

Rules:

- 4 people per team, 2 teams (white + red)
- numbered: color 1, color captain, color 3, color 4
- each person has a buzzer, click it and it locks everyone else out. dont buzz until the question is read. (you may interrupt during choices being read)
- wait until moderator acknowledges you (color \_\_ ) to speak
- 2nd chair is captain, they speak for Bonus – Short Answeres.

- 2 types of questions: Toss-up – Multiple Choice and Bonus – Short Answer
- moderator will say question type + multiple choice or short answer
- Toss-up – Multiple Choices are always multiple choice with four choices (wxyz for easier distinguishability)
- for Toss-up – Multiple Choices, the first person to buzz in gets to answer
- if they get it wrong, the question goes to the other team
- you have to answer verbatim or with the letter
- toss-ups give you 4 points, and you also get to answer the Bonus – Short Answer.**
- if you answer wrong, you get 0 points, unless you interrupt, then you get -4**
- Bonus – Short Answer questions are 6 points**
- you have 20 seconds to discuss with your team, then captain answers.
- no point penalty for wrong answer on Bonus – Short Answer

**10 toss-ups and Bonus – Short Answers per round, 6 min.**

- interrupts are when you buzz in before the question is done being read
- if an interrupt is incorrect, then your team loses 4 points
- blurt is when you start talking before moderator acknowledges you
- no points are awarded or lost on a blurt, but the question goes to the other team

6 Minutes per half round, two half rounds with break in between

1) Toss-up – Multiple Choice

What is the most abundant substance in the ocean?

- W) Water
- X) Salt
- Y) Oxygen
- Z) Carbonic acid

Ans: W) water

1) Bonus – Short Answer

What is the molecular formula for water?

Ans: H<sub>2</sub>O

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2) Toss-up – Multiple Choice

Which is the largest ocean?

- W) Atlantic ocean
- X) Indian ocean
- Y) Pacific ocean
- Z) Arctic ocean

Ans: Y) Pacific

2) Bonus – Short Answer

What is a seamount?

Ans: underwater volcano/mountain

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3) Toss-up – Multiple Choice

What famous music group played a song about life in a submersible?

- W) Marianas Trench
- X) Rolling Stones
- Y) The Beatles
- Z) Daft Punk

Answer: The Beatles

3) Bonus – Short Answer

What non-technical term refers to the phenomenon in which a strong, southern branch of the polar jet stream forms a steady frontal boundary across the North Pacific?

Answer: Pineapple Express

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4) Toss-up – Multiple Choice

Who is the author of the famous book published in 1962, Silent Spring, which sparked the environmentalist movement in the US?

- W) Herman Melville
- X) George Orwell
- Y) Rachel Carson
- Z) Jack London

Ans: Y) Rachel Carson

4) Bonus – Short Answer

Who is the author of the novel Moby Dick (or The Whale), which tells the story of the captain of whaling ship's fervent quest to exact revenge on a whale?

Ans: Herman Melville

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5) Toss-up – Multiple Choice

What caused the disastrous sinking of the RMS Titanic in 1912?

- W) It hit a massive iceberg
- X) It was attacked by a shark
- Y) It was destroyed in a seamount eruption
- Z) It hit a barrier island

Ans: W) It hit a massive iceberg

5) Bonus – Short Answer

Who discovered the remains of the RMS Titanic in 1985?

Ans: Robert Ballard

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6) Toss-up – Multiple Choice

Which of the following organisms is least related to the others?

- W) Coral
- X) Squid
- Y) Clam
- Z) Snail

Ans: W) Coral

6) Bonus – Short Answer

What is the name for the filaments in a whale's mouth that allow it to filter krill from water?

Ans: Baleen

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7) Toss-up – Multiple Choice

What is the name for the chemical compound that is broken down to produce energy in chemosynthesis in hydrothermal vent communities?

W) Methane

X) Hydrogen sulfide

Y) Iron (III) oxide

Z) Silicon dioxide

Answer: X) Hydrogen sulfide

7) Bonus – Short Answer

Off the coasts of what islands were hydrothermal vents discovered for the first time?

Answer: Galapagos Islands

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8) Toss-up – Multiple Choice

Which of the following continents is made entirely of desert?

W) Antarctica

X) Asia

Y) Africa

Z) South America

Ans: W) Antarctica

8) Bonus – Short Answer

What is the name for the deepest trench in the world's oceans?

Ans: Marianas trench

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9) Toss-up – Multiple Choice

Which of the following changes of state releases energy?

W) Melting

X) Evaporation

Y) Sublimation

Z) Condensation

Ans: Z) Condensation

9) Bonus – Short Answer

What is the name for the amount of energy it takes for a substance to change from solid to liquid?

Ans: Heat of fusion

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10) Toss-up – Multiple Choice

What is the temperature at which fresh water is most dense?

W) -4 degrees C

X) 0 degrees C

Y) 2 degrees C

Z) 4 degrees C

Ans: Z) 4 degrees C

10) Bonus – Short Answer

Which of the following substances has the highest specific heat?

W) Water

X) Aluminum

Y) Chalk

Z) Gold

Ans: W) Water

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11) Toss-up – Multiple Choice

The oldest seafloor is about how many years old?

w. 30 millions years

x. 180 million years

y. 1.6 billion years

z. 4.5 billion years

Ans: x

11) Bonus – Short Answer

How many different species of sea turtles exist today?

Ans: Seven different species.

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12) Toss-up – Multiple Choice

A large loop of rotating ocean currents is known as:

w. a whirlpool

x. a gyre

y. an eddy

z. a hurricane

ans: x. a gyre

12) Bonus – Short Answer

Name a current in the North Atlantic gyre.

Ans: Gulf Stream, North atlantic drift, Canary current, North equatorial current

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13) Toss-up – Multiple Choice

Most surface waves are created by:

w. wind

x. differences in temperature

y. tides

z. comets

ans: w

13) Bonus – Short Answer

What is the name of a large wave that forms as a result of seismic activity?

Ans: Tsunami

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14) Toss-up – Multiple Choice

What is the average salinity of the ocean?

w. 10 ppt

x. 15 ppt

y. 35 ppt

z. 75 ppt

ans: y. 35 ppt

14) Bonus – Short Answer

Who first proposed the coral atoll formation theory?

Ans: Charles Darwin

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15) Toss-up – Multiple Choice

Ocean acidification is the rapid decrease in the pH of the oceans. It is caused primarily by increased uptake of what gas into the ocean?

w. oxygen

x. nitrogen

y. methane

z. carbon dioxide

Ans: z

15) Bonus – Short Answer

In what year was whaling banned?

ans: 1986

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16) Toss-up – Multiple Choice

What is the name of the manmade channel connecting the Atlantic and Pacific ocean?

W) Suez canal

X) Panama canal  
Y) English channel  
Z) Bering sea  
Ans: X) Panama canal

16) Bonus – Short Answer

In the Panama Canal, ships are lifted up to 85 feet above sea level by large engineered structures.  
What is the name of these structures?

Ans: Locks

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17) Toss-up – Multiple Choice

Of the 14 National Marine Sanctuaries, which one is the closest in proximity to us?

w) Stellwagon Bank  
x) Olympic Coast  
y) Monitor  
z) Monterey Bay  
ans: Stellwagon Bank

17) Bonus – Short Answer:

What is the name of the oceanographic institute located in Cape Cod, MA?  
Woodshole

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18) Toss-up – Multiple Choice

What is the name of the submarine in Jules Verne's 1870 novel, *20,000 Leagues Under the Sea*?

w) the Nautilus  
x) Alvin  
y) Red October  
z) the Turtle  
Ans: w)

18) Bonus – Short Answer

What does SONAR stand for?  
ans: Sound navigation and ranging

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19) Toss-up – Multiple Choice

While you are on a sailboat traveling north, what would you call the side of the boat to your east?

w) bow  
x) stern  
y) port

z) starboard

ans: z) starboard

19) Bonus – Short Answer

What genus are seahorses in?

Answer: Hippocampus

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20) Toss-up – Multiple Choice

What is the name of the famous oceanographer who helped to develop scuba, aka the aqualung?

w) Jacques Piccard

x) James Cameron

y) Sylvia Earle

z) Jacques Yves Cousteau

ans: z)

20) Bonus – Short Answer

What does SCUBA stand for?

ans: Self-contained underwater breathing apparatus