

1st and 3rd periods. In these periods, your team will choose a category and be read ten questions for you to complete in ninety seconds. After each response, the moderator will indicate whether or not it was correct.

Bonus Category: SCIENCE IS HOT!

1. What object accounts for over ninety-nine percent of the mass in our Solar System?

answer: The Sun or Sol

2. Created at temperatures over one thousand degrees Fahrenheit, what carbon and iron alloy is used to construct buildings?

answer: steel

3. Also something a knight would use in defense, what term describes volcanoes with shallow sloping sides like Mauna Kea?

answer: shield volcano

4. X-ray, ultraviolet, and gamma are types of what energy also released by unstable elements?

answer: radiation

5. Charles' gas law says that as gases are heated, what other quantity, the amount of space they occupy, increases?

answer: volume

6. In degrees Celsius, what is the boiling point of water?

answer: 100 degrees Celsius

7. Used in night vision, what kind of images show different temperatures as different colors?

answer: thermograms or infrared thermography or thermal (or thermographic) imaging

8. Water vapor, carbon dioxide, and methane are what kind of gases that trap heat on the Earth, like a gardener's nursery?

answer: greenhouse gases

9. Different than sedimentary and metamorphic, what class of rocks are formed when magma cools?

answer: igneous

10. Smaller than Jupiter's moon Ganymede, the surface of what planet with shortest orbital period reaches eight hundred degrees?

answer: Mercury

Bonus Category: JOHN ADAMS IN DEPTH

1. Adams was a lawyer for people involved in what Massachusetts event in which British soldiers shot Massachusetts townspeople?

answer: The Boston Massacre

2. What third President depicted on the twenty dollar bill was Adams' Vice President?

answer: Thomas Jefferson

3. Adams attended both of these bodies, the second of which signed the Declaration of Independence in 1776.

answer: Continental Congresses

4. This brewer and second cousin of John was a Sons of Liberty leader.

answer: Samuel Adams

5. While Adams was Vice President, what state with cities Knoxville and Chattanooga joined the union?

answer: Tennessee

6. In 1785, Adams met what king while ambassador to Britain?

answer: George III Hanover (prompt on "George")

7. Located at 1600 Pennsylvania Avenue, Adams was the first person to live at what structure designed by James Hoban?

answer: The White House

8. Adams was the longest living President until what man elected in 1980 and 1984 lived longer?

answer: Ronald Reagan [Ford subsequently lived to age 93]

9. Adams was a member of what political party that believed in a strong central government?

answer: Federalist Party

10. Adams gave what type of speech on March 4, 1797, the first day of his Presidency?

answer: Inaugural Address

Bonus Category: DISNEY CHANNEL SHOWS

Given a plot description, name these Disney Channel shows, past and present:

1. Kevin lets Macy be a backup singer on an upcoming album, but Joe and Nick are unimpressed.

answer: JONAS

2. The Pigs in Space are bored, Scooter sings "Bennie and the Jets" with Elton John, the Swedish Chef chases a chicken.

answer: The Muppet Show

3. Justin gets a big zit right before a dance, Alex accidentally uses an animation spell on it, and Max helps to find a way to reverse it.

answer: Wizards of Waverly Place

4. Magica de Spell attempts to steal Scrooge's lucky dime, and is thwarted by Huey, Dewey, and Louie.

answer: Ducktales (also known as Disney's Ducktales)

5. Dave's constant sneezing interrupts his ability to work on music. Rich, Scott, and Smitty try to find what's causing his allergies.

answer: Imagination Movers

6. Professor Coldheart and Frostbite try to freeze the Forest of Feelings, but leave when Love-a-Lot, Funshine, Birthday, and Bedtime use their beams.

answer: The Care Bears

7. The viewer helps Leo, June, Quincy, and Annie with a Little Tulip before Big Jet changes the seasons.

answer: Little Einsteins

8. The main character has a vision of Eddie and Chelsea kissing, but it turns out they were salsa dancing for the Chill Grill's Grand Opening.

answer: That's So Raven

9. Homeless teenager Luke Brower played by Leonardo DiCaprio becomes part of the family of psychiatrist Jason Seaver and kids Mike, Carol, and Ben.

answer: Growing Pains [originally an ABC series, the Disney Channel aired reruns]

10. Ren gets a "C" in woodshop class while Louis, played by Shia LaBeouf, gets assigned a janitor's closet as a temporary locker.

answer: Even Stevens

Bonus Category: DAYS OF THE WEEK

Give these days of the week. Answers may repeat.

1. Martin Luther King, Jr. Day is held on the third one of these in January.

answer: Monday

2. According to film and series about the Permian High School Panthers football team, this is the day of "Night Lights".

answer: Friday

3. Occurring ten days after Ascension Thursday, Christians celebrate Pentecost on this day.

answer: Sunday [it is known as "White Sunday" in Great Britain]

4. Celebrated in New Orleans, Mardi Gras occurs on this day.

answer: Tuesday [the name is French for "Fat Tuesday"]

5. What day of the week is named for the Roman God of Agriculture?

answer: Saturday

6. Thanksgiving is held on the fourth of these in November.

answer: Thursday

7. The December 7, 1941 surprise attack on Pearl Harbor occurred on this day.

answer: Sunday

8. Labor Day is on one of these in September.

answer: Monday

9. The Islamic Jumu'ah prayers are held on this day of the week.

answer: Friday

10. Lisa Loring played this daughter of Gomez and Morticia on *The Addams Family* TV show.

answer: Wednesday Addams

Bonus Category: POPULOUS U.S. CITIES

Given a landmark, name its location, which is the most populous city in its state.

1. NASA's Johnson Space Center in Texas.

answer: Houston

2. The Stratosphere Tower in Nevada.

answer: Las Vegas

3. Marquette University in Wisconsin.

answer: Milwaukee

4. The Mormon Tabernacle in Utah.

answer: Salt Lake City

5. The Statehouse in South Carolina.

answer: Columbia

6. The northern endpoint of the Seward Highway in Alaska.

answer: Anchorage

7. The Learjet Headquarters in Kansas.

answer: Wichita

8. Safeco Baseball Field in Washington.

answer: Seattle

9. U. S. Steel's Fairfield Works in Alabama.

answer: Birmingham

10. Churchill Downs in Kentucky.

answer: Louisville

2nd period: This period contains twenty tossups worth 10 points each. When you think you know the answer, signal with your buzzer and your team will have five seconds to respond.

TOSSUPS:

1. In what 2009 film does Reese Witherspoon voice a 49-foot tall woman that fights a robot probe from another planet?

answer: Monsters vs. Aliens

2. Pinwheel, Sombrero, and Whirlpool are names of what astronomical groups of stars that also include Andromeda and our Milky Way?

answer: galaxy

3. Pencil and paper ready. What fraction, when multiplied by $\frac{6}{7}$, gives a product of $\frac{36}{77}$?

answer: $\frac{6}{11}$ [six elevenths]

4. What Montagnais [mon-TAG-ness] Native American term for "snowshoe netter" describes people in tribes from Greenland, Canada, and Alaska?

answer: Eskimo (accept: Inuit or Yupik, two subgroups)

5. Varina Farms, Westenholme Towne, Hampton Roads, Roanoke, and Jamestown were early colonial settlements in what state whose capital is Richmond?

answer: Virginia

6. *The Trumpet of the Swan*, *Stuart Little*, and *Charlotte's Web* were all written by what author with a colorful name?

answer: E(lwyn) B(rooks) White

7. Permitted by the Sixteenth Amendment and collected by the Internal Revenue Service, the federal government receives 10 to 35 percent of people's earnings through what kind of tax?

answer: income tax

8. Studied in pulmonology, the pleural cavity surrounds what organs containing alveoli, two structures that are used in breathing?

answer: lungs

9. Known as caribes [kuh-REE-base] in Venezuelan rivers, what omnivorous fish of the Amazon basin are known for their sharp teeth?

answer: piranha

10. What is the only note marked as sharp in the key of D major?

answer: F (sharp)

11. Harry Turtledove's *USS Bluefin*, Tom Clancy's *Red October*, and Jules Verne's *Nautilus* are all are what kind of ship that travels underwater?

answer: submarine

12. What Eastern Conference team lost the 2009 NBA final, whose players include Jameer Nelson, Rashard Lewis, and Dwight Howard?

answer: Orlando Magic

13. Contained in Bridget Riley's *Movement in Squares*, Op Art is a genre of art that makes use of what kind of images that play tricks on the eyes?

answer: optical illusions or visual illusions

14. Also the workplace of Squidward Tentacles, what Bikini Bottom restaurant employs SpongeBob SquarePants and has a name meaning a brittle, irritable crustacean?

answer: Krusty Krab

15. The 2014 Winter Olympics will be held in what country's city of Sochi, which is near the Caucasus Mountains and Black Sea and south of Saint Petersburg and Moscow?

answer: Russia

16. An office currently vacant in Illinois, Matthew Denn currently holds what position in Delaware's government, the second ranking executive officer?

answer: Lieutenant Governor

17. In some myth versions, this happened to Polydectes and to Atlas, but not to Perseus because he looked at the reflection in a shield. What happened to people who looked at the head of the Medusa?

answer: turned to stone (accept equivalents)

18. Igor Sikorsky pioneered the rotor layout of what flying device whose name is Greek for "spiral wing" and whose varieties include Apache and Black Hawk?

answer: helicopter

19. The Wii Remote is essentially a three-dimensional version of what common device that comes in mechanical and optical versions that allows users to reposition an arrow on their computer screen?

answer: mouse

20. When Napoleon invaded Portugal in November 1806, the royal court had to flee to what South American country where Portuguese is an official language?

answer: Brazil

4th period: This period contains twenty tossups worth 15 points each. When you think you know the answer, signal with your buzzer and your team will have five seconds to respond.

TOSSUPS:

1. The European Speckled Wood variety of this creature can uniquely survive winter as either a pupa or larva. These Lepidopterans include a Common Mormon species that mimics the appearance of red-bodied swallowtails. For 15 points—name these insects that include Painted Lady, Viceroy and Monarch species which are bright orange and drink flower nectar.

answer: butterflies

2. This tone is about 261.6 hertz, and the alto clef used by viola players has this note on its center line. It is often denoted "4" because it is the fourth such note on a standard keyboard. On sheet music, it is located on a ledger line between the treble and bass clefs. For 15 points—name this note played with a key near the center of a piano.

answer: middle C (prompt on "C")

3. When this food is *sudados* or "sweaty", it is filled with spicy meat and placed in a covered basket to steam. This term is derived from Spanish for "light snack" and when Jacoby Ellsbury stole a base in the 2008 World Series, fans were given a Crunchy Seasoned Beef one by a fast food chain. For 15 points—name this Mexican dish composed of a corn or wheat tortilla rolled or folded around a filling.

answer: taco

4. Each of this planet's poles receives 42 years of sunlight followed by 42 years of darkness. Seen from Earth's perspective, this planet rotates top to bottom. Many of its 27 known moons are named for Shakespearean characters while the planet itself is named for the Greek god of the sky. For 15 points—name this planet between Saturn and Neptune.

answer: Uranus

5. A barn in Buckinghamshire, England, is said to be built with scrap wood from this vehicle headed by Christopher Jones. It was to be accompanied by the *Speedwell* and its passengers signed a Compact upon arriving at the destination. Those passengers included William Brewster, John Alden, and Myles Standish, who desired religious freedom. For 15 points—name this ship that landed at Cape Cod, Massachusetts in 1620 before going to Plymouth.

answer: Mayflower

6. In his book of the Bible, the terrible creatures Leviathan and Behemoth are mentioned and Eliza and Bildad sit with this man without talking because of his pain. Said to be pious, an angel argues that he is good because he is prosperous, but when he does not curse God, Satan asks for permission to afflict his body. For 15 points—name this book of the Bible about a man whose faith is tested and whose name is similar to a generic word for occupation.

answer: The Book of Job

7. When these tissues of the body lack adequate oxygen, lactic acid can build up. Examples of these structures include the gacilis, pectoral, and oblique. The trapezius one helps to maintain shoulder position, the deltoid lifts the arms, and athletes often pull their hamstring one. For 15 points—name these structures that become larger in weightlifting.

answer: muscles

8. Pencil and paper ready. Joe buys a twelve pack of diet soda for \$4.20 and wants to know the price per can. He can calculate this by taking \$4.20 and dividing by the 12 cans. For 15 points—what is the price per can? You get 10 seconds.

answer: 0.35

9. In June 2009 a Tuscan museum displayed a "Vanna" version of this painting, which may mean an unclotted version of the original by the artist or his students existed. The figure married a wealthy Florentine silk merchant, Francesco del Giocondo, and placed her right hand on top of her left as a symbol of a faithful wife. For 15 points—name this Leonardo da Vinci work now found in the Louvre in Paris, whose smile is considered an enigma.

answer: Mona Lisa (accept La Gioconda before "Giocondo")

10. He spent extra time with the Wilkes Barre Red Barons as his major league debut was delayed by Jim Thome. He's had two seasons with 199 strikeouts, and won the MVP and Home Run Derby titles in 2006. This St Louis native joined the 100 home-run club in record time. For 15 points—name this left-handed Phillies first baseman.

answer: Ryan Howard

11. *Betrayed*, *Chosen*, and *Tamed* are three books in a series named for a "night" one of these objects. The second A. A. Milne collection about Winnie was called one of these at Pooh Corner. Laura Ingalls Wilder wrote about a "big" one of these in the woods and a "little" one on the prairie. For 15 points—name this type of structure, one of which owned by three bears was visited by Goldilocks.

answer: house (accept: House of Night series, Little House on the Prairie, et cetera)

12. In April 2009 this man was criticized for saying that he wouldn't ride on a train because of swine flu. He called "jobs" a three-letter word and had to apologize for saying you needed an Indian accent to walk into a Dunkin' Donuts or 7-11 in Delaware. For 15 points—name this man who once called his running mate "Barack America", the current Vice President of the United States.

answer: Joe Biden

13. In the United Kingdom, this competition is judged by Bruno Tonioli, Arlene Phillips, and Craig Revel Horwood. Winners of the U.S. version of this show have included Drew Lachey, Kristi Yamaguchi, and Emmitt Smith. Master P once earned an 8 out of 30 for his Paso doble and other presentations include Cha Cha, Waltz, and Quickstep. For 15 points—name this ABC show in which celebrities move their feet to music.

answer: Dancing With the Stars or Strictly Come Dancing

14. The Phyllis Algeo farm in Ohio claims to have the only living specimen handled by this person, of the Rambo variety. Legend says this Church of New Jerusalem missionary got out of a boat and licked the ground to create a western path animals followed. The items he distributed were free, since cider mills wanted business. For 15 points—name this man who created nurseries of fruit trees for settlers, nicknamed for the small particles he planted.

answer: Johnny Appleseed or John Chapman

15. One of these is called unprecursed if it has no antecedent, meaning the phrase or word it refers to is missing. This part of speech can be indefinite such as the word "anyone", relative such as "who", or possessive like "mine". For 15 points—name these words including he, they, and I that replace persons, places, or things in sentences.

answer: pronouns

16. The fifth highest American men's player in this sport is Mardy Fish, who won the February 2009 Delray Championship. Tournaments in this sport include the Gerry Weber Open, Masters Series Monte Carlo, and the Legg Mason Classic. Other American players include Sam Querrey, James Blake, and Andy Roddick. For 15 points—name this sport played by Roger Federer and Raphael Nadal.

answer: tennis

17. During the equinoxes this peoples' Chichen Itza temple casts a shadow of a plumed serpent which descends the temple and reaches the ground at six P.M. These people with a calendar whose cycle ends in 2012 primarily lived in southern Mexico and Central America, with their largest cities located on the Yucatan Peninsula. For 15 points—name this Pre-Colombian civilization that predated the Incas and Aztecs.

answer: Mayan Civilization

18. In mathematics, seventy factorial is about 1.2 of these, a number whose only prime factors are two and five. The nephew of American mathematician Edward Kasner coined this term, and if you add the suffix "plex" you get ten to this number. The Shannon number says there are more chess games than this number, and it greater than the number of observable atoms in the universe. For 15 points—give this number, a one followed by one hundred zeros, the number of webpages according to a search engine.

answer: googol [spelled differently than Google]

19. The band Rush wrote a song about this character that appears in *Rock Band*. His surname was a term riverboat pilots used for trees with branches at the surface. He tricked two friends to whitewash his fence after he pretended that it was fun and saw his own funeral after a faked death. He is raised by his Aunt Polly and is the boyfriend of Becky Thatcher. For 15 points—name this Mark Twain character, a friend of Huck Finn.

answer: Tom Sawyer (accept either underlined name)

20. Both the Oregon and Mormon Trails ran through this state's Morrill County, past Chimney Rock. Its highest elevation is Panorama point, where this state meets Colorado and Wyoming in its southwest. Cities include Kearney, Grand Island, Bellevue, and Lincoln. For 15 points—name this state that borders South Dakota and Kansas, whose capital is Omaha.

answer: Nebraska