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Vocabulary Builder Reference from...

David Lunney: Where does gold come from? | TED Talk

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

All Words

IMPORTANT

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Session 1: Word List

medieval

adj. relating to or belonging to the Middle Age that is for the period of A.D.600 to A.D. 1450

synonym : gothic, knightly, antique

(1) **medieval** times, (2) **medieval** history

Only the **medieval** tower remained standing.

alchemy

n. a medieval chemical philosophy and speculative theory that aimed to transform base metals into gold or produce a universal elixir that could cure all diseases and grant immortality; a process of transformation or creation that appears magical or mysterious

synonym : sorcery, magic, transmutation

(1) **alchemy** experiment, (2) **alchemy** of emotions

Today, the study of **alchemy** remains an important part of the history of science and philosophy

achieve

v. to successfully complete a task or goal, often through hard work, perseverance, and dedication; to attain or accomplish something that one has set out to do

synonym : accomplish, attain, reach

(1) **achieve** success, (2) **achieve** milestones

I will work hard to **achieve** my goals and realize my dreams.

transform

v. to change in outward structure or looks;

synonym: alter, convert, change

(1) **transform** an education system, (2) **transform** heat into power

My father's death **transformed** my life completely.

gleam

v. to reflect light in a way that creates a shining or bright and attractive appearance; to become visible or apparent

synonym: glitter, shimmer, shine

(1) **gleam** in eyes, (2) **gleam** like honey

The diamond ring **gleamed** in the sunlight, catching everyone's eye.

portray

v. to depict or describe someone or something in a painting, film, book, or other artistic work

synonym: depict, describe, illustrate

(1) **portray** feelings in words, (2) accurately **portray** the condition

We often **portray** political problems as religious issues.

eccentric

adj. weird or unusual, sometimes in a funny way

synonym: bizarre, abnormal, curious

(1) display **eccentric** behavior, (2) **eccentric** characters

He was **eccentric**, but he was also a genius.

achievable

adj. possible to accomplish or attain

synonym: attainable, possible, reachable

(1) **achievable** task, (2) **achievable** plan

Setting a realistic and **achievable** goal is the key to success.

manufacture

v. to make goods in large numbers, usually in a factory using machines

synonym: create, fabricate, assemble

(1) **manufacture** an enzyme, (2) **manufacture** a product

The majority of synthetic vitamins are **manufactured** from oil.

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.

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**.

precious

adj. uncommon and extremely valuable

synonym : adored, cherished, valued

(1) price of **precious** metals, (2) **precious** information

We cannot afford to squander **precious** time.

embedded

adj. fixed firmly into the surface of something

synonym : ingrained, implanted, inserted

(1) **embedded** systems, (2) LED- **embedded** glass

The **embedded** chip in my credit card allows me to make contactless payments.

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.

gaze

v. to stare at something or someone for an extended time, usually out of surprise or adoration, or because you are thinking about something else

synonym : stare, gawk, look

(1) **gaze** steadily at his face, (2) **gaze** absently out a window

The youngster was **gazed** at by the beast.

upward

adv. toward the top or highest point, or a higher position or level; (adjective) extending or moving toward a higher place

synonym : skyward, uphill

(1) look **upward**, (2) demonstrate an **upward** trend

The company adjusted the revenue **upward**.

extraterrestrial

adj. relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth

synonym : alien, outer, otherworldly

(1) **extraterrestrial** planet, (2) **extraterrestrial** intelligence

Scientists are constantly searching for signs of **extraterrestrial** life in the universe.

rocky

adj. full of or abounding in rocks; of, relating to, or made of rock

synonym : stony, boulder-strewn, rough

(1) **rocky** terrain, (2) **rocky** relationship

The **rocky** road made it difficult to drive on.

crust

n. a hard outer layer that forms on the surface of a liquid as it cools or on a solid as a result of exposure to air or moisture

synonym : layer, coating, shell

(1) **crust** formation, (2) the earth's **crust**

The bread's **crust** was golden brown and crispy.

cataclysm

n. a sudden violent event that changes the earth's environment, such as a flood or a war

synonym : disaster, catastrophe, turmoil

(1) global **cataclysm**, (2) existential **cataclysm**

The earthquake was a **cataclysm** from which the local people never recovered.

stellar

adj. excellent; relating to or resembling a star, especially in quality or attractiveness

synonym : starry, celestial, astral

(1) **stellar** performance, (2) a **stellar** system

She received a **stellar** review from her boss, which boosted her confidence.

supernova

n. a powerful and luminous explosion that occurs in some stars, resulting in an extremely bright, short-lived object that later fades into a supernova remnant

synonym : explosion, detonation, blast

(1) extragalactic **supernova**, (2) **supernova** remnant

The **supernova** explosion created a bright new star in the night sky.

hydrogen

n. the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water

(1) **hydrogen** gas, (2) heavy **hydrogen**

The **hydrogen** and the oxygen react and then form water.

enormous

adj. extremely large or great

synonym : huge, giant, gigantic

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

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

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.

compress

v. to press or squeeze together to make something take up less space

synonym : condense, constrict, squeeze

(1) **compress** the chest, (2) **compress** gas

She **compressed** the files into a single ZIP archive to save

space on her computer.

trigger

v. to make something happen suddenly; to cause something such as a device, machine, etc. to function

synonym: activate, spark, drive

(1) **trigger** a biochemical response, (2) **trigger** inflation

The incident **triggered** a political controversy.

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.

fusion

n. the process of combining two or more things to form a single entity

synonym: merger, consolidation, amalgamation

(1) heat **fusion**, (2) **fusion** cuisine

Nuclear **fusion** is a process in which atomic nuclei combine to form heavier nuclei.

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.

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.

helium

n. a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas series in the periodic table

synonym: He, light gas, noble gas

(1) **helium** atom, (2) **helium** gas

The **helium-filled** balloons floated into the sky.

carbon

n. a chemical element that can be found in pure form as diamond or graphite, and it is also an essential part of coal and oil and is found in all plants and animals

(1) **carbon** dioxide, (2) **carbon** emission

Trees absorb **carbon** dioxide and give off oxygen.

oxygen

n. the chemical element with the symbol O that is present in air and water and is necessary for people, animals, and plants to live

(1) the hydrogen binds the **oxygen**, (2) lack of **oxygen**

The passenger grabbed for the **oxygen** mask.

subsequent

adj. happening or occurring later or after something else

synonym: later, following, ensuing

(1) over **subsequent** months, (2) reduce **subsequent** mortality

In the **subsequent** meeting, the team discussed ways to improve productivity.

nickel

n. a silver-white metallic element with the symbol Ni, used in many alloys and as a coin; a United States coin worth one-twentieth of a dollar

synonym: metal, coin, alloy

(1) **nickel** ore, (2) **nickel** plate

The **nickel** in my pocket jingled as I walked.

peter

v. to fail or lose power, efficiency, or value gradually before coming to an end

synonym : decrease, drop, lower

(1) eventually **peter** out, (2) begin to **peter** out

The music just **petered** out.

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.

bounce

v. to cause to move up or away after hitting a surface; to spring back

synonym : bound, leap, spring

(1) **bounce** across the floor, (2) **bounce** back from failure

They will **bounce** between various emotional states.

injection

n. the act of introducing a liquid, especially a drug, into the body using a needle and a syringe

synonym : shot, infusion, dose

(1) fuel **injection**, (2) **injection** needle

He received an **injection** of antibiotics to treat his infection.

explode

v. to burst or break open violently and noisily; to cause something to burst or break open

synonym : detonate, blast, rupture

(1) **explode** in anger, (2) **explode** in popularity

The old building **exploded** in a fiery inferno.

extreme

adj. very great in amount or degree

synonym : farthestmost, outermost, fierce

(1) **extreme** sports, (2) **extreme** weather events

Solar gravity creates **extreme** pressures and temperatures.

atomic

adj. of or relating to atom (= the smallest component of an element)

synonym : tiny, microscopic, nuclear

(1) **atomic** nucleus, (2) **atomic** bomb
Carbon has an **atomic** mass of 12.

proton

n. a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms

(1) **proton** decay, (2) **proton** conductivity

The solar wind is composed almost entirely of electrons and **protons**.

electron

n. a tiny particle with the negative electrical charge
synonym: negatron

(1) flow of **electrons**, (2) beam of **electrons**

The outermost **electron** shell determines the chemical properties of an atom.

neutron

n. a subatomic particle with no electric charge that is present in all atomic nuclei except those of ordinary hydrogen

(1) **neutron** acceleration, (2) the antiparticle of a **neutron**

A **neutron** star is incredibly dense and has a strong gravitational pull.

repel

v. to force an attack or attacker to withdraw or retreat
synonym: turn away, fight off, force back

(1) **repel** bandits, (2) **repel** bad luck

This material can **repel** moisture swiftly.

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.

norm

n. something that is regarded as usual, typical, or standard
synonym: criterion, mean, standard

(1) **norm** of action, (2) cultural **norm**

The systems we have developed has accepted as industry **norms**.

circumstance

n. the specific conditions or events that surround a particular situation or occurrence

synonym: condition, context, environment

(1) **circumstance** of birth, (2) **circumstance** of injury

She explained the **circumstances** surrounding the accident.

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.

contrast

v. to put in opposition to show or emphasize differences

synonym: differ, vary, counterpoint

(1) **contrast** with a decade ago, (2) **contrast** two things

It's intriguing to compare and **contrast** the two authors.

transformation

n. a complete change in form, nature, or appearance of someone or something

synonym: change, conversion, renewal

(1) the **transformation** of a tadpole into a frog, (2) cast a **transformation** spell

Understanding unitary **transformations** of a normal matrix require considerable mathematical sophistication.

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.

shockwave

n. a wave or series of waves produced by a sudden disturbance, such as an explosion or a supersonic flow, capable of producing significant changes in pressure, temperature, and density of the medium through which it travels

synonym : blast, shock, impact

(1) the propagation of **shockwaves**, (2) **shockwave** effect

The **shockwave** from the explosion shattered windows for several blocks.

propel

v. to move, drive or push something forward or in a particular direction, often with a lot of force

synonym : drive, push, move

(1) **propel** growth, (2) **propel** the ship

An increase in employment helps **propel** economic growth.

debris

n. broken or torn fragments of something

synonym : remains, remnants, garbage

(1) space **debris**, (2) pile of **debris**

Marine **debris** is a major continuous global problem.

interstellar

adj. relating to or located in the space between stars

synonym : galactic, cosmic, intergalactic

(1) **interstellar** communication, (2) **interstellar** space

The **interstellar** medium comprises gas, dust, and cosmic rays that fill the space between stars.

medium

adj. of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information

synonym : average, intermediate, (noun) channel

(1) **medium** color, (2) an advertising **medium**

The **medium** size shirt fits him perfectly.

swirl

v. to move in a circular or spiral pattern

synonym : spin, whirl, turn

(1) **swirl** the wine, (2) **swirl** up dirt and dust

The chef expertly **swirled** the sauce onto the plate.

condense

v. to reduce the volume or size of something, often by removing water or other liquid; to make something shorter, more concise, or more concentrated

synonym: compress, compact, shorten

(1) **condense** the text, (2) **condense** water vapor

I need to **condense** all of my notes into a manageable summary for my presentation.

knead

v. to work or press into a flexible mixture, especially bread dough, with the hands, fingers, or a device

synonym: massage, rub, manipulate

(1) **knead** clay, (2) **knead** muscles

I need to **knead** the dough before I can bake the bread.

vein

n. a blood vessel that carries blood from various parts of the body back to the heart; a mineral deposit or layer of rock that is contained within another rock formation

synonym: artery, blood vessel, capillary

(1) spider **vein**, (2) collapsed **vein**

The nurse inserted the needle into the **vein** in his arm to draw blood.

geothermal

adj. relating to or produced by the internal heat of the earth; often used to refer to energy produced by tapping into the natural heat of the earth

synonym: underground, thermal, subterranean

(1) **geothermal** activity, (2) **geothermal** drilling

The town is exploring using **geothermal** energy to power its homes and buildings.

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.

compound

n. an item composed of two or more distinct elements combined; a chemical formed by the combination of two or more elements

synonym: combination, mixture, blend

(1) aquatic **compound**, (2) harmful **compound**
Common salt is a sodium and chlorine **compound**.

rarity

n. the condition or trait of being unusual; something that is unusual

synonym: rareness, infrequency, uncommonness

(1) the **rarity** of the event, (2) book of great **rarity**
Due to their **rarity**, diamonds are expensive.

pile

n. a collection of objects positioned one on top of another; a large sum of something, such as money

synonym: accumulation, heap, stack

(1) a sand **pile**, (2) the height of a **pile**
After the party, they had to clean up **piles** of dirty dishes.

represent

v. to speak, act, or be present on behalf of another person or group; to form or constitute

synonym: depict, express, describe

(1) **represent** by a diagram, (2) the characters that **represent** numbers

We elected him to **represent** us at the international conference.

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.

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.

covet

v. to strongly desire or crave something, particularly something that belongs to someone else; to have an excessive or envious desire for

synonym: desire, yearn, crave

(1) **covet** wealth, (2) **covet** fame

She couldn't help but **covet** her friend's designer handbag.

commodity

n. a product or a raw material that can be traded, bought, or sold

synonym: merchandise, goods, entity

(1) **commodity** tax, (2) international **commodity**

The government announced a policy to control the rise in **commodity** prices.

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.

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.

mimic

v. to imitate someone's speech, movement, or behavior, especially to make others laugh

synonym : mirror, imitate, ape

(1) **mimic** a human voice, (2) **mimic** numerous instruments
He is very popular at school because he can **mimic** all the teachers' accents.

complexity

n. the state or quality of being complicated or intricate and difficult to understand

synonym : intricacy, sophistication, elaboration

(1) cognitive **complexity**, (2) **complexity** theory

The project's **complexity** made it difficult for the team to complete it on time.

reaction

n. a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others

synonym : response, reply, answer

(1) chemical **reaction**, (2) trigger a **reaction**

There was a chemical **reaction** of the lime with the groundwater.

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.

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.

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.

gram

n. a metric unit of weight equal to one-thousandth of a kilogram

(1) centimeter- **gram-second** system, (2) **gram** amount
How much is it per one hundred **grams**?

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.

exceed

v. to surpass or go beyond a limit, expectation, or requirement; to be better or greater than anticipated or desired

synonym : surpass, outdo, excel

(1) **exceed** sales targets, (2) **exceed** the speed limit

The athlete's performance **exceeded** all expectations, breaking a world record.

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**.

bury

v. to place a dead body in the ground, grave, or tomb

synonym : entomb, sink, forget

(1) **bury** in the earth, (2) **bury** emotion

There is plenty of space to **bury** everyone.

estimate

v. to guess or calculate the cost, size, value, etc. of something

synonym: calculate, gauge, evaluate

(1) **estimate** a fair value, (2) **estimate** this chicken to weigh three pounds

We **estimated** the season's total trade deficit at \$50 billion.

dissolve

v. to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss

synonym: disband, disappear, liquefy

(1) **dissolve** the sugar, (2) officially **dissolved** the marriage

The political party **dissolved** after much internal fighting.

minuscule

adj. extremely small; tiny

synonym: tiny, insignificant, microscopic

(1) **minuscule** amount, (2) **minuscule** letters

This ore emits **minuscule** quantities of radiation

concentration

n. the ability to focus all your time and energy on one thing without thinking about anything else.

synonym: attention, engagement, assiduity

(1) **concentration** of armaments, (2) his research area of **concentration**

This exam requires excellent **concentration** to pass.

recover

v. to return to a former condition, health, mind, or strength

synonym: come back, convalesce, heal

(1) **recover** a loss, (2) **recover** approval ratings

She is still **recovering** from a shot to her shoulder.

tap

v. to hit someone or something quickly, gently, and often repeatedly; to use existing resources, such as energy, knowledge, etc.

synonym: knock, exploit, use

(1) **tap** a new market, (2) **tap** keyboard with an index finger

To expand the company, we must **tap** new human resources.

wealth

n. a large amount of money, property, or other things that someone or an organization owns

synonym: affluence, assets, fortunate

(1) majority of his **wealth**, (2) material **wealth**

The **wealth** inequality was unavoidable.

treasure

n. a valuable or desirable possession; something that is cherished or held dear; a collection of valuable objects or money that is hidden or protected

synonym: hoard, fortune, gem

(1) **treasure** hunt, (2) **treasure** island

The pirates searched for buried **treasure** in the dunes.

eradicate

v. to get rid of or destroy something completely, especially something bad

synonym: destroy, eliminate, exterminate

(1) **eradicate** the deficit, (2) **eradicate** racial discrimination

We are trying to **eradicate** this disease from the world.

Session 2: Spelling

1. LED-em____ed glass *adj.* fixed firmly into the surface of something
2. nu____r fusion *adj.* of or relating to or constituting the nucleus of an atom; deriving destructive energy from the release of atomic energy
3. po____y feelings in words *v.* to depict or describe someone or something in a painting, film, book, or other artistic work
4. de__e forests *adj.* containing a large number of people or something with little space between them
5. fuel in____on *n.* the act of introducing a liquid, especially a drug, into the body using a needle and a syringe
6. man____re a product *v.* to make goods in large numbers, usually in a factory using machines
7. g__e steadily at his face *v.* to stare at something or someone for an extended time, usually out of surprise or adoration, or because you are thinking about something else
8. a st____r system *adj.* excellent; relating to or resembling a star, especially in quality or attractiveness
9. spider v__n *n.* a blood vessel that carries blood from various parts of the body back to the heart; a mineral deposit or layer of rock that is contained within another rock formation

ANSWERS: 1. embedded, 2. nuclear, 3. portray, 4. dense, 5. injection, 6. manufacture, 7. gaze, 8. stellar, 9. vein

10. ca_____e customers' hearts *v.* to catch a person or an animal and confine them in an area which they cannot escape
11. gl__m like honey *v.* to reflect light in a way that creates a shining or bright and attractive appearance; to become visible or apparent
12. heavy hy_____en *n.* the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water
13. the characters that re_____nt numbers *v.* to speak, act, or be present on behalf of another person or group; to form or constitute
14. kn__d clay *v.* to work or press into a flexible mixture, especially bread dough, with the hands, fingers, or a device
15. ext_____ial intelligence *adj.* relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth
16. me_____al times *adj.* relating to or belonging to the Middle Age that is for the period of A.D.600 to A.D. 1450
17. 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

ANSWERS: 10. capture, 11. gleam, 12. hydrogen, 13. represent, 14. knead, 15. extraterrestrial, 16. medieval, 17. process

18. ca___n dioxide *n.* a chemical element that can be found in pure form as diamond or graphite, and it is also an essential part of coal and oil and is found in all plants and animals
19. space de___s *n.* broken or torn fragments of something
20. centimeter-g__m-second system *n.* a metric unit of weight equal to one-thousandth of a kilogram
21. geo_____al drilling *adj.* relating to or produced by the internal heat of the earth; often used to refer to energy produced by tapping into the natural heat of the earth
22. book of great ra___y *n.* the condition or trait of being unusual; something that is unusual
23. 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
24. pre-mo___n agricultural society *adj.* of or belonging to the present time or recent times
25. heat fu___n *n.* the process of combining two or more things to form a single entity
26. v__t desert *adj.* enormous in size, number, amount, or quantity
27. ready to co_____se *v.* to fall down or give way suddenly, often after breaking apart
28. the antiparticle of a ne_____n *n.* a subatomic particle with no electric charge that is present in all atomic nuclei except those of ordinary hydrogen

ANSWERS: 18. carbon, 19. debris, 20. gram, 21. geothermal, 22. rarity, 23. atom, 24. modern, 25. fusion, 26. vast, 27. collapse, 28. neutron

29. existential ca_____sm *n.* a sudden violent event that changes the earth's environment, such as a flood or a war
30. t_p keyboard with an index finger *v.* to hit someone or something quickly, gently, and often repeatedly; to use existing resources, such as energy, knowledge, etc.
31. tr_____re island *n.* a valuable or desirable possession; something that is cherished or held dear; a collection of valuable objects or money that is hidden or protected
32. di_____ve the sugar *v.* to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
33. pr____l the ship *v.* to move, drive or push something forward or in a particular direction, often with a lot of force
34. international co_____ty *n.* a product or a raw material that can be traded, bought, or sold
35. re_____e a prisoner *v.* to set free or allow to escape from confinement
36. en_____us amount *adj.* extremely large or great
37. the hydrogen binds the ox____n *n.* the chemical element with the symbol O that is present in air and water and is necessary for people, animals, and plants to live
38. demonstrate an up____d trend *adv.* toward the top or highest point, or a higher position or level; (adjective) extending or moving toward a higher place

ANSWERS: 29. cataclysm, 30. tap, 31. treasure, 32. dissolve, 33. propel, 34. commodity, 35. release, 36. enormous, 37. oxygen, 38. upward

39. ex_____e weather events *adj.* very great in amount or degree
40. acc_____te a chemical reaction *v.* to make something faster or earlier; to cause to develop or progress more quickly
41. pile of de____s *n.* broken or torn fragments of something
42. cultural n__m *n.* something that is regarded as usual, typical, or standard
43. 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
44. tr_____re hunt *n.* a valuable or desirable possession; something that is cherished or held dear; a collection of valuable objects or money that is hidden or protected
45. cr__t formation *n.* a hard outer layer that forms on the surface of a liquid as it cools or on a solid as a result of exposure to air or moisture
46. gl__m in eyes *v.* to reflect light in a way that creates a shining or bright and attractive appearance; to become visible or apparent
47. the in_____on of new techniques *n.* the creation of a new device or process resulting from study and experimentation; the act of inventing
48. hy_____en gas *n.* the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water

ANSWERS: 39. extreme, 40. accelerate, 41. debris, 42. norm, 43. uranium, 44. treasure, 45. crust, 46. gleam, 47. invention, 48. hydrogen

58. co_____ty tax *n.* a product or a raw material that can be traded, bought, or sold
59. an advertising me____m *adj.* of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information
60. ca____n emission *n.* a chemical element that can be found in pure form as diamond or graphite, and it is also an essential part of coal and oil and is found in all plants and animals
61. g__e absently out a window *v.* to stare at something or someone for an extended time, usually out of surprise or adoration, or because you are thinking about something else
62. over sub_____nt months *adj.* happening or occurring later or after something else
63. ach_____le task *adj.* possible to accomplish or attain
64. collapsed v__n *n.* a blood vessel that carries blood from various parts of the body back to the heart; a mineral deposit or layer of rock that is contained within another rock formation
65. al_____y experiment *n.* a medieval chemical philosophy and speculative theory that aimed to transform base metals into gold or produce a universal elixir that could cure all diseases and grant immortality; a process of transformation or creation that appears magical or mysterious

ANSWERS: 58. commodity, 59. medium, 60. carbon, 61. gaze, 62. subsequent, 63. achievable, 64. vein, 65. alchemy

66. display ec_____ic behavior *adj.* weird or unusual, sometimes in a funny way
67. 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
68. 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
69. re_____r a loss *v.* to return to a former condition, health, mind, or strength
70. pr____n decay *n.* a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms
71. b__y emotion *v.* to place a dead body in the ground, grave, or tomb
72. 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
73. re_____r approval ratings *v.* to return to a former condition, health, mind, or strength
74. b__y in the earth *v.* to place a dead body in the ground, grave, or tomb
75. the stock market co_____sed *v.* to fall down or give way suddenly, often after breaking apart
76. aquatic co_____nd *n.* an item composed of two or more distinct elements combined; a chemical formed by the combination of two or more elements

ANSWERS: 66. eccentric, 67. nuclear, 68. planet, 69. recover, 70. proton, 71. bury, 72. atom, 73. recover, 74. bury, 75. collapse, 76. compound

77. ac____e milestones *v.* to successfully complete a task or goal, often through hard work, perseverance, and dedication; to attain or accomplish something that one has set out to do
78. co____ss gas *v.* to press or squeeze together to make something take up less space
79. 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
80. n__m of action *n.* something that is regarded as usual, typical, or standard
81. officially di____ved the marriage *v.* to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
82. co____ss the chest *v.* to press or squeeze together to make something take up less space
83. pr____l growth *v.* to move, drive or push something forward or in a particular direction, often with a lot of force
84. er____te the deficit *v.* to get rid of or destroy something completely, especially something bad
85. critical m__s *n.* a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together
86. ach____le plan *adj.* possible to accomplish or attain
87. tr____rm heat into power *v.* to change in outward structure or looks;
88. me____m color *adj.* of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information

ANSWERS: 77. achieve, 78. compress, 79. hypothesis, 80. norm, 81. dissolve, 82. compress, 83. propel, 84. eradicate, 85. mass, 86. achievable, 87. transform, 88. medium

89. gra_____nal waves *adj.* relating to or caused by gravity (= the force that attracts objects towards one another)
90. me_____al history *adj.* relating to or belonging to the Middle Age that is for the period of A.D.600 to A.D. 1450
91. com_____ty theory *n.* the state or quality of being complicated or intricate and difficult to understand
92. co_____st with a decade ago *v.* to put in opposition to show or emphasize differences
93. cast a tra_____ion spell *n.* a complete change in form, nature, or appearance of someone or something
94. al_____y of emotions *n.* a medieval chemical philosophy and speculative theory that aimed to transform base metals into gold or produce a universal elixir that could cure all diseases and grant immortality; a process of transformation or creation that appears magical or mysterious
95. flow of el_____ons *n.* a tiny particle with the negative electrical charge
96. ni____l plate *n.* a silver-white metallic element with the symbol Ni, used in many alloys and as a coin; a United States coin worth one-twentieth of a dollar
97. co__t fame *v.* to strongly desire or crave something, particularly something that belongs to someone else; to have an excessive or envious desire for

ANSWERS: 89. gravitational, 90. medieval, 91. complexity, 92. contrast, 93. transformation, 94. alchemy, 95. electron, 96. nickel, 97. covet

98. co____st two things
v. to put in opposition to show or emphasize differences
99. at___c nucleus
adj. of or relating to atom (= the smallest component of an element)
100. gra_____nal energy
adj. relating to or caused by gravity (= the force that attracts objects towards one another)
101. his research area of
con_____ion
n. the ability to focus all your time and energy on one thing without thinking about anything else.
102. tr_____r inflation
v. to make something happen suddenly; to cause something such as a device, machine, etc. to function
103. harmful co_____nd
n. an item composed of two or more distinct elements combined; a chemical formed by the combination of two or more elements
104. ne_____n acceleration
n. a subatomic particle with no electric charge that is present in all atomic nuclei except those of ordinary hydrogen
105. pr_____us information
adj. uncommon and extremely valuable
106. pr___n conductivity
n. a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms
107. kn__d muscles
v. to work or press into a flexible mixture, especially bread dough, with the hands, fingers, or a device

ANSWERS: 98. contrast, 99. atomic, 100. gravitational, 101. concentration, 102. trigger, 103. compound, 104. neutron, 105. precious, 106. proton, 107. knead

108. tr____r a biochemical response *v.* to make something happen suddenly; to cause something such as a device, machine, etc. to function
109. extragalactic su____va *n.* a powerful and luminous explosion that occurs in some stars, resulting in an extremely bright, short-lived object that later fades into a supernova remnant
110. look up____d *adv.* toward the top or highest point, or a higher position or level; (adjective) extending or moving toward a higher place
111. common in____on *n.* the creation of a new device or process resulting from study and experimentation; the act of inventing
112. ex____d sales targets *v.* to surpass or go beyond a limit, expectation, or requirement; to be better or greater than anticipated or desired
113. the tra_____ion of a tadpole into a frog *n.* a complete change in form, nature, or appearance of someone or something
114. the earth's cr__t *n.* a hard outer layer that forms on the surface of a liquid as it cools or on a solid as a result of exposure to air or moisture
115. ro__y relationship *adj.* full of or abounding in rocks; of, relating to, or made of rock
116. in____on needle *n.* the act of introducing a liquid, especially a drug, into the body using a needle and a syringe
117. material we____h *n.* a large amount of money, property, or other things that someone or an organization owns

ANSWERS: 108. trigger, 109. supernova, 110. upward, 111. invention, 112. exceed, 113. transformation, 114. crust, 115. rocky, 116. injection, 117. wealth

118. fu___n cuisine *n.* the process of combining two or more things to form a single entity
119. ex___d a lineup *v.* to increase or to make something greater in size, number, or importance
120. a brief ex_____t from the book *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
121. ex_____e sports *adj.* very great in amount or degree
122. a sand p__e *n.* a collection of objects positioned one on top of another; a large sum of something, such as money
123. global ca_____sm *n.* a sudden violent event that changes the earth's environment, such as a flood or a war
124. ex_____e in anger *v.* to burst or break open violently and noisily; to cause something to burst or break open
125. price of pr_____us metals *adj.* uncommon and extremely valuable
126. the height of a p__e *n.* a collection of objects positioned one on top of another; a large sum of something, such as money
127. cognitive com_____ty *n.* the state or quality of being complicated or intricate and difficult to understand
128. 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

ANSWERS: 118. fusion, 119. expand, 120. extract, 121. extreme, 122. pile, 123. cataclysm, 124. explode, 125. precious, 126. pile, 127. complexity, 128. planet

129. mi__c a human voice *v.* to imitate someone's speech, movement, or behavior, especially to make others laugh
130. es_____te this chicken to weigh three pounds *v.* to guess or calculate the cost, size, value, etc. of something
131. re_____nt by a diagram *v.* to speak, act, or be present on behalf of another person or group; to form or constitute
132. sw__l up dirt and dust *v.* to move in a circular or spiral pattern
133. pa_____le energy *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
134. ex___d the speed limit *v.* to surpass or go beyond a limit, expectation, or requirement; to be better or greater than anticipated or desired
135. int_____lar communication *adj.* relating to or located in the space between stars
136. re_____e CO2 into the air *v.* to set free or allow to escape from confinement
137. ni___l ore *n.* a silver-white metallic element with the symbol Ni, used in many alloys and as a coin; a United States coin worth one-twentieth of a dollar
138. the ra___y of the event *n.* the condition or trait of being unusual; something that is unusual
139. ex_____e in popularity *v.* to burst or break open violently and noisily; to cause something to burst or break open

ANSWERS: 129. mimic, 130. estimate, 131. represent, 132. swirl, 133. particle, 134. exceed, 135. interstellar, 136. release, 137. nickel, 138. rarity, 139. explode

140. 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
141. 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
142. su_____va remnant *n.* a powerful and luminous explosion that occurs in some stars, resulting in an extremely bright, short-lived object that later fades into a supernova remnant
143. chemical re_____on *n.* a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others
144. em_____ed systems *adj.* fixed firmly into the surface of something
145. v__t majority *adj.* enormous in size, number, amount, or quantity
146. es_____te a fair value *v.* to guess or calculate the cost, size, value, etc. of something
147. he___m gas *n.* a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas series in the periodic table

ANSWERS: 140. process, 141. universe, 142. supernova, 143. reaction, 144. embedded, 145. vast, 146. estimate, 147. helium

148. tr_____m an education system *v.* to change in outward structure or looks;
149. mo____n poetry *adj.* of or belonging to the present time or recent times
150. man_____re an enzyme *v.* to make goods in large numbers, usually in a factory using machines
151. ex____d agricultural output *v.* to increase or to make something greater in size, number, or importance
152. ext_____ial planet *adj.* relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth
153. cir_____nce of birth *n.* the specific conditions or events that surround a particular situation or occurrence
154. co_____se the text *v.* to reduce the volume or size of something, often by removing water or other liquid; to make something shorter, more concise, or more concentrated
155. nutrient-de__e foods *adj.* containing a large number of people or something with little space between them
156. ac_____e success *v.* to successfully complete a task or goal, often through hard work, perseverance, and dedication; to attain or accomplish something that one has set out to do
157. begin to pe__r out *v.* to fail or lose power, efficiency, or value gradually before coming to an end
158. beam of el_____ons *n.* a tiny particle with the negative electrical charge

ANSWERS: 148. transform, 149. modern, 150. manufacture, 151. expand, 152. extraterrestrial, 153. circumstance, 154. condense, 155. dense, 156. achieve, 157. peter, 158. electron

159. st____r performance *adj.* excellent; relating to or resembling a star, especially in quality or attractiveness
160. g__m amount *n.* a metric unit of weight equal to one-thousandth of a kilogram
161. cir_____nce of injury *n.* the specific conditions or events that surround a particular situation or occurrence
162. majority of his we____h *n.* a large amount of money, property, or other things that someone or an organization owns
163. eventually pe__r out *v.* to fail or lose power, efficiency, or value gradually before coming to an end
164. t_p a new market *v.* to hit someone or something quickly, gently, and often repeatedly; to use existing resources, such as energy, knowledge, etc.
165. bo____e across the floor *v.* to cause to move up or away after hitting a surface; to spring back
166. en____us potential *adj.* extremely large or great
167. re__l bad luck *v.* to force an attack or attacker to withdraw or retreat
168. 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
169. int_____lar space *adj.* relating to or located in the space between stars

ANSWERS: 159. stellar, 160. gram, 161. circumstance, 162. wealth, 163. peter, 164. tap, 165. bounce, 166. enormous, 167. repel, 168. universe, 169. interstellar

170. bo___e back from failure *v.* to cause to move up or away after hitting a surface; to spring back
171. mi_____le letters *adj.* extremely small; tiny
172. co_____ct a 3D image *v.* to build or create something; to assemble or combine different parts to form something whole
173. trigger a re_____on *n.* a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others
174. ec_____ic characters *adj.* weird or unusual, sometimes in a funny way
175. geo_____al activity *adj.* relating to or produced by the internal heat of the earth; often used to refer to energy produced by tapping into the natural heat of the earth
176. con_____ion of armaments *n.* the ability to focus all your time and energy on one thing without thinking about anything else.
177. mi_____le amount *adj.* extremely small; tiny
178. botanical ex_____t *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
179. sh_____ve effect *n.* a wave or series of waves produced by a sudden disturbance, such as an explosion or a supersonic flow, capable of producing significant changes in pressure, temperature, and density of the medium through which it travels

ANSWERS: 170. bounce, 171. minuscule, 172. construct, 173. reaction, 174. eccentric, 175. geothermal, 176. concentration, 177. minuscule, 178. extract, 179. shockwave

180. charged pa____le *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
181. ca____e a glimpse *v.* to catch a person or an animal and confine them in an area which they cannot escape
182. co____ct a dam *v.* to build or create something; to assemble or combine different parts to form something whole
183. the propagation of sh____ves *n.* a wave or series of waves produced by a sudden disturbance, such as an explosion or a supersonic flow, capable of producing significant changes in pressure, temperature, and density of the medium through which it travels
184. reduce sub____nt mortality *adj.* happening or occurring later or after something else
185. he___m atom *n.* a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas series in the periodic table
186. mi__c numerous instruments *v.* to imitate someone's speech, movement, or behavior, especially to make others laugh
187. at___c bomb *adj.* of or relating to atom (= the smallest component of an element)
188. co____se water vapor *v.* to reduce the volume or size of something, often by removing water or other liquid; to make something shorter, more concise, or more concentrated

ANSWERS: 180. particle, 181. capture, 182. construct, 183. shockwave, 184. subsequent, 185. helium, 186. mimic, 187. atomic, 188. condense

189. re__l bandits

v. to force an attack or attacker to
withdraw or retreat

190. er_____te racial discrimination

v. to get rid of or destroy something
completely, especially something bad

ANSWERS: 189. repel, 190. eradicate

Session 3: Fill in the Blanks

1. The roof finally _____ after three days and three nights of heavy snowfall.
v. to fall down or give way suddenly, often after breaking apart
2. She couldn't help but _____ her friend's designer handbag.
v. to strongly desire or crave something, particularly something that belongs to someone else; to have an excessive or envious desire for
3. Nuclear _____ is a process in which atomic nuclei combine to form heavier nuclei.
n. the process of combining two or more things to form a single entity
4. The political party _____ after much internal fighting.
v. to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
5. Carbon has an _____ mass of 12.
adj. of or relating to atom (= the smallest component of an element)
6. The animal rights group worked to _____ the dolphins back into the wild.
v. to set free or allow to escape from confinement
7. The outermost _____ shell determines the chemical properties of an atom.
n. a tiny particle with the negative electrical charge
8. This exam requires excellent _____ to pass.
n. the ability to focus all your time and energy on one thing without thinking about anything else.

ANSWERS: 1. collapsed, 2. covet, 3. fusion, 4. dissolved, 5. atomic, 6. release, 7. electron, 8. concentration

9. The pirates searched for buried _____ in the dunes.
n. a valuable or desirable possession; something that is cherished or held dear; a collection of valuable objects or money that is hidden or protected
10. 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
11. Solar gravity creates _____ pressures and temperatures.
adj. very great in amount or degree
12. The _____ medium comprises gas, dust, and cosmic rays that fill the space between stars.
adj. relating to or located in the space between stars
13. They will _____ between various emotional states.
v. to cause to move up or away after hitting a surface; to spring back
14. The old building _____ in a fiery inferno.
v. to burst or break open violently and noisily; to cause something to burst or break open
15. Setting a realistic and _____ goal is the key to success.
adj. possible to accomplish or attain
16. Today, the study of _____ remains an important part of the history of science and philosophy
n. a medieval chemical philosophy and speculative theory that aimed to transform base metals into gold or produce a universal elixir that could cure all diseases and grant immortality; a process of transformation or creation that appears magical or mysterious

ANSWERS: 9. treasure, 10. planet, 11. extreme, 12. interstellar, 13. bounce, 14. exploded, 15. achievable, 16. alchemy

17. Only the _____ tower remained standing.

adj. relating to or belonging to the Middle Age that is for the period of A.D.600 to A.D. 1450

18. The government announced a policy to control the rise in _____ prices.

n. a product or a raw material that can be traded, bought, or sold

19. Shakespeare's output of poetry was _____.

adj. extremely large or great

20. We elected him to _____ us at the international conference.

v. to speak, act, or be present on behalf of another person or group; to form or constitute

21. He was _____ but he was also a genius.

adj. weird or unusual, sometimes in a funny way

22. She explained the _____ surrounding the accident.

n. the specific conditions or events that surround a particular situation or occurrence

23. The chef expertly _____ the sauce onto the plate.

v. to move in a circular or spiral pattern

24. The solar wind is composed almost entirely of electrons and _____.

n. a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms

25. An increase in employment helps _____ economic growth.

v. to move, drive or push something forward or in a particular direction, often with a lot of force

ANSWERS: 17. medieval, 18. commodity, 19. enormous, 20. represent, 21. eccentric, 22. circumstances, 23. swirled, 24. protons, 25. propel

26. The town is exploring using _____ energy to power its homes and buildings.

adj. relating to or produced by the internal heat of the earth; often used to refer to energy produced by tapping into the natural heat of the earth

27. The _____ size shirt fits him perfectly.

adj. of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information

28. To expand the company, we must ____ new human resources.

v. to hit someone or something quickly, gently, and often repeatedly; to use existing resources, such as energy, knowledge, etc.

29. I need to _____ all of my notes into a manageable summary for my presentation.

v. to reduce the volume or size of something, often by removing water or other liquid; to make something shorter, more concise, or more concentrated

30. I will work hard to _____ my goals and realize my dreams.

v. to successfully complete a task or goal, often through hard work, perseverance, and dedication; to attain or accomplish something that one has set out to do

31. The company adjusted the revenue _____.

adv. toward the top or highest point, or a higher position or level; (adjective) extending or moving toward a higher place

32. The majority of synthetic vitamins are _____ from oil.

v. to make goods in large numbers, usually in a factory using machines

33. She is still _____ from a shot to her shoulder.

v. to return to a former condition, health, mind, or strength

ANSWERS: 26. geothermal, 27. medium, 28. tap, 29. condense, 30. achieve, 31. upward, 32. manufactured, 33. recovering

34. 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
35. I need to _____ the dough before I can bake the bread.
- v. to work or press into a flexible mixture, especially bread dough, with the hands, fingers, or a device
36. 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
37. The project's _____ made it difficult for the team to complete it on time.
- n. the state or quality of being complicated or intricate and difficult to understand
38. The _____ from the explosion shattered windows for several blocks.
- n. a wave or series of waves produced by a sudden disturbance, such as an explosion or a supersonic flow, capable of producing significant changes in pressure, temperature, and density of the medium through which it travels
39. We often _____ political problems as religious issues.
- v. to depict or describe someone or something in a painting, film, book, or other artistic work
40. 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
41. Understanding unitary _____ of a normal matrix require considerable mathematical sophistication.
- n. a complete change in form, nature, or appearance of someone or something

ANSWERS: 34. capture, 35. knead, 36. universe, 37. complexity, 38. shockwave, 39. portray, 40. atom, 41. transformations

42. Trees absorb _____ dioxide and give off oxygen.
n. a chemical element that can be found in pure form as diamond or graphite, and it is also an essential part of coal and oil and is found in all plants and animals
43. The _____ inequality was unavoidable.
n. a large amount of money, property, or other things that someone or an organization owns
44. 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
45. They hope to _____ their business worldwide.
v. to increase or to make something greater in size, number, or importance
46. 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
47. How much is it per one hundred _____
n. a metric unit of weight equal to one-thousandth of a kilogram
48. The _____ balloons floated into the sky.
n. a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas series in the periodic table
49. Due to their _____ diamonds are expensive.
n. the condition or trait of being unusual; something that is unusual

ANSWERS: 42. carbon, 43. wealth, 44. mass, 45. expand, 46. particles, 47. grams?, 48. helium-filled, 49. rarity,

50. The government tried to _____ the commercialization of this development.
- v.* to make something faster or earlier; to cause to develop or progress more quickly
51. We _____ the season's total trade deficit at \$50 billion.
- v.* to guess or calculate the cost, size, value, etc. of something
52. The _____ and the oxygen react and then form water.
- n.* the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water
53. 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
54. 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
55. After the party, they had to clean up _____ of dirty dishes.
- n.* a collection of objects positioned one on top of another; a large sum of something, such as money
56. The nurse inserted the needle into the _____ in his arm to draw blood.
- n.* a blood vessel that carries blood from various parts of the body back to the heart; a mineral deposit or layer of rock that is contained within another rock formation

ANSWERS: 50. accelerate, 51. estimated, 52. hydrogen, 53. hypothesis, 54. process, 55. piles, 56. vein

57. 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
58. Scientists are constantly searching for signs of _____ life in the universe.
- adj.* relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth
59. A _____ audience viewed the broadcast.
- adj.* enormous in size, number, amount, or quantity
60. The _____ explosion created a bright new star in the night sky.
- n.* a powerful and luminous explosion that occurs in some stars, resulting in an extremely bright, short-lived object that later fades into a supernova remnant
61. The passenger grabbed for the _____ mask.
- n.* the chemical element with the symbol O that is present in air and water and is necessary for people, animals, and plants to live
62. We cannot afford to squander _____ time.
- adj.* uncommon and extremely valuable
63. 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

ANSWERS: 57. constructs, 58. extraterrestrial, 59. vast, 60. supernova, 61. oxygen, 62. precious, 63. uranium

64. 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)
65. The _____ in my pocket jingled as I walked.
n. a silver-white metallic element with the symbol Ni, used in many alloys and as a coin; a United States coin worth one-twentieth of a dollar
66. The athlete's performance _____ all expectations, breaking a world record.
v. to surpass or go beyond a limit, expectation, or requirement; to be better or greater than anticipated or desired
67. The systems we have developed has accepted as industry _____.
n. something that is regarded as usual, typical, or standard
68. This material can _____ moisture swiftly.
v. to force an attack or attacker to withdraw or retreat
69. The incident _____ a political controversy.
v. to make something happen suddenly; to cause something such as a device, machine, etc. to function
70. In the _____ meeting, the team discussed ways to improve productivity.
adj. happening or occurring later or after something else
71. He received an _____ of antibiotics to treat his infection.
n. the act of introducing a liquid, especially a drug, into the body using a needle and a syringe

ANSWERS: 64. gravitational, 65. nickel, 66. exceeded, 67. norms, 68. repel, 69. triggered, 70. subsequent, 71. injection

72. My father's death _____ my life completely.

v. to change in outward structure or looks;

73. 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

74. The entire mountain is covered in _____ rainforest.

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

75. The _____ chip in my credit card allows me to make contactless payments.

adj. fixed firmly into the surface of something

76. The _____ road made it difficult to drive on.

adj. full of or abounding in rocks; of, relating to, or made of rock

77. The bread's _____ was golden brown and crispy.

n. a hard outer layer that forms on the surface of a liquid as it cools or on a solid as a result of exposure to air or moisture

78. There was a chemical _____ of the lime with the groundwater.

n. a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others

79. Marine _____ is a major continuous global problem.

n. broken or torn fragments of something

ANSWERS: 72. transformed, 73. extracting, 74. dense, 75. embedded, 76. rocky, 77. crust, 78. reaction, 79. debris

80. The diamond ring _____ in the sunlight, catching everyone's eye.
v. to reflect light in a way that creates a shining or bright and attractive appearance; to become visible or apparent
81. 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
82. The earthquake was a _____ from which the local people never recovered.
n. a sudden violent event that changes the earth's environment, such as a flood or a war
83. Common salt is a sodium and chlorine _____.
n. an item composed of two or more distinct elements combined; a chemical formed by the combination of two or more elements
84. The youngster was _____ at by the beast.
v. to stare at something or someone for an extended time, usually out of surprise or adoration, or because you are thinking about something else
85. Their headquarters are in a _____ skyscraper.
adj. of or belonging to the present time or recent times
86. The music just _____ out.
v. to fail or lose power, efficiency, or value gradually before coming to an end
87. She received a _____ review from her boss, which boosted her confidence.
adj. excellent; relating to or resembling a star, especially in quality or attractiveness

ANSWERS: 80. gleamed, 81. nuclear, 82. cataclysm, 83. compound, 84. gazed, 85. modern, 86. petered, 87. stellar

88. This ore emits _____ quantities of radiation
adj. extremely small; tiny
89. We are trying to _____ this disease from the world.
v. to get rid of or destroy something completely, especially something bad
90. It's intriguing to compare and _____ the two authors.
v. to put in opposition to show or emphasize differences
91. She _____ the files into a single ZIP archive to save space on her computer.
v. to press or squeeze together to make something take up less space
92. He is very popular at school because he can _____ all the teachers' accents.
v. to imitate someone's speech, movement, or behavior, especially to make others laugh
93. A _____ star is incredibly dense and has a strong gravitational pull.
n. a subatomic particle with no electric charge that is present in all atomic nuclei except those of ordinary hydrogen
94. Necessity is the mother of _____.
n. the creation of a new device or process resulting from study and experimentation; the act of inventing
95. There is plenty of space to _____ everyone.
v. to place a dead body in the ground, grave, or tomb

ANSWERS: 88. minuscule, 89. eradicate, 90. contrast, 91. compressed, 92. mimic, 93. neutron, 94. invention, 95. bury