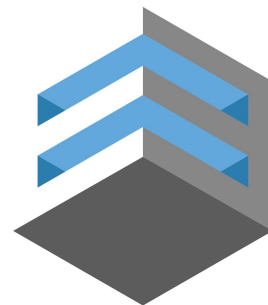


# Englist.me



## Vocabulary Builder Reference from...

*Fabio Pacucci: Could we harness the power of a black hole? | TED Talk*

[https://www.ted.com/talks/fabio\\_pacucci\\_could\\_we\\_harness\\_the\\_power\\_of\\_a\\_black\\_hole](https://www.ted.com/talks/fabio_pacucci_could_we_harness_the_power_of_a_black_hole)

### All Words

#### IMPORTANT

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## Session 1: Word List

### distant

*adj.* far away in space, time, or where you are; far apart in relevance, relationship, or kinship

*synonym*: far, isolated, remote

(1) a **distant** memory, (2) **distant** ancestors

The sun set over the crest of **distant** hills.

### pale

*adj.* having skin that is very light colored; lacking in vitality or interest or effectiveness

*synonym*: sallow, faint, ashen

(1) a **pale** complexion, (2) **pale** pink

She turned **pale** when she heard the news.

### dot

*n.* a very small circular mark, especially one that is printed

*synonym*: drop, dab, fleck

(1) connecting the **dots**, (2) **dot** blot method

The wallpaper had a pattern of pink **dots** on a white surface.

### forge

*v.* to fashion or shape metal by heating it and hammering it into shape; to create or develop something new or original; to form strong bonds or relationships with others

*synonym*: create, build, establish

(1) **forge** an alliance, (2) **forge** iron

She had to **forge** her father's signature on the permission slip because he was out of town.

## 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.

## light-year

*n.* a unit of distance used in astronomy to represent the distance that light travels in a year, which is equal to about 9.46 trillion kilometers or 5.88 trillion miles

(1) **light-year** distance, (2) billions of **light-years**

Proxima Centauri is the closest star to Earth, located about 4.24 **light-years** away.

## maintain

*v.* to continue to uphold or sustain; to keep in a particular state or condition; to assert or declare something to be true

*synonym*: preserve, uphold, sustain

(1) **maintain** order, (2) **maintain** good health

I need to **maintain** my car regularly to prevent any major mechanical issues.

## galactic

*adj.* relating to or concerning the galaxy or galaxies; having characteristics or qualities that are vast, extensive, or cosmic in scope

*synonym*: cosmic, celestial, enormous

(1) **galactic** scale, (2) a **galactic** system

The Milky Way is a **galactic** collection of billions of stars and planets.

## transport

*n.* a system for moving people or products from one location to another using automobiles, roads, and so on

*synonym*: shipment, transit, conveyance

(1) **transport** facilities, (2) access to public **transport**

Enhanced rail **transportation** is crucial for our business.

## leap

- v.* to jump or spring into the air, often with the feet leaving the ground or a surface below; to move quickly or suddenly, often forward or upward

*synonym*: jump, bound, hop

- (1) **leap** to a conclusion, (2) **leap** of faith

The athlete was able to **leap** over the hurdle with ease.

## communicate

- v.* to share or exchange information with others by speaking, writing, moving your body, or using other signals

*synonym*: convey, share, transmit

- (1) **communicate** his anxieties to the psychiatrist,

- (2) **communicate** well with my advisor

Dolphins use sound to **communicate** with each other.

## government

- n.* the group of people with authority to control a country or state

*synonym*: administration, regime, state

- (1) **government** bureaucracy, (2) **government** funding

The federal **government** is planning to increase taxes for the next fiscal year.

## fundamental

- adj.* forming an essential base or core from which everything else develops or is affected

*synonym*: basic, essential, entire

- (1) **fundamental** education, (2) **fundamental** rights

Human behavior has **fundamental** characteristics.

## industrious

- adj.* hardworking, diligent, and persistent in effort

*synonym*: diligent, hardworking, assiduous

- (1) **industrious** worker, (2) **industrious** student

He was known to be very **industrious** and would often work late into the night.

## terraform

- v. to transform the environment or land of a planet, moon, or other celestial body to make it habitable for life, typically by introducing or modifying the atmosphere, temperature, or topography

(1) **terraform** Mars, (2) **terraform** the planet

The company plans to **terraform** the barren land into a lush green park.

## operate

- v. to work in a particular way; to supervise something

*synonym*: work, use, employ

(1) **operate** 24 hours a day, (2) manually **operate** a machine

This machine is too difficult to **operate** for me.

## astronomer

- n. a physicist who studies astronomy

*synonym*: stargazer, cosmologist, astrophysicist

(1) amateur **astronomer**, (2) solar **astronomer**

This question has fascinated solar **astronomers** for decades.

## propose

- v. to make a proposal, declare a plan for something

*synonym*: suggest, offer, recommend

(1) **propose** the amendment, (2) **propose** changes

I want to **propose** a toast in honor of our longstanding relationship.

## quantity

- n. the amount or number of something; magnitude

*synonym*: abundance, portion, amount

(1) half **quantity**, (2) residual **quantity**

In southward, the average annual water **quantity** increases.

## 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.

## 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.

## 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

## fossil

*n.* any preserved remains, impression, or trace of any once-living thing that has become hard and turned into rock

*synonym*: relic, remnant, antediluvian

(1) burning of **fossil** fuels, (2) a **fossil** leaf

It was the **fossil** of a dinosaur tooth.

## panel

*n.* a square or rectangular and flat piece of something that forms a distinct section or component of something; a small group of specialists who discuss particular topics or give their advice or opinion about something

*synonym*: board, commission, discussion

(1) **panel** discussion, (2) cost of solar **panels**

A **panel** of economic advisers from the United States visited the country to help rebuild its economy.

## 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.

## settle

*v.* to reach an agreement of disagreement

*synonym*: inhabit, occupy, decide

(1) **settle** a dispute, (2) **settle** down in the town

I don't want to **settle** for second best.

## 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.

## yotta

*n.* a prefix used in the International System of Units to denote a factor of 10 to the power of 24 (1,000,000,000,000,000,000,000,000), often used in computer science and information technology to represent extremely large quantities of data

(1) **yottabyte**, (2) **yotta** values

The development of quantum computing may result in **yotta-scale** calculations becoming commonplace.

## joule

*n.* the unit of measurement for energy in the International System of Units (SI), equal to the work done by a force of one newton when its point of application moves one meter in the direction of the force

*synonym*: calorie

(1) measure energy in **joules**, (2) **joule** heating

A 60-watt light bulb uses 60 **joules** of energy per second.

## release

*v.* to set free or allow to escape from confinement

*synonym*: free, let go, discharge

(1) **release** a prisoner, (2) **release** CO2 into the air

The animal rights group worked to **release** the dolphins back into the wild.

## barring

*adv.* excepting or excluding something or someone; in the absence of something or someone

*synonym*: except, apart from

(1) **barring** bad weather, (2) **barring** unexpected circumstances

**Barring** any unforeseeable technical issues, the project should be completed by next week.

## breakthrough

*n.* a sudden, dramatic, and important discovery or development that helps to improve a situation or provide an answer to a problem

*synonym*: advance, progress, innovation

(1) **breakthrough** in the negotiations, (2) **breakthrough** discovery

A technique called deep learning has led to **breakthroughs** in AI.

## exotic

*adj.* originating from or characteristic of a foreign country or culture; strikingly unusual, uncommon, or intriguing

*synonym*: foreign, alien, unfamiliar

(1) **exotic** species, (2) **exotic** vacation

I love trying **exotic** foods from different cultures.

## physics

*n.* the science of matter and energy and their interactions

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

He studied the **physics** of radiation.

## suffice

*v.* to be enough or sufficient; to meet the needs or requirements of something or someone; to satisfy or fulfill a purpose

*synonym*: satisfy, meet, be enough

(1) **suffice** to live, (2) **suffice** as evidence

Would one cup of flour **suffice** for this recipe?

## massive

*adj.* enormous amount; very heavy and solid

*synonym*: enormous, giant, immense

(1) **massive** amounts, (2) **massive** stars

The recent economic downturn has resulted in **massive** layoffs.

## counterintuitive

*adj.* contrary to what common sense would suggest

*synonym*: unreasonable, paradoxical, nonsensical

(1) **counterintuitive** results, (2) **counterintuitive** behavior

The **counterintuitive** nature of quantum physics has been a source of confusion for scientists for decades.

## accretion

*n.* the process of gradual growth or accumulation, particularly of layers or matter building up over time; the result of such a process

*synonym*: accumulation, buildup, growth

(1) stellar **accretion**, (2) island **accretion**

The rock was formed by the slow **accretion** of sediments over millions of years.

## disk

*n.* a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music

*synonym*: record, platter, plate

(1) **disk** drive, (2) **disk** space

The computer's hard **disk** was full, so she had to delete some files.

## circular

*adj.* shaped like a circle; having a round form

*synonym*: round, loopy, oblique

(1) **circular** economy, (2) non- **circular** orbit

The **circular** shape of the planet makes it difficult to determine which direction is north.

## structure

*n.* the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts

*synonym*: construction, architecture, establishment

(1) the **structure** of a machine, (2) **structure** and function of the brain



The organizational **structure** of start-ups is often flat and straightforward.

## 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.

## conservation

*n.* the protection of something important, such as the natural environment or artificial structures, especially from the damaging effects of human activity

*synonym*: preservation, protection, saving

(1) soil **conservation**, (2) the **conservation** law of physics

The forest was recently designated a **conservation** area.

## angular

*adj.* measured by an angle or by the rate of change of an angle; having angles or an angular shape

*synonym*: jagged, angulate

(1) **angular** mountain ridge, (2) **angular** momentum

Any rotating body has **angular** momentum about its center of mass.

## 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.

## plummet

*v.* to fall or drop suddenly and steeply; to decline rapidly or sharply

*synonym*: drop, plunge, fall

(1) **plummeting** sales, (2) **plummet** against other major currencies

The stock prices have **plummeted** in the last hour, causing

concern for investors.

## straight

*adj.* extending or moving in one direction without bending or curving; having no deviations

*synonym*: linear, honest, consecutive

(1) a **straight** line, (2) **straight** for two months

He was sick for five **straight** days.

## spiral

*n.* a curve that coils around a central point and gets progressively farther away from it as it goes around

*synonym*: coil, helix, twist

(1) **spiral** staircase, (2) **spiral** design

The leaves of the fern were arranged in a **spiral** pattern.

## intense

*adj.* (especially of a feeling) very strong; extremely sharp or severe

*synonym*: extreme, fierce, harsh

(1) **intense** heat, (2) develop **intense** itching

That statement by the prime minister drew **intense** international criticism.

## 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.

## convert

*v.* to have a talk with someone; (adjective) reversed in order, relation, or action

*synonym*: alter, remake, transform

(1) **convert** fat into energy, (2) **convert** base 10 to base 16

I want to **convert** my sadness into strength.

## kinetic

*adj.* of or relating to motion or the forces that cause motion

*synonym*: active, dynamic, lively

(1) **kinetic** friction, (2) **kinetic** motion

The **kinetic** energy of the falling object increased as it fell.

## interaction

*n.* the act of connecting with someone, mainly when working, playing, or spending time with them

*synonym*: dealings, exchange, relations

(1) the **interaction** between man and his environment,

(2) **interaction** among human beings

The **interaction** of the two groups is good for brainstorming.

## 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.

## astonishing

*adj.* surprising or shocking; difficult to believe

*synonym*: surprising, shocking, astounding

(1) **astonishing** achievement, (2) make **astonishing** gains

The news of her sudden death was **astonishing** to everyone who knew her.

## efficiency

*n.* the state or quality of doing something well with no waste of input such as time or money

*synonym*: effectiveness, efficacy, productivity

(1) better fuel **efficiency**, (2) an energy **efficiency**

Our company must continue to strive for greater **efficiency**.

## rotate

*v.* to turn around a central point or axis; to move in a circular path around something

*synonym*: turn, revolve, spin

(1) **rotate** crops, (2) **rotate** about the origin

The Earth **rotates** on its axis once every 24 hours.

## rot

*v.* to decay, or cause something to decay, naturally and gradually

*synonym*: perish, decay, corrode

(1) begin to **rot**, (2) **rot** with age

Please refrigerate the meat, or it will **rot**.

## drastic

*adj.* radical and extreme; likely to have a significant or far-reaching impact

*synonym*: extreme, fierce, radical

(1) **drastic** measures, (2) make **drastic** revision

The global community is undergoing **drastic** changes at present.

## outshine

*v.* to be more brilliant, striking, or impressive than; to outdo or excel

*synonym*: surpass, excel, outdo

(1) **outshine** his teacher, (2) **outshine** expectations

The new singer **outshined** all the others on stage with her powerful voice.

## fission

*n.* the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces

*synonym*: splitting, division, separation

(1) heavy-ion **fission**, (2) atomic **fission**

Nuclear **fission** is the process of splitting an atom into two smaller ones.

## efficient

*adj.* performing at the highest level of productivity with the least wasted effort or resources; capable of achieving maximum output with minimum wasted effort, time, or materials

*synonym*: productive, effective, competent

(1) **efficient** operation, (2) energy- **efficient** appliances

The new washing machine is much more **efficient** than the old one.

## mechanism

- n.* a part of a machine, or a set of parts that performs a task; a natural or established process that occurs during a specific situation or reaction

*synonym*: means, method, system

- (1) the **mechanism** for DNA replication, (2) defense **mechanism**

He discovered unique **mechanisms** for photochemical reactions.

## extract

- n.* a short passage taken from a book, piece of music, etc.; a substance obtained from something through a specific process; (verb) to obtain from something or to remove something by effort or force

*synonym*: excerpt, quote, distillation

- (1) a brief **extract** from the book, (2) botanical **extract**

Anesthetize the gum before **extracting** the teeth.

## mass

- n.* a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together

*synonym*: abundance, crowd, mob

- (1) a **mass** of molten rock, (2) critical **mass**

The **mass** of people who do not own property is politically impotent.

## uranium

- n.* a chemical element with the symbol U, atomic number 92, that is a dense, silvery-white metal that is radioactive and is used as a fuel for nuclear power plants

*synonym*: U

- (1) **uranium** mining, (2) radioactive **uranium** isotope

The mining and processing of **uranium** can lead to releasing radioactive materials into the environment.

## 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.

## **harness**

*v.* to control and exploit the power of something, especially natural resources that produce energy; (noun) a set of narrow pieces of leather and metal that are used to control or hold in place a person, animal, or object

*synonym*: rein in, control, (noun) belt

(1) **harness** a horse to a carriage, (2) put a **harness** on my pet

People have been exploring ways to **harness** natural forces and resources since ancient times.

## **devise**

*v.* to come up with an idea, plan, theory, etc., using your intelligence or imagination

*synonym*: create, concoct, invent

(1) **devise** a plan, (2) **devise** a literary plot

They had to **devise** a system that did not depend on fossil fuels.

## **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.

## **freeman**

*n.* a person who is not a serf or enslaved person and has the right to hold property and vote

*synonym*: citizen, individual, person

(1) **freeman** rights, (2) **freeman** status

In the colonial period, only **freeman** was allowed to vote.

## **sphere**

*n.* a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity

*synonym*: ball, globe, scope

(1) **sphere** of influence, (2) business **sphere**

The **sphere** of the earth is divided into several layers including the crust, mantle, and core.

## **advance**

*v.* to go or move forward; to develop in a positive way

*synonym*: progress, boost, come along

(1) **advance** the technology, (2) **advance** a cooperative relationship

Scientific knowledge will **advance** significantly with the power of AI.

## **engineer**

*n.* a person whose job is designing, building, or maintaining something such as machines, structures, or software

*synonym*: architect, creator, builder

(1) a civil **engineer**, (2) **engineer** shortage

The **engineer** will repair my telephone tomorrow morning.

## **capture**

*v.* to catch a person or an animal and confine them in an area which they cannot escape

*synonym*: catch, arrest, imprison

(1) **capture** a glimpse, (2) **capture** customers' hearts

I was able to **capture** the moment on film.

## **satisfy**

*v.* to make somebody pleased by giving them what they want or need

*synonym*: please, amuse, meet

(1) **satisfy** a desire, (2) **satisfy** a user's needs

Did this response **satisfy** your request?

## **vast**

*adj.* enormous in size, number, amount, or quantity

*synonym*: expansive, extended, boundless

(1) **vast** majority, (2) **vast** desert

A **vast** audience viewed the broadcast.

## **complicated**

*adj.* involving a lot of different things or parts in a way that is difficult to understand or analyze

*synonym*:

complex, convoluted, intricate

(1) a **complicated** process, (2) become increasingly **complicated**

He did **complicated** pen-and-ink drawings in just a few days.

## theoretical

*adj.* relating to the concepts and principles upon which a particular topic is founded, rather than practice and experience

*synonym*: conceptual, conjectural, ideal

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

Absolute zero is the lowest **theoretical** temperature.

## continuously

*adv.* without being interrupted or paused; repeatedly

*synonym*: constantly, frequently, always

(1) use one thing **continuously**, (2) **continuously** removed

The country's domestic coal consumption has been **continuously** declining for decades.

## plasma

*n.* (biology) the yellow-colored liquid component of blood, in which blood cells are suspended; (physics) one of the four fundamental states of matter consisting of positive ions and free electrons

(1) **plasma** membrane, (2) high-temperature **plasma**

Blood **plasma** makes up about half of the volume of blood.

## jet

*n.* a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances

*synonym*: plane, aircraft, flier

(1) private **jet**, (2) commercial **jet**

The **jet** flew over the ocean at high speed, reaching its destination in hours.

## pole

*n.* one of two antipodal points where the Earth's axis of rotation intersects the Earth's surface; a long, slender, rounded rod, typically of wood or metal, used as a support or to hang something



*synonym*: rod, staff, shaft

(1) a fishing **pole**, (2) the plus **pole**

The North **Pole** is the northernmost point on Earth.

## **smithereens**

*n.* small fragments, pieces, or splinters resulting from the breaking or smashing of something

*synonym*: shreds, bits, fragments

(1) split into **smithereens**, (2) get blown to **smithereens**

The vase was shattered into **smithereens** after it fell off the table.

## **remotely**

*adv.* at a distance; not directly or easily accessible

*synonym*: distantly, remotely, slightly

(1) **remotely** operate, (2) control **remotely**

The company can **remotely** access its employees' computers for troubleshooting purposes.

## **swarm**

*n.* a group of many things, such as insects, fishes, etc., in the air or water or on the ground

*synonym*: horde, hive, throng

(1) a **swarm** of mosquitoes, (2) locust **swarm**

A **swarm** of angry bees attacked because we had approached the hive.

## **orbit**

*n.* the path of an object around a celestial body, especially a planet, star, or moon, under the influence of gravity.

*synonym*: path, course, trajectory

(1) the **orbit** of the moon, (2) a planetary **orbit**

The rocket engine is used to put the satellite into **orbit**.

## **device**

*n.* a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic

*synonym*: gadget, instrument, tool

(1) electronic **device**, (2) tracking **device**

I always carry a backup **device** in case my phone runs out of

battery.

## transmit

*v.* to send or forward an electronic signal; to pass something from one person or thing to another

*synonym*: convey, share, dispatch

(1) **transmit** the disease, (2) **transmit** information

Parents often **transmit** their characteristics to their children.

## powerplant

*n.* a facility designed for generating electricity or other forms of power, typically through the use of turbines, engines, or other power-generating mechanisms

*synonym*: generator, power station, power center

(1) **powerplant** emissions, (2) nuclear **powerplant**

The **powerplant** operator monitors the equipment and power output to ensure everything runs smoothly.

## battery

*n.* a device that is placed inside a car, gadget, equipment, etc. and that provides electrical power to them

*synonym*: electric cell, array, batch

(1) a dry **battery**, (2) **battery** charging

The engine did not start because the **battery** was flat.

## storage

*n.* the act or process of putting in and keeping something in a particular place for use in the future; an electronic memory device that can store information

*synonym*: storehouse, depository, warehousing

(1) a **storage** battery, (2) **storage** at low temperature

We store customer data in cloud **storage**.

## radial

*adj.* of or relating to rays or the radii of a circle; spreading out from a central point

*synonym*: concentric, central, spoke-like

(1) **radial** symmetry, (2) in a **radial** direction

The **radial** design of the wheel allows for maximum strength and stability.

## **melt**

v. to turn from something solid into something soft or liquid as a result of heating

*synonym*: disintegrate, soften, disappear

(1) **melt** the ice, (2) **melt** down gold

Her resistance **melted** under his persuasion.

## **fraction**

n. a small part or item forming a piece of a whole; the quotient of two rational numbers

*synonym*: piece, part, fragment

(1) a **fractional** share of the vote, (2) a numerator in a **fraction**

He spent only a **fraction** of his earnings.

## **disrupt**

v. to prevent or stop something, especially an event, activity, or process, from continuing in the usual way by causing a problem or disturbance

*synonym*: interrupt, disturb, break into

(1) **disrupt** a well-ordered condition, (2) **disrupt** sleep

I'm so sorry to **disrupt** you when you're pretty busy.

## **hematite**

n. a reddish or black mineral consisting of iron oxide, which is the main ore of iron

*synonym*: iron ore, bloodstone

(1) **hematite** deposits, (2) **hematite** mineral

The geology museum had an exhibit showcasing various specimens of **hematite**.

## **construct**

v. to build or create something; to assemble or combine different parts to form something whole

*synonym*: build, assemble, create

(1) **construct** a 3D image, (2) **construct** a dam

He **constructs** hypotheses that no mathematician has ever imagined before.

## **dismantle**

v. to take apart or demolish (a structure, machine, system, or the like); to strip off fittings or equipment

*synonym*: take apart, demolish, take down

(1) **dismantle** a machine, (2) **dismantle** a system

The old building had to be **dismantled** because it was structurally unsound.

## technological

*adj.* based on scientific and industrial progress

*synonym*: specialized, technical

(1) **technological** advancement, (2) **technological** policy

**Technological** advances have disrupted many industries.

## masterpiece

*n.* a work of art that is exceptionally good or highly skilled; a great achievement

*synonym*: classic, chef-d'oeuvre, magnum opus

(1) literary **masterpiece**, (2) a **masterpiece** of design

The Mona Lisa is widely considered to be a **masterpiece** of art.

## 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.

## 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.

## crisis

*n.* a time of great disagreement, confusion, or danger when problems must be resolved or critical decisions must be taken

*synonym*: concern, problem, emergency

(1) financial **crisis**, (2) **crisis** management

The Chinese word for **crisis** comprises two characters, one for danger and the other for opportunity.

## confront

*v.* to face, meet or deal with a problem or difficult situation or person

*synonym*: engage, encounter, contend

(1) **confront** a global warming, (2) **confront** the issue

He finally decided to **confront** problems directly.

## sustainable

*adj.* able to continue or be continued for a long time

*synonym*: continuable, endurable, tolerable

(1) **sustainable** alternative fuel, (2) principles of **sustainable** development

The government should do more to support environmentally **sustainable** agriculture.

## survival

*n.* the state of continuing to exist or live, frequently in the face of difficulty or danger

*synonym*: endurance, continuity

(1) **survival** ability, (2) **survival** food

He evaluated his chances for **survival** rather pessimistically.

## progression

*n.* the act or process of changing to the next stage or phase or moving forward

*synonym*: advancement, development, evolution

(1) **progression** of civilization, (2) **progression** of disease

The company has made great strides in its **progression** toward sustainability.

## conquer

*v.* to bring under control by force or authority

*synonym*: defeat, overpower, subdue

(1) **conquer** fatal disease, (2) **conquer** the world

You must **conquer** your anxiety about driving.

## astronomical

*adj.* relating to astronomy or the study of celestial bodies and phenomena; very large or immense in scale or magnitude

*synonym*: huge, vast, enormous

(1) **astronomical** observation, (2) **astronomical** numbers

The cost of the new equipment was **astronomical** and beyond the company's budget.

## **giant**

*adj.* enormous; much bigger or more important than similar items usually are

*synonym*: big, gigantic, huge

(1) **giant** trees, (2) **giant** tech company

The **giant** jets gradually dominate the world's airlines.

## **dim**

*adj.* poorly lit; not bright

*synonym*: dull, faint, weak

(1) **dim** and distant past, (2) **dim** memory

The **dim** light made it difficult to read the book.

## **superstructure**

*n.* the part of a structure or building that is built on top of the foundation or base; a framework or system that is built on top of something else and supports or enhances it

*synonym*: framework, structure, infrastructure

(1) **superstructure** design, (2) wooden **superstructure**

The bridge's **superstructure** was carefully constructed to withstand high winds and heavy traffic.

## **realm**

*n.* a domain of activity, interest, or knowledge

*synonym*: domain, empire, kingdom

(1) public **realm**, (2) beyond the **realm** of possibility

Her passions are in the **realm** of real-world political affairs.

## **ingenuity**

*n.* the quality of inventing things or solving problems in clever new ways

*synonym*: creativity, invention, originality

(1) the infinite **ingenuity** of man, (2) abound in **ingenuity**

Creativity and **ingenuity** are often brought about by extreme concentration.

## Session 2: Spelling

- |                             |  |
|-----------------------------|--|
| 1. better fuel eff_____cy   | <i>n.</i> the state or quality of doing something well with no waste of input such as time or money  |
| 2. sp____l design           | <i>n.</i> a curve that coils around a central point and gets progressively farther away from it as it goes around                                  |
| 3. m__t the ice             | <i>v.</i> to turn from something solid into something soft or liquid as a result of heating  |
| 4. ra____l symmetry         | <i>adj.</i> of or relating to rays or the radii of a circle; spreading out from a central point  |
| 5. island ac_____on         | <i>n.</i> the process of gradual growth or accumulation, particularly of layers or matter building up over time; the result of such a process      |
| 6. co_____t fat into energy | <i>v.</i> to have a talk with someone; (adjective) reversed in order, relation, or action  |
| 7. an____r mountain ridge   | <i>adj.</i> measured by an angle or by the rate of change of an angle; having angles or an angular shape   |
| 8. in____e heat             | <i>adj.</i> (especially of a feeling) very strong; extremely sharp or severe   |
| 9. su____al food            | <i>n.</i> the state of continuing to exist or live, frequently in the face of difficulty or danger   |
| 10. oxygen a__m             | <i>n.</i> 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: 1. efficiency, 2. spiral, 3. melt, 4. radial, 5. accretion, 6. convert, 7. angular, 8. intense, 9. survival, 10. atom

11. co____nt the issue	<i>v.</i> to face, meet or deal with a problem or difficult situation or person
12. the con_____ion law of physics	<i>n.</i> the protection of something important, such as the natural environment or artificial structures, especially from the damaging effects of human activity
13. defense me_____sm	<i>n.</i> a part of a machine, or a set of parts that performs a task; a natural or established process that occurs during a specific situation or reaction
14. fr_____n rights	<i>n.</i> a person who is not a serf or enslaved person and has the right to hold property and vote
15. sp_____te about the reason	<i>v.</i> to form a theory or conjecture or guess about a subject without solid evidence
16. measure energy in jo__es	<i>n.</i> the unit of measurement for energy in the International System of Units (SI), equal to the work done by a force of one newton when its point of application moves one meter in the direction of the force
17. v__t desert	<i>adj.</i> enormous in size, number, amount, or quantity
18. pro_____on of disease	<i>n.</i> the act or process of changing to the next stage or phase or moving forward
19. he_____te deposits	<i>n.</i> a reddish or black mineral consisting of iron oxide, which is the main ore of iron
20. burning of fo___l fuels	<i>n.</i> any preserved remains, impression, or trace of any once-living thing that has become hard and turned into rock

ANSWERS: 11. confront, 12. conservation, 13. mechanism, 14. freeman, 15. speculate, 16. joule, 17. vast, 18. progression, 19. hematite, 20. fossil



21. become increasingly com_____ed	<i>adj.</i> involving a lot of different things or parts in a way that is difficult to understand or analyze
22. se___e a dispute	<i>v.</i> to reach an agreement of disagreement
23. sp_____te on the outcome	<i>v.</i> to form a theory or conjecture or guess about a subject without solid evidence
24. d_t blot method	<i>n.</i> a very small circular mark, especially one that is printed
25. literary mas_____ce	<i>n.</i> a work of art that is exceptionally good or highly skilled; a great achievement
26. ex_____on project	<i>n.</i> the process of becoming larger or more extensive, or the result of this process
27. residual qu_____ty	<i>n.</i> the amount or number of something; magnitude
28. a m__s of molten rock	<i>n.</i> a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together
29. pr_____e changes	<i>v.</i> to make a proposal, declare a plan for something
30. ra_____e an aura	<i>v.</i> to spread out or emit something, such as light or heat, in all directions
31. sus_____le alternative fuel	<i>adj.</i> able to continue or be continued for a long time
32. put a ha_____s on my pet	<i>v.</i> to control and exploit the power of something, especially natural resources that produce energy; (noun) a set of narrow pieces of leather and metal that are used to control or hold in place a person, animal, or object

ANSWERS: 21. complicated, 22. settle, 23. speculate, 24. dot, 25. masterpiece, 26. expansion, 27. quantity, 28. mass, 29. propose, 30. radiate, 31. sustainable, 32. harness

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|------------------------------------|--|
| 33. gov_____nt funding             | <i>n.</i> the group of people with authority to control a country or state   |
| 34. di_____le a machine            | <i>v.</i> to take apart or demolish (a structure, machine, system, or the like); to strip off fittings or equipment  |
| 35. gov_____nt bureaucracy         | <i>n.</i> the group of people with authority to control a country or state   |
| 36. fun_____al rights              | <i>adj.</i> forming an essential base or core from which everything else develops or is affected   |
| 37. pl_____ting sales              | <i>v.</i> to fall or drop suddenly and steeply; to decline rapidly or sharply  |
| 38. st_____ht for two months       | <i>adj.</i> extending or moving in one direction without bending or curving; having no deviations  |
| 39. radioactive ur_____m isotope   | <i>n.</i> a chemical element with the symbol U, atomic number 92, that is a dense, silvery-white metal that is radioactive and is used as a fuel for nuclear power plants                                    |
| 40. a brief ex_____t from the book | <i>n.</i> a short passage taken from a book, piece of music, etc.; a substance obtained from something through a specific process; (verb) to obtain from something or to remove something by effort or force |
| 41. te_____rm Mars                 | <i>v.</i> to transform the environment or land of a planet, moon, or other celestial body to make it habitable for life, typically by introducing or modifying the atmosphere, temperature, or topography    |

ANSWERS: 33. government, 34. dismantle, 35. government, 36. fundamental, 37. plummet, 38. straight, 39. uranium, 40. extract, 41. terraform

42. ou____ne his teacher	<i>v.</i> to be more brilliant, striking, or impressive than; to outdo or excel
43. co_____ct a dam	<i>v.</i> to build or create something; to assemble or combine different parts to form something whole
44. ha____s a horse to a carriage	<i>v.</i> to control and exploit the power of something, especially natural resources that produce energy; (noun) a set of narrow pieces of leather and metal that are used to control or hold in place a person, animal, or object
45. en____er shortage	<i>n.</i> a person whose job is designing, building, or maintaining something such as machines, structures, or software
46. an____r momentum	<i>adj.</i> measured by an angle or by the rate of change of an angle; having angles or an angular shape
47. op____e 24 hours a day	<i>v.</i> to work in a particular way; to supervise something
48. ro___e about the origin	<i>v.</i> to turn around a central point or axis; to move in a circular path around something
49. soil con_____ion	<i>n.</i> the protection of something important, such as the natural environment or artificial structures, especially from the damaging effects of human activity
50. non-ci____ar orbit	<i>adj.</i> shaped like a circle; having a round form
51. use one thing con_____sly	<i>adv.</i> without being interrupted or paused; repeatedly

ANSWERS: 42. outshine, 43. construct, 44. harness, 45. engineer, 46. angular, 47. operate, 48. rotate, 49. conservation, 50. circular, 51. continuously

52. business sp___e	<i>n.</i> a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity
53. ou____ne expectations	<i>v.</i> to be more brilliant, striking, or impressive than; to outdo or excel
54. co____r fatal disease	<i>v.</i> to bring under control by force or authority
55. pr____e the amendment	<i>v.</i> to make a proposal, declare a plan for something
56. bre______ugh in the negotiations	<i>n.</i> a sudden, dramatic, and important discovery or development that helps to improve a situation or provide an answer to a problem
57. the event ho____n of a black hole	<i>n.</i> the line at which the earth's surface and the sky appear to meet; the range of interest or activity that can be anticipated
58. make ast____ng gains	<i>adj.</i> surprising or shocking; difficult to believe
59. re____e a prisoner	<i>v.</i> to set free or allow to escape from confinement
60. d_m and distant past	<i>adj.</i> poorly lit; not bright
61. su____e to live	<i>v.</i> to be enough or sufficient; to meet the needs or requirements of something or someone; to satisfy or fulfill a purpose
62. ast____ng achievement	<i>adj.</i> surprising or shocking; difficult to believe

ANSWERS: 52. sphere, 53. outshine, 54. conquer, 55. propose, 56. breakthrough, 57. horizon, 58. astonishing, 59. release, 60. dim, 61. suffice, 62. astonishing

63. con_____sly removed	<i>adv.</i> without being interrupted or paused; repeatedly
64. ad_____e the technology	<i>v.</i> to go or move forward; to develop in a positive way
65. neutral hydrogen a__ms	<i>n.</i> the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus
66. su_____e as evidence	<i>v.</i> to be enough or sufficient; to meet the needs or requirements of something or someone; to satisfy or fulfill a purpose
67. st_____e at low temperature	<i>n.</i> the act or process of putting in and keeping something in a particular place for use in the future; an electronic memory device that can store information
68. the_____al models	<i>adj.</i> relating to the concepts and principles upon which a particular topic is founded, rather than practice and experience
69. commercial j_t	<i>n.</i> a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances
70. sa_____y a desire	<i>v.</i> to make somebody pleased by giving them what they want or need
71. a fishing p__e	<i>n.</i> one of two antipodal points where the Earth's axis of rotation intersects the Earth's surface; a long, slender, rounded rod, typically of wood or metal, used as a support or to hang something

ANSWERS: 63. continuously, 64. advance, 65. atom, 66. suffice, 67. storage, 68. theoretical, 69. jet, 70. satisfy, 71. pole

72. begin to r_t	<i>v.</i>	to decay, or cause something to decay, naturally and gradually
73. st_____re and function of the brain	<i>n.</i>	the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
74. he_____te mineral	<i>n.</i>	a reddish or black mineral consisting of iron oxide, which is the main ore of iron
75. elliptic ga____y	<i>n.</i>	an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
76. critical m__s	<i>n.</i>	a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together
77. ba_____g bad weather	<i>adv.</i>	excepting or excluding something or someone; in the absence of something or someone
78. ba_____y charging	<i>n.</i>	a device that is placed inside a car, gadget, equipment, etc. and that provides electrical power to them
79. te_____rm the planet	<i>v.</i>	to transform the environment or land of a planet, moon, or other celestial body to make it habitable for life, typically by introducing or modifying the atmosphere, temperature, or topography
80. ev____e	<i>v.</i>	to develop gradually, or to cause the development of something or someone gradually

ANSWERS: 72. rot, 73. structure, 74. hematite, 75. galaxy, 76. mass, 77. barring, 78. battery, 79. terraform, 80. evolve

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|-------------------------------|--|
| 81. botanical ex____t         | <i>n.</i> a short passage taken from a book, piece of music, etc.; a substance obtained from something through a specific process; (verb) to obtain from something or to remove something by effort or force |
| 82. a fo___l leaf             | <i>n.</i> any preserved remains, impression, or trace of any once-living thing that has become hard and turned into rock   |
| 83. amateur ast_____er        | <i>n.</i> a physicist who studies astronomy  |
| 84. split into smi_____ns     | <i>n.</i> small fragments, pieces, or splinters resulting from the breaking or smashing of something   |
| 85. pl___t like the Earth     | <i>n.</i> any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star   |
| 86. ro___e crops              | <i>v.</i> to turn around a central point or axis; to move in a circular path around something  |
| 87. nu_____r fusion           | <i>adj.</i> of or relating to or constituting the nucleus of an atom; deriving destructive energy from the release of atomic energy  |
| 88. ca_____e a glimpse        | <i>v.</i> to catch a person or an animal and confine them in an area which they cannot escape  |
| 89. re_____e CO2 into the air | <i>v.</i> to set free or allow to escape from confinement  |

ANSWERS: 81. extract, 82. fossil, 83. astronomer, 84. smithereens, 85. planet, 86. rotate, 87. nuclear, 88. capture, 89. release

90. the st_____re of a machine	<i>n.</i> the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
91. di_____le a system	<i>v.</i> to take apart or demolish (a structure, machine, system, or the like); to strip off fittings or equipment
92. a mas_____ce of design	<i>n.</i> a work of art that is exceptionally good or highly skilled; a great achievement
93. gi__t trees	<i>adj.</i> enormous; much bigger or more important than similar items usually are
94. business ho_____n	<i>n.</i> the line at which the earth's surface and the sky appear to meet; the range of interest or activity that can be anticipated
95. ev___e over the past decade	<i>v.</i> to develop gradually, or to cause the development of something or someone gradually
96. half qu_____ty	<i>n.</i> the amount or number of something; magnitude
97. di_____t ancestors	<i>adj.</i> far away in space, time, or where you are; far apart in relevance, relationship, or kinship
98. stellar ac_____on	<i>n.</i> the process of gradual growth or accumulation, particularly of layers or matter building up over time; the result of such a process
99. theoretical ph_____st	<i>n.</i> a scientist who specializes in the field of physics

ANSWERS: 90. structure, 91. dismantle, 92. masterpiece, 93. giant, 94. horizon, 95. evolve, 96. quantity, 97. distant, 98. accretion, 99. physicist



100. ex___c vacation	<i>adj.</i> originating from or characteristic of a foreign country or culture; strikingly unusual, uncommon, or intriguing
101. m__t down gold	<i>v.</i> to turn from something solid into something soft or liquid as a result of heating
102. sup_____ure design	<i>n.</i> the part of a structure or building that is built on top of the foundation or base; a framework or system that is built on top of something else and supports or enhances it
103. d__k drive	<i>n.</i> a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music
104. tec_____cal advancement	<i>adj.</i> based on scientific and industrial progress
105. the evo_____ary process	<i>adj.</i> relating to or denoting how living things develop or change from earlier forms
106. fo__e iron	<i>v.</i> to fashion or shape metal by heating it and hammering it into shape; to create or develop something new or original; to form strong bonds or relationships with others
107. public re__m	<i>n.</i> a domain of activity, interest, or knowledge
108. a com_____ed process	<i>adj.</i> involving a lot of different things or parts in a way that is difficult to understand or analyze
109. yo__abyte	<i>n.</i> a prefix used in the International System of Units to denote a factor of 10 to the power of 24 (1,000,000,000,000,000,000,000,000), often used in computer science and information technology to represent extremely large quantities of data

ANSWERS: 100. exotic, 101. melt, 102. superstructure, 103. disk, 104. technological, 105. evolutionary, 106. forge, 107. realm, 108. complicated, 109. yotta

110. di\_\_\_\_t sleep      *v.* to prevent or stop something, especially an event, activity, or process, from continuing in the usual way by causing a problem or disturbance
111. ast\_\_\_\_\_cal observation      *adj.* relating to astronomy or the study of celestial bodies and phenomena; very large or immense in scale or magnitude
112. fo\_\_e an alliance      *v.* to fashion or shape metal by heating it and hammering it into shape; to create or develop something new or original; to form strong bonds or relationships with others
113. the plus p\_\_e      *n.* one of two antipodal points where the Earth's axis of rotation intersects the Earth's surface; a long, slender, rounded rod, typically of wood or metal, used as a support or to hang something
114. ur\_\_\_\_\_m mining      *n.* a chemical element with the symbol U, atomic number 92, that is a dense, silvery-white metal that is radioactive and is used as a fuel for nuclear power plants
115. co\_\_\_\_\_r the world      *v.* to bring under control by force or authority
116. sp\_\_\_e of influence      *n.* a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity
117. ecology and evo\_\_\_\_\_ary biology      *adj.* relating to or denoting how living things develop or change from earlier forms

ANSWERS: 110. disrupt, 111. astronomical, 112. forge, 113. pole, 114. uranium, 115. conquer, 116. sphere, 117. evolutionary

118. su____al ability	<i>n.</i> the state of continuing to exist or live, frequently in the face of difficulty or danger
119. a st____ht line	<i>adj.</i> extending or moving in one direction without bending or curving; having no deviations
120. l__p of faith	<i>v.</i> to jump or spring into the air, often with the feet leaving the ground or a surface below; to move quickly or suddenly, often forward or upward
121. a st____e battery	<i>n.</i> the act or process of putting in and keeping something in a particular place for use in the future; an electronic memory device that can store information
122. lig____ar distance	<i>n.</i> a unit of distance used in astronomy to represent the distance that light travels in a year, which is equal to about 9.46 trillion kilometers or 5.88 trillion miles
123. ind____us worker	<i>adj.</i> hardworking, diligent, and persistent in effort
124. a p__e complexion	<i>adj.</i> having skin that is very light colored; lacking in vitality or interest or effectiveness
125. sp___l staircase	<i>n.</i> a curve that coils around a central point and gets progressively farther away from it as it goes around
126. energy-ef____nt appliances	<i>adj.</i> performing at the highest level of productivity with the least wasted effort or resources; capable of achieving maximum output with minimum wasted effort, time, or materials

ANSWERS: 118. survival, 119. straight, 120. leap, 121. storage, 122. light-year, 123. industrious, 124. pale, 125. spiral, 126. efficient

127. heavy-ion fi____n	<i>n.</i> the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces
128. save the pl____t	<i>n.</i> any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star
129. gi__t tech company	<i>adj.</i> enormous; much bigger or more important than similar items usually are
130. d__k space	<i>n.</i> a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music
131. gra_____nal waves	<i>adj.</i> relating to or caused by gravity (= the force that attracts objects towards one another)
132. solar ast_____er	<i>n.</i> a physicist who studies astronomy
133. jo__e heating	<i>n.</i> the unit of measurement for energy in the International System of Units (SI), equal to the work done by a force of one newton when its point of application moves one meter in the direction of the force
134. sa_____y a user's needs	<i>v.</i> to make somebody pleased by giving them what they want or need
135. d_m memory	<i>adj.</i> poorly lit; not bright
136. use of nu____r power	<i>adj.</i> of or relating to or constituting the nucleus of an atom; deriving destructive energy from the release of atomic energy

ANSWERS: 127. fission, 128. planet, 129. giant, 130. disk, 131. gravitational, 132. astronomer, 133. joule, 134. satisfy, 135. dim, 136. nuclear

- |                                |   |
|--------------------------------|---|
| 137. pa__l discussion          | <i>n.</i> a square or rectangular and flat piece of something that forms a distinct section or component of something; a small group of specialists who discuss particular topics or give their advice or opinion about something |
| 138. make dr____c revision     | <i>adj.</i> radical and extreme; likely to have a significant or far-reaching impact  |
| 139. ma____in order            | <i>v.</i> to continue to uphold or sustain; to keep in a particular state or condition; to assert or declare something to be true   |
| 140. ca____e customers' hearts | <i>v.</i> to catch a person or an animal and confine them in an area which they cannot escape   |
| 141. a dry ba____y             | <i>n.</i> a device that is placed inside a car, gadget, equipment, etc. and that provides electrical power to them  |
| 142. l__p to a conclusion      | <i>v.</i> to jump or spring into the air, often with the feet leaving the ground or a surface below; to move quickly or suddenly, often forward or upward   |
| 143. ex___c species            | <i>adj.</i> originating from or characteristic of a foreign country or culture; strikingly unusual, uncommon, or intriguing   |
| 144. de___e a literary plot    | <i>v.</i> to come up with an idea, plan, theory, etc., using your intelligence or imagination   |
| 145. charged pa____le          | <i>n.</i> a small piece of something; a word or piece of a term with grammatical function but little or no significance   |

ANSWERS: 137. panel, 138. drastic, 139. maintain, 140. capture, 141. battery, 142. leap, 143. exotic, 144. devise, 145. particle

146. ba____g unexpected circumstances	<i>adv.</i> excepting or excluding something or someone; in the absence of something or someone
147. the infinite in_____ty of man	<i>n.</i> the quality of inventing things or solving problems in clever new ways
148. bre_____ugh discovery	<i>n.</i> a sudden, dramatic, and important discovery or development that helps to improve a situation or provide an answer to a problem
149. biomass f__l	<i>n.</i> a substance that is typically burned to generate heat or energy
150. cou_____ive behavior	<i>adj.</i> contrary to what common sense would suggest
151. manually op_____e a machine	<i>v.</i> to work in a particular way; to supervise something
152. the me_____sm for DNA replication	<i>n.</i> a part of a machine, or a set of parts that performs a task; a natural or established process that occurs during a specific situation or reaction
153. fun_____al education	<i>adj.</i> forming an essential base or core from which everything else develops or is affected
154. ind_____us student	<i>adj.</i> hardworking, diligent, and persistent in effort
155. com_____te his anxieties to the psychiatrist	<i>v.</i> to share or exchange information with others by speaking, writing, moving your body, or using other signals
156. tec_____cal policy	<i>adj.</i> based on scientific and industrial progress

ANSWERS: 146. barring, 147. ingenuity, 148. breakthrough, 149. fuel, 150. counterintuitive, 151. operate, 152. mechanism, 153. fundamental, 154. industrious, 155. communicate, 156. technological

157. yo__a values	<i>n.</i> a prefix used in the International System of Units to denote a factor of 10 to the power of 24 (1,000,000,000,000,000,000,000,000), often used in computer science and information technology to represent extremely large quantities of data
158. pl____t against other major currencies	<i>v.</i> to fall or drop suddenly and steeply; to decline rapidly or sharply
159. com_____te well with my advisor	<i>v.</i> to share or exchange information with others by speaking, writing, moving your body, or using other signals
160. ki____c motion	<i>adj.</i> of or relating to motion or the forces that cause motion
161. ast_____cal numbers	<i>adj.</i> relating to astronomy or the study of celestial bodies and phenomena; very large or immense in scale or magnitude
162. a di____t memory	<i>adj.</i> far away in space, time, or where you are; far apart in relevance, relationship, or kinship
163. ki____c friction	<i>adj.</i> of or relating to motion or the forces that cause motion
164. ma____e stars	<i>adj.</i> enormous amount; very heavy and solid
165. control re____ly	<i>adv.</i> at a distance; not directly or easily accessible
166. tr____it information	<i>v.</i> to send or forward an electronic signal; to pass something from one person or thing to another

ANSWERS: 157. yotta, 158. plummet, 159. communicate, 160. kinetic, 161. astronomical, 162. distant, 163. kinetic, 164. massive, 165. remotely, 166. transmit

167. tr_____rt facilities	<i>n.</i> a system for moving people or products from one location to another using automobiles, roads, and so on
168. beyond the re__m of possibility	<i>n.</i> a domain of activity, interest, or knowledge
169. a planetary or__t	<i>n.</i> the path of an object around a celestial body, especially a planet, star, or moon, under the influence of gravity.
170. a ga___y of famous actors	<i>n.</i> an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
171. abound in in_____ty	<i>n.</i> the quality of inventing things or solving problems in clever new ways
172. r_t with age	<i>v.</i> to decay, or cause something to decay, naturally and gradually
173. private j_t	<i>n.</i> a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances
174. a numerator in a fr_____on	<i>n.</i> a small part or item forming a piece of a whole; the quotient of two rational numbers
175. financial cr___s	<i>n.</i> a time of great disagreement, confusion, or danger when problems must be resolved or critical decisions must be taken
176. develop in_____e itching	<i>adj.</i> (especially of a feeling) very strong; extremely sharp or severe
177. de___e a plan	<i>v.</i> to come up with an idea, plan, theory, etc., using your intelligence or imagination

ANSWERS: 167. transport, 168. realm, 169. orbit, 170. galaxy, 171. ingenuity, 172. rot, 173. jet, 174. fraction, 175. crisis, 176. intense, 177. devise



178. di\_\_\_\_t a well-ordered condition      *v.* to prevent or stop something, especially an event, activity, or process, from continuing in the usual way by causing a problem or disturbance
179. atomic fi\_\_\_\_n      *n.* the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces
180. se\_\_\_e down in the town      *v.* to reach an agreement or disagreement
181. the\_\_\_\_\_\_al physicist      *adj.* relating to the concepts and principles upon which a particular topic is founded, rather than practice and experience
182. pa\_\_\_\_le energy      *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
183. laws of ph\_\_\_\_s      *n.* the science of matter and energy and their interactions
184. ef\_\_\_\_nt operation      *adj.* performing at the highest level of productivity with the least wasted effort or resources; capable of achieving maximum output with minimum wasted effort, time, or materials
185. pl\_\_\_a membrane      *n.* (biology) the yellow-colored liquid component of blood, in which blood cells are suspended; (physics) one of the four fundamental states of matter consisting of positive ions and free electrons

ANSWERS: 178. disrupt, 179. fission, 180. settle, 181. theoretical, 182. particle, 183. physics, 184. efficient, 185. plasma

186. industrial ex_____on	<i>n.</i> the process of becoming larger or more extensive, or the result of this process
187. in a ra___l direction	<i>adj.</i> of or relating to rays or the radii of a circle; spreading out from a central point
188. connecting the d_ts	<i>n.</i> a very small circular mark, especially one that is printed
189. the int_____on between man and his environment	<i>n.</i> the act of connecting with someone, mainly when working, playing, or spending time with them
190. gra_____nal energy	<i>adj.</i> relating to or caused by gravity (= the force that attracts objects towards one another)
191. access to public tr_____rt	<i>n.</i> a system for moving people or products from one location to another using automobiles, roads, and so on
192. ad_____e a cooperative relationship	<i>v.</i> to go or move forward; to develop in a positive way
193. principles of sus_____le development	<i>adj.</i> able to continue or be continued for a long time
194. a fr_____onal share of the vote	<i>n.</i> a small part or item forming a piece of a whole; the quotient of two rational numbers
195. a civil en_____er	<i>n.</i> a person whose job is designing, building, or maintaining something such as machines, structures, or software
196. locust sw___m	<i>n.</i> a group of many things, such as insects, fishes, etc., in the air or water or on the ground

ANSWERS: 186. expansion, 187. radial, 188. dot, 189. interaction, 190. gravitational, 191. transport, 192. advance, 193. sustainable, 194. fraction, 195. engineer, 196. swarm

197. p__e pink	<i>adj.</i> having skin that is very light colored; lacking in vitality or interest or effectiveness
198. tr____it the disease	<i>v.</i> to send or forward an electronic signal; to pass something from one person or thing to another
199. nuclear ph____s	<i>n.</i> the science of matter and energy and their interactions
200. an energy eff____cy	<i>n.</i> the state or quality of doing something well with no waste of input such as time or money
201. talented ph____st	<i>n.</i> a scientist who specializes in the field of physics
202. smokeless f__l	<i>n.</i> a substance that is typically burned to generate heat or energy
203. cou_____ive results	<i>adj.</i> contrary to what common sense would suggest
204. ga____ic scale	<i>adj.</i> relating to or concerning the galaxy or galaxies; having characteristics or qualities that are vast, extensive, or cosmic in scope
205. tracking de___e	<i>n.</i> a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic
206. ma____in good health	<i>v.</i> to continue to uphold or sustain; to keep in a particular state or condition; to assert or declare something to be true
207. a sw__m of mosquitoes	<i>n.</i> a group of many things, such as insects, fishes, etc., in the air or water or on the ground

ANSWERS: 197. pale, 198. transmit, 199. physics, 200. efficiency, 201. physicist, 202. fuel, 203. counterintuitive, 204. galactic, 205. device, 206. maintain, 207. swarm

208. the or__t of the moon	<i>n.</i> the path of an object around a celestial body, especially a planet, star, or moon, under the influence of gravity.
209. cost of solar pa__ls	<i>n.</i> a square or rectangular and flat piece of something that forms a distinct section or component of something; a small group of specialists who discuss particular topics or give their advice or opinion about something
210. co_____nt a global warming	<i>v.</i> to face, meet or deal with a problem or difficult situation or person
211. wooden sup_____ure	<i>n.</i> the part of a structure or building that is built on top of the foundation or base; a framework or system that is built on top of something else and supports or enhances it
212. cr___s management	<i>n.</i> a time of great disagreement, confusion, or danger when problems must be resolved or critical decisions must be taken
213. billions of lig_____ars	<i>n.</i> a unit of distance used in astronomy to represent the distance that light travels in a year, which is equal to about 9.46 trillion kilometers or 5.88 trillion miles
214. pow_____nt emissions	<i>n.</i> a facility designed for generating electricity or other forms of power, typically through the use of turbines, engines, or other power-generating mechanisms
215. ra_____e in all directions	<i>v.</i> to spread out or emit something, such as light or heat, in all directions

ANSWERS: 208. orbit, 209. panel, 210. confront, 211. superstructure, 212. crisis, 213. light-year, 214. powerplant, 215. radiate

216. pro_____on of civilization	<i>n.</i> the act or process of changing to the next stage or phase or moving forward
217. ci_____ar economy	<i>adj.</i> shaped like a circle; having a round form
218. fr_____n status	<i>n.</i> a person who is not a serf or enslaved person and has the right to hold property and vote
219. nuclear pow_____nt	<i>n.</i> a facility designed for generating electricity or other forms of power, typically through the use of turbines, engines, or other power-generating mechanisms
220. get blown to smi_____ns	<i>n.</i> small fragments, pieces, or splinters resulting from the breaking or smashing of something
221. co_____t base 10 to base 16	<i>v.</i> to have a talk with someone; (adjective) reversed in order, relation, or action
222. a ga_____ic system	<i>adj.</i> relating to or concerning the galaxy or galaxies; having characteristics or qualities that are vast, extensive, or cosmic in scope
223. co_____ct a 3D image	<i>v.</i> to build or create something; to assemble or combine different parts to form something whole
224. int_____on among human beings	<i>n.</i> the act of connecting with someone, mainly when working, playing, or spending time with them
225. v__t majority	<i>adj.</i> enormous in size, number, amount, or quantity

ANSWERS: 216. progression, 217. circular, 218. freeman, 219. powerplant, 220. smithereens, 221. convert, 222. galactic, 223. construct, 224. interaction, 225. vast

- |                               |   |
|-------------------------------|---|
| 226. dr____c measures         | <i>adj.</i> radical and extreme; likely to have a significant or far-reaching impact  |
| 227. high-temperature pl____a | <i>n.</i> (biology) the yellow-colored liquid component of blood, in which blood cells are suspended; (physics) one of the four fundamental states of matter consisting of positive ions and free electrons |
| 228. re____ly operate         | <i>adv.</i> at a distance; not directly or easily accessible  |
| 229. electronic de____e       | <i>n.</i> a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic  |
| 230. ma____e amounts          | <i>adj.</i> enormous amount; very heavy and solid   |

ANSWERS: 226. drastic, 227. plasma, 228. remotely, 229. device, 230. massive

## Session 3: Fill in the Blanks

1. He finally decided to \_\_\_\_\_ problems directly.  
*v.* to face, meet or deal with a problem or difficult situation or person
2. The \_\_\_\_\_ scarcity most severely impacted the manufacturing sector  
*n.* a substance that is typically burned to generate heat or energy
3. \_\_\_\_\_ any unforeseeable technical issues, the project should be completed by next week.  
*adv.* excepting or excluding something or someone; in the absence of something or someone
4. The country's domestic coal consumption has been \_\_\_\_\_ declining for decades.  
*adv.* without being interrupted or paused; repeatedly
5. Blood \_\_\_\_\_ makes up about half of the volume of blood.  
*n.* (biology) the yellow-colored liquid component of blood, in which blood cells are suspended; (physics) one of the four fundamental states of matter consisting of positive ions and free electrons
6. Dolphins use sound to \_\_\_\_\_ with each other.  
*v.* to share or exchange information with others by speaking, writing, moving your body, or using other signals
7. Human behavior has \_\_\_\_\_ characteristics.  
*adj.* forming an essential base or core from which everything else develops or is affected

ANSWERS: 1. confront, 2. fuel, 3. Barring, 4. continuously, 5. plasma, 6. communicate, 7. fundamental

8. The forest was recently designated a \_\_\_\_\_ area.
- n.* the protection of something important, such as the natural environment or artificial structures, especially from the damaging effects of human activity
9. The \_\_\_\_\_ of people who do not own property is politically impotent.
- n.* a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together
10. He \_\_\_\_\_ that this investment would lead to success.
- v.* to form a theory or conjecture or guess about a subject without solid evidence
11. I was able to \_\_\_\_\_ the moment on film.
- v.* to catch a person or an animal and confine them in an area which they cannot escape
12. The stock prices have \_\_\_\_\_ in the last hour, causing concern for investors.
- v.* to fall or drop suddenly and steeply; to decline rapidly or sharply
13. You must \_\_\_\_\_ your anxiety about driving.
- v.* to bring under control by force or authority
14. 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
15. He discovered unique \_\_\_\_\_ for photochemical reactions.
- n.* a part of a machine, or a set of parts that performs a task; a natural or established process that occurs during a specific situation or reaction
16. Parents often \_\_\_\_\_ their characteristics to their children.
- v.* to send or forward an electronic signal; to pass something from one person or thing to another

ANSWERS: 8. conservation, 9. mass, 10. speculated, 11. capture, 12. plummeted, 13. conquer, 14. radiate, 15. mechanisms, 16. transmit



17. The leaves of the fern were arranged in a \_\_\_\_\_ pattern.  
*n.* a curve that coils around a central point and gets progressively farther away from it as it goes around
18. The company has made great strides in its \_\_\_\_\_ toward sustainability.  
*n.* the act or process of changing to the next stage or phase or moving forward
19. The government should do more to support environmentally \_\_\_\_\_ agriculture.  
*adj.* able to continue or be continued for a long time
20. The \_\_\_\_\_ of the earth is divided into several layers including the crust, mantle, and core.  
*n.* a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity
21. The Chinese word for \_\_\_\_\_ comprises two characters, one for danger and the other for opportunity.  
*n.* a time of great disagreement, confusion, or danger when problems must be resolved or critical decisions must be taken
22. The rocket engine is used to put the satellite into \_\_\_\_\_.  
*n.* the path of an object around a celestial body, especially a planet, star, or moon, under the influence of gravity.
23. Einstein was an outstanding and famous \_\_\_\_\_ of the 20th century.  
*n.* a scientist who specializes in the field of physics
24. Enhanced rail \_\_\_\_\_ is crucial for our business.  
*n.* a system for moving people or products from one location to another using automobiles, roads, and so on

ANSWERS: 17. spiral, 18. progression, 19. sustainable, 20. sphere, 21. crisis, 22. orbit, 23. physicist, 24. transportation

25. The computer's hard \_\_\_\_\_ was full, so she had to delete some files.
- n.* a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music
26. A \_\_\_\_\_ of economic advisers from the United States visited the country to help rebuild its economy.
- n.* a square or rectangular and flat piece of something that forms a distinct section or component of something; a small group of specialists who discuss particular topics or give their advice or opinion about something
27. A 60-watt light bulb uses 60 \_\_\_\_\_ of energy per second.
- n.* the unit of measurement for energy in the International System of Units (SI), equal to the work done by a force of one newton when its point of application moves one meter in the direction of the force
28. Scientific knowledge will \_\_\_\_\_ significantly with the power of AI.
- v.* to go or move forward; to develop in a positive way
29. Did this response \_\_\_\_\_ your request?
- v.* to make somebody pleased by giving them what they want or need
30. The \_\_\_\_\_ design of the wheel allows for maximum strength and stability.
- adj.* of or relating to rays or the radii of a circle; spreading out from a central point
31. 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
32. Nuclear \_\_\_\_\_ is the process of splitting an atom into two smaller ones.
- n.* the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces

ANSWERS: 25. disk, 26. panel, 27. joules, 28. advance, 29. satisfy, 30. radial, 31. horizon, 32. fission

33. Creativity and \_\_\_\_\_ are often brought about by extreme concentration.  
*n.* the quality of inventing things or solving problems in clever new ways
34. A \_\_\_\_\_ of angry bees attacked because we had approached the hive.  
*n.* a group of many things, such as insects, fishes, etc., in the air or water or on the ground
35. 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
36. The rock was formed by the slow \_\_\_\_\_ of sediments over millions of years.  
*n.* the process of gradual growth or accumulation, particularly of layers or matter building up over time; the result of such a process
37. I don't want to \_\_\_\_\_ for second best.  
*v.* to reach an agreement of disagreement
38. Absolute zero is the lowest \_\_\_\_\_ temperature.  
*adj.* relating to the concepts and principles upon which a particular topic is founded, rather than practice and experience
39. It was the \_\_\_\_\_ of a dinosaur tooth.  
*n.* any preserved remains, impression, or trace of any once-living thing that has become hard and turned into rock
40. We store customer data in cloud \_\_\_\_\_.  
*n.* the act or process of putting in and keeping something in a particular place for use in the future; an electronic memory device that can store information

ANSWERS: 33. ingenuity, 34. swarm, 35. expansion, 36. accretion, 37. settle, 38. theoretical, 39. fossil, 40. storage

41. He was sick for five \_\_\_\_\_ days.

*adj.* extending or moving in one direction without bending or curving; having no deviations

42. A technique called deep learning has led to \_\_\_\_\_ in AI.

*n.* a sudden, dramatic, and important discovery or development that helps to improve a situation or provide an answer to a problem

43. The \_\_\_\_\_ will repair my telephone tomorrow morning.

*n.* a person whose job is designing, building, or maintaining something such as machines, structures, or software

44. The athlete was able to \_\_\_\_\_ over the hurdle with ease.

*v.* to jump or spring into the air, often with the feet leaving the ground or a surface below; to move quickly or suddenly, often forward or upward

45. I always carry a backup \_\_\_\_\_ in case my phone runs out of battery.

*n.* a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic

46. The animal rights group worked to \_\_\_\_\_ the dolphins back into the wild.

*v.* to set free or allow to escape from confinement

47. Our company must continue to strive for greater \_\_\_\_\_.

*n.* the state or quality of doing something well with no waste of input such as time or money

48. He spent only a \_\_\_\_\_ of his earnings.

*n.* a small part or item forming a piece of a whole; the quotient of two rational numbers

ANSWERS: 41. straight, 42. breakthroughs, 43. engineer, 44. leap, 45. device, 46. release, 47. efficiency, 48. fraction

49. \_\_\_\_\_ 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

50. The old building had to be \_\_\_\_\_ because it was structurally unsound.

*v.* to take apart or demolish (a structure, machine, system, or the like); to strip off fittings or equipment

51. Any rotating body has \_\_\_\_\_ momentum about its center of mass.

*adj.* measured by an angle or by the rate of change of an angle; having angles or an angular shape

52. Her passions are in the \_\_\_\_\_ of real-world political affairs.

*n.* a domain of activity, interest, or knowledge

53. Proxima Centauri is the closest star to Earth, located about 4.24 \_\_\_\_\_ away.

*n.* a unit of distance used in astronomy to represent the distance that light travels in a year, which is equal to about 9.46 trillion kilometers or 5.88 trillion miles

54. Anesthetize the gum before \_\_\_\_\_ the teeth.

*n.* a short passage taken from a book, piece of music, etc.; a substance obtained from something through a specific process; (verb) to obtain from something or to remove something by effort or force

55. The organizational \_\_\_\_\_ of start-ups is often flat and straightforward.

*n.* the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts

56. This machine is too difficult to \_\_\_\_\_ for me.

*v.* to work in a particular way; to supervise something

ANSWERS: 49. Evolutionary, 50. dismantled, 51. angular, 52. realm, 53. light-years, 54. extracting, 55. structure, 56. operate

57. The bridge's \_\_\_\_\_ was carefully constructed to withstand high winds and heavy traffic.

- n.* the part of a structure or building that is built on top of the foundation or base; a framework or system that is built on top of something else and supports or enhances it

58. A \_\_\_\_\_ audience viewed the broadcast.

- adj.* enormous in size, number, amount, or quantity

59. I love trying \_\_\_\_\_ foods from different cultures.

- adj.* originating from or characteristic of a foreign country or culture; strikingly unusual, uncommon, or intriguing

60. The wallpaper had a pattern of pink \_\_\_\_\_ on a white surface.

- n.* a very small circular mark, especially one that is printed

61. The \_\_\_\_\_ operator monitors the equipment and power output to ensure everything runs smoothly.

- n.* a facility designed for generating electricity or other forms of power, typically through the use of turbines, engines, or other power-generating mechanisms

62. The sun set over the crest of \_\_\_\_\_ hills.

- adj.* far away in space, time, or where you are; far apart in relevance, relationship, or kinship

63. I want to \_\_\_\_\_ my sadness into strength.

- v.* to have a talk with someone; (adjective) reversed in order, relation, or action

64. Her resistance \_\_\_\_\_ under his persuasion.

- v.* to turn from something solid into something soft or liquid as a result of heating

ANSWERS: 57. superstructure, 58. vast, 59. exotic, 60. dots, 61. powerplant, 62. distant, 63. convert, 64. melted

65. 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)

66. She had to \_\_\_\_\_ her father's signature on the permission slip because he was out of town.

*v.* to fashion or shape metal by heating it and hammering it into shape; to create or develop something new or original; to form strong bonds or relationships with others

67. The \_\_\_\_\_ light made it difficult to read the book.

*adj.* poorly lit; not bright

68. 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

69. The \_\_\_\_\_ flew over the ocean at high speed, reaching its destination in hours.

*n.* a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances

70. The new singer \_\_\_\_\_ all the others on stage with her powerful voice.

*v.* to be more brilliant, striking, or impressive than; to outdo or excel

71. The company can \_\_\_\_\_ access its employees' computers for troubleshooting purposes.

*adv.* at a distance; not directly or easily accessible

72. The federal \_\_\_\_\_ is planning to increase taxes for the next fiscal year.

*n.* the group of people with authority to control a country or state

ANSWERS: 65. gravitational, 66. forge, 67. dim, 68. galaxy, 69. jet, 70. outshined, 71. remotely, 72. government

73. The \_\_\_\_\_ shape of the planet makes it difficult to determine which direction is north.

*adj.* shaped like a circle; having a round form

74. 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

75. 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

76. The cost of the new equipment was \_\_\_\_\_ and beyond the company's budget.

*adj.* relating to astronomy or the study of celestial bodies and phenomena; very large or immense in scale or magnitude

77. Eyeless fish \_\_\_\_\_ in dark caves.

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

78. The Milky Way is a \_\_\_\_\_ collection of billions of stars and planets.

*adj.* relating to or concerning the galaxy or galaxies; having characteristics or qualities that are vast, extensive, or cosmic in scope

79. The news of her sudden death was \_\_\_\_\_ to everyone who knew her.

*adj.* surprising or shocking; difficult to believe

80. The recent economic downturn has resulted in \_\_\_\_\_ layoffs.

*adj.* enormous amount; very heavy and solid

ANSWERS: 73. circular, 74. atom, 75. nuclear, 76. astronomical, 77. evolved, 78. galactic, 79. astonishing, 80. massive



81. The Earth \_\_\_\_\_ on its axis once every 24 hours.

- v.* to turn around a central point or axis; to move in a circular path around something

82. I'm so sorry to \_\_\_\_\_ you when you're pretty busy.

- v.* to prevent or stop something, especially an event, activity, or process, from continuing in the usual way by causing a problem or disturbance

83. He was known to be very \_\_\_\_\_ and would often work late into the night.

- adj.* hardworking, diligent, and persistent in effort

84. The global community is undergoing \_\_\_\_\_ changes at present.

- adj.* radical and extreme; likely to have a significant or far-reaching impact

85. He evaluated his chances for \_\_\_\_\_ rather pessimistically.

- n.* the state of continuing to exist or live, frequently in the face of difficulty or danger

86. He did \_\_\_\_\_ pen-and-ink drawings in just a few days.

- adj.* involving a lot of different things or parts in a way that is difficult to understand or analyze

87. 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

88. They had to \_\_\_\_\_ a system that did not depend on fossil fuels.

- v.* to come up with an idea, plan, theory, etc., using your intelligence or imagination

ANSWERS: 81. rotates, 82. disrupt, 83. industrious, 84. drastic, 85. survival, 86. complicated, 87. particles, 88. devise

89. The \_\_\_\_\_ nature of quantum physics has been a source of confusion for scientists for decades.  
*adj.* contrary to what common sense would suggest
90. The development of quantum computing may result in \_\_\_\_\_ calculations becoming commonplace.  
*n.* a prefix used in the International System of Units to denote a factor of 10 to the power of 24 (1,000,000,000,000,000,000,000,000), often used in computer science and information technology to represent extremely large quantities of data
91. People have been exploring ways to \_\_\_\_\_ natural forces and resources since ancient times.  
*v.* to control and exploit the power of something, especially natural resources that produce energy; (noun) a set of narrow pieces of leather and metal that are used to control or hold in place a person, animal, or object
92. He \_\_\_\_\_ hypotheses that no mathematician has ever imagined before.  
*v.* to build or create something; to assemble or combine different parts to form something whole
93. The geology museum had an exhibit showcasing various specimens of \_\_\_\_\_.  
*n.* a reddish or black mineral consisting of iron oxide, which is the main ore of iron
94. The engine did not start because the \_\_\_\_\_ was flat.  
*n.* a device that is placed inside a car, gadget, equipment, etc. and that provides electrical power to them
95. That statement by the prime minister drew \_\_\_\_\_ international criticism.  
*adj.* (especially of a feeling) very strong; extremely sharp or severe

ANSWERS: 89. counterintuitive, 90. yotta-scale, 91. harness, 92. constructs, 93. hematite, 94. battery, 95. intense

96. The vase was shattered into \_\_\_\_\_ after it fell off the table.  
*n.* small fragments, pieces, or splinters resulting from the breaking or smashing of something
97. 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
98. The \_\_\_\_\_ jets gradually dominate the world's airlines.  
*adj.* enormous; much bigger or more important than similar items usually are
99. I want to \_\_\_\_\_ a toast in honor of our longstanding relationship.  
*v.* to make a proposal, declare a plan for something
100. Please refrigerate the meat, or it will \_\_\_\_\_.  
*v.* to decay, or cause something to decay, naturally and gradually
101. He studied the \_\_\_\_\_ of radiation.  
*n.* the science of matter and energy and their interactions
102. The \_\_\_\_\_ energy of the falling object increased as it fell.  
*adj.* of or relating to motion or the forces that cause motion
103. \_\_\_\_\_ advances have disrupted many industries.  
*adj.* based on scientific and industrial progress
104. The new washing machine is much more \_\_\_\_\_ than the old one.  
*adj.* performing at the highest level of productivity with the least wasted effort or resources; capable of achieving maximum output with minimum wasted effort, time, or materials

ANSWERS: 96. smithereens, 97. planet, 98. giant, 99. propose, 100. rot, 101. physics, 102. kinetic, 103. Technological, 104. efficient

105. The mining and processing of \_\_\_\_\_ can lead to releasing radioactive materials into the environment.

- n.* a chemical element with the symbol U, atomic number 92, that is a dense, silvery-white metal that is radioactive and is used as a fuel for nuclear power plants

106. The \_\_\_\_\_ of the two groups is good for brainstorming.

- n.* the act of connecting with someone, mainly when working, playing, or spending time with them

107. She turned \_\_\_\_\_ when she heard the news.

- adj.* having skin that is very light colored; lacking in vitality or interest or effectiveness

108. The North \_\_\_\_\_ is the northernmost point on Earth.

- n.* one of two antipodal points where the Earth's axis of rotation intersects the Earth's surface; a long, slender, rounded rod, typically of wood or metal, used as a support or to hang something

109. In the colonial period, only \_\_\_\_\_ was allowed to vote.

- n.* a person who is not a serf or enslaved person and has the right to hold property and vote

110. This question has fascinated solar \_\_\_\_\_ for decades.

- n.* a physicist who studies astronomy

111. Would one cup of flour \_\_\_\_\_ for this recipe?

- v.* to be enough or sufficient; to meet the needs or requirements of something or someone; to satisfy or fulfill a purpose

ANSWERS: 105. uranium, 106. interaction, 107. pale, 108. Pole, 109. freeman, 110. astronomers, 111. suffice

112. In southward, the average annual water \_\_\_\_\_ increases.

- n.* the amount or number of something; magnitude

113. The Mona Lisa is widely considered to be a \_\_\_\_\_ of art.

- n.* a work of art that is exceptionally good or highly skilled; a great achievement

114. The company plans to \_\_\_\_\_ the barren land into a lush green park.

- v.* to transform the environment or land of a planet, moon, or other celestial body to make it habitable for life, typically by introducing or modifying the atmosphere, temperature, or topography

115. I need to \_\_\_\_\_ my car regularly to prevent any major mechanical issues.

- v.* to continue to uphold or sustain; to keep in a particular state or condition; to assert or declare something to be true

ANSWERS: 112. quantity, 113. masterpiece, 114. terraform, 115. maintain