10

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Rocks and Minerals

**Question Text:**

---

Which term is used to describe a mineral created in situ from the precipitation of dissolved chemicals?

**Answer W:**

---

Autochthonous [awe-TOK-then-os]

**Answer X:**

---

Allochthonous [al-OCK-then-os]

**Answer Y:**

---

Lithogenous [lith-OJ-en-os]

**Answer Z:**

---

Cosmogenous [coz-MOJ-en-os]

**Correct Answer:**

---

W

Question #: 0000034040

Competition: Regional Competition 1

Round: Round 10

Pair: 19

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy

**Question Text:**

---

Under which authority can the President of the United States designate marine national monuments?

**Correct Answer:**

---

The Antiquities Act OR The Antiquities Act of 1906

Question #: 0000034319

Competition: Regional Competition 1

Round: Round 10

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

How is the distribution of zooxanthellae in giant clam tissues different than in corals?

**Answer W:**

---

They form cylindrical pillars

**Answer X:**

---

They form sheets

**Answer Y:**

---

They are less abundant

**Answer Z:**

---

They are only deep in the tissues

**Correct Answer:**

---

W

Question #: 0000033445

Competition: Regional Competition 1

Round: Round 10

Pair: 20

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Research Vessels

**Question Text:**

---

Which institution operates the R/V Marcus G. Langseth?

**Correct Answer:**

---

Lamont-Doherty Earth Observatory OR Columbia University

Question #: 0000034392

Competition: Regional Competition 1

Round: Round 10

Pair: 20



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - Fisheries Management

**Question Text:**

---

In a 2017 UN Food and Agricultural Organization report, world aquaculture production of food fish is reported for Africa, the Americas, Asia, Europe, and Oceania. Of these regions, what two reported a decline in aquaculture production for 2015?

**Answer W:**

---

Asia and Europe

**Answer X:**

---

Americas and Europe

**Answer Y:**

---

Americas and Oceania

**Answer Z:**

---

Oceania and Africa

**Correct Answer:**

---

Y

Question #: 000022447

Competition: Regional Competition 1

Round: Round 11

Pair: 1

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Plate Tectonics

**Question Text:**

---

What is the deep, active seismic area that delineates a subduction zone?

**Correct Answer:**

---

Benioff zone (Acceptable: Wadati-Benioff zone)

Question #: 0000022400

Competition: Regional Competition 1

Round: Round 11

Pair: 1

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

In low and middle latitudes, a permanent thermocline is always present at approximately which depth, in meters?

**Answer W:**

---

20-100

**Answer X:**

---

100-500

**Answer Y:**

---

200-1000

**Answer Z:**

---

1000-2000

**Correct Answer:**

---

Y

Question #: 0000033671

Competition: Regional Competition 1

Round: Round 11

Pair: 2

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Salinity

**Question Text:**

---

What would allow scientists to assume that net global ocean freshwater transport (averaged over several years) is nearly zero?

**Correct Answer:**

---

(Measurements indicating) mean salinity is nearly constant

Question #: 0000033963

Competition: Regional Competition 1

Round: Round 11

Pair: 2

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology

**Question Text:**

---

The oldest ocean crust known to remain today is approximately how many million years old?

**Answer W:**

---

340

**Answer X:**

---

210

**Answer Y:**

---

170

**Answer Z:**

---

130

**Correct Answer:**

---

W

Question #: 0000033777

Competition: Regional Competition 1

Round: Round 11

Pair: 3

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

Octopus and squid are both molluscs, a phylum characterized by a calcium carbonate shell. How do octopus and squid compare with respect to this molluscan trait?

**Correct Answer:**

---

Octopuses have no shell remnant nor stiff structure Or has lost the ancestral shell.  
Squid have a stiffer structure known as a pen.

Question #: 0000033531

Competition: Regional Competition 1

Round: Round 11

Pair: 3

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Instrumentation

**Question Text:**

---

If you wanted to take in situ images of plankton and particulates with an underwater microscope, what instrument would you use?

**Answer W:**

---

CTD

**Answer X:**

---

ADCP

**Answer Y:**

---

DPPT

**Answer Z:**

---

VPR

**Correct Answer:**

---

Z

Question #: 0000034059

Competition: Regional Competition 1

Round: Round 11

Pair: 4

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Social Sciences

**Question Text:**

---

What has recently been shown to directly change how storm clouds form over the ocean, leading to significantly more powerful thunderstorms and lightning strikes, directly above heavily trafficked shipping lanes in the Indian Ocean and South China Sea?

**Correct Answer:**

---

Ship exhaust or particles in ship exhaust

Question #: 0000034651

Competition: Regional Competition 1

Round: Round 11

Pair: 4



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Air-sea Interface

**Question Text:**

---

Averaged over the global oceans, evaporation exceeds precipitation by approximately how many grams of water per year?

**Answer W:**

---

5 x 10<sup>18</sup>

**Answer X:**

---

126 x 10<sup>18</sup>

**Answer Y:**

---

40 x 10<sup>18</sup>

**Answer Z:**

---

17 x 10<sup>18</sup>

**Correct Answer:**

---

Y

Question #: 0000033635

Competition: Regional Competition 1

Round: Round 11

Pair: 5

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology

**Question Text:**

---

What is the nontechnical name given to the atmospheric river that transports moisture from Hawaii to the US West coast?

**Correct Answer:**

---

The Pineapple Express

Question #: 0000033984

Competition: Regional Competition 1

Round: Round 11

Pair: 5

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following structures does an adult swordfish lack?

**Answer W:**

---

Pectoral fin

**Answer X:**

---

Swim bladder

**Answer Y:**

---

Lateral line

**Answer Z:**

---

Teeth

**Correct Answer:**

---

Z

Question #: 0000033478

Competition: Regional Competition 1

Round: Round 11

Pair: 6

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical

**Question Text:**

---

What is the process called during ice formation when salt is pushed from the forming ice and expelled into the surrounding water?

**Correct Answer:**

---

Brine rejection

Question #: 0000033656

Competition: Regional Competition 1

Round: Round 11

Pair: 6

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - International laws and treaties

**Question Text:**

---

Which UN agreement entered into force in 2016 seeks to prevent, deter, and eliminate illegal, unreported, and unregulated fishing?

**Answer W:**

---

UN Convention on the Law of the Sea

**Answer X:**

---

Port State Measures Agreement

**Answer Y:**

---

UN Fish Stocks Agreement

**Answer Z:**

---

London Convention

**Correct Answer:**

---

X

Question #: 0000034304

Competition: Regional Competition 1

Round: Round 11

Pair: 7

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What genus of bacteria was recently discovered to consume plastic in the ocean?

**Correct Answer:**

---

Ideonella [eye-dee-oh-nell-ah]

Question #: 0000033546

Competition: Regional Competition 1

Round: Round 11

Pair: 7

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geography

**Question Text:**

---

Which is the approximate depth of the Molloy Deep, the deepest point in the Arctic Ocean, in meters?

**Answer W:**

---

5600

**Answer X:**

---

4500

**Answer Y:**

---

3200

**Answer Z:**

---

2800

**Correct Answer:**

---

W

Question #: 0000034427

Competition: Regional Competition 1

Round: Round 11

Pair: 8

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Sediments

**Question Text:**

---

What is the name given to water trapped in open spaces that exist between particles in sediments?

**Correct Answer:**

---

Pore water OR interstitial water

Question #: 0000033956

Competition: Regional Competition 1

Round: Round 11

Pair: 8



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Social Sciences

**Question Text:**

---

The sea scorpion, Eurypterus remipes [you-RIP-tehr-us REM-ip-eez], is which state's state fossil?

**Answer W:**

---

New York

**Answer X:**

---

Vermont

**Answer Y:**

---

Virginia

**Answer Z:**

---

Wyoming

**Correct Answer:**

---

W

Question #: 0000033873

Competition: Regional Competition 1

Round: Round 11

Pair: 9

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

What is the name of the geographic feature in the Antarctic Peninsula that experienced significant calving in the summer of 2017, creating very large icebergs?

**Correct Answer:**

---

Larsen C ice shelf OR Larsen ice shelf

Question #: 0000033821

Competition: Regional Competition 1

Round: Round 11

Pair: 9

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

What is the lowest temperature that Antarctic fishes can withstand, in degrees Celsius?

**Answer W:**

---

-2.5

**Answer X:**

---

0

**Answer Y:**

---

5

**Answer Z:**

---

10

**Correct Answer:**

---

W

Question #: 0000033479

Competition: Regional Competition 1

Round: Round 11

Pair: 10

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Instrumentation

**Question Text:**

---

When was the first CTD developed?

**Correct Answer:**

---

1960s OR 1969

Question #: 0000033942

Competition: Regional Competition 1

Round: Round 11

Pair: 10

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

How would the solubility of carbon dioxide in a warming climate affect the concentration of carbon dioxide in the atmosphere?

**Answer W:**

---

The concentration will increase, causing a positive feedback loop

**Answer X:**

---

The concentration will increase, causing a negative feedback loop

**Answer Y:**

---

The concentration will decrease, causing a positive feedback loop

**Answer Z:**

---

The concentration will decrease, causing a negative feedback loop

**Correct Answer:**

---

W

Question #: 0000034250

Competition: Regional Competition 1

Round: Round 11

Pair: 11

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What species is used instead of pesticides in salmon farming to cure sea lice?

**Correct Answer:**

---

Lumpsuckers OR lumpfish OR Cyclopterus lumpus

Question #: 0000033533

Competition: Regional Competition 1

Round: Round 11

Pair: 11

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical - Waves

**Question Text:**

---

Which of the following is the name of the physical state that ensues when waves reach their maximum size for a given set of storm conditions?

**Answer W:**

---

Full Fetch Conditions

**Answer X:**

---

Storm Surge State

**Answer Y:**

---

Fully Developed Sea

**Answer Z:**

---

High Spring Tide

**Correct Answer:**

---

Y

Question #: 0000022223

Competition: Regional Competition 1

Round: Round 11

Pair: 12

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy

**Question Text:**

---

What flag combination symbolizes a hurricane warning?

**Correct Answer:**

---

Two red, square flags with a black square in the center of each

Question #: 0000022857

Competition: Regional Competition 1

Round: Round 11

Pair: 12



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Biology

**Question Text:**

---

Which of the following fishes undergoes a period of suspended development or diapause?

**Answer W:**

---

Salmon

**Answer X:**

---

Killifish

**Answer Y:**

---

Butterflyfish

**Answer Z:**

---

Sturgeon

**Correct Answer:**

---

X

Question #: 0000033469

Competition: Regional Competition 1

Round: Round 11

Pair: 13

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geology - Geologic Time Scale

**Question Text:**

---

In which geological time period do scientists theorize that all marine phyla first appeared collectively in the ocean?

**Correct Answer:**

---

Cambrian

Question #: 0000033875

Competition: Regional Competition 1

Round: Round 11

Pair: 13

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - International laws and treaties

**Question Text:**

---

Which of the following pieces of legislation implements Annex V of the International Convention for the Prevention of Pollution from Ships in the U.S.?

**Answer W:**

---

Marine Plastic Pollution Research and Control Act

**Answer X:**

---

Clean Water Act

**Answer Y:**

---

National Environmental Policy Act

**Answer Z:**

---

Coastal Zone Management Act

**Correct Answer:**

---

W

Question #: 0000023121

Competition: Regional Competition 1

Round: Round 11

Pair: 14

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Geography

**Question Text:**

---

The adage – "Red sky at night, sailors' delight. Red sky in morning, sailors take warning" – has scientific basis at what latitudes in both the Northern and Southern hemispheres?

**Correct Answer:**

---

At 30 to 60 degrees latitude

Question #: 0000033892

Competition: Regional Competition 1

Round: Round 11

Pair: 14

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical

**Question Text:**

---

Annually, what percentage of carbon dioxide emitted to the atmosphere is absorbed by the ocean?

**Answer W:**

---

49%

**Answer X:**

---

37%

**Answer Y:**

---

74%

**Answer Z:**

---

26%

**Correct Answer:**

---

Z

Question #: 0000034360

Competition: Regional Competition 1

Round: Round 11

Pair: 15

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

What are the two ways that a benthic invertebrate like a limpet can travel long distances?

**Correct Answer:**

---

Rafting AND larval dispersal

Question #: 0000033554

Competition: Regional Competition 1

Round: Round 11

Pair: 15

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Physical

**Question Text:**

---

Which of the following is NOT true regarding non-dispersive, shallow-water waves?

**Answer W:**

---

Phase velocity depends on wavelength

**Answer X:**

---

Group velocity depends on depth

**Answer Y:**

---

Phase and group velocities are the same

**Answer Z:**

---

Energy moves at the same velocity for all wavelengths

**Correct Answer:**

---

W

Question #: 0000033668

Competition: Regional Competition 1

Round: Round 11

Pair: 16

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Technology - Bathymetry

**Question Text:**

---

What is the term for the measurement and description of the physical features of oceans, seas, coastal areas, lakes and rivers?

**Correct Answer:**

---

Hydrography

Question #: 0000022578

Competition: Regional Competition 1

Round: Round 11

Pair: 16



# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Chemical - Laboratory Analysis

**Question Text:**

---

Which of the following analytical instruments would be used to quantify trace metal constituents of seawater?

**Answer W:**

---

Inductively coupled plasma mass spectrometry

**Answer X:**

---

Gas chromatography mass spectrometry

**Answer Y:**

---

Scintillation counting

**Answer Z:**

---

X-ray diffraction

**Correct Answer:**

---

W

Question #: 0000034528

Competition: Regional Competition 1

Round: Round 11

Pair: 17

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Biology

**Question Text:**

---

For filter feeders, what are two ways that food particles can reach the animal?

**Correct Answer:**

---

Any two of the following: external currents, currents created by flagella or cilia, currents created by muscular activity

Question #: 0000033555

Competition: Regional Competition 1

Round: Round 11

Pair: 17

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Technology - Research Vessels

**Question Text:**

---

What does the name of the IODP drill ship Chikyu mean when translated to English?

**Answer W:**

---

Core

**Answer X:**

---

Ocean

**Answer Y:**

---

Earth

**Answer Z:**

---

Drill

**Correct Answer:**

---

Y

Question #: 0000034099

Competition: Regional Competition 1

Round: Round 11

Pair: 18

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Marine Policy

**Question Text:**

---

The National Marine Protected Areas Center is a partnership between NOAA and what other Federal agency?

**Correct Answer:**

---

Department of the Interior

Question #: 0000033767

Competition: Regional Competition 1

Round: Round 11

Pair: 18

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Geology - Plate Tectonics

**Question Text:**

---

What evidence best supports the claim that New Zealand sits on its own continent, Zealandia?

**Answer W:**

---

The ocean over Zealandia is shallow

**Answer X:**

---

It is 6 times larger than Madagascar

**Answer Y:**

---

The crust of Zealandia is mostly thicker than oceanic crust

**Answer Z:**

---

Zealandia is made primarily of siliceous, continental rocks

**Correct Answer:**

---

Z

Question #: 0000033651

Competition: Regional Competition 1

Round: Round 11

Pair: 19

# 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Physical - Water Properties

**Question Text:**

---

What is the definition of potential temperature?

**Correct Answer:**

---

The temperature that a fluid parcel (e.g. water) would attain if raised adiabatically (or without loss of heat) to the sea surface or brought to a standard reference pressure.

Question #: 0000033947

Competition: Regional Competition 1

Round: Round 11

Pair: 19

# 2018 Buzzer Question

Question Type: Toss-Up

Question Format: Multiple Choice

Category: Marine Policy - Marine Protected Areas

**Question Text:**

---

In 2010 President Obama signed the Stewardship of the Ocean, Our Coasts, and the Great Lakes executive order, establishing a national ocean policy. Which of the following was to be developed under this order?

**Answer W:**

---

Coastal and marine spatial planning

**Answer X:**

---

Ocean zoning

**Answer Y:**

---

Fishery management plans

**Answer Z:**

---

Carbon cap and trade program

**Correct Answer:**

---

W

Question #: 0000023000

Competition: Regional Competition 1

Round: Round 11

Pair: 20

## 2018 Buzzer Question

Question Type: Bonus

Question Format: Short Answer

Category: Chemical - Chemical species

### Question Text:

---

To two significant digits, what is the activity coefficient for ionic calcium in seawater if the actual concentration is 10.3 moles per kilogram and the effective concentration is 9.3 moles per kilogram?

### Correct Answer:

---

0.90

Question #: 0000034473

Competition: Regional Competition 1

Round: Round 11

Pair: 20