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Vocabulary Builder Reference from...

Sean Carroll: Distant time and the hint of a multiverse

| TED Talk

https://www.ted.com/talks/sean_carroll_distant_time_and_the_hint_of_a_multiverse

All Words

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Session 1: Word List

universe

n. everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy

synonym: cosmos, macrocosm

(1) theory of the **universe**, (2) expansion of the **universe**

The **universe** is about 13.8 billion years old.

galaxy

n. an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity

synonym: star cluster, nebula, star system

(1) elliptic **galaxy**, (2) a **galaxy** of famous actors

The Milky Way **galaxy** has numerous water-bearing planets.

random

adj. made, done, or happening without method, conscious decision, or any regular pattern

synonym: incidental, arbitrary, unanticipated

(1) a **random** choice, (2) bombs fell at **random**

To find drunk drivers, police conduct **random** tests.

attach

v. to fasten, join, or connect one thing to another

synonym: fix, fasten, bind

(1) **attach** firmly, (2) **attach** a file to an e-mail

He does not **attach** importance to these rumors.

telescope

n. a device like a tube in shape containing lenses used to magnify and observe distant objects

(1) a binocular **telescope**, (2) look through a **telescope**

This facility has the largest astronomical **telescope** in the country.

blob

n. a small amount or drop of a thick liquid or sticky substance

synonym: chunk, lump, hunk

(1) a big **blob** of yellow, (2) a **blob** of jelly

A **blob** of ink fell on the floor.

roughly

adv. approximately but not precisely; with a violent manner

synonym: approximately, more or less, around

(1) **roughly** explain my idea, (2) **roughly** speaking

Five miles is **roughly** similar to eight kilometers.

approximately

adv. close to a specific number or time but not exactly that number or time

synonym: about, around, roughly

(1) **approximately** 3 feet long, (2) **approximately** same

This trail takes **approximately** 2.5 hours.

observable

adj. that can be noticed or seen

synonym: visible, perceptible, detectable

(1) **observable** change, (2) experimentally **observable**

Any theorem relies on both **observable** fact and assumption.

bang

v. to hit or cause to hit something in a way that makes a loud noise

synonym: crash, hit, smash

(1) **bang** his fist on a desk, (2) **bang** a phone down

My father tried to **bang** mathematics into my head since childhood.

admire

v. to have regard for or respect for someone's qualities or the actions they have performed

synonym : esteem, respect, marvel

(1) **admire** the subtlety of the distinctions, (2) **admire** kids with attitude

We all **admire** him because he is a nobleman.

evolutionary

adj. relating to or denoting how living things develop or change from earlier forms

synonym : developmental, mutative, transformative

(1) ecology and **evolutionary** biology, (2) the **evolutionary** process

Evolutionary algorithms can find ways to optimize that humans do not anticipate.

ancestor

n. a person from whom one is descended; a forefather

synonym : forebear, forefather, progenitor

(1) **ancestor** language, (2) earliest human **ancestor**

My remote **ancestor** immigrated to the United States from Ireland in the 1800s.

adapt

v. to make fit for or change to suit a new purpose or environment

synonym : adjust, acclimate, accustom

(1) **adapt** fully to the environment, (2) **adapt** as needed

I advised him to **adapt** to his new surroundings.

evolve

v. to develop gradually, or to cause the development of something or someone gradually

synonym : develop, mature, grow

(1) **evolve**, (2) **evolve** over the past decade

Eyeless fish **evolved** in dark caves.

cosmology

n. the scientific study of the nature and origin of the universe

synonym : cosmogony

(1) physical **cosmology**, (2) modern **cosmology**

Cosmology evolved from people's philosophical questions about the natural world.

clue

n. an object, a piece of evidence, or some information that helps someone to find the answer to a problem, question, or mystery

synonym : hint, indication, inkling

(1) a **clue** about the crime, (2) a **clue** to the diagnosis

The police couldn't find a **clue** to her whereabouts.

velocity

n. the rate of change of an object's position with respect to time, often measured in meters per second (m/s)

synonym : speed, rapidity, swiftness

(1) initial **velocity**, (2) high **velocity**

The **velocity** of the car was too fast for the road conditions.

expand

v. to increase or to make something greater in size, number, or importance

synonym : extend, grow, boost

(1) **expand** a lineup, (2) **expand** agricultural output

They hope to **expand** their business worldwide.

dense

adj. containing a large number of people or something with little space between them

synonym : heavy, thick, idiotic

(1) nutrient- **dense** foods, (2) **dense** forests

The entire mountain is covered in **dense** rainforest.

squeeze

v. to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness

synonym : compress, crush, clamp

(1) **squeeze** a lemon, (2) **squeeze** a confession

She **squeezed** the toothpaste tube from the middle to get the last bit out.

temperature

n. the degree of hotness or coldness of a thing or place
synonym : climate, warmth, degree

(1) extreme **temperatures**, (2) the atmospheric **temperature**

Cities around the world set records for highest **temperatures** this summer.

gravitational

adj. relating to or caused by gravity (= the force that attracts objects towards one another)

synonym : weighty, heavy, earthbound

(1) **gravitational** energy, (2) **gravitational** waves

The **gravitational** force of the black hole was so strong that nothing, not even light, could escape.

imperfectly

adv. in a faulty or incomplete way

synonym : amiss, insufficiently, clumsily

(1) **imperfectly** developed, (2) **imperfectly** known disease

He created an **imperfectly** shaped torso.

spot

n. a particular location or place; a small round or roundish area, differing in color or feels from the surface around it

synonym : dot, mark, place

(1) beauty **spot**, (2) a **spot** on his honor

This remote **spot** is rarely visited.

atom

n. the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus

synonym : particle, element, fraction

(1) oxygen **atom**, (2) neutral hydrogen **atoms**

The outermost electron shell of an **atom** determines its chemical characteristics.

collapse

v. to fall down or give way suddenly, often after breaking apart

synonym : tumble, spill, bankruptcy

(1) the stock market **collapsed**, (2) ready to **collapse**
The roof finally **collapsed** after three days and three nights of heavy snowfall.

arrangement

n. a plan or preparation for the future event; the action or process of placing things in a particular order

synonym: placement, configuration, account

(1) **arrangement** of the furniture, (2) **arrangement** committee

As a first **arrangement**, we agreed to meet the following Friday.

physicist

n. a scientist who specializes in the field of physics

(1) talented **physicist**, (2) theoretical **physicist**

Einstein was an outstanding and famous **physicist** of the 20th century.

contribution

n. the act of giving something, especially money, to a particular cause or organization; a voluntary gift as of money or service or ideas made to some worthwhile cause

synonym: donation, gift, offering

(1) make a positive **contribution**, (2) **contribution** to society

His **contribution** to the charity was a generous donation of money.

entropy

n. a scientific concept that is most commonly associated with a state of disorder, randomness, or uncertainty

synonym: randomness

(1) **entropy** calculation, (2) **entropy** conservation

Since the second law of thermodynamics is applicable to the universe, the **entropy** of the universe continues to increase.

disorder

n. an untidy state or a lack of organization; a physical condition or illness that causes problems with how a section of the body or brain functions

synonym : chaos, disturbance, disease

(1) the files are in complete **disorder**, (2) people with bipolar **disorder**

The doctor prescribed some medicine for the mental **disorder**.

chaotic

adj. without any order or organization; extremely disorganized, unpredictable, and confusing

synonym : disorderly, cluttered, topsy-turvy

(1) the **chaotic** economic situation, (2) **chaotic** theory

Change is also occurring in Turkey as a result of **chaotic** reform.

formula

n. a group of symbols, letters, or numbers that represent a rule, law, or mathematical statement

synonym : expression, recipe, procedure

(1) structural **formula**, (2) a binomial **formula**

The teacher told the students to memorize the math **formula**.

engrave

v. to carve, cut, or etch a design, message, or image onto a surface, often using a sharp tool or laser; to permanently record or mark something in a lasting manner

synonym : carve, inscribe, etch

(1) **engrave** initials, (2) **engrave** metal

He wanted to **engrave** his wedding ring with their initials as a lasting symbol of their love.

tomb

n. a large stone structure or underground chamber in which the dead are buried

synonym : grave, burial site, mausoleum

(1) bury in **tomb**, (2) the ancient **tomb**

The **tomb** of the unknown soldier honored the bravery and sacrifice of those who lost their lives in battle.

quants

n. quantitative analysts or individuals who specialize in using quantitative methods, including mathematical and

statistical modeling, in analyzing financial markets and making investment decisions

synonym : quantitative analysts, number crunchers, data scientists

(1) the team of **quants**, (2) industry **quants**

Many financial **quants** work in investment banks, using complex mathematical models to analyze financial data.

rearrange

v. to change the order or position of things already made; to change the time, date, or place of an event already planned

synonym : readjust, reorganize, reconstruct

(1) **rearrange** the furniture, (2) **rearrange** his schedule

Please **rearrange** these files as we start a new project tomorrow.

constituent

n. one of the parts of the whole; a person represented by an elected official

synonym : member, element, part

(1) **constituent** assembly, (2) the solid **constituent** of blood cells

Each **constituent** member of the council has the right to vote on important decisions.

macroscopic

adj. visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools

synonym : large, visible, apparent

(1) **macroscopic** observation, (2) **macroscopic** anatomy

The **macroscopic** view of the galaxy is simply breathtaking.

individual

n. a single person or thing, as distinct from a group

synonym : person, being, self

(1) a private **individual**, (2) **individual** freedom

As an **individual**, he had the right to make his own decisions and live his life as he saw fit.

configuration

n. the arrangement or pattern of something or a group of related things

synonym: arrangement, composition, formatting

(1) **configuration** of the system, (2) engine **configuration**

The **configuration** of molecules in steel changes significantly with temperature.

crucial

adj. extremely vital or necessary

synonym: essential, pivotal, vital

(1) **crucial** information, (2) a **crucial** issue for women

The revitalization of technology companies is **crucial** to the country's growth.

insight

n. the ability to gain an accurate and deep understanding of people or situations; an accurate and deep understanding of what something is like

synonym: wisdom, discernment, understanding

(1) a profound **insight**, (2) share my **insights**

We gained various **insights** by analyzing the vast amount of data owned by the company.

thermodynamics

n. the area of physics that deals with heat, work, and temperature and their relation to energy, entropy, and the physical properties of matter and radiation

(1) applied **thermodynamics**, (2) the laws of **thermodynamics**

The second law of **thermodynamics** denies the existence of a perpetual motion engine.

isolate

v. to physically or socially separate someone or something from other people or things

synonym: separate, sequester, insulate

(1) **isolate** a compound, (2) **isolate** a patient

You should not **isolate** them from the community.

arrow

n. a thin, pointed projectile designed to be shot from a bow; a symbol or pointer that is shaped like an arrow

synonym : shaft, dart, projectile

(1) **arrow** pointing, (2) **arrow** diagram

The archer aimed his **arrow** carefully at the target.

unfortunately

adv. by bad luck; unluckily

synonym : regrettably, unluckily, alas

(1) **unfortunately** caught in a shower, (2) even more **unfortunately**

The treatments were done but, **unfortunately**, were unsuccessful.

modern

adj. of or belonging to the present time or recent times

synonym : contemporary, stylish, current

(1) **modern** poetry, (2) pre- **modern** agricultural society

Their headquarters are in a **modern** skyscraper.

bunch

n. a grouping of several similar things which are growing or fastened together

synonym : group, assemblage, bundle

(1) a **bunch** of trees, (2) a **bunch** of schoolgirls

One bad apple spoils the whole **bunch**.

undergraduate

n. a student who is studying for their first degree at a university or other higher education institution

synonym : college student, freshman

(1) engineering **undergraduate**, (2) **undergraduate** course

The class was composed of both **undergraduate** and graduate students.

physics

n. the science of matter and energy and their interactions

(1) nuclear **physics**, (2) laws of **physics**

He studied the **physics** of radiation.

graduate

n. a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree

synonym :

alumna, alum, grad

(1) **graduate** degree program, (2) honor **graduate**

Many employers hire **graduate** trainees to train as managers.

gravitation

n. the force by which a celestial body, such as the Earth, pulls objects toward its center; the attraction between two or more objects due to their mass

synonym: attraction, pull, gravity

(1) terrestrial **gravitation**, (2) universal **gravitation**

The force of **gravitation** keeps the planets in our solar system in orbit around the sun.

emphasize

v. to give or show particular importance to something

synonym: highlight, accentuate, stress

(1) **emphasize** her words, (2) **emphasize** a direct relationship

Use italics or capitals to **emphasize** a word in a piece of writing.

puzzle

n. a situation that is difficult to follow or solve; a game, problem, or toy that tests a person's ingenuity or knowledge; (verb) to cause someone to feel confused because of something difficult to understand

synonym: plight, maze, (verb) perplex

(1) crossword **puzzle**, (2) mathematical **puzzle**

This jigsaw **puzzle** is challenging because there are no pictures.

accent

n. a distinctive way of pronouncing the words of a language that shows which area, country, or social group a person comes from; particular importance or significance

synonym: articulation, inflection, pronunciation

(1) a foreign **accent**, (2) put the **accent** on comfort

She has a thick southern **accent**.

mystery

n. something difficult to understand or explain; a secret or enigmatic quality that adds to the fascination or interest of something; a genre of fiction that involves the solution of a crime or a puzzle

synonym: enigma, puzzle, secret

(1) **mystery** novel, (2) unsolved **mystery**

The **mystery** surrounding the disappearance of the traveler has yet to be solved by authorities.

speculate

v. to form a theory or conjecture or guess about a subject without solid evidence

synonym: assume, conjecture, infer

(1) **speculate** about the reason, (2) **speculate** on the outcome

He **speculated** that this investment would lead to success.

accelerate

v. to make something faster or earlier; to cause to develop or progress more quickly

synonym: speed up, quicken, rev

(1) **accelerate** a chemical reaction, (2) **accelerate** the car

The government tried to **accelerate** the commercialization of this development.

cubic

adj. having the shape of a cube or being of three dimensions; measured in units that are the third power of a linear unit

synonym: three-dimensional, boxlike, cubical

(1) **cubic** meter, (2) **cubic** structure

The package was a **cubic** shape, which made it easier to stack on the shelf.

centimeter

n. a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter

(1) **centimeter** measurement, (2) thirty **centimeters** tall

The room was only one **centimeter** wider than the piano, making it a tight fit.

particle

n. a small piece of something; a word or piece of a term with grammatical function but little or no significance

synonym : atom, grain, bit

(1) charged **particle**, (2) **particle** energy

We can calculate the position of the **particles** statistically.

radiation

n. the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health

synonym : dissemination, emission, irradiation

(1) exposure to **radiation**, (2) electromagnetic **radiation**

He tried every possible treatment, including chemotherapy and **radiation** therapy.

exert

v. to put forth effort; to put into action; to bring into play

synonym : exert, apply, use

(1) **exert** control, (2) **exert** influence

He **exerted** himself to lift the heavyweight.

perpetual

adj. continuing for an extended period in the same way without stopping or being interrupted

synonym : enduring, unchanging, incessant

(1) **perpetual** motion machine, (2) **perpetual** struggle

The company employs a **perpetual** inventory system.

impulse

n. a sudden strong and unreflective wish or need to do something; the electrical discharge that travels along a nerve fiber

synonym : stimulation, provocation, urge

(1) a combative **impulse**, (2) profound religious **impulses**

Nerve **impulses** cross a synapse through the action of neurotransmitters.

dilute

v. to make a substance less concentrated by adding a liquid or another substance to it

synonym : weaken, thin, reduce

(1) **dilute** acid with water, (2) **dilute** a great idea

She **diluted** the concentrated juice with water.

implication

n. something that is inferred or indirectly stated; the act or fact of being involved in something

synonym: suggestion, association, conclusion

(1) the **implication** in a crime, (2) the **implication** of a word
His poem has a very significant **implication**.

fond

adj. having affection or liking for someone, particularly someone you've known for a long time

synonym: liking, enjoying, affectionate

(1) very **fond** of, (2) **fond** memories of the birthday
He is excessively **fond** of alcohol.

infinite

adj. unlimited or very great; impossible to measure

synonym: boundless, countless, limitless

(1) **infinite** appetite, (2) **infinite** in supply

The battle had an **infinite** impact on the nation.

intent

n. a strong determination or attention to do or achieve something; (adjective) having a strong determination to do or achieve something

synonym: purpose, aim, goal

(1) the **intent** of a question, (2) **intent** gaze

The designer's **intent** was to create a minimalist aesthetic for the interior of the building.

finite

adj. having a limit or restriction of size, time, etc.

synonym: delimited, defined, limited

(1) **finite** resources, (2) **finite** decimal

Human beings have a **finite** lifespan, so we yearn for the idea of immortality.

surround

v. to be all around something or somebody

synonym: encircle, encompass, envelop

(1) **surround** a town, (2) a stone wall **surrounds** the palace

On three sides, mountains **surround** the settlement.

horizon

n. the line at which the earth's surface and the sky appear to meet; the range of interest or activity that can be anticipated

synonym: skyline, view, visible boundary

(1) the event **horizon** of a black hole, (2) business **horizon**

As the sun set, the colors of the sky merged with the **horizon**, creating a beautiful orange and pink hue.

fin

n. a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance

synonym: flipper, appendage, stabilizer

(1) back **fin**, (2) a **fin** of a plane

The shark's powerful **fins** allowed it to swim at high speeds.

hawk

n. a bird of prey typically having short rounded wings and a long tail; an advocate of an aggressive policy on foreign relations

synonym: militarist, jingo, aggressor

(1) cast off a **hawk**, (2) congressional **hawk**

That team signed a center forward who was a ball- **hawk**.

emit

v. to give off or send out something such as light, heat, sound, gas, etc.

synonym: give off, radiate, expel

(1) **emit** a gamma ray, (2) **emit** air pollution

During the unloading, the container box **emits** a clicking sound.

quantum

n. the smallest amount or unit of something, especially (electromagnetic) energy

(1) probabilistic **quantum** theory, (2) laws of **quantum** mechanics

Big techs are now eager to develop **quantum** computers.

mechanics

n. the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles

synonym : kinematics, dynamics

(1) **mechanics** equation, (2) **mechanics** of the game

He studied **mechanics** in college and now works as an engineer.

curvature

n. the degree to which a line or surface deviates from being straight or flat; a measure of the amount of bending of a curve

synonym : bend, arch, bow

(1) the degree of **curvature**, (2) spinal **curvature**

The **curvature** of the earth can be seen from space.

mechanical

adj. operated by a machine, relating to or concerned with machinery or tools

synonym : machinelike, automated, automatic

(1) a **mechanical** style of writing, (2) the influence of **mechanical** action

A **mechanical** engineer is still in demand in many companies.

fluctuation

n. a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes

synonym : change, instability, flux

(1) price **fluctuations**, (2) **fluctuation** of water level

Temperature **fluctuations** are often milder in oceanfront areas.

radiate

v. to spread out or emit something, such as light or heat, in all directions

synonym : give off, scatter, beam

(1) **radiate** an aura, (2) **radiate** in all directions

Roads **radiate** from the famous building in the center of the city.

precise

adj. sharply exact or accurate or delimited

synonym : accurate, exact, distinct

(1) **precise** analyses, (2) estimate **precise** costs

The content is **precise** and informative for me.

calculation

n. the act or process of using numbers to judge an amount of something

synonym : analysis, computation, estimate

(1) make a **calculation**, (2) **calculation** of loss and gain

The error in the **calculation** was attributable to rounding.

ordinary

adj. not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree

synonym : mundane, prosaic, average

(1) an **ordinary** school, (2) **ordinary** annual revenue

The **ordinary** session of the Diet opened.

thermal

adj. relating to heat or temperature; designed for or capable of producing or maintaining heat

synonym : heat-related, warm, hot

(1) **thermal** insulation, (2) **thermal** energy

The **thermal** imaging camera was used to detect heat signatures in the dark.

probabilistic

adj. characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks

synonym : probable, statistical, likely

(1) **probabilistic** model, (2) **probabilistic** approach

In a **probabilistic** system, the outcome is uncertain and can vary based on chance.

enormous

adj. extremely large or great

synonym : huge, giant, gigantic

(1) **enormous** amount, (2) **enormous** potential

Shakespeare's output of poetry was **enormous**.

suffocate

v. to die or cause someone to die from lack of air or inability to breathe; to be overwhelmed or constricted by a feeling or situation, such as anxiety or oppression

synonym : choke, smother, stifle

(1) **suffocate** to death, (2) **suffocate** fire

People can **suffocate** from a lack of oxygen in confined spaces.

unlikely

adj. not probable or likely to happen

synonym : doubtful, questionable, far-fetched

(1) **unlikely** event, (2) it is **unlikely** that he would win the game

The passage of the bill is **unlikely**.

obtain

v. to get something, especially by making a great effort

synonym : accept, acquire, receive

(1) **obtain** a license, (2) **obtain** a bid

Where can I **obtain** the application form?

molecule

n. a group of two or more atoms held together by attractive forces known as chemical bonds

synonym : particle, element, atom

(1) small **molecules**, (2) **molecule** behavior

The shape of the DNA **molecule** is a double helix.

eventually

adv. finally, particularly after a long time or a lot of struggle, complications, and so on

synonym : finally, someday, ultimately

(1) **eventually** become obsolete, (2) **eventually** succeed

The corporation **eventually** dominated the entire tobacco business.

equilibrium

n. a state in which opposing forces or influences are balanced

synonym : balance, stability, harmony

(1) **equilibrium** point, (2) political **equilibrium**

The company struggled to maintain an **equilibrium** between its profits and social responsibilities.

expansion

n. the process of becoming larger or more extensive, or the result of this process

synonym: growth, enlargement, development

(1) industrial **expansion**, (2) **expansion** project

The company is undergoing an **expansion**, opening new locations in several states.

Newtonian

adj. relating to Sir Isaac Newton or his laws of motion and universal gravitation

synonym: classical, physics, mechanics

(1) **Newtonian** physics, (2) **Newtonian** mechanics

The motion of planets can be described using **Newtonian** mechanics.

absolute

adj. perfect or complete or to the most considerable degree possible

synonym: complete, infrangible, indisputable

(1) **absolute** loyalty, (2) an **absolute** must

Gandhi had an **absolute** zeal for nonviolence.

stick

v. to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material

synonym: pierce, adhere, stay

(1) **stick** a key in a lock, (2) fire **stick**

You **stick** a bill in the change machine, and the coins pop out.

evenly

adv. in equal amounts or shares; in a balanced or impartial way

synonym: constantly, smoothly, equally

(1) **evenly** colored, (2) almost **evenly** divided

This product can spread the cement **evenly**.

occasionally

adv. now and then; sometimes but not often

synonym : periodically, sometimes, from time to time

(1) **occasionally** dine with friends, (2) **occasionally** change the routine

She still **occasionally** writes a short romance novel.

invention

n. the creation of a new device or process resulting from study and experimentation; the act of inventing

synonym : creation, design, innovation

(1) the **invention** of new techniques, (2) common **invention**
Necessity is the mother of **invention**.

multiverse

n. a hypothetical space or realm consisting of multiple universes, of which our universe is just one of them

(1) the **multiverse** hypothesis, (2) the concept of the **multiverse**

The various universes within the **multiverse** are sometimes called parallel universes.

anthropology

n. the scientific study of humanity, concerned with human behavior, human biology, cultures, societies, and linguistics in both the present and past, including past human species

(1) social **anthropology**, (2) **anthropology** of religion

The areas of **anthropology** and psychology are significantly related to one another.

principle

n. a fundamental law or truth that explains or controls how something happens or works

synonym : rule, creed, code

(1) **principle** of treatment, (2) **principle** in business

Efficiency isn't an essential **principle** here; fairness is.

process

n. a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable

for consumption or use in other dairy products

synonym : procedure, method, system

(1) **process** improvement, (2) decision-making **process**

The **process** for applying for a visa can be lengthy and complicated.

metabolism

n. the set of chemical reactions in cells or organisms that are necessary for life-sustaining

(1) **metabolism** enzyme, (2) hemoglobin **metabolism**

Better sleep leads to increased **metabolism**.

bump

v. to hit or knock against something hard, often with a dull sound; to meet with by accident

synonym : collide, hit, jolt

(1) **bump** against a wall, (2) **bump** up prices

She accidentally **bumped** into him in the crowded room.

relax

v. to become or cause someone to become less active or tense and calmer

synonym : soften, comfort, soothe

(1) **relax** a series of muscles, (2) **relax** at home

The rules were **relaxed** after the new executive arrived.

planet

n. any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star

synonym : earth, world, globe

(1) **planet** like the Earth, (2) save the **planet**

Mercury is the closest **planet** to the sun.

fluctuate

v. to rise and fall irregularly or unexpectedly; to vary or change often and unpredictably

synonym : vary, oscillate, sway

(1) **fluctuate** prices, (2) **fluctuate** rapidly

Stock prices **fluctuate** daily based on market demand and supply.

assignment

n. a duty or task given to someone, usually as part of their job or studies

synonym: task, duty, designation

(1) finish the **assignment**, (2) **assignment** of interest

My **assignment** was overwhelming and complicated, but it was also exciting.

contemplate

v. to think about a possible future action or to think about something for a long time thoughtfully

synonym: think over, ponder, consider

(1) **contemplate** a marriage, (2) **contemplated** leaving school

I recently **contemplated** dropping out of school and getting a full-time job.

scenario

n. a description of possible actions or events in the future; a written outline of a play, film, or literary work

synonym: plan, scheme, procedure

(1) the worst case **scenario**, (2) number of different **scenarios**

The president prepared several possible **scenarios** for an enemy attack.

frequent

adj. happening constantly

synonym: periodic, recurring, routine

(1) **frequent** absence, (2) **frequent** use

His heartaches are less **frequent** now.

orchard

n. a piece of land that is planted with fruit trees, such as apples, pears, or cherries

synonym: grove, plantation, fruit garden

(1) local apple **orchard**, (2) **orchard** tree

The farmer owns an **orchard** where he grows apples, pears, and plums.

prediction

n. the act of predicting the future by reasoning; a statement made about the future

synonym: forecast, anticipation, foretelling

(1) make my **predictions**, (2) gloomy **predictions**

These results muddied the **prediction**.

minimal

adj. tiny in amount; the least possible

synonym: tiniest, essential, minimum

(1) **minimal** effort, (2) **minimal** amount

The process was carried out at **minimal** cost.

impressive

adj. arousing admiration due to size, quality, or skill

synonym: impactful, remarkable, exceptional

(1) **impressive** performances, (2) an **impressive** array of facts

The budget reduction was an **impressive** feat for our nation.

statistics

n. the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data

(1) **statistics** for cancer, (2) official **statistics**

The **statistics** demonstrate that poverty and unemployment are genuine problems.

brain

n. the organ inside the head that is responsible for one's movement, thought, memory, and feeling

synonym: intellect, mind, encephalon

(1) basic **brain** function, (2) permanent **brain** damage

X-rays revealed a small tumor in his **brain**.

predict

v. to state beforehand that something will happen in the future, mainly based on knowledge or experience

synonym: forecast, anticipate, foresee

(1) **predict** the future, (2) **predict** when she will arrive

It's notoriously challenging to **predict** birth rates.

hypothesis

n. a proposed idea or explanation that is based on a few known facts but has not yet been proven to be true or accurate

synonym : assumption, conjecture, theory

(1) test my **hypothesis**, (2) a bold **hypothesis**

This evidence supports the big-bang **hypothesis**.

conclude

v. to come to an end or close; to reach a judgment or opinion by reasoning

synonym : complete, finish, decide

(1) **conclude** a meeting, (2) **conclude** that he is healthy

We **concluded** a cease-fire.

nuclear

adj. of or relating to or constituting the nucleus of an atom; deriving destructive energy from the release of atomic energy

synonym : atomic

(1) **nuclear** fusion, (2) use of **nuclear** power

Many countries have now agreed to a treaty banning the use of **nuclear** weapons.

fuel

n. a substance that is typically burned to generate heat or energy

synonym : energy, power, gas

(1) biomass **fuel**, (2) smokeless **fuel**

The **fuel** scarcity most severely impacted the manufacturing sector

evaporate

v. to turn a liquid into a gas; to become less intense and disappear gradually

synonym : vaporize, disappear, vanish

(1) **evaporate** the water, (2) **evaporate** almost overnight

The sun will **evaporate** the mist.

essentially

adv. relating to the essential features or concepts of anything

synonym : fundamentally, basically, virtually

(1) **essentially** correct, (2) become **essentially** same

Essentially, a society is an organism.

combination

n. a collection of things that have been combined; an assemblage of separate parts or qualities

synonym: blend, hybrid, compounding

(1) genic **combinations**, (2) **combination** number

The **combination** to the safe was a secret.

degree

n. a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment

synonym: level, qualification, diploma

(1) bachelor's **degree**, (2) **degree** centigrade

She received her **degree** in psychology from the university.

afterglow

n. a period of time following an event or experience during which a feeling of pleasure, satisfaction, or contentment persists; a lingering glow or light that remains after an object has disappeared from view

synonym: glow, sunset, twilight

(1) concert **afterglow**, (2) romantic **afterglow**

The **afterglow** of the sunset was a beautiful end to a long day.

brute

n. a violent, wild, or feral animal; a person who is cruel, uncivilized, or lacking in intelligence or sensitivity; a physical force or power

synonym: beast, savage, animal

(1) **brute** beasts, (2) **brute** force

The **brute** behavior of the football players caused the game to be canceled.

unbroken

adj. continuous and not interrupted; (of promises or contracts) not violated or disregarded

synonym: intact, unchanged, continuing

(1) an **unbroken** horse, (2) **unbroken** chain

He enjoyed the **unbroken** quiet of the afternoon at the villa.

refrigerator

n. an appliance or device used for preserving and cooling food and beverages by maintaining a low temperature within a closed compartment

synonym : fridge, cooler, icebox

(1) **refrigerator** magnet, (2) empty **refrigerator**

Don't forget to put the eggs in the **refrigerator** after you've used them.

universal

adj. existing or affecting everywhere or everyone

synonym : common, broad, worldwide

(1) **universal** life, (2) principles of **universal** design

The picture earned near- **universal** acclaim from critics.

naturally

adv. as might be expected; by natural manners

synonym : by nature, inherently, intrinsically

(1) **naturally** arising, (2) **naturally** regenerated forest

He was **naturally** gifted.

bold

adj. brave, daring, and confident; not frightened of danger or afraid to say what you feel or to take risks

synonym : brave, courageous, fearless

(1) a **bold** design, (2) big, **bold** piano sounds

The effort to alleviate climate change needs **bold** action.

absolutely

adv. without restriction or limitation; completely or utterly

synonym : completely, utterly, definitely

(1) **absolutely** against, (2) **absolutely** obsessed with the girl

I am **absolutely** opposed to his idea because of morality.

vindicate

v. to clear someone or something of blame, suspicion, or doubt; to show or prove that someone or something is right or justified

synonym : justify, absolve, exonerate

(1) **vindicate** innocence, (2) **vindicate** his reputation

The athlete's exceptional performance **vindicated** their

coach's training methods and strategies.

external

adj. belonging to or situated outside of someone or something

synonym: outside, exterior, foreign

(1) **external** factors, (2) **external** commerce

When a company discloses information to the market, an **external** auditor verifies them.

communal

adj. belonging to or used by a group rather than individuals; for common use

synonym: collaborative, combined, collective

(1) **communal** swimming pool, (2) **communal** combination of funds

Communal elections were held in several European countries.

observation

n. the act or activity of carefully examining or monitoring something or someone

synonym: watching, notice, reflection

(1) class **observation** day, (2) **observation** instrument

In the hospital, she will remain under constant **observation**.

exciting

adj. causing a lot of interest or excitement

synonym: exhilarating, stimulating, thrilling

(1) **exciting** football player, (2) **exciting** news

The findings of the experiment were both **exciting** and unexpected.

Session 2: Spelling

1. a bu__h of trees
n. a grouping of several similar things which are growing or fastened together
2. ex____al commerce
adj. belonging to or situated outside of someone or something
3. an or____ry school
adj. not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree
4. pro____tic approach
adj. characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks
5. em____ze her words
v. to give or show particular importance to something
6. Ne____an mechanics
adj. relating to Sir Isaac Newton or his laws of motion and universal gravitation
7. very f__d of
adj. having affection or liking for someone, particularly someone you've known for a long time
8. beauty s__t
n. a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
9. en____e metal
v. to carve, cut, or etch a design, message, or image onto a surface, often using a sharp tool or laser; to permanently record or mark something in a lasting manner

ANSWERS: 1. bunch, 2. external, 3. ordinary, 4. probabilistic, 5. emphasize, 6. Newtonian, 7. fond, 8. spot, 9. engrave

10. a ra___m choice *adj.* made, done, or happening without method, conscious decision, or any regular pattern
11. the stock market co_____sed *v.* to fall down or give way suddenly, often after breaking apart
12. an imp_____ve array of facts *adj.* arousing admiration due to size, quality, or skill
13. in___t gaze *n.* a strong determination or attention to do or achieve something; (adjective) having a strong determination to do or achieve something
14. modern co_____gy *n.* the scientific study of the nature and origin of the universe
15. physical co_____gy *n.* the scientific study of the nature and origin of the universe
16. en_____us amount *adj.* extremely large or great
17. at___h firmly *v.* to fasten, join, or connect one thing to another
18. co_____al swimming pool *adj.* belonging to or used by a group rather than individuals; for common use
19. mi_____l amount *adj.* tiny in amount; the least possible
20. fr_____nt absence *adj.* happening constantly
21. ess_____ly correct *adv.* relating to the essential features or concepts of anything
22. the team of qu___s *n.* quantitative analysts or individuals who specialize in using quantitative methods, including mathematical and statistical modeling, in analyzing financial markets and making investment decisions

ANSWERS: 10. random, 11. collapse, 12. impressive, 13. intent, 14. cosmology, 15. cosmology, 16. enormous, 17. attach, 18. communal, 19. minimal, 20. frequent, 21. essentially, 22. quants

23. the mul_____se hypothesis *n.* a hypothetical space or realm consisting of multiple universes, of which our universe is just one of them
24. ad__t as needed *v.* to make fit for or change to suit a new purpose or environment
25. ev_____te the water *v.* to turn a liquid into a gas; to become less intense and disappear gradually
26. pr_____le in business *n.* a fundamental law or truth that explains or controls how something happens or works
27. un_____en chain *adj.* continuous and not interrupted; (of promises or contracts) not violated or disregarded
28. ad__t fully to the environment *v.* to make fit for or change to suit a new purpose or environment
29. vi_____te his reputation *v.* to clear someone or something of blame, suspicion, or doubt; to show or prove that someone or something is right or justified
30. terrestrial gra_____on *n.* the force by which a celestial body, such as the Earth, pulls objects toward its center; the attraction between two or more objects due to their mass
31. b__p against a wall *v.* to hit or knock against something hard, often with a dull sound; to meet with by accident
32. or_____d tree *n.* a piece of land that is planted with fruit trees, such as apples, pears, or cherries
33. co_____de that he is healthy *v.* to come to an end or close; to reach a judgment or opinion by reasoning

ANSWERS: 23. multiverse, 24. adapt, 25. evaporate, 26. principle, 27. unbroken, 28. adapt, 29. vindicate, 30. gravitation, 31. bump, 32. orchard, 33. conclude

34. arr_____nt committee *n.* a plan or preparation for the future event; the action or process of placing things in a particular order
35. unsolved my_____y *n.* something difficult to understand or explain; a secret or enigmatic quality that adds to the fascination or interest of something; a genre of fiction that involves the solution of a crime or a puzzle
36. hemoglobin met_____sm *n.* the set of chemical reactions in cells or organisms that are necessary for life-sustaining
37. mi_____l effort *adj.* tiny in amount; the least possible
38. a mec_____al style of writing *adj.* operated by a machine, relating to or concerned with machinery or tools
39. em_____ze a direct relationship *v.* to give or show particular importance to something
40. industry qu_____s *n.* quantitative analysts or individuals who specialize in using quantitative methods, including mathematical and statistical modeling, in analyzing financial markets and making investment decisions
41. nutrient-de___e foods *adj.* containing a large number of people or something with little space between them
42. a ga_____y of famous actors *n.* an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity

ANSWERS: 34. arrangement, 35. mystery, 36. metabolism, 37. minimal, 38. mechanical, 39. emphasize, 40. quants, 41. dense, 42. galaxy

43. laws of qu____m mechanics *n.* the smallest amount or unit of something, especially (electromagnetic) energy
44. ant____ogy of religion *n.* the scientific study of humanity, concerned with human behavior, human biology, cultures, societies, and linguistics in both the present and past, including past human species
45. is____e a compound *v.* to physically or socially separate someone or something from other people or things
46. a combative im____e *n.* a sudden strong and unreflective wish or need to do something; the electrical discharge that travels along a nerve fiber
47. make a cal____on *n.* the act or process of using numbers to judge an amount of something
48. in____te appetite *adj.* unlimited or very great; impossible to measure
49. pa____le energy *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
50. cu__c structure *adj.* having the shape of a cube or being of three dimensions; measured in units that are the third power of a linear unit
51. de____e centigrade *n.* a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment

ANSWERS: 43. quantum, 44. anthropology, 45. isolate, 46. impulse, 47. calculation, 48. infinite, 49. particle, 50. cubic, 51. degree

52. the laws of the _____ ics *n.* the area of physics that deals with heat, work, and temperature and their relation to energy, entropy, and the physical properties of matter and radiation
53. pe _____ al struggle *adj.* continuing for an extended period in the same way without stopping or being interrupted
54. pe _____ al motion machine *adj.* continuing for an extended period in the same way without stopping or being interrupted
55. acc _____ te a chemical reaction *v.* to make something faster or earlier; to cause to develop or progress more quickly
56. na _____ ly regenerated forest *adv.* as might be expected; by natural manners
57. genic com _____ ons *n.* a collection of things that have been combined; an assemblage of separate parts or qualities
58. sq _____ e a lemon *v.* to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness
59. arr _____ nt of the furniture *n.* a plan or preparation for the future event; the action or process of placing things in a particular order
60. a s __ t on his honor *n.* a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
61. neutral hydrogen a __ ms *n.* the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus

ANSWERS: 52. thermodynamics, 53. perpetual, 54. perpetual, 55. accelerate, 56. naturally, 57. combination, 58. squeeze, 59. arrangement, 60. spot, 61. atom

62. ex_____on project *n.* the process of becoming larger or more extensive, or the result of this process
63. the ancient t__b *n.* a large stone structure or underground chamber in which the dead are buried
64. f__d memories of the birthday *adj.* having affection or liking for someone, particularly someone you've known for a long time
65. fl_____te prices *v.* to rise and fall irregularly or unexpectedly; to vary or change often and unpredictably
66. finish the ass_____nt *n.* a duty or task given to someone, usually as part of their job or studies
67. ind_____al freedom *n.* a single person or thing, as distinct from a group
68. mac_____ic anatomy *adj.* visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools
69. re_____ge the furniture *v.* to change the order or position of things already made; to change the time, date, or place of an event already planned
70. e__t a gamma ray *v.* to give off or send out something such as light, heat, sound, gas, etc.
71. en_____y conservation *n.* a scientific concept that is most commonly associated with a state of disorder, randomness, or uncertainty
72. pre-mo___n agricultural society *adj.* of or belonging to the present time or recent times
73. co_____al combination of funds *adj.* belonging to or used by a group rather than individuals; for common use

ANSWERS: 62. expansion, 63. tomb, 64. fond, 65. fluctuate, 66. assignment, 67. individual, 68. macroscopic, 69. rearrange, 70. emit, 71. entropy, 72. modern, 73. communal

74. business ho_____n *n.* the line at which the earth's surface and the sky appear to meet; the range of interest or activity that can be anticipated
75. ass_____nt of interest *n.* a duty or task given to someone, usually as part of their job or studies
76. sp_____te on the outcome *v.* to form a theory or conjecture or guess about a subject without solid evidence
77. gra_____nal waves *adj.* relating to or caused by gravity (= the force that attracts objects towards one another)
78. concert af_____ow *n.* a period of time following an event or experience during which a feeling of pleasure, satisfaction, or contentment persists; a lingering glow or light that remains after an object has disappeared from view
79. universal gra_____on *n.* the force by which a celestial body, such as the Earth, pulls objects toward its center; the attraction between two or more objects due to their mass
80. ob____n a bid *v.* to get something, especially by making a great effort
81. gloomy pre_____ons *n.* the act of predicting the future by reasoning; a statement made about the future
82. even more unf_____ely *adv.* by bad luck; unluckily
83. ar__w diagram *n.* a thin, pointed projectile designed to be shot from a bow; a symbol or pointer that is shaped like an arrow

ANSWERS: 74. horizon, 75. assignment, 76. speculate, 77. gravitational, 78. afterglow, 79. gravitation, 80. obtain, 81. prediction, 82. unfortunately, 83. arrow

84. probabilistic qu_____m theory *n.* the smallest amount or unit of something, especially (electromagnetic) energy
85. nuclear ph_____s *n.* the science of matter and energy and their interactions
86. pl____t like the Earth *n.* any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star
87. principles of un_____al design *adj.* existing or affecting everywhere or everyone
88. mathematical pu_____e *n.* a situation that is difficult to follow or solve; a game, problem, or toy that tests a person's ingenuity or knowledge; (verb) to cause someone to feel confused because of something difficult to understand
89. di____e a great idea *v.* to make a substance less concentrated by adding a liquid or another substance to it
90. ob____n a license *v.* to get something, especially by making a great effort
91. a foreign ac____t *n.* a distinctive way of pronouncing the words of a language that shows which area, country, or social group a person comes from; particular importance or significance
92. Ne_____an physics *adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation

ANSWERS: 84. quantum, 85. physics, 86. planet, 87. universal, 88. puzzle, 89. dilute, 90. obtain, 91. accent, 92. Newtonian

93. ar__w pointing *n.* a thin, pointed projectile designed to be shot from a bow; a symbol or pointer that is shaped like an arrow
94. ev_____te almost overnight *v.* to turn a liquid into a gas; to become less intense and disappear gradually
95. ex_____ng news *adj.* causing a lot of interest or excitement
96. occ_____lly dine with friends *adv.* now and then; sometimes but not often
97. re__x a series of muscles *v.* to become or cause someone to become less active or tense and calmer
98. un_____al life *adj.* existing or affecting everywhere or everyone
99. the solid con_____nt of blood cells *n.* one of the parts of the whole; a person represented by an elected official
100. abs_____ly against *adv.* without restriction or limitation; completely or utterly
101. smokeless f__l *n.* a substance that is typically burned to generate heat or energy
102. expansion of the un_____se *n.* everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy
103. the imp_____on in a crime *n.* something that is inferred or indirectly stated; the act or fact of being involved in something
104. social ant_____ogy *n.* the scientific study of humanity, concerned with human behavior, human biology, cultures, societies, and linguistics in both the present and past, including past human species

ANSWERS: 93. arrow, 94. evaporate, 95. exciting, 96. occasionally, 97. relax, 98. universal, 99. constituent, 100. absolutely, 101. fuel, 102. universe, 103. implication, 104. anthropology

105. make my pre_____ons *n.* the act of predicting the future by reasoning; a statement made about the future
106. cal_____on of loss and gain *n.* the act or process of using numbers to judge an amount of something
107. official sta_____cs *n.* the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data
108. a f_n of a plane *n.* a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance
109. th_____l energy *adj.* relating to heat or temperature; designed for or capable of producing or maintaining heat
110. the evo_____ary process *adj.* relating to or denoting how living things develop or change from earlier forms
111. gra_____nal energy *adj.* relating to or caused by gravity (= the force that attracts objects towards one another)
112. imp_____ly developed *adv.* in a faulty or incomplete way
113. the influence of mec_____al action *adj.* operated by a machine, relating to or concerned with machinery or tools
114. an ab_____te must *adj.* perfect or complete or to the most considerable degree possible
115. pro_____tic model *adj.* characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks

ANSWERS: 105. prediction, 106. calculation, 107. statistics, 108. fin, 109. thermal, 110. evolutionary, 111. gravitational, 112. imperfectly, 113. mechanical, 114. absolute, 115. probabilistic

116. put the ac___t on comfort *n.* a distinctive way of pronouncing the words of a language that shows which area, country, or social group a person comes from; particular importance or significance
117. unf_____ely caught in a shower *adv.* by bad luck; unluckily
118. at___h a file to an e-mail *v.* to fasten, join, or connect one thing to another
119. en_____e initials *v.* to carve, cut, or etch a design, message, or image onto a surface, often using a sharp tool or laser; to permanently record or mark something in a lasting manner
120. a stone wall su_____nds the palace *v.* to be all around something or somebody
121. ab_____te loyalty *adj.* perfect or complete or to the most considerable degree possible
122. en_____y calculation *n.* a scientific concept that is most commonly associated with a state of disorder, randomness, or uncertainty
123. pr_____t the future *v.* to state beforehand that something will happen in the future, mainly based on knowledge or experience
124. na_____ly arising *adv.* as might be expected; by natural manners
125. mo___n poetry *adj.* of or belonging to the present time or recent times
126. class obs_____on day *n.* the act or activity of carefully examining or monitoring something or someone

ANSWERS: 116. accent, 117. unfortunately, 118. attach, 119. engrave, 120. surround, 121. absolute, 122. entropy, 123. predict, 124. naturally, 125. modern, 126. observation

127. gr____te degree program *n.* a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree
128. en____us potential *adj.* extremely large or great
129. make a positive con____ion *n.* the act of giving something, especially money, to a particular cause or organization; a voluntary gift as of money or service or ideas made to some worthwhile cause
130. pr____e analyses *adj.* sharply exact or accurate or delimited
131. earliest human an____or *n.* a person from whom one is descended; a forefather
132. re__x at home *v.* to become or cause someone to become less active or tense and calmer
133. ad___e the subtlety of the distinctions *v.* to have regard for or respect for someone's qualities or the actions they have performed
134. profound religious im____es *n.* a sudden strong and unreflective wish or need to do something; the electrical discharge that travels along a nerve fiber
135. obs____le change *adj.* that can be noticed or seen
136. oxygen a__m *n.* the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus
137. met____sm enzyme *n.* the set of chemical reactions in cells or organisms that are necessary for life-sustaining

ANSWERS: 127. graduate, 128. enormous, 129. contribution, 130. precise, 131. ancestor, 132. relax, 133. admire, 134. impulse, 135. observable, 136. atom, 137. metabolism

138. share my in_____ts *n.* the ability to gain an accurate and deep understanding of people or situations; an accurate and deep understanding of what something is like
139. acc_____te the car *v.* to make something faster or earlier; to cause to develop or progress more quickly
140. su_____te to death *v.* to die or cause someone to die from lack of air or inability to breathe; to be overwhelmed or constricted by a feeling or situation, such as anxiety or oppression
141. eve_____ly succeed *adv.* finally, particularly after a long time or a lot of struggle, complications, and so on
142. in_____te in supply *adj.* unlimited or very great; impossible to measure
143. thirty cen_____ers tall *n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
144. elliptic ga_____y *n.* an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
145. estimate pr_____e costs *adj.* sharply exact or accurate or delimited
146. sta_____cs for cancer *n.* the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data
147. eve_____ly become obsolete *adv.* finally, particularly after a long time or a lot of struggle, complications, and so on
148. a c__e about the crime *n.* an object, a piece of evidence, or some information that helps someone to find the answer to a problem, question, or mystery

ANSWERS: 138. insight, 139. accelerate, 140. suffocate, 141. eventually, 142. infinite, 143. centimeter, 144. galaxy, 145. precise, 146. statistics, 147. eventually, 148. clue

149. app_____ely 3 feet long *adv.* close to a specific number or time but not exactly that number or time
150. exposure to ra_____on *n.* the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health
151. vi_____te innocence *v.* to clear someone or something of blame, suspicion, or doubt; to show or prove that someone or something is right or justified
152. pr_____s improvement *n.* a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
153. an_____or language *n.* a person from whom one is descended; a forefather
154. save the pl____t *n.* any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star
155. ch_____c theory *adj.* without any order or organization; extremely disorganized, unpredictable, and confusing
156. a profound in_____t *n.* the ability to gain an accurate and deep understanding of people or situations; an accurate and deep understanding of what something is like

ANSWERS: 149. approximately, 150. radiation, 151. vindicate, 152. process, 153. ancestor, 154. planet, 155. chaotic, 156. insight

157. cu__c meter *adj.* having the shape of a cube or being of three dimensions; measured in units that are the third power of a linear unit
158. ex__t control *v.* to put forth effort; to put into action; to bring into play
159. fi___e resources *adj.* having a limit or restriction of size, time, etc.
160. become ess_____ly same *adv.* relating to the essential features or concepts of anything
161. back f_n *n.* a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance
162. fl_____te rapidly *v.* to rise and fall irregularly or unexpectedly; to vary or change often and unpredictably
163. look through a te_____pe *n.* a device like a tube in shape containing lenses used to magnify and observe distant objects
164. the concept of the mul_____se *n.* a hypothetical space or realm consisting of multiple universes, of which our universe is just one of them
165. ex_____al factors *adj.* belonging to or situated outside of someone or something
166. de__e forests *adj.* containing a large number of people or something with little space between them
167. theoretical ph_____st *n.* a scientist who specializes in the field of physics
168. people with bipolar di_____er *n.* an untidy state or a lack of organization; a physical condition or illness that causes problems with how a section of the body or brain functions

ANSWERS: 157. cubic, 158. exert, 159. finite, 160. essentially, 161. fin, 162. fluctuate, 163. telescope, 164. multiverse, 165. external, 166. dense, 167. physicist, 168. disorder

169. cen_____er measurement *n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
170. imp_____ly known disease *adv.* in a faulty or incomplete way
171. ev___e over the past decade *v.* to develop gradually, or to cause the development of something or someone gradually
172. is_____e a patient *v.* to physically or socially separate someone or something from other people or things
173. co_____de a meeting *v.* to come to an end or close; to reach a judgment or opinion by reasoning
174. fire st__k *v.* to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
175. ev___y colored *adv.* in equal amounts or shares; in a balanced or impartial way
176. laws of ph_____s *n.* the science of matter and energy and their interactions
177. und_____ate course *n.* a student who is studying for their first degree at a university or other higher education institution
178. a b__d design *adj.* brave, daring, and confident; not frightened of danger or afraid to say what you feel or to take risks
179. an un_____en horse *adj.* continuous and not interrupted; (of promises or contracts) not violated or disregarded

ANSWERS: 169. centimeter, 170. imperfectly, 171. evolve, 172. isolate, 173. conclude, 174. stick, 175. evenly, 176. physics, 177. undergraduate, 178. bold, 179. unbroken

180. decision-making pr____s *n.* a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
181. number of different sc____ios *n.* a description of possible actions or events in the future; a written outline of a play, film, or literary work
182. app_____ely same *adv.* close to a specific number or time but not exactly that number or time
183. high ve____ty *n.* the rate of change of an object's position with respect to time, often measured in meters per second (m/s)
184. b__p up prices *v.* to hit or knock against something hard, often with a dull sound; to meet with by accident
185. engineering und_____ate *n.* a student who is studying for their first degree at a university or other higher education institution
186. a bu__h of schoolgirls *n.* a grouping of several similar things which are growing or fastened together
187. permanent br__n damage *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
188. fr____nt use *adj.* happening constantly
189. extreme tem_____res *n.* the degree of hotness or coldness of a thing or place

ANSWERS: 180. process, 181. scenario, 182. approximately, 183. velocity, 184. bump, 185. undergraduate, 186. bunch, 187. brain, 188. frequent, 189. temperature

190. ecology and evo_____ary biology *adj.* relating to or denoting how living things develop or change from earlier forms
191. empty ref_____tor *n.* an appliance or device used for preserving and cooling food and beverages by maintaining a low temperature within a closed compartment
192. initial ve_____ty *n.* the rate of change of an object's position with respect to time, often measured in meters per second (m/s)
193. the ch_____c economic situation *adj.* without any order or organization; extremely disorganized, unpredictable, and confusing
194. common in_____on *n.* the creation of a new device or process resulting from study and experimentation; the act of inventing
195. bombs fell at ra_____m *adj.* made, done, or happening without method, conscious decision, or any regular pattern
196. mac_____ic observation *adj.* visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools
197. obs_____on instrument *n.* the act or activity of carefully examining or monitoring something or someone
198. romantic af_____ow *n.* a period of time following an event or experience during which a feeling of pleasure, satisfaction, or contentment persists; a lingering glow or light that remains after an object has disappeared from view

ANSWERS: 190. evolutionary, 191. refrigerator, 192. velocity, 193. chaotic, 194. invention, 195. random, 196. macroscopic, 197. observation, 198. afterglow

199. occ_____ly change the routine *adv.* now and then; sometimes but not often
200. b__g a phone down *v.* to hit or cause to hit something in a way that makes a loud noise
201. com_____on number *n.* a collection of things that have been combined; an assemblage of separate parts or qualities
202. un_____ly event *adj.* not probable or likely to happen
203. the imp_____on of a word *n.* something that is inferred or indirectly stated; the act or fact of being involved in something
204. experimentally obs_____le *adj.* that can be noticed or seen
205. ev___e *v.* to develop gradually, or to cause the development of something or someone gradually
206. it is un_____ly that he would win the game *adj.* not probable or likely to happen
207. price flu_____ons *n.* a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes
208. political equ_____um *n.* a state in which opposing forces or influences are balanced
209. br___e beasts *n.* a violent, wild, or feral animal; a person who is cruel, uncivilized, or lacking in intelligence or sensitivity; a physical force or power
210. con_____ion of the system *n.* the arrangement or pattern of something or a group of related things

ANSWERS: 199. occasionally, 200. bang, 201. combination, 202. unlikely, 203. implication, 204. observable, 205. evolve, 206. unlikely, 207. fluctuation, 208. equilibrium, 209. brute, 210. configuration

211. applied the _____ ics *n.* the area of physics that deals with heat, work, and temperature and their relation to energy, entropy, and the physical properties of matter and radiation
212. con _____ te a marriage *v.* to think about a possible future action or to think about something for a long time thoughtfully
213. ex __ t influence *v.* to put forth effort; to put into action; to bring into play
214. ro _____ y explain my idea *adv.* approximately but not precisely; with a violent manner
215. the degree of cu _____ re *n.* the degree to which a line or surface deviates from being straight or flat; a measure of the amount of bending of a curve
216. the in ___ t of a question *n.* a strong determination or attention to do or achieve something; (adjective) having a strong determination to do or achieve something
217. sp _____ te about the reason *v.* to form a theory or conjecture or guess about a subject without solid evidence
218. a private ind _____ al *n.* a single person or thing, as distinct from a group
219. a c __ e to the diagnosis *n.* an object, a piece of evidence, or some information that helps someone to find the answer to a problem, question, or mystery
220. cr _____ l information *adj.* extremely vital or necessary
221. charged pa _____ le *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance

ANSWERS: 211. thermodynamics, 212. contemplate, 213. exert, 214. roughly, 215. curvature, 216. intent, 217. speculate, 218. individual, 219. clue, 220. crucial, 221. particle

222. ex___d agricultural output *v.* to increase or to make something greater in size, number, or importance
223. ex___d a lineup *v.* to increase or to make something greater in size, number, or importance
224. a binomial fo____a *n.* a group of symbols, letters, or numbers that represent a rule, law, or mathematical statement
225. a bold hyp_____is *n.* a proposed idea or explanation that is based on a few known facts but has not yet been proven to be true or accurate
226. almost ev___y divided *adv.* in equal amounts or shares; in a balanced or impartial way
227. b__g his fist on a desk *v.* to hit or cause to hit something in a way that makes a loud noise
228. biomass f__l *n.* a substance that is typically burned to generate heat or energy
229. talented ph_____st *n.* a scientist who specializes in the field of physics
230. ex_____ng football player *adj.* causing a lot of interest or excitement
231. theory of the un_____se *n.* everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy
232. local apple or _____d *n.* a piece of land that is planted with fruit trees, such as apples, pears, or cherries
233. e__t air pollution *v.* to give off or send out something such as light, heat, sound, gas, etc.
234. br__e force *n.* a violent, wild, or feral animal; a person who is cruel, uncivilized, or lacking in intelligence or sensitivity; a physical force or power

ANSWERS: 222. expand, 223. expand, 224. formula, 225. hypothesis, 226. evenly, 227. bang, 228. fuel, 229. physicist, 230. exciting, 231. universe, 232. orchard, 233. emit, 234. brute

235. flu_____on of water level *n.* a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes
236. abs_____ly obsessed with the girl *adv.* without restriction or limitation; completely or utterly
237. a b__b of jelly *n.* a small amount or drop of a thick liquid or sticky substance
238. basic br__n function *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
239. pr_____le of treatment *n.* a fundamental law or truth that explains or controls how something happens or works
240. me_____cs of the game *n.* the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles
241. th_____l insulation *adj.* relating to heat or temperature; designed for or capable of producing or maintaining heat
242. mo_____le behavior *n.* a group of two or more atoms held together by attractive forces known as chemical bonds
243. the files are in complete di_____er *n.* an untidy state or a lack of organization; a physical condition or illness that causes problems with how a section of the body or brain functions

ANSWERS: 235. fluctuation, 236. absolutely, 237. blob, 238. brain, 239. principle, 240. mechanics, 241. thermal, 242. molecule, 243. disorder

244. a big b__b of yellow *n.* a small amount or drop of a thick liquid or sticky substance
245. small mo____les *n.* a group of two or more atoms held together by attractive forces known as chemical bonds
246. use of nu____r power *adj.* of or relating to or constituting the nucleus of an atom; deriving destructive energy from the release of atomic energy
247. ro____y speaking *adv.* approximately but not precisely; with a violent manner
248. imp____ve performances *adj.* arousing admiration due to size, quality, or skill
249. su____te fire *v.* to die or cause someone to die from lack of air or inability to breathe; to be overwhelmed or constricted by a feeling or situation, such as anxiety or oppression
250. con____nt assembly *n.* one of the parts of the whole; a person represented by an elected official
251. structural fo____a *n.* a group of symbols, letters, or numbers that represent a rule, law, or mathematical statement
252. con____ion to society *n.* the act of giving something, especially money, to a particular cause or organization; a voluntary gift as of money or service or ideas made to some worthwhile cause
253. con____ted leaving school *v.* to think about a possible future action or to think about something for a long time thoughtfully

ANSWERS: 244. blob, 245. molecule, 246. nuclear, 247. roughly, 248. impressive, 249. suffocate, 250. constituent, 251. formula, 252. contribution, 253. contemplate

254. cast off a h__k *n.* a bird of prey typically having short rounded wings and a long tail; an advocate of an aggressive policy on foreign relations
255. bury in t__b *n.* a large stone structure or underground chamber in which the dead are buried
256. sq_____e a confession *v.* to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness
257. the event ho_____n of a black hole *n.* the line at which the earth's surface and the sky appear to meet; the range of interest or activity that can be anticipated
258. the atmospheric tem_____re *n.* the degree of hotness or coldness of a thing or place
259. electromagnetic ra_____on *n.* the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health
260. the worst case sc_____io *n.* a description of possible actions or events in the future; a written outline of a play, film, or literary work
261. or_____ry annual revenue *adj.* not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree
262. fi___e decimal *adj.* having a limit or restriction of size, time, etc.
263. a cr_____l issue for women *adj.* extremely vital or necessary

ANSWERS: 254. hawk, 255. tomb, 256. squeeze, 257. horizon, 258. temperature, 259. radiation, 260. scenario, 261. ordinary, 262. finite, 263. crucial

264. ra_____e in all directions *v.* to spread out or emit something, such as light or heat, in all directions
265. bachelor's de____e *n.* a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment
266. su_____nd a town *v.* to be all around something or somebody
267. honor gr_____te *n.* a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree
268. spinal cu_____re *n.* the degree to which a line or surface deviates from being straight or flat; a measure of the amount of bending of a curve
269. engine con_____ion *n.* the arrangement or pattern of something or a group of related things
270. ad____e kids with attitude *v.* to have regard for or respect for someone's qualities or the actions they have performed
271. pr_____t when she will arrive *v.* to state beforehand that something will happen in the future, mainly based on knowledge or experience
272. me_____cs equation *n.* the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles

ANSWERS: 264. radiate, 265. degree, 266. surround, 267. graduate, 268. curvature, 269. configuration, 270. admire, 271. predict, 272. mechanics

273. re_____ge his schedule *v.* to change the order or position of things already made; to change the time, date, or place of an event already planned
274. big, b__d piano sounds *adj.* brave, daring, and confident; not frightened of danger or afraid to say what you feel or to take risks
275. crossword pu___e *n.* a situation that is difficult to follow or solve; a game, problem, or toy that tests a person's ingenuity or knowledge; (verb) to cause someone to feel confused because of something difficult to understand
276. st__k a key in a lock *v.* to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
277. ref_____tor magnet *n.* an appliance or device used for preserving and cooling food and beverages by maintaining a low temperature within a closed compartment
278. my_____y novel *n.* something difficult to understand or explain; a secret or enigmatic quality that adds to the fascination or interest of something; a genre of fiction that involves the solution of a crime or a puzzle
279. ready to co_____se *v.* to fall down or give way suddenly, often after breaking apart

ANSWERS: 273. rearrange, 274. bold, 275. puzzle, 276. stick, 277. refrigerator, 278. mystery, 279. collapse

280. equ_____um point *n.* a state in which opposing forces or influences are balanced
281. ra_____e an aura *v.* to spread out or emit something, such as light or heat, in all directions
282. test my hyp_____is *n.* a proposed idea or explanation that is based on a few known facts but has not yet been proven to be true or accurate
283. the in_____on of new techniques *n.* the creation of a new device or process resulting from study and experimentation; the act of inventing
284. nu_____r fusion *adj.* of or relating to or constituting the nucleus of an atom; deriving destructive energy from the release of atomic energy
285. congressional h__k *n.* a bird of prey typically having short rounded wings and a long tail; an advocate of an aggressive policy on foreign relations
286. di_____e acid with water *v.* to make a substance less concentrated by adding a liquid or another substance to it
287. a binocular te_____pe *n.* a device like a tube in shape containing lenses used to magnify and observe distant objects
288. industrial ex_____on *n.* the process of becoming larger or more extensive, or the result of this process

ANSWERS: 280. equilibrium, 281. radiate, 282. hypothesis, 283. invention, 284. nuclear, 285. hawk, 286. dilute, 287. telescope, 288. expansion

Session 3: Fill in the Blanks

1. His heartaches are less _____ now.
adj. happening constantly
2. The shark's powerful _____ allowed it to swim at high speeds.
n. a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance
3. The _____ surrounding the disappearance of the traveler has yet to be solved by authorities.
n. something difficult to understand or explain; a secret or enigmatic quality that adds to the fascination or interest of something; a genre of fiction that involves the solution of a crime or a puzzle
4. The company struggled to maintain an _____ between its profits and social responsibilities.
n. a state in which opposing forces or influences are balanced
5. The budget reduction was an _____ feat for our nation.
adj. arousing admiration due to size, quality, or skill
6. The package was a _____ shape, which made it easier to stack on the shelf.
adj. having the shape of a cube or being of three dimensions; measured in units that are the third power of a linear unit
7. A _____ of ink fell on the floor.
n. a small amount or drop of a thick liquid or sticky substance

ANSWERS: 1. frequent, 2. fins, 3. mystery, 4. equilibrium, 5. impressive, 6. cubic, 7. blob

8. _____ a society is an organism.
adv. relating to the essential features or concepts of anything
9. The company employs a _____ inventory system.
adj. continuing for an extended period in the same way without stopping or being interrupted
10. The room was only one _____ wider than the piano, making it a tight fit.
n. a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
11. The archer aimed his _____ carefully at the target.
n. a thin, pointed projectile designed to be shot from a bow; a symbol or pointer that is shaped like an arrow
12. He does not _____ importance to these rumors.
v. to fasten, join, or connect one thing to another
13. Better sleep leads to increased _____.
n. the set of chemical reactions in cells or organisms that are necessary for life-sustaining
14. The government tried to _____ the commercialization of this development.
v. to make something faster or earlier; to cause to develop or progress more quickly
15. The various universes within the _____ are sometimes called parallel universes.
n. a hypothetical space or realm consisting of multiple universes, of which our universe is just one of them

ANSWERS: 8. Essentially, 9. perpetual, 10. centimeter, 11. arrow, 12. attach, 13. metabolism, 14. accelerate, 15. multiverse

16. Change is also occurring in Turkey as a result of _____ reform.

adj. without any order or organization; extremely disorganized, unpredictable, and confusing

17. I recently _____ dropping out of school and getting a full-time job.

v. to think about a possible future action or to think about something for a long time thoughtfully

18. He studied the _____ of radiation.

n. the science of matter and energy and their interactions

19. We _____ a cease-fire.

v. to come to an end or close; to reach a judgment or opinion by reasoning

20. _____ evolved from people's philosophical questions about the natural world.

n. the scientific study of the nature and origin of the universe

21. The _____ session of the Diet opened.

adj. not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree

22. The class was composed of both _____ and graduate students.

n. a student who is studying for their first degree at a university or other higher education institution

23. The _____ imaging camera was used to detect heat signatures in the dark.

adj. relating to heat or temperature; designed for or capable of producing or maintaining heat

ANSWERS: 16. chaotic, 17. contemplated, 18. physics, 19. concluded, 20. Cosmology, 21. ordinary, 22. undergraduate, 23. thermal

24. It's notoriously challenging to _____ birth rates.
- v.* to state beforehand that something will happen in the future, mainly based on knowledge or experience
25. My _____ was overwhelming and complicated, but it was also exciting.
- n.* a duty or task given to someone, usually as part of their job or studies
26. Many employers hire _____ trainees to train as managers.
- n.* a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree
27. Mercury is the closest _____ to the sun.
- n.* any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star
28. We can calculate the position of the _____ statistically.
- n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
29. The _____ view of the galaxy is simply breathtaking.
- adj.* visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools
30. The rules were _____ after the new executive arrived.
- v.* to become or cause someone to become less active or tense and calmer
31. Eyeless fish _____ in dark caves.
- v.* to develop gradually, or to cause the development of something or someone gradually

ANSWERS: 24. predict, 25. assignment, 26. graduate, 27. planet, 28. particles, 29. macroscopic, 30. relaxed, 31. evolved

32. The findings of the experiment were both _____ and unexpected.
adj. causing a lot of interest or excitement
33. The passage of the bill is _____.
adj. not probable or likely to happen
34. The company is undergoing an _____ opening new locations in several states.
n. the process of becoming larger or more extensive, or the result of this process
35. Where can I _____ the application form?
v. to get something, especially by making a great effort
36. He created an _____ shaped torso.
adv. in a faulty or incomplete way
37. People can _____ from a lack of oxygen in confined spaces.
v. to die or cause someone to die from lack of air or inability to breathe; to be overwhelmed or constricted by a feeling or situation, such as anxiety or oppression
38. We all _____ him because he is a nobleman.
v. to have regard for or respect for someone's qualities or the actions they have performed
39. The entire mountain is covered in _____ rainforest.
adj. containing a large number of people or something with little space between them

ANSWERS: 32. exciting, 33. unlikely, 34. expansion, 35. obtain, 36. imperfectly, 37. suffocate, 38. admire, 39. dense

40. A _____ engineer is still in demand in many companies.
adj. operated by a machine, relating to or concerned with machinery or tools
41. The error in the _____ was attributable to rounding.
n. the act or process of using numbers to judge an amount of something
42. The farmer owns an _____ where he grows apples, pears, and plums.
n. a piece of land that is planted with fruit trees, such as apples, pears, or cherries
43. This trail takes _____ 2.5 hours.
adv. close to a specific number or time but not exactly that number or time
44. Nerve _____ cross a synapse through the action of neurotransmitters.
n. a sudden strong and unreflective wish or need to do something; the electrical discharge that travels along a nerve fiber
45. He enjoyed the _____ quiet of the afternoon at the villa.
adj. continuous and not interrupted; (of promises or contracts) not violated or disregarded
46. He _____ himself to lift the heavyweight.
v. to put forth effort; to put into action; to bring into play
47. He studied _____ in college and now works as an engineer.
n. the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles
48. The process was carried out at _____ cost.
adj. tiny in amount; the least possible

ANSWERS: 40. mechanical, 41. calculation, 42. orchard, 43. approximately, 44. impulses, 45. unbroken, 46. exerted, 47. mechanics, 48. minimal

49. I am _____ opposed to his idea because of morality.

adv. without restriction or limitation; completely or utterly

50. In a _____ system, the outcome is uncertain and can vary based on chance.

adj. characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks

51. She _____ the toothpaste tube from the middle to get the last bit out.

v. to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness

52. The _____ of the car was too fast for the road conditions.

n. the rate of change of an object's position with respect to time, often measured in meters per second (m/s)

53. Many financial _____ work in investment banks, using complex mathematical models to analyze financial data.

n. quantitative analysts or individuals who specialize in using quantitative methods, including mathematical and statistical modeling, in analyzing financial markets and making investment decisions

54. The battle had an _____ impact on the nation.

adj. unlimited or very great; impossible to measure

55. He _____ that this investment would lead to success.

v. to form a theory or conjecture or guess about a subject without solid evidence

56. She has a thick southern _____.

n. a distinctive way of pronouncing the words of a language that shows which area, country, or social group a person comes from; particular importance or significance

ANSWERS: 49. absolutely, 50. probabilistic, 51. squeezed, 52. velocity, 53. quants, 54. infinite, 55. speculated, 56. accent

57. The _____ for applying for a visa can be lengthy and complicated.
- n.* a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
58. The treatments were done but, _____ were unsuccessful.
- adv.* by bad luck; unluckily
59. The Milky Way _____ has numerous water-bearing planets.
- n.* an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
60. The revitalization of technology companies is _____ to the country's growth.
- adj.* extremely vital or necessary
61. The corporation _____ dominated the entire tobacco business.
- adv.* finally, particularly after a long time or a lot of struggle, complications, and so on
62. The teacher told the students to memorize the math _____.
- n.* a group of symbols, letters, or numbers that represent a rule, law, or mathematical statement
63. The motion of planets can be described using _____ mechanics.
- adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation
64. Einstein was an outstanding and famous _____ of the 20th century.
- n.* a scientist who specializes in the field of physics

ANSWERS: 57. process, 58. unfortunately, 59. galaxy, 60. crucial, 61. eventually, 62. formula, 63. Newtonian, 64. physicist

65. His _____ to the charity was a generous donation of money.
n. the act of giving something, especially money, to a particular cause or organization; a voluntary gift as of money or service or ideas made to some worthwhile cause
66. This facility has the largest astronomical _____ in the country.
n. a device like a tube in shape containing lenses used to magnify and observe distant objects
67. In the hospital, she will remain under constant _____.
n. the act or activity of carefully examining or monitoring something or someone
68. The _____ behavior of the football players caused the game to be canceled.
n. a violent, wild, or feral animal; a person who is cruel, uncivilized, or lacking in intelligence or sensitivity; a physical force or power
69. The content is _____ and informative for me.
adj. sharply exact or accurate or delimited
70. She _____ the concentrated juice with water.
v. to make a substance less concentrated by adding a liquid or another substance to it
71. Don't forget to put the eggs in the _____ after you've used them.
n. an appliance or device used for preserving and cooling food and beverages by maintaining a low temperature within a closed compartment
72. Stock prices _____ daily based on market demand and supply.
v. to rise and fall irregularly or unexpectedly; to vary or change often and unpredictably

ANSWERS: 65. contribution, 66. telescope, 67. observation, 68. brute, 69. precise, 70. diluted, 71. refrigerator, 72. fluctuate

73. The athlete's exceptional performance _____ their coach's training methods and strategies.
- v.* to clear someone or something of blame, suspicion, or doubt; to show or prove that someone or something is right or justified
74. The sun will _____ the mist.
- v.* to turn a liquid into a gas; to become less intense and disappear gradually
75. _____ algorithms can find ways to optimize that humans do not anticipate.
- adj.* relating to or denoting how living things develop or change from earlier forms
76. He is excessively _____ of alcohol.
- adj.* having affection or liking for someone, particularly someone you've known for a long time
77. Human beings have a _____ lifespan, so we yearn for the idea of immortality.
- adj.* having a limit or restriction of size, time, etc.
78. Efficiency isn't an essential _____ here; fairness is.
- n.* a fundamental law or truth that explains or controls how something happens or works
79. The president prepared several possible _____ for an enemy attack.
- n.* a description of possible actions or events in the future; a written outline of a play, film, or literary work
80. Since the second law of thermodynamics is applicable to the universe, the _____ of the universe continues to increase.
- n.* a scientific concept that is most commonly associated with a state of disorder, randomness, or uncertainty

ANSWERS: 73. vindicated, 74. evaporate, 75. Evolutionary, 76. fond, 77. finite, 78. principle, 79. scenarios, 80. entropy

81. One bad apple spoils the whole _____.
- n.* a grouping of several similar things which are growing or fastened together
82. The force of _____ keeps the planets in our solar system in orbit around the sun.
- n.* the force by which a celestial body, such as the Earth, pulls objects toward its center; the attraction between two or more objects due to their mass
83. The police couldn't find a _____ to her whereabouts.
- n.* an object, a piece of evidence, or some information that helps someone to find the answer to a problem, question, or mystery
84. You should not _____ them from the community.
- v.* to physically or socially separate someone or something from other people or things
85. I advised him to _____ to his new surroundings.
- v.* to make fit for or change to suit a new purpose or environment
86. Temperature _____ are often milder in oceanfront areas.
- n.* a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes
87. My father tried to _____ mathematics into my head since childhood.
- v.* to hit or cause to hit something in a way that makes a loud noise
88. She received her _____ in psychology from the university.
- n.* a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment

ANSWERS: 81. bunch, 82. gravitation, 83. clue, 84. isolate, 85. adapt, 86. fluctuations, 87. bang, 88. degree

89. The _____ force of the black hole was so strong that nothing, not even light, could escape.

adj. relating to or caused by gravity (= the force that attracts objects towards one another)

90. On three sides, mountains _____ the settlement.

v. to be all around something or somebody

91. The effort to alleviate climate change needs _____ action.

adj. brave, daring, and confident; not frightened of danger or afraid to say what you feel or to take risks

92. Their headquarters are in a _____ skyscraper.

adj. of or belonging to the present time or recent times

93. This remote _____ is rarely visited.

n. a particular location or place; a small round or roundish area, differing in color or feels from the surface around it

94. You _____ a bill in the change machine, and the coins pop out.

v. to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material

95. The roof finally _____ after three days and three nights of heavy snowfall.

v. to fall down or give way suddenly, often after breaking apart

96. When a company discloses information to the market, an _____ auditor verifies them.

adj. belonging to or situated outside of someone or something

ANSWERS: 89. gravitational, 90. surround, 91. bold, 92. modern, 93. spot, 94. stick, 95. collapsed, 96. external

97. The _____ of the sunset was a beautiful end to a long day.

- n.* a period of time following an event or experience during which a feeling of pleasure, satisfaction, or contentment persists; a lingering glow or light that remains after an object has disappeared from view

98. Use italics or capitals to _____ a word in a piece of writing.

- v.* to give or show particular importance to something

99. Any theorem relies on both _____ fact and assumption.

- adj.* that can be noticed or seen

100. As a first _____ we agreed to meet the following Friday.

- n.* a plan or preparation for the future event; the action or process of placing things in a particular order

101. This evidence supports the big-bang _____.

- n.* a proposed idea or explanation that is based on a few known facts but has not yet been proven to be true or accurate

102. These results muddled the _____.

- n.* the act of predicting the future by reasoning; a statement made about the future

103. The _____ scarcity most severely impacted the manufacturing sector

- n.* a substance that is typically burned to generate heat or energy

104. To find drunk drivers, police conduct _____ tests.

- adj.* made, done, or happening without method, conscious decision, or any regular pattern

ANSWERS: 97. afterglow, 98. emphasize, 99. observable, 100. arrangement, 101. hypothesis, 102. prediction, 103. fuel, 104. random

105. Gandhi had an _____ zeal for nonviolence.

adj. perfect or complete or to the most considerable degree possible

106. Many countries have now agreed to a treaty banning the use of _____ weapons.

adj. of or relating to or constituting the nucleus of an atom; deriving destructive energy from the release of atomic energy

107. The _____ demonstrate that poverty and unemployment are genuine problems.

n. the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data

108. That team signed a center forward who was a ball-_____.

n. a bird of prey typically having short rounded wings and a long tail; an advocate of an aggressive policy on foreign relations

109. They hope to _____ their business worldwide.

v. to increase or to make something greater in size, number, or importance

110. Cities around the world set records for highest _____ this summer.

n. the degree of hotness or coldness of a thing or place

111. X-rays revealed a small tumor in his _____.

n. the organ inside the head that is responsible for one's movement, thought, memory, and feeling

112. Big techs are now eager to develop _____ computers.

n. the smallest amount or unit of something, especially (electromagnetic) energy

ANSWERS: 105. absolute, 106. nuclear, 107. statistics, 108. hawk, 109. expand, 110. temperatures, 111. brain, 112. quantum

113. His poem has a very significant _____.

- n.* something that is inferred or indirectly stated; the act or fact of being involved in something

114. He was _____ gifted.

- adv.* as might be expected; by natural manners

115. The _____ of the earth can be seen from space.

- n.* the degree to which a line or surface deviates from being straight or flat; a measure of the amount of bending of a curve

116. The _____ of the unknown soldier honored the bravery and sacrifice of those who lost their lives in battle.

- n.* a large stone structure or underground chamber in which the dead are buried

117. Necessity is the mother of _____.

- n.* the creation of a new device or process resulting from study and experimentation; the act of inventing

118. He wanted to _____ his wedding ring with their initials as a lasting symbol of their love.

- v.* to carve, cut, or etch a design, message, or image onto a surface, often using a sharp tool or laser; to permanently record or mark something in a lasting manner

119. The _____ to the safe was a secret.

- n.* a collection of things that have been combined; an assemblage of separate parts or qualities

120. Each _____ member of the council has the right to vote on important decisions.

- n.* one of the parts of the whole; a person represented by an elected official

ANSWERS: 113. implication, 114. naturally, 115. curvature, 116. tomb, 117. invention, 118. engrave, 119. combination, 120. constituent

121. The second law of _____ denies the existence of a perpetual motion engine.
- n.* the area of physics that deals with heat, work, and temperature and their relation to energy, entropy, and the physical properties of matter and radiation
122. Roads _____ from the famous building in the center of the city.
- v.* to spread out or emit something, such as light or heat, in all directions
123. As an _____ he had the right to make his own decisions and live his life as he saw fit.
- n.* a single person or thing, as distinct from a group
124. During the unloading, the container box _____ a clicking sound.
- v.* to give off or send out something such as light, heat, sound, gas, etc.
125. The _____ is about 13.8 billion years old.
- n.* everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy
126. The doctor prescribed some medicine for the mental _____.
- n.* an untidy state or a lack of organization; a physical condition or illness that causes problems with how a section of the body or brain functions
127. The _____ of molecules in steel changes significantly with temperature.
- n.* the arrangement or pattern of something or a group of related things
128. She accidentally _____ into him in the crowded room.
- v.* to hit or knock against something hard, often with a dull sound; to meet with by accident

ANSWERS: 121. thermodynamics, 122. radiate, 123. individual, 124. emits, 125. universe, 126. disorder, 127. configuration, 128. bumped

129. This product can spread the cement _____.

adv. in equal amounts or shares; in a balanced or impartial way

130. The shape of the DNA _____ is a double helix.

n. a group of two or more atoms held together by attractive forces known as chemical bonds

131. _____ elections were held in several European countries.

adj. belonging to or used by a group rather than individuals; for common use

132. We gained various _____ by analyzing the vast amount of data owned by the company.

n. the ability to gain an accurate and deep understanding of people or situations; an accurate and deep understanding of what something is like

133. As the sun set, the colors of the sky merged with the _____ creating a beautiful orange and pink hue.

n. the line at which the earth's surface and the sky appear to meet; the range of interest or activity that can be anticipated

134. Five miles is _____ similar to eight kilometers.

adv. approximately but not precisely; with a violent manner

135. My remote _____ immigrated to the United States from Ireland in the 1800s.

n. a person from whom one is descended; a forefather

136. She still _____ writes a short romance novel.

adv. now and then; sometimes but not often

ANSWERS: 129. evenly, 130. molecule, 131. Communal, 132. insights, 133. horizon, 134. roughly, 135. ancestor, 136. occasionally

137. The outermost electron shell of an _____ determines its chemical characteristics.
n. the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus
138. He tried every possible treatment, including chemotherapy and _____ therapy.
n. the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health
139. Shakespeare's output of poetry was _____.
adj. extremely large or great
140. Please _____ these files as we start a new project tomorrow.
v. to change the order or position of things already made; to change the time, date, or place of an event already planned
141. The areas of _____ and psychology are significantly related to one another.
n. the scientific study of humanity, concerned with human behavior, human biology, cultures, societies, and linguistics in both the present and past, including past human species
142. The designer's _____ was to create a minimalist aesthetic for the interior of the building.
n. a strong determination or attention to do or achieve something; (adjective) having a strong determination to do or achieve something
143. The picture earned near-_____ acclaim from critics.
adj. existing or affecting everywhere or everyone

ANSWERS: 137. atom, 138. radiation, 139. enormous, 140. rearrange, 141. anthropology, 142. intent, 143. universal

144. This jigsaw _____ is challenging because there are no pictures.

- n.* a situation that is difficult to follow or solve; a game, problem, or toy that tests a person's ingenuity or knowledge; (verb) to cause someone to feel confused because of something difficult to understand

ANSWERS: 144. puzzle