2010 Collaborative Middle School Tournament
Round 8

Tossups

1. The Long Walls connected this city to its port, Piraeus ("peer-AY-us"). The Delian ("DEAL-ee-un") League was headed by this city, where plague broke out in 429 BC, killing its leader, Pericles ("PEAR-ick-lees"). Its forces won the Battle of Marathon, but were defeated by Sparta in the Peloponnesian ("PELL-uh-poe-NEES-yun") War. For 10 points, name this democratic city-state of ancient Greece, the home of Socrates ("SOCK-ruh-tees") and Plato.
ANSWER: **Athens**

2. In this novel, a dead parachutist is discovered by the strange introverted character Simon. Sam and Eric are the last followers of one character in this novel. Late in this novel, Roger uses a boulder to kill the overweight intellectual named Piggy. The violent Jack Merridew feuds with the civilized Ralph in, for 10 points, what English novel written by William Golding?
ANSWER: ***Lord of the Flies***

3. The size of these objects is given by the Schwarzschild ("SHWARTZ child") radius. According to quantum mechanics, these objects emit Hawking radiation. One of them, Sagittarius A Star, sits at the center of our galaxy and has four million times the mass of our sun. For 10 points, what are these objects in outer space from which supposedly nothing, not even light, can escape?
ANSWER: **black hole**s

4. This instrument descended from the chalumeau ("SHAL-oo-mow"). An improvised solo by one of these instruments opens George Gershwin's *Rhapsody In Blue.* Famously played by Benny Goodman, this instrument also comes in bass and contrabass varieties, and high notes on this instrument require the register key. For 10 points, name this woodwind instrument tuned in B flat, which plays lower notes than the flute.
ANSWER: **clarinet**

5. This figure's birth was engineered by Sir Pelles ("PELL-us"), his grandfather. A descendant of Joseph of Arimathea ("AIR-uh-muh-THEE-uh"), this youngest of the Knights of the Round Table died after taking a fated trip to Jerusalem, while accompanied by Sirs Bors and Percival. He is the only figure who is allowed to sit in the Siege Perilous, due to his destiny. The son of Sir Lancelot was, for 10 points, what Arthurian figure who found the Holy Grail?
ANSWER: Sir **Galahad**

6. In 1822, the House of Iturbide ("EE-tur-BEE-day") assumed control of this nation for one year. This nation was ruled by an Austrian emperor installed by Napoleon III, Maximilian, although he was overthrown by Benito Juarez ("WAHR-ezz"). The Gadsden Purchase bought land from this country, whose victory at Puebla ("PWAY-bluh") is celebrated as Cinco de Mayo. For 10 points, identify this nation that once owned California and Texas.
ANSWER: **Mexico**

7. Venus' hairstone consists of this mineral with rutile ("ROO-tile") interspersed within. Citrine ("SIT-reen") is formed through heating the "smoky" form of this mineral, whose rarer forms consist of a "rose" form as well as amethyst. Sandstone is primarily composed of this mineral. Silicon dioxide is the primary composition of, for 10 points, what mineral, number 8 on the Mohs scale, which is used in glass and sandpaper?
ANSWER: **quartz**

8. This writer symbolized the warbling of a thrush in a swamp and the western fallen star in a poem entitled "When Lilacs Last in the Dooryard Bloom'd." This author of "Song of Myself" also described a figure "fallen cold and dead" just after "our fearful trip is done" in a poem on Abraham Lincoln's death. For 10 points, name this American writer of the poetry collection *Leaves of Grass* and the poem "O Captain, My Captain."
ANSWER: Walter **Whitman**

9. In this game, one can play the Ruy ("ROY") Lopez or the Dragon Sicilian. ELO rankings were first computed for competitors in this game, whose special moves include the *en passant* ("AHN pah-SAHN") capture and castling. Pieces that move in an L-shape in this game are called knights. For 10 points, name this game in which white and black each try to put their opponent in checkmate.
ANSWER: **chess**

10. pH in this fluid is regulated by the bicarbonate ("bi-CAR-bo-nate") ion buffer system. Cells in this fluid include leukocytes ("LOO-ko-sites") and erythrocytes ("uh-RITH-ro-sites"), while platelets help form clots that stop its flow. It is carried in arteries and veins. For 10 points, name this fluid that delivers oxygen and nutrients to cells and is pumped by the heart.
ANSWER: **blood**

11. Bill Clinton is the United Nations special envoy to this nation. Toussaint L'Ouverture ("TOO-saunt LOO-vair-choor") National Airport was used as the base of operations for its president, René Préval ("ruh-NAY pray-VAHL"), after a 2010 disaster that provoked mass migration to the neighboring Dominican Republic. For 10 points, population centers including the capital of Port-au-Prince were destroyed by a magnitude 7.0 earthquake in what Caribbean nation?
ANSWER: **Haiti**

12. This owner of a stuffed elephant named Ella Funt plays a black-nosed sheep in a Christmas play and dresses up as "the baddest witch in the world." She has a cat named Picky-Picky until it dies, and she also sees herself in an infinite mirror. This best friend of Howie Kemp lives on the same street as Henry Higgins. For 10 points, name this little sister of Beezus, the main character of a series of books by Beverly Cleary.
ANSWER: **Ramona** Geraldine **Quimby** [accept either]

13. This is the only number that satisfies the equation sine x equals x. The additive inverse property says that the sum of any number and its additive inverse equals this number, while the additive identity property says that any number plus this number equals the original number. For 10 points, name this only non-positive whole number, which yields itself when multiplied by any number.
ANSWER: **zero**

14. This native of Tarsus undertook several missionary trips to western areas like Asia Minor and Syria. This author of two epistles to the Corinthians ("core-IN-thee-uns") and one to the Romans advocated the persecution of Jews who accepted Jesus, until he had a life-altering vision on the road to Damascus. For 10 points, identify this Catholic saint born with the name Saul.
ANSWER: St. **Paul** the Apostle [accept **Saul** until mentioned]

15. This man wrote that "injustice anywhere is a threat to justice everywhere" in his Letter from Birmingham Jail. This organizer of the Southern Christian Leadership Conference hoped that his children would be judged by "the content of their character" in his 1963 speech at the Lincoln Memorial. For 10 points, the "I Have A Dream" speech was given by what civil rights leader commemorated on a January holiday?
ANSWER: Martin Luther **King** Jr. [accept **MLK**]

16. This artist's paintings of the New York City skyline include *The Radiator Building, Night*. White objects dot a blue painting by this artist in *Sky Above Clouds*. After her husband's death, she moved to a site where she painted *Black Iris* and another work bisected by a black stripe, *Cow's Skull: Red, White, and Blue*. For 10 points, name this wife of Alfred Stieglitz ("STEE-glitz"), an American painter of flowers and the southwest.
ANSWER: Georgia (Totto) **O'Keeffe**

17. This state suffered the Good Friday Earthquake, and it is the only state divided into boroughs rather than counties. Islands located here include Kodiak and Amaknak ("uh-MACK-nack"), the most populous of the Aleutians ("uh-LOO-shins"). Its largest city lies on the Cook Inlet, and its city of Nome lies on the Bering Sea. For 10 points, name this state, whose cities include Fairbanks and Anchorage, and which is the northernmost state in the United States.
ANSWER: **Alaska**

18. Near the end of this novel, Marya Bolkonskaya ("MAR-yuh BOWL-con-SKY-uh") marries a cavalry officer named Nikolay. Nikolay's sister later marries the former husband of the most fascinating woman in Petersburg, Helene Kuragina ("eh-LEN kur-AH-jin-ah"). By the end of this novel, Natasha Rostova ("ross-TOE-vah") marries Pierre Bezukhov ("BEZ-oo-kov"). For 10 points, name this Leo Tolstoy novel that is notoriously long.
ANSWER: *War and Peace*

19. The two-tiered tracking system during the Civil Rights era was one attempt to avoid this practice. Appropriations bills are not subject to it, and Strom Thurmond once did this for 24 hours and 37 minutes. The cloture rule requires a three-fifths majority to stop it. For 10 points, what is this practice found exclusively in the Senate, often used by minority parties to block legislation from passing?
ANSWER: **filibuster** [accept word forms]

20. Cherenkov ("CHAIR-en-kov") radiation exists when this value is exceeded. The ratio of this quantity in a vacuum to this quantity in a material is that material's index of refraction. It is squared and multiplied by mass to give energy in an equation derived by Einstein, E equals m c squared. For 10 points, name this theoretical upper limit for the speed of any object, equal to about three hundred million meters per second.
ANSWER: **speed of light** [accept **c** before mentioned]

Extra. The liturgical season that ends on this day represents the length of time Jesus spent in the desert, and the season starting on this day ends with Pentecost. The Sunday before this day is known as Palm Sunday, and this holiday commemorates events that occurred two days after Good Friday. For 10 points, name this Christian holiday that celebrates the resurrection of Jesus.
ANSWER: **Easter** Sunday

Bonuses

1. For 10 points each, answer the following about sound waves:
[10] Sound waves are classified as this type of wave. Unlike transverse waves, these waves are characterized by vibration in the same direction as the motion of the wave.
ANSWER: **longitudinal** waves
[10] This property of a sound wave is inversely proportional to its wavelength and is measured in hertz.
ANSWER: **frequency**
[10] In this effect, the frequency of a sound appears to change as its source moves toward or away from an observer.
ANSWER: **Doppler** effect

2. For 10 points each, identify the following figures from myth who lack a key sense: sight.
[10] Polyphemus, one of these one-eyed creatures, claimed that "No Man" blinded him while Odysseus and his men escaped.
ANSWER: **Cyclops**
[10] Loki utilized this figure's blindness to engineer the death of Baldur ("BALL-dur"). This blind Norse god was the one who chucked the deadly mistletoe at the god of light, and was subsequently killed by Vali ("VAHL-ee").
ANSWER: **Hod**ur ("HOED-ur")
[10] This prophet spent seven years as a woman, and was struck blind after getting on Hera's bad side. He offered advice to Odysseus from beyond the grave, and warned Oedipus in vain about pursuing the truth about the death of Laius.
ANSWER: **Tiresias** ("tie-REE-see-us")

3. For 10 points each, identify some of the Seven Wonders of the Ancient World:
[10] This triangular tomb of Khufu ("KOO-foo") stands in a necropolis on the outskirts of Cairo. The Great Sphinx stands nearby.
ANSWER: **Great Pyramid** of Giza
[10] King Nebuchadnezzar ("NEB-uh-kud-NEZZ-ur") of Chaldea ("cal-DEE-uh") built these structures for his wife Amytis ("AM-uh-tis") of Media. They consisted of terraces and irrigation structures that serviced a variety of luscious trees.
ANSWER: **Hanging Gardens** of Babylon
[10] This structure was built to guide ships toward the Egyptian mainland. Its construction was ordered by Ptolemy Soter, and it shares the name of a nearby city named for a great Macedonian conqueror.
ANSWER: **Lighthouse** of **Alexandria** [or **Pharos** of **Alexandria**; accept clear equivalents that use both words]

4. One of his works depicts two hands coming out of a sheet of paper and drawing each other. For 10 points each:
[10] Identify this Dutch artist who often drew impossible objects or scenes. He also drew transformational works such as *Sky and Water I*, which shows a fish gradually changing into a bird.
ANSWER: M(aurits) C(ornelis) **Escher**
[10] Escher was fond of this kind of interlocking tiling of a surface, in which only a few distinct images are arranged and rotated in such a way that they cover a surface with no holes and no overlap.
ANSWER: **tessellation**
[10] In this Escher print series, composed of three works, tessellations are gradually transformed into different shapes. The Italian town of Atranti ("uh-TRON-tee") features prominently in all three works in this series.
ANSWER: ***Metamorphosis***

5. This NBA legend was the first player to record 200 steals and 100 blocks in the same season. For 10 points each:
[10] Identify this superstar who played his college ball at North Carolina under Dean Smith. He led his team to a three-peat in the 90s, retired, and repeated the three-peat again after his comeback.
ANSWER: Michael (Jeffrey) **Jordan**
[10] Michael Jordan spent most of his NBA career for this team, playing alongside Scottie Pippen and Steve Kerr.
ANSWER: **Chicago** **Bulls** [accept either]
[10] During those title runs in the 90s, the Bulls were led by this Buddhist coach, who now coaches the Los Angeles Lakers.
ANSWER: Phil(ip) Douglas **Jackson**

6. At one point in this play, Miranda tells Prince Ferdinand of her love for him while he is rolling logs. For 10 points each:
[10] Name this comedy, Shakespeare's last play, in which the marooned wizard Prospero frees the sprite Ariel after reconciling with King Alonso and regaining the Duchy of Milan.
ANSWER: *The **Tempest***
[10] In *The Tempest*, Prospero enslaves this monstrous son of Sycorax ("SICK-or-ax") after this character attempts to rape Miranda. Robert Browning wrote a poem about this character "upon Setebos ("SET-uh-bos")."
ANSWER: **Caliban**
[10] Caliban's mother, Sycorax, engaged in this practice. Because of it, she is commonly compared to Medea and Circe.
ANSWER: **witch**craft [accept equivalents]

7. At least one part of this bonus requires computation. John rolls a fair, six-sided die twice. For 10 points each:
[10] What is the probability that John rolls two sixes? Express your answer as a fraction in lowest terms.
ANSWER: **1/36**
[10] The probability of John rolling two sixes is equal to the probability of rolling a six times the probability of rolling another six because the two events have what property?
ANSWER: **independence** [or word forms such as "they're **independent**"]
[10] What is the probability that John rolls at least one six? Express your answer as a fraction in lowest terms.
ANSWER: **11/36**

8. The legendary founding of this city took place in 753 BC. For 10 points each:
[10] What city became the center of an empire that dominated the ancient Mediterranean until it declined and fell in the fifth century?
ANSWER: **Rome** [or **Roma**]
[10] In 410 AD Rome was sacked by this barbarian people led by Alaric.
ANSWER: **Goth**s [or **Visigoth**s; do not accept "Ostrogoths"]
[10] Many Goths fled into the Roman Empire to avoid attacks by these nomadic people, who were later led by Attila.
ANSWER: **Hun**s

9. For 10 points each, name these literary devices:
[10] Often found in Old English poetry, this device happens when words repeat the same first letter.
ANSWER: **alliteration**
[10] This occurs when an author gives hints or clues as to what the ending of a novel will be.
ANSWER: **foreshadowing**
[10] This phrase refers to an ending when the conflict is resolved through a way that has little to do with the story.
ANSWER: ***deus ex machine*** [or **god out of the machine**]

10. It is also known as the Ptolemaic model. For 10 points each:
[10] Name this model of the solar system that consisted of the Sun and all the planets rotating around the Earth.
ANSWER: **geocentric** model
[10] The geocentric model was superseded by the heliocentric model of this Polish astronomer.
ANSWER: Nicolaus **Copernicus**
[10] Tycho Brahe ("TY-co BRAH-hay") was a successor of Copernicus. Although he died when his bladder burst on a carriage ride, his data helped this man formulate his three laws of planetary motion.
ANSWER: Johannes **Kepler**

11. For 10 points each, answer these questions about a group created by Article III of the U.S. Constitution:
[10] Sonia Sotomayor ("SO-toe-my-OAR") is the most recent member of what group of justices, whose number is currently standardized at nine?
ANSWER: **Supreme Court** of the United States
[10] This document grants the petitioning party the right to Supreme Court review, and it is the only way to bring a case before the Court.
ANSWER: writ of **certiorari** ("sur-tee-or-AHR-ee")
[10] The Supreme Court exercises this right claimed by Chief Justice Marshall in *Marbury v. Madison* when it reviews a case to determine its Constitutionality.
ANSWER: **judicial review**

12. For 10 points each, name these elements of a certain kind of music:
[10] Some musicians use this technique of making up new melody as the piece progresses, based on chords and scales.
ANSWER: **improvisation**
[10] This type of improvisational singing uses nonsense syllables in place of words.
ANSWER: **scat** singing
[10] Scat and improvisation are both key elements of vocalists in this kind of music. Notable musicians in this kind of music include Louis Armstrong and Duke Ellington.
ANSWER: **jazz**

13. This woman created the fictional Miss Jane Marple. For 10 points each:
[10] Name this English mystery writer who wrote *Death on the Nile* and *Appointment with Death*, and also created Hercule Poirot.
ANSWER: Agatha **Christie** [or Agatha Mary Clarissa **Miller**]
[10] Agatha Christie wrote this novel about the murder of Mister Ratchett aboard the title train, in which all twelve suspects committed it.
ANSWER: ***Murder on the Orient Express***
[10] In this Christie book, Inspector Maine talks about the Soldier Island case, which included a set of ten figurines, with Thomas Legge.
ANSWER: ***And Then There Were None*** [accept ***Ten Little Indians***]

14. For 10 points each, name these protists:
[10] This genus of protozoans ("PRO-toe-zoe-uns") use a pseudopod ("SOO-doe-pod") for locomotion and phagocytosis ("FAY-go-sigh-TOE-sis").
ANSWER: *Amoeba* [or **ameba**; or **am**o**eba**e; or **am**o**eba**s]
[10] *gracilis* is a species in this genus of protists, which use flagella for locomotion and have a red eyespot, which they use to locate light.
ANSWER: *Euglena*
[10] Species in this genus form spherical colonies of up to 50,000 cells, which are bound together by protoplasm. Each cell in the colony has two flagella; the combined motion of the flagella provides the colony's locomotion.
ANSWER: *Volvox*

15. The over 3,000 deaths that resulted from it led to one of the most tragic times in our history. For 10 points each:
[10] Identify this event that saw the destruction of the World Trade Center when planes flew into the Twin Towers.
ANSWER: **September 11**th attacks [or clear-knowledge equivalents]
[10] September 11th was planned by operatives of this group headed by Osama bin Laden.
ANSWER: **Al-Qaeda**
[10] Besides destroying the World Trade Center, members of Al-Qaeda managed to destroy a portion of the E Ring of this building on September 11th.
ANSWER: The **Pentagon**

16. For 10 points each, name these disciples of Jesus:
[10] This doubter asked "how can we know the way?" at the Last Supper. When other disciples indicated potential stoning, he replied "let us also go, that we may die with him."
ANSWER: Saint **Thomas**
[10] This saint's martyrdom is chronicled in Acts 12:2. This brother of John was beheaded, and his body taken to Santiago de Compostela.
ANSWER: Saint **James** the Greater [or **James**, son of Zebedee]
[10] This former tax collector is usually identified with Levi ("LEE-vie"), and is the namesake of the first book of the New Testament.
ANSWER: **Matthew**

17. For 10 points each, name these Eastern European cities:
[10] This city is home to the Bolshoi ("BOWL-shoy") Theatre and St. Basil's Cathedral, which is famous for its colored onion-shaped domes. Other landmarks include the Kremlin, the center of Russian political activity.
ANSWER: **Moscow**
[10] This major city in northern Russia was its capital for over two centuries. It is home to the world's largest art museum, the Hermitage, and is Russia's second-largest city.
ANSWER: **St. Petersburg** [prompt on **Leningrad**]
[10] This city that sits on both sides of the Dnieper ("duh-NEE-per") River is home to the St. Sophia Cathedral and the historic Golden Gate. It is the capital of the Ukraine.
ANSWER: **Kiev**

18. This group recently held a convention that was headlined by Sarah Palin. For 10 points each:
[10] Identify this party of conservative Americans who oppose heavy government spending. They are named for an event that occurred in 1773 in Boston.
ANSWER: **Tea Party**
[10] The Tea Party held its first national convention in this Tennessee city that is home to the Grand Ole Opry and the Country Music Hall of Fame.
ANSWER: **Nashville**
[10] Congresswoman Michele Bachmann, who refused an invitation to speak at the Tea Party National Convention, is from this state. In 2008, it was the site of a recount for a seat eventually won by Al Franken over Norm Coleman.
ANSWER: **Minnesota**

19. The singing David Gamut provides the comic relief in this novel. For 10 points each:
[10] Name this historical novel in which the traitorous Huron Magua ("MOG-wah") kills Cora Munro and Uncas, the son of Chingachgook ("CHIN-gotch-gook").
ANSWER: *The **Last of the Mohicans***
[10] This author, who was despised by Mark Twain, wrote *The Last of the Mohicans* as part of his *Leatherstocking Tales*.
ANSWER: James Fenimore **Cooper**
[10] This central character of the *Leatherstocking Tales* was punished for killing a deer as a youth and is known as Hawkeye.
ANSWER: Nathaniel **"Natty" Bumppo** [accept either]

20. For 10 points each, answer these questions about clouds:
[10] These clouds are characterized by thin, whisplike strands. Found at altitudes above 23,000 feet, they are also known as Mare's Tail.
ANSWER: **cirrus** clouds
[10] These types of clouds are also known as thunder heads. Meaning "column rain" in Latin, they are low lying clouds that involved in extreme weather phenomena including thunderstorms.
ANSWER: **cumulonimbus** clouds
[10] Clouds are formed in this step of the water cycle. In between evaporation and water storage, this term describes the change in state from a gas to a liquid.
ANSWER: **condensation**

Extra. For 10 points each, name these bones of the human body:
[10] Though hip fractures are typically caused by a break in this bone, not the pelvis, this longest bone in the human body is found mostly in the thigh.
ANSWER: **femur**
[10] This lowest part of the spine is found below the sacrum ("SACK-rum"), and consists of several often-fused vertebrae. It can be painfully bruised if you fall too hard on your butt.
ANSWER: **coccyx** [or **tailbone**]
[10] This bone is found near the top of the shoulder and serves to keep the scapula, or shoulder blade, in place. It is sometimes also called the collarbone.
ANSWER: **clavicle**