

Stateline Juniors 2023

Game 4

Buzz-In Round

- 1) What personified concept travels with Immortality in a carriage in a poem by Emily Dickinson named "Because I could not stop for" this concept?

Answer: **Death** (accept **Because I could not stop for Death**)

- 2) What mathematical shape is graphed by the equation "y equals 4 x squared plus 4 x plus 4," whose path starts at positive infinity and goes down until it reaches the vertex, where it turns back upward?

Answer: **parabola** (accept an upward-pointing **parabola**)

- 3) What painting stolen from the Louvre in 1911 depicts the wife of Francesco del Giocondo, and is a famous portrait painted by Leonardo da Vinci?

Answer: **Mona Lisa** (accept La **Giocondo**; accept La **Joconde**)

- 4) The Aswan High Dam was built on what river, whose Blue and White arms meet in Sudan before flowing north to the Mediterranean through Egypt?

Answer: **Nile** River

- 5) Name the part of speech whose "passive" and "active" voices make the difference between examples like "it was done" and "it did," since this part of speech communicates an action.

Answer: **verb**

- 6) CAM photosynthesis is used by most of what type of succulent plants, whose types include Saguaro and prickly pear, and which are able to grow in desert environments?

Answer: **cactus** (accept **cacti**; accept **succulents** before it is read)

- 7) What US state is home to Iolani Palace, the only royal palace on American soil, where King Kamehameha once ruled in Honolulu?

Answer: **Hawai'i**

- 8) What President, who failed to weaken the Four Horsemen in a "court-packing" scheme, gave the Fireside Chats to inspire confidence during the Great Depression after succeeding Herbert Hoover?

Answer: **Franklin Delano Roosevelt** (both underlined parts required; accept **FDR**; prompt on "Roosevelt" alone)

- 9) In a 2023 movie, what fictional piano player sings "Peaches, Peaches, Peaches, Peaches, Peaches" for his would-be fiancée before she defeats him with the help of the Super Mario Bros?

Answer: **Bowser**

- 10) Against the advice of the Royal Court, the Catholic Monarchs sponsored what explorer, who oversaw the voyage of the Nina, Pinta, and Santa Maria across the Atlantic in 1492?

Answer: Christopher **Columbus** (accept Cristobal **Colon**)

- 11) Anton Weidinger, Dizzy Gillespie, and Wynton Marsalis played what instrument, a relative of the cornet that is made of brass and has three valves?

Answer: **trumpet**

- 12) What championship concluded in 2022 with Rob Manfred giving the Commissioner's Trophy to Houston after they defeated the Phillies in game six by four runs to one?

Answer: **World Series**

- 13) What particles, which are made of two up quarks and one down quark, are bound by the strong force to neutrons in the nucleus and have a positive charge?

Answer: **protons**

- 14) What Charles Dickens work describes Mr Fezziwig's party and the grave of Tiny Tim, which help Ebenezer Scrooge learn the value of the holiday spirit?

Answer: A **Christmas Carol**

- 15) The Theia [THAY-uh] hypothesis explains the formation of what astronomical body, which includes the Sea of Tranquility and was visited by Artemis 1 and the Apollo missions?

Answer: Earth's **moon** (accept **Luna**)

- 16) What trident-wielding mythical husband of Amphitrite was a patron of horses and the Greek god of the sea?

Answer: **Poseidon** (accept **Neptune**)

- 17) The hopeful proclamation "Free at last, Thank God almighty, we are free at last" ends what 1963 speech, given in Washington D.C. by Martin Luther King?

Answer: **I Have a Dream** speech (prompt on descriptions of "MLK's speech at the March on Washington (for Jobs and Freedom)")

- 18) Limnologists study what bodies of water, which are called "ox-bow" when they form when a meander is cut off from the rest of a river, and which has five "Great" examples in the American midwest?

Answer: **lake** (accept **pond** before "ox-bow" is read)

- 19) Henri Becquerel's work was expanded by a study of actinide salts by what scientist, who discovered polonium and radium and was the first woman to win a Nobel Prize?

Answer: Marie **Curie** (accept Marie **Skłodowska-Curie**)

- 20) Name the object used by Sam and Eric to light fires in William Golding's novel *Lord of the Flies* after it is stolen off of Piggy's face.

Answer: eyeg**lasses** (accept synonyms like **spectacles**)

Volleyball Round

- 1) What literary figure encounters the feuding Grangerford and Shepherdson families while traveling down the Mississippi with the escaped slave Jim in a novel by Mark Twain?

Answer: **Huck** Finn (accept either name; accept **Huckleberry** Finn; accept **The Adventures of Huckleberry Finn**)

- 2) ATP is generated via aerobic respiration in what cell organelle, giving it its common name of "powerhouse of the cell?"

Answer: **mitochondria** (accept **mitochondrion**)

- 3) The Water Tower on Michigan Avenue was one of the few structures to survive a Great 1871 fire in what Illinois city?

Answer: **Chicago** (accept Great **Chicago** Fire)

- 4) Anne Sullivan was the teacher of what social activist and co-founder of the ACLU, who became deaf and blind due to a childhood illness?

Answer: Helen **Keller** (accept Helen Adams **Keller**)

- 5) A sour taste is typical of what type of chemical, which may donate protons in solution and which have pH values less than 7, unlike bases?

Answer: **acid**

- 6) Name the Vanir goddess who rode the boar Hildisvini, or in a chariot pulled by cats, and who governed magic, war, and love in Norse myth.

Answer: **Freyja** (do not accept or prompt on "Frey," "Frigg," or "Frigga")

- 7) The "Blood, Toil, Tears, and Sweat" speech was given by which British Prime Minister, who led the UK during World War II?

Answer: Sir Winston **Churchill**

- 8) What mythical land east of Gondor contains Barad-dur, the Black Tower that serves as the base of operation for Sauron in novels by J.R.R. Tolkien?

Answer: **Mordor**

- 9) Sriya from BLACKSWAN and Aria from X:IN [ex-in] are Indian pop idols who perform with groups based in what home country of BLACKPINK?

Answer: **South Korea** (accept **Republic of Korea**; accept **ROK**; accept **Daehan Minguk**; prompt on "Korea" alone)

- 10) What interpersonal action titles a Klimt painting of two people in gold, as well as Rodin's sculpture of Francesca da Rimini and her lover Paolo?

Answer: **kiss** (accept The **Kiss**; accept Der **Kuss**; accept La **Baiser**)

- 11) What literary character created by Hans Christian Anderson trades her voice for legs that feel like walking on knives so she can try (and fail) to win the love of a human prince?

Answer: The **Little Mermaid** (accept Den **lille havfrue**)

- 12) Numbers like pi and e are NOT what type of number, which have a decimal representation that either ends or repeats infinitely, and which can be written as a fraction?

Answer: **rational** numbers

- 13) What two-word term refers to long periods of time in which the Earth's atmosphere cools and there is extreme glaciation, the last of which was roughly twelve thousand years ago?

Answer: **ice age**

- 14) In 2022, what drink brand collaborated with Rosalia and used its "Creations" platform to produce unpopular flavors Move and Starlight, and is a longtime competitor of Pepsi?

Answer: **Coca-Cola** (accept **Coke**)

- 15) The Illinois city of Aurora has two hundred thousand fewer residents than what western state's city of Aurora, which is about half the size of this state's largest city, Denver?

Answer: **Colorado**

Lightning Round

The categories are...

- 1) Science Cycles
- 2) Famous Artists
- 3) PBS

Science Cycles

Name the following with regards to scientific cycles, or naturally recurring patterns.

- 1) Biological cycle with egg, larva, pupa, and adult stages.

Answer: **life** cycle (accept **metamorphosis** cycle; accept descriptions of the life cycle of any particular **insect**)

- 2) Substance that evaporates into vapor and precipitates as rain.

Answer: **water** cycle

- 3) Seasonal movement of animals, such as birds flying south for the winter.

Answer: **migration** (accept word forms, like **migratory** cycle)

- 4) Cool regions on the Sun that appear in an 11-year cycle.

Answer: **sunspots** (accept **sunspot** cycle)

- 5) Event in which the Moon or Earth casts a shadow on the other.

Answer: **eclipses** (accept solar and/or lunar **eclipse**; accept **eclipse** cycle)

- 6) Element with symbol C whose atmospheric cycle has been disrupted by human activity.

Answer: **carbon** cycle

- 7) Element with atomic number 7 whose cycle includes nitrification, ammonification, and fixation.

Answer: **nitrogen** cycle

- 8) Rise and fall of sea levels, mostly caused by the Moon's gravity.

Answer: **tides** (accept **tidal** cycle)

- 9) Agricultural practice of farming wheat, then oats, then nothing, to preserve soil.

Answer: **crop rotation** (accept three-**field rotation**)

- 10) Type of "rhythm" that naturally manages the 24-hour sleep cycle.

Answer: **Circadian** rhythm (accept **Circadian** cycle)

Famous Artists

I'll give the names of one or more artists and some additional information, and you name their home country. Some answers may be repeated.

1) Michaelangelo and Raphael.

Answer: **Italy** (accept **Italian** Republic; accept Repubblica **Italiana**)

2) Georgia O'Keefe, who painted flowers and skulls in her New Mexico studio.

Answer: **United States** of America (accept **USA**; accept **America**)

3) Jacques Louis David, who painted historical figures like Napoleon.

Answer: **France** (accept **French** Republic; accept La **France**; accept Republique **française**)

4) Hokusai, who painted Thirty-Six Views of Mount Fuji.

Answer: **Japan** (accept **Nihon**-koku; accept **Nippon**-koku)

5) Rembrandt, a Golden Age painter in Amsterdam.

Answer: the **Netherlands** (accept **Dutch** Republic; accept **Nederland**; accept **Holland**)

6) Pablo Picasso, whose Guernica is displayed in Madrid.

Answer: **Spain** (accept Kingdom of **Spain** or Reino de **Espana**))

7) Frida Kahlo and Diego Rivera.

Answer: **Mexico** (or United **Mexican States**; accept Estados Unidos **Mexicanos**)

8) Edward Hopper, whose Nighthawks is set in a brightly lit diner.

Answer: **United States** of America (accept **USA**; accept **America**)

9) Praxiteles, who sculpted Apollo and Hermes in the 4th century BCE.

Answer: **Greece** (accept **Ellada**; accept **Hellenic** Republic or **Elliniki** Dimokratia; accept **Athens**; accept **Athenai**))

10) Edvard Munch, who painted The Scream and sets for Henrik Ibsen.

Answer: **Norway** (accept Kingdom of **Norway**; accept **Norge** or **Noreg**; accept Kongeriket **Norge**)

PBS

Given the setting and one or more characters, name the following shows on PBS or PBS Kids.

- 1) Big Bird, Grover, and Elmo on a Muppet-filled New York street

Answer: **Sesame Street**

- 2) Agents Olive, Otis, and Olympia in Precinct 13579.

Answer: **Odd Squad**

- 3) Prince Wednesday, O the Owl, and baby Margaret in the Neighborhood of Make Believe.

Answer: **Daniel Tiger's Neighborhood** (accept **Daniel Tiger**)

- 4) Tooeey, Trini, and Suki the Malamute in Alaska.

Answer: **Molly of Denali**

- 5) Judges like Paul Hollywood and Mary Berry in a very well-stocked tent.

Answer: The **Great British Bake Off** (accept The **Great British Baking Show**; accept **GBBO**; accept **GBBS**)

- 6) Buster, D.W., and Francine, at Lakewood Elementary School.

Answer: **Arthur**

- 7) Buddy, Tiny, and Don in the Mesozoic Era.

Answer: **Dinosaur Train**

- 8) Miss Frizzle in Walker Elementary School and, also, outer space.

Answer: The **Magic School Bus** (accept The **Magic School Bus Rides Again**)

- 9) Brothers Chris and Martin in various animal habitats, both animated and live-action.

Answer: **Wild Kratts** (accept **Zoboomafoo**)

- 10) Dozens of appraisers and owners of valuable items, in various American cities.

Answer: **Antiques Roadshow**

Final Challenge

- 1) What man, who made a controversial engraving of the Boston Massacre, worked with William Dawes on a plan in which signal lanterns at the Old North Church were used to tell this man to warn American colonists that "the British are coming?"

Answer: Paul **Revere**

- 2) In calculus, the definite integral can compute what quantity between two curves? In geometry, this quantity is found by squaring the side length of a square, and is the amount of two-dimensional space taken up by a shape.

Answer: **area**

- 3) In what novel does a visit to the Hummel family leave Beth so sick with scarlet fever that she cannot lift her sewing needle, saddening her sisters, Meg, Jo, and Amy March? It was written by Louisa May Alcott.

Answer: **Little Women**

- 4) What city, which was targeted by Orban's cannons during Mehmed II's sacking in 1453, became the capital of the Ottoman Empire, was formerly known as Byzantium, and is currently known as Istanbul?

Answer: **Constantinople**

- 5) What metal, which Geiger and Marsden used to carry out an Ernest Rutherford experiment, is found on the periodic table below another precious metal, silver?

Answer: **gold** (accept **Au**)

- 6) What US state is home to Brandeis University in Waltham, state schools in Lowell and Amherst, and several large schools in Cambridge, including MIT and Harvard?

Answer: **Massachusetts**

- 7) Name the video game franchise whose upcoming "Project René" is expected to be a multiplayer version of its usual game format, in which players control the lives of virtual humans like Nancy Landgraab and Bella Goth.

Answer: The **Sims** (accept specific numbered games like The **Sims** 5; do not accept or prompt on other games like "The Sims Medieval" or "Sim City")

- 8) The Carnival of the Animals includes a cello solo named for what animal, which also appears in a Tchaikovsky ballet named for their Lake?

Answer: **swan**

- 9) Malagasy is the official language of what island country, which is across the Mozambique Channel off the southeastern coast of Africa?

Answer: **Madagascar** (accept Republic of **Madagascar**)

- 10) What bodily sense, which may be impaired by keratitis or macular degeneration, uses rod and cone cells to detect photons in the retina of the eye?

Answer: **sight** (accept synonyms like **vision**; accept descriptions of being able to **see**)

- 11) What novel by Miguel de Cervantes follows a man who rides the elderly horse Rocinante, declares his one-sided love for the maiden Dulcinea, and is helped by Sancho Panza as he pretends to be a knight and tilts at windmills?

Answer: Don **Quijote** (accept The Ingenious Gentleman **Don Quijote** of La Mancha; accept El Ingenioso hidalgo **Don Quixote** de la Mancha)

- 12) What kind of building in Rouen [**roo-ON**] was repeatedly painted by Claude Monet with elaborate Gothic architecture, is dedicated to Notre Dame, and is the seat of a Catholic bishop, unlike a normal church?

Answer: **cathedral** (prompt on "church" before it is read)

- 13) Name the literary character who, in a story by Hans Chrisitan Andersen, is born out of a barley flower and almost marries a toad and a mole before she falls in love with a fairy prince who is as small as she is.

Answer: **Thumbelina**

- 14) A painting of what religious figure shows her sitting on the lap of her mother, Saint Anne, and reaching for her son, Jesus?

Answer: **Mary** (accept Virgin **Mary**, Mother **Mary**, or Holy **Mary**; accept the **Madonna**; accept the Holy **Virgin**)

NOTE: The painting is *The Virgin and Child with Saint Anne* by Leonardo da Vinci

- 15) An Atwood machine contains one of what kind of simple machine that changes the direction of a cable or rope passed over it?

Answer: **pulley**

- 16) The Northwest Angle is part of what US state, whose cities include Mankato, Eden Prairie, Duluth, and the twin cities of Saint Paul and Minneapolis?

Answer: **Minnesota**

- 17) What mathematical objects, which can have eigenvalues [EYE-gen-values] and determinants if they are square, are rectangular arrays of numbers in rows and columns?

Answer: **matrixes** (accept **matrices**)

- 18) Jocelyn Bell discovered what type of astronomical body, whose behavior is commonly compared to that of a lighthouse because it emits a beam of radiation as it rotates?

Answer: **pulsar** (prompt on "neutron star")

- 19) Name the poem by Edgar Allan Poe that describes title objects found on sledges, in alarm towers, and churches, that keep "time, time, time" in a sort of Runic rhyme."

Answer: The **Bells**

- 20) Horace Mann advocated for what type of institution, which were re-configured by people like Maria Montessori and whose secondary examples include ninth through twelfth grades?

Answer: **school** (accept public **schools**; accept Montessori **schools**)