# ATHENA (Academic Tournament for High School Education N' Achievement) II 

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## PACKET 2 TOSSUPS

1. This legislation was first introduced in Congress by future vice president Charles Curtis in 1921. A provision of this bill passed by the Senate but not included in the House version was named for Carl Hayden. An opponent of this legislation claimed that it meant "homosexual privileges" and "whatever else". This legislation was opposed by the Eagle Forum, organized by (*) Phyllis Schlafly. Despite being ratified by Congress, this bill fell short after only 35 out of the necessary 38 states approved it. For 10 points, name this proposed Constitutional amendment, co-written by Alice Paul, that forbids any and all gender discrimination.



#### Abstract

2. During a 1960 concert in Berlin, this musician improvised lyrics such as "Louis Miller, oh, something about cash" while performing "Mack the Knife." This musician worked with Verve Records to record her eight namesake Song Books, and she recorded songs such as "Cheek to Cheek" on a collaborative album with Louis Armstrong. Chick Webb's band accompanied this musician, who sings about sending "a letter to my mommy" and dropping "a brown and yellow (*) basket," in her 1938 jazz rendition of a nursery rhyme. "A-Tisket, A-Tasket" was popularized by, for 10 points, what scat-singing "First Lady of Song"? ANSWER: Ella (Jane) Fitzgerald <WJ; Fine Arts Other>


3. This person was nearly killed in an attack on Multan Citadel, which occurred during the Mallian Campaign. This leader met a future spouse after sending forces up a supposedly impenetrable fortress in Bactria using tent pegs. A small detachment led upstream by Young Porus was no match for this ruler's forces, who defeated it shortly after crossing the (*) Hydaspes River. According to legend, this man cut the Gordian Knot. This leader won victories at Issus and Gaugamela over Darius III, leading to the fall of the Persian Empire. For 10 points, name this heir to Philip of Macedon.
ANSWER: Alexander the Great [or Alexander III of Macedon] $<\mathrm{KK}$; Ancient and British History $>$
4. Signals from these entities are the subject of the volunteer computing project Einstein@Home. The millisecond type of these entities "recycle" matter through accretion from nearby objects. Irregularities in the velocity of these objects are known as glitches, which may be the result of (*) starquakes. One scientist named the periodic signal from one of these objects "LGM-1" due to its possible extraterrestrial origin. That scientist, Jocelyn Bell, was skipped over for the Nobel Prize despite being the first to observe these objects. For 10 points, name these rotating neutron stars.
ANSWER: pulsars [accept millisecond pulsar; prompt on MSP; prompt on neutron stars before mentioned] <KK; Science Other>
5. The protagonist of this story wears a blue dress and cuffs made of white organdy so that if anyone sees her dead, they will "know at once that she was a lady." A character in this story is embarrassed to realize a house with a secret panel she insisted was in Georgia is actually in Tennessee, after which she accidentally frees the cat Pitty Sing. After a stop at $\left(^{*}\right)$ Red Sammy's restaurant, a family including the children June Star and John Wesley are confronted by an escaped criminal. For ten points, name this short story in which the Misfit murders the Grandmother, by Flannery O'Connor.
ANSWER: "A Good Man is Hard to Find" <CM; American Literature>
6. One person with this surname is currently in a relationship with soccer star Megan Rapinoe. An "exception" named for another person with this surname allows a team to exceed its salary cap to keep a player on its roster. One player with this surname scored 22 points in Game 5 over the Phoenix Mercury en route to a (*) championship-winning sweep of the Washington Mystics. One player with this surname was the oldest member of the 1992 "Dream Team" and won three NBA championships in the 1980s. For 10 points, give this surname shared by Seattle Storm player Sue and Boston Celtics player Larry.
ANSWER: Bird [accept Sue Bird; accept Larry Bird] <KK; Trash>
7. In this play, a man who dreams his brother pushed him into the ocean ends up dead in a keg of wine. A character in this play has loud music played to drown out his mother cursing him. In this play, Rivers and Gray are imprisoned at Pomfret Castle by the second husband of Anne Neville. (*) Buckingham loses favor with the protagonist in this play because he refuses to murder two princes shut up in a tower who are the sons of Edward IV. The protagonist is "determined to prove a villain" in this play in a speech beginning "Now is the winter of our discontent." For 10 points, name this Shakespeare play about a hunchbacked king.
ANSWER: Richard III $<\mathrm{CM}$; British Literature>
8. ABS-CBN returned to the air in this country following the seizure of Channel 4 by rebels. That event was organized by Cardinal Jaime Sin and Radio Veritas. A leader of this country ran for president after Rolando Galman and that leader's husband were killed at this country's national airport. Despite losing that election, she came to power at the head of the (*) People Power Revolution. An autocratic ruler of this country's wife Imelda had a notoriously large collection of shoes. For 10 points, name this country where Corazon Aquino overthrew Ferdinand Marcos.
ANSWER: Republic of the Philippines $<$ KK; World History $>$
9. A B-flat major work in this genre by Beethoven contains a notable cavatina. Ravel's only piece of this type was dedicated to Gabriel Faure and based on a gamelan-inspired one in G minor by Debussy. Antonin Dvorak played the viola in the premiere of a piece in this genre which contains a sustained harmonic $E$ representing the ringing in (*) Bedrich Smetana's ears before his complete deafness. Beethoven wrote three of them for Count Razumovsky. Like symphonies, Franz Joseph Haydn was known as the "father" of this ensemble. For 10 points, name this genre which is played by two violins, a viola, and a cello.

ANSWER: string quartets [prompt on partial answer] [specifically, the individually-mentioned pieces are first string quartets, except for the first piece, which is Beethoven's 13th] <CS; Fine Arts Auditory>
10. One part of this work mentions "the rose as where some buried Caesar bled," and another recalls "the brave music of a distant drum." Another part of this work claims we will "descend Dust into Dust" while "sans Song, sans Singer—and sans End!" A play with a title from this work is about the Miller family's 4th of July; that play is Ah, Wilderness! This work states "The (*) Moving Finger writes, and having writ, moves on." One of this collection's poems mentions "A Flask of Wine, a Book of Verse-and Thou" in its translation by Edward FitzGerald. For ten points, name this collection of quatrains by Omar Khayyam.
ANSWER: The Rubaiyat of Omar Khayyam <CM; World Literature>
11. Pedro Menendez de Aviles sacked a settlement of these people in North America known as Fort Caroline. This group was harassed by quartered soldiers in the "dragonnade" policy, and they stuck a controversial poster on Francis I's bedchamber door during the Affair of the Placards. Leaders of these people such as Gaspard de Coligny [co-leen-YEE] were killed on the orders of (*) Catherine de Medici in the St. Bartholomew's Day Massacre. Louis XIV refused these people toleration in the Edict of Fontainebleau, which repealed Henry IV's earlier Edict of Nantes. For 10 points, name this often persecuted group of French Protestants.
ANSWER: Huguenots [accept French Protestants until mentioned and prompt on partial answers] <KK; European History>
12. A woman with this first name wrote about her friend N.N. Punin's arrest in a poem where she describes "Death sweat on your brow" and declares she "will howl by the Kremlin towers like the wives of the Streltsy." This first name of the author of "Requiem," who bears the surname (*) Akhmatova, is also the first name of a sister of Stiva who refuses a divorce out of love for her son Seryozha. That character, the wife of Alexei, has an affair with Count Vronsky and flings herself under a train. For 10 points, name this first name of a Tolstoy heroine with surname Karenina.

ANSWER: Anna [accept Anna Akhmatova or Anna Karenina] <CM; European Literature>
13. One type of this protein is almost solely found in sauropsids and is much tougher than its counterpart. Two right-handed alpha-helices coiled into a left-handed superhelix characterize an alpha variant of this protein. Featuring many cysteine residues permanent crosslinked, this protein makes up type I and II (*) intermediate filaments. Epidermal cells become filled with this protein during the process of cornification, and ingestion of this protein produces hairballs in cats. For 10 points, name this fibrous protein that makes up most of the skin, hair, nails, and claws.
ANSWER: keratin [accept alpha-keratin; accept beta-keratin] <JP; Biology>
14. Jessie Weston extended the ideas of James Frazer to characterize this object as a fertility symbol in From Ritual to Romance. Chretien de Troyes' last work is subtitled "the story of [this object]." Baginet, Leigh, and Lincoln claimed that it was really a woman's womb and her bloodline, a secret protected by the Priory of Sion. Robert de Boron Christianized this object, which was kept by Anfortas in the (*) Waste Land. The Siege Perilous was reserved for the man who would successfully quest for this object, which Joseph of Arimathea used to catch the blood of Christ. For 10 points, name this object retrieved by Sir Galahad in Arthurian legend, a sacred drinking vessel.
ANSWER: Holy Grail [or Holy Chalice; prompt on grail; prompt on chalice] <CS; Mythology>
15. This state's Republican Party was led by Reince Priebus [rince PREE-bus] before he became chair of the Republican National Committee. In this state, white nationalist Paul Nehlen challenged a sitting congressman in 2016 before launching a 2018 bid for an open seat. This state's governor survived a recall election before seeking the presidency in 2016. It is represented in the Senate by America's (*) first openly lesbian senator, Tammy Baldwin. This is the home state of a politician who was Mitt Romney's running mate during the 2012 election. For 10 points, name this state with its capital at Madison, home to the current Speaker of the House, Paul Ryan.
ANSWER: Wisconsin $<\mathrm{CC}$; Current Events $>$
16. One reactant in this process is obtained by performing the Fischer-Tropf process on methane. This process replaced the cyanamide and the Birkeland-Eyde processes, the former of which required a reactor vessel at 1000 degrees Celsius. Gerhard Ertl was instrumental in determining the mechanism of this process, which was originally catalyzed by osmium before it was replaced by (*) iron. The product of this process is typically used for fertilizer, and its synthesis requires the breaking of the strongest triple bond. For 10 points, name this industrial process that makes hydrogen and nitrogen into ammonia.
ANSWER: Haber-Bosch process $<$ KK; Chemistry $>$
17. This deity is believed to "fly" between the parts of a network of temples which are given this deity's alternate name, Shinmei. This deity's chief minister was historically known as the saio. This deity dwells in and is worshipped at Naiku, part of the Ise Grand Shrine, which is rebuilt every twenty years. Ninigi was given three items by this deity: the sword, the jewel, and the mirror of the (*) Imperial Regalia. Despite the Humanity Declaration, emperors have continued to claim descent from this deity to legitimize their rule. For 10 points, name this sister of Tsukuyomi and Susanoo, the kami of the sun and chief deity of Shintoism. ANSWER: Amaterasu <CS; Religion and Mythology>
18. The treatise Sakuteiki focuses on creating artworks usually named for this material. Robert Smithson's Spiral Jetty was made from this material. It was used for the original version of a statue of two near-identical rectangular people embracing named The Kiss, whose artist also used this material to sculpt twelve hourglass-shaped seats surrounding a Table of (*) Silence. Fifty-six Aubrey holes were discovered at a monument made of a "blue" form of it. Sand often raked to look wavy and this material are used to create so-called "Zen gardens." For 10 points, name this natural material which makes up a "henge" in England.
ANSWER: stone [accept rock or rock gardens; accept obvious equivalents; accept specific types of rock like basalt, but do NOT accept "marble"; prompt on mud or salt] [The Kiss and the Table of Silence were made by Constantin Brancusi [bran-KOOSH]] $<\mathrm{CS}$; Fine Arts Visual $>$
19. This process will only occur if a certain vector satisfies the Laue equations, which is dependent on Miller indices. The opacity of an object will only affect the intensity of this process according to Babinet's principle, which holds that it behaves identically for an object and an equivalent hole. The angular resolution of this phenomenon is expressed in the Rayleigh criterion. This process forms an (*) Airy disk, limiting the focus of a circular lens. A series of slits called a "grating" separates wavelengths of light using this phenomenon. For 10 points, name this phenomenon in which light bends around an obstacle.
ANSWER: diffraction [accept diffraction grating; do not accept or prompt on "refraction"] <KK; Physics>
20. A dialectic model of this discipline involving a "hard core" and "protective belt" was made by Imre Lakatos. The "epistemological anarchy" of Paul Feyerabend opposes a model of it that features gestalt shifts. Thomas Kuhn's model of "paradigm shifts" first described this field, which relies on falsification rather than verificationism according to Karl Popper. In the (*) Novum Organum, Francis Bacon established a standard inductive method for this field. For 10 points, name this broad field which experienced a "Copernican revolution." ANSWER: science [accept scientific revolutions; accept scientific method; accept scientific research] <CS;
Philosophy and Social Science>

## PACKET 2 BONUSES

1. This result lends its name to a very basic sort algorithm that places objects in buckets and forms the basis for radix sort. For 10 points each:
[10] Name this result used to prove the inevitability of hashing collisions. It is also known as Dirichlet's [dee-ree-CLAY's] box principle.
ANSWER: pigeonhole principle
[10] The pigeonhole principle implies that, not counting leap years, two people must share one of these dates when considering a set of 366 random people, though it only takes a set of 70 people to hit a $99 \%$ probability.
ANSWER: birthdays
[10] This probability problem was popularized by Marilyn vos Savant's "Ask Marilyn" column. Mathematician Paul Erdos didn't believe Savant's suggestion of switching doors to increase the odds of winning the car was correct until shown a simulation.
ANSWER: Monty Hall problem $<\mathrm{CS}$; Science Other $>$
2. Ezra Pound declared "Nobody has taught me anything about writing since [this poet] died." For 10 points each: [10] Name this British poet. He wrote of "the Spinner of Years" and "The Immanent Will that stirs and urges everything" which made a ship sink in "The Convergence of the Twain."
ANSWER: Thomas Hardy [the poem is about the HMS Titanic]
[10] When "every spirit upon earth / Seemed fervourless as I," one of these birds sings "a full-hearted evensong / Of joy illimited" in a Hardy poem that opens "I leant upon a coppice gate."
ANSWER: thrush [accept "The Darkling Thrush"]
[10] Hardy's "Channel Firing" is about the opening of this war, which was protested by poets like Siegfried Sassoon and Wilfred Owen in poems such as "They" and "Dulce et Decorum Est."
ANSWER: World War I [or clear-knowledge equivalents like WWI] <CS; British Literature>
3. This scholar integrated his mythographic ideas into the novel Seven Days in New Crete. For 10 points each:
[10] Name this author of The Greek Myths whose euhemeristic approach asserted that European and pagan mythologies are mostly derived from ancient female-dominated moon cults in The White Goddess.
ANSWER: Robert Graves
[10] Graves wrote a novel about the "daughter" of this author of the Iliad, whom Graves believed didn't write the Odyssey.
ANSWER: Homer [or Homeros; accept Homer's Daughter]
[10] Robert Graves and Samuel Butler both believed that the author of the Odyssey was a woman who lived on this island. Either Typhon or Enceladus was trapped under a volcano on this island.

4. This religion was first introduced to the West at the 1893 Parliament of the World's Religions in Chicago. For 10 points each:
[10] Name this religion promulgated by Swami Vivekananda, a disciple of Ramakrishna who carried a copy of the Bhagavad-Gita during his travels.
ANSWER: Hinduism
[10] Vivekananda introduced the Ashtanga variety of this philosophy to the West. Pananjali wrote a set of sutras on this philosophy, which is associated with poses like the Downward Dog and Sun Salutation in the West.
ANSWER: yoga [accept ashtanga yoga]
[10] Hatha yoga suggests that there are seven of these focal points in the psycho-spiritual subtle body. Named for the Sanskrit word for "wheel," the topmost one is called the "crown" one, and the "nabhi" one is also termed the solar plexus.
ANSWER: chakras <CS; Religion and Mythology>
5. The ironclad Huáscar sank the Esmeralda during this war's Battle of Iquique. For 10 points each:
[10] Name this war fought over coastal saltpeter deposits in the Atacama Desert. Peru was forced to enter this war against Chile due to the Treaty of Defensive Alliance.
ANSWER: War of the Pacific [or Guerra del Pacifico]
[10] This treaty ended the War of the Pacific, ceding the region of Tarapaca to Chile.
ANSWER: Treaty of Ancon
[10] The Treaty of Ancon landlocked this nation, leading to its involvement in the Gran Chaco War. This country has two capitals, located at Sucre and La Paz.
ANSWER: Bolivia <KK; World History>
6. Coyote Springs is a fictional band from one of these places in a novel titled for its "blues." For 10 points each:
[10] Name this type of place where Junior grows up as a member of the Spokane tribe.
ANSWER: Native-American reservations
[10] Reservation Blues was written by this author, who also created Junior, the protagonist of The Absolutely True Diary of a Part-Time Indian.
ANSWER: Sherman Alexie
[10] Native-American author Louise Erdrich wrote about Geraldine's sexual assault in a novel titled for a Round one of these structures. Esperanza wants to escape the title one of these structures in a Sandra Cisneros novel.
ANSWER: a house [accept The Round House and prompt on The House on Mango Street] <CM; American
Literature>
7. This is the oldest of the "Big Five" orchestras by over thirty years. For 10 points each:
[10] Pierre Boulez was the first French director of what orchestra? Its "Young People's Concerts" were first televised beginning in 1958.
ANSWER: New York Philharmonic Orchestra [or the NYPO; or the NY Phil]
[10] This longtime conductor for the New York Philharmonic recorded those televised Young People's Concerts. He's most famous for his musical West Side Story.
ANSWER: Leonard Bernstein
[10] The biologically unrelated Elmer Bernstein composed pieces mainly in this genre, as did Erich Wolfgang Korngold and Ennio Morricone. Leonard Bernstein's On the Waterfront is also in this genre.
ANSWER: film scores [accept descriptions of music in movies; prompt on score; prompt on soundtrack] <CS; Fine Arts Auditory>
8. Heide Gottner-Abendroth is the foremost advocate for the study of these societies. For 10 points each: [10] Name this type of society where inheritance is traced through the female line.
ANSWER: matriarchy [or matriarchal society]
[10] The Kurgan hypothesis states tates that speakers of this language originated from the Pontic Steppe. This language was hypothesized by William Jones after analyzing similarities between Latin and Sanskrit.
ANSWER: Proto-Indo-European [or PIE]
[10] Ian Hodder's more recent excavations of a site in this present-day country named Catalhoyuk have contradicted James Mellaart's assertions that it was a matriarchal proto-city. Ancient Troy is believed to be located in this country.
ANSWER: Turkey $<$ CS; Philosophy and Social Science>
9. Some movies have ambiguous endings. For 10 points each, name these movies in which we aren't really sure what happened.
[10] At the end of this 2010 Christopher Nolan movie, it's unclear whether Dominic Cobb, played by Leonardo DiCaprio, has really been reunited with his kids or is still dreaming.
ANSWER: Inception
[10] The unnamed main character of this 2011 movie, played by Ryan Gosling, is stabbed by the dying mobster Bernie Rose before driving into the night. The audience is left unsure whether he lives or dies.
ANSWER: Drive
[10] In this 1938 mob movie, criminal Rocky Sullivan, played by James Cagney, begs for his life before his execution. It is unclear whether he is actually afraid or attempting to stop a gang of children from following his path.
ANSWER: Angels with Dirty Faces <AC; Trash>
10. A deadly form of this disease that does not test positive for HER2 receptors and two hormone receptors is called triple-negative. For 10 points each:
[10] Name this disease screened for by mammograms. Its treatment commonly involves a mastectomy.
ANSWER: breast cancer [prompt on cancer]
[10] Male breast cancer is most common in patients with this other disease. Sufferers of it will have Barr bodies in their body cells and an XXY karyotype.
ANSWER: Klinefelter's syndrome [or KS]
[10] $80 \%$ of breast cancers are ER-positive, meaning they test positive for receptors of these compounds whose negative feedback loop with FSH motivates their use in oral contraceptives. The most important of these compounds has the suffix -diol.
ANSWER: estrogens [accept estradiol] $<\mathrm{CS} ;$ Biology>
11. At the beginning of this story, Theodore abandons the protagonist to marry a wealthier woman. For 10 points each:
[10] Name this story about the maid Felicite, who remains loyal to Madame Aubain despite being chronically underpaid. A dead parrot named Loulou provides the inspiration for Felicite's continued perseverance.
ANSWER: "A Simple Heart"
[10] "A Simple Heart" inspired a Julian Barnes novel titled [this author's] Parrot. He is most famous for writing Madame Bovary.
ANSWER: Gustave Flaubert (accept $\underline{\text { Flaubert's Parrot) }}$
[10] "A Simple Heart" was included in a collection of this many Tales. This is also the number of original Musketeers in the title of an Alexandre Dumas work.

ANSWER: three [accept Three Tales, accept The Three Musketeers] <TDG; European Literature>
12. This person suffered a traumatic head injury while trying to protect a slave from harm. For 10 points each:
[10] Name this conductor of the Underground Railroad, who went back to the South to rescue others after escaping slavery herself. She supposedly "never lost a passenger" during her years of service.
ANSWER: Harriet Tubman
[10] This song was supposedly used by escaped slaves to make their way to the North, as it contained coded instructions for navigation. Its name is a reference to the Big Dipper.
ANSWER: "Follow the Drinking Gourd"
[10] This so-called "President of the Underground Railroad" claimed to have helped over 2,000 slaves reach freedom. His home became known as "Grand Central Station" for its prominence in assisting fugitive slaves. ANSWER: Levi Coffin <KK; American History>
13. This equation is used to find the energy of a system as an eigenvalue of its characteristic function. For 10 points each:
[10] Name this fundamental equation of quantum mechanics. Its time-independent form states that the Hamiltonian of the wavefunction equals the energy times the wavefunction.
ANSWER: time-independent Schrodinger equation
[10] Electron-electron repulsion terms render the Schrodinger equation unsolvable for all atomic systems except this one, which only has one electron in its ground state.
ANSWER: hydrogen atom [or $\underline{\mathbf{H}}$ ]
[10] Transitions to the $n=2$ quantum state from higher energies produce this set of hydrogen spectral lines that lie in the visible range of the spectrum, unlike the Lyman series.
ANSWER: Balmer lines [or Balmer series] < KW; Physics>
14. This leader came to power after the Romans took advantage of her husband Prasutagus' death and annexed his people. For 10 points each,
[10] Name this leader of the Iceni tribe who destroyed the settlements of Colchester and Londinium during her namesake revolt.

## ANSWER: Boudicca

[10] Boudicca's revolt was eventually crushed at this battle by Gaius Suetonius Paulinus despite her overwhelming numerical advantage. It ended resistance to Roman rule in Southern Britain.
ANSWER: Battle of Watling Street
[10] Boudicca's revolt occurred in what is now this island nation, which has been ruled by monarchs such as Victoria and Elizabeth.
ANSWER: Great Britain (accept $\underline{\text { United }} \underline{\text { Kingdom) }}<\mathrm{KK}$; Ancient and British History $>$
15. After a shipwreck, Gemmy Fairley is raised by people of this ethnicity in David Malouf's Remembering Babylon. For 10 points each:
[10] Name this ethnicity. Jimmie Blacksmith is a half-British, half-this ethnicity man who murders several women after being underpaid for the fencing he does for the Newbys.
ANSWER: Australian Aboriginals [or Australian Aborigines; aceept Indigenous Australians or Australian
Natives; prompt on Australians]
[10] The Chant of Jimmie Blacksmith was by Thomas Keneally, who is better known for writing this novel about Oskar's efforts to save Jews during WWII, which was adapted into a movie about a "list."
ANSWER: Schindler's Ark
[10] Disgrace author J. M. Coetzee ["coat"-"zee"] currently resides in Australia, but comes from this home country of Andre Brink and other Sestigers who wrote in Afrikaans.
ANSWER: South Africa <CS; World Literature>
16. This leader managed to fight off an attempt on his life by Ferdinand Cohen-Blind despite being shot five times. For 10 points each:
[10] Name this architect of German unification who was known as the "Iron Chancellor". His victory over Napoleon III in the Franco-Prussian War allowed him to annex the provinces of Alsace and Lorraine.
ANSWER: Otto von Bismarck
[10] Much of Bismarck's success was due to this political philosophy, which focuses primarily on practical factors rather than ideals. Bismarck's policy of starting wars only at opportune times is an example of this philosophy.
ANSWER: realpolitik
[10] Another territory acquired by Bismarck was this pair of duchies previously held by Denmark. Although the Peace of Prague promised these states self-determination, that promise was never fulfilled; either state is acceptable. ANSWER: Schleswig-Holstein [accept either or both underlined portions] <KK; European History>
17. The Piraha language's unique structure makes it a prime candidate for testing this theory, as it is simple to the point of lacking numbers. For 10 points each:
[10] Name this theory, whose weak form suggests that one's language influences their thoughts and decisions. Many tests of this theory focus on subjective experiences like color and time perception.
ANSWER linguistic relativity [or Sapir-Whorf hypothesis; prompt on linguistic determinism]
[10] The Piraha people are indigenous to Brazil, where they live along a tributary of this river. This river lends its name to a Brazilian state, as well as the rainforest that covers its watershed.
ANSWER: Amazon River [or Amazon rainforest; accept Amazonia]
[10] The Amazon is home to the boto, one of these creatures. The boto is doing relatively well compared to its relatives in the Yangtze, which are functionally extinct.
ANSWER: river dolphins $<\mathrm{CS}$; Geography $>$
18. Ornette Coleman, among others, was featured on this artist's album partly titled for her "Plastic Band" which popularized wordless vocalizations in lieu of singing. For 10 points each:
[10] Name this Fluxus artist who was photographed by Annie Leibovitz with her naked husband hours before her husband's 1980 death.
ANSWER: Yoko Ono (the album is Yoko Ono/Plastic Ono Band, a companion to her husband's John Lennon/Plastic Ono Band)
[10] In another famous piece of feminist performance art, Carolee Schneemann pulled an artwork made of this material out of her vagina. Akira Yoshizawa invented wet-folding for use with material in his origami art.
ANSWER: paper [or washi or kami; accept Interior Scroll]
[10] Marina Abramovic recently came back into the spotlight for allegedly performing a "spirit" type of this art with the Clintons. The Michelin Guide awards stars to places which perform this action.
ANSWER: cooking [accept Spirit Cooking; or cookery; accept clear-knowledge equivalents] $<$ CS; Fine Arts Other>
19. This artist once painted herself as the Allegory of Painting. For 10 points each:
[10] Name this daughter of the painter Orazio. She is most famous for paintings like Susanna and the Elders, Judith and her Maidservant, and Judith Beheading Holofernes based on the "Power of Women" topos.
ANSWER: Artemisia Gentileschi
[10] Gentileschi was a follower of this painter, and made her Judith Beheading Holofernes after his. This rather violent man painted The Calling of Saint Matthew.
ANSWER: Michelangelo Merisi da Caravaggio [or Michelangelo Merisi; or Amerighi da Caravaggio]
[10] Both Gentileschi and Caravaggio used this extreme form of chiaroscuro, whose name ultimately comes from a Latin word for "darkness." This technique, sometimes called dramatic illumination, creates a "spotlight effect."
ANSWER: tenebrism [accept tenebroso] <CS; Fine Arts Visual>
20. This thinker presented a hypothesis that every chemical phenomenon could be explained in terms of the collision of particles and clusters of particles in his The Sceptical Chymist. For 10 points each:
[10] Name this scientist whose namesake gas law is sometimes named for Mariotte and states that in an ideal gas, volume is inversely proportional to pressure.
ANSWER: Robert Boyle
[10] Boyle names a version of this quantity at which a real gas will behave like an ideal gas. Boyle's law requires that this quantity, often measured in Kelvins, remains constant.
ANSWER: temperature
[10] For an ideal gas, both the fugacity coefficient and this quantity are equal. This quantity for a real gas demonstrates its deviation from ideal gas behavior.
ANSWER: compressibility factor [or compression factor; accept $\underline{\mathbf{Z}}$; do not accept or prompt on compressibility] <CS; Chemistry>

