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Stuart Kauffman: The "adjacent possible" -- and how it explains human innovation | TED Talk

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

All Words

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Session 1: Word List

bubble

n. a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses

synonym : blob, balloon, mania

(1) **bubble** in the champagne glass, (2) economic **bubble**
Many people worry that the current real estate market is a **bubble** that could burst soon.

forth

adv. forward, outward, or onward in location, direction, or progress; into view or consideration; with confidence, boldness, or in the open

synonym : forward, onwards, ahead

(1) bring **forth** a beautiful vase, (2) call **forth** demand
I pushed **forth** with my new project, even though it would take much hard work.

adjacent

adj. next to, close to, or adjoining something

synonym : next, adjoining, neighboring

(1) **adjacent** to his house, (2) **adjacent** houses
Our country has military alliances with **adjacent** countries.

biosphere

n. the part of the Earth and its atmosphere in which living organisms exist, including plants, animals, and microorganisms

synonym : ecosphere, ecospace, ecosystem

(1) terrestrial **biosphere**, (2) artificial **biosphere**

The balance of the **biosphere** is crucial for the survival of species.

possibility

n. a chance that something may happen or be true

synonym : chance, prospect, likelihood

(1) **possibility** for growth, (2) **possibility** of a major earthquake

The **possibility** of getting the disease will drastically increase.

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.

critic

n. someone who expresses opinions about the quality of books, music, etc.

synonym : pundit, analyst, attacker

(1) art **critic**, (2) severe **critic**

Advocates for legal reform hear less harsh words from their **critics**.

physics

n. the science of matter and energy and their interactions

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

He studied the **physics** of radiation.

organism

n. a tiny living thing

synonym : being, creature

(1) aerobic **organism**, (2) group of **organisms**

A diversified plant species generally enhances beneficial **organism** populations.

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.

bacteria

n. single-celled or noncellular spherical or spiral or rod-shaped organisms that exist in large numbers in the air, water, and soil, and also in living and dead creatures and plants, and are often a cause of disease

synonym: microorganism, microbe

(1) pathogenic **bacteria**, (2) harmless **bacteria**

Bacteria prevalent in hospitals are often resistant to antibiotics.

highway

n. a main road, especially one connecting major towns or cities

synonym: road, expressway, freeway

(1) **highway** system, (2) an interstate **highway**

I'm going to take the **highway** to get to my destination faster.

emerge

v. to move out of or away from something and become visible

synonym: arise, occur, appear

(1) **emerge** as a butterfly, (2) **emerge** from poverty

During colonial eras, new migratory patterns **emerged**.

extraordinary

adj. exceptional, unexpected, very unusual; surpassing the ordinary or usual

synonym: exceptional, noteworthy, astonishing

(1) **extraordinary** ability, (2) **extraordinary** weather

He narrated the **extraordinary** story of his adventure.

explosion

n. a violent release induced by a chemical or nuclear reaction

synonym : burst, eruption, outbreak

(1) a lot of **explosions**, (2) site of the **explosion**

A broken gas pipe triggered the **explosion**.

creative

adj. relating to or involving the use of skill and original and unusual ideas to create something

synonym : imaginative, innovative, inventive

(1) **creative** writing, (2) barren of **creative** spirit

All the supervisor has to do is assign tasks that make his subordinates more **creative**.

phylum

n. a major group or category of animals or plants characterized by shared physical, developmental, and evolutionary characteristics

synonym : division, group, classification

(1) animal **phylum**, (2) plant **phylum**

Arthropoda is the largest **phylum** in the animal kingdom, comprising insects, spiders, and crustaceans.

scared

adj. afraid or frightened

synonym : frightened, fearful, dreading

(1) **scared** all the time, (2) **scared** dog

I'm **scared** of insects.

afterward

adv. after the time mentioned

synonym : later, thereafter, following

(1) a few years **afterward**, (2) go there **afterward**

We will explain the countermeasure concerning this problem **afterward**.

gentle

adj. having or showing a kindly or tender nature; soft and mild

synonym : mild, delicate, soft

(1) in a **gentle** voice, (2) **gentle** downward slope

Her **gentle** manner relaxed everyone there.

function

n. the purpose or use of an object, system, or process; a particular activity or operation that is designed to serve a specific purpose; a mathematical concept that describes a relationship between two sets of values, called the input and output sets; (verb) to operate or work in a specific way, or to perform a particular task or purpose

synonym : purpose, mapping, job

(1) **function** properly, (2) immune **function**

The brain is an incredibly complex organ that controls the body's **function**.

organ

n. a part of the body of an animal or plant that has a particular purpose and performs a specific job

synonym : function, structure

(1) **organ** bleeding, (2) damage to internal **organs**

These infections have the potential to impact practically every **organ** system.

pump

v. to cause water, air, gas, etc. to move from one place to another by using mechanical equipment; to get or supply something such as money, information, etc. in significant quantities

synonym : drain, inject, send

(1) **pump** a secret out of success, (2) **pump** blood throughout the body

He was alert and could not **pump** any critical information out of him.

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.

subset

n. a set of things that are contained within another larger set; a portion or division of a group or category

synonym: subcategory, subdivision

(1) proper **subset**, (2) **subset** selection

A **subset** of the employees will be trained in the new software program.

causal

adj. relating to or indicating a cause or the relationship between causes and effects; resulting from a cause

synonym: causative, contributory, connected

(1) **causal** chain, (2) **causal** effect

The study aimed to establish a **causal** relationship between smoking and lung cancer.

sustain

v. to supply enough of what somebody or something needs to survive or exist; to accept as valid

synonym: maintain, nurture, support

(1) **sustain** a good relationship with him, (2) **sustain** a wellness lifestyle

She struggled to **sustain** the children's reading habits.

jury

n. a group of people called upon to render a verdict or judgment in a legal trial; a group of people chosen for a special purpose or task

synonym: panel, tribunal, adjudicators

(1) **jury** verdict, (2) **jury** duty

The judge instructed the **jury** on the law and the evidence presented in the trial.

rig

v. to prepare or set up something in a certain way, typically in a carefully planned or fraudulent manner; to equip with sails or masts

synonym: set up, prepare, arrange

(1) **rig** an election, (2) **rig** a ship with new sails

He **rigged** the game so he could win the prize.

- feat** *n.* a notable or impressive achievement, especially one that requires great skill or bravery
synonym: achievement, accomplishment, exploit
(1) intellectual **feat**, (2) **feat** accomplishment
It is an incredible **feat** to climb Mount Everest, the highest mountain in the world.
- shallow** *adj.* not having much distance from the top to the bottom
synonym: superficial, external, surface
(1) **shallow** people, (2) **shallow** water
Shallow brooks are noisier than deep rivers.
- hanger** *n.* a device or object used for hanging or supporting something, often used for hanging clothes; a loop-shaped object used to hang clothes in a closet
synonym: hook, peg, rack
(1) clothes **hanger**, (2) coat **hanger**
I hung the coat on a **hanger** in the closet.
- slide** *v.* to move or cause to move smoothly along a surface without interruption
synonym: glide, drift, drop
(1) **slide** a card across the table, (2) **slide** a glance
If necessary, you can **slide** the front seats forward.
- handle** *v.* to deal with a situation, problem, or strong emotion
synonym: control, manage, deal with
(1) **handle** a precious object, (2) **handled** the incident
We all should learn how to **handle** stress.
- screwdriver** *n.* a tool used for turning screws, typically consisting of a handle and a metal rod with a flattened tip that fits into the slot on the head of a screw; a popular cocktail made with vodka and orange juice
synonym: screw, driver, wrench
(1) open the can with a **screwdriver**, (2) electric **screwdriver**

I need a flathead **screwdriver** to tighten the loose screws on this cabinet.

screw

v. to turn something, such as a bolt, with a driver or wrench to tighten or loosen it; (noun) a cylindrical rod with a helical ridge used to fasten things together

synonym : tighten, fix, secure

(1) **screw** the cap, (2) a female **screw**

He had to **screw** the loose knob back onto the cabinet door.

scraping

n. the act of removing a thin layer of material from a surface, often to clean or smooth it; a sound or sensation that is produced by something being removed or rubbed against another surface; (of computer technology) the automated extraction or collection of data from websites

synonym : abrading, scratching, rubbing

(1) **scraping** tools, (2) metal **scraping**

The **scraping** sound coming from the engine made us worry about the car's condition.

putty

n. a soft, pliable substance, typically made of clay, plaster, or dough, used for filling cracks, sealing glass panes, or molding

synonym : paste, adhesive, cement

(1) **putty** work, (2) moldable **putty**

She used a **putty** knife to smooth out the surface of the wall.

engine

n. a machine that converts thermal energy to mechanical work; something that has an important role used to achieve a purpose

synonym : motor, locomotive, driver

(1) a steam **engine**, (2) an air-cooled **engine**

The policies he announces can be the **engine** of economic growth in the country.

drill *n.* a tool or machine used for making round holes or driving fasteners; a training or practice
synonym: exercise, routine, training
(1) the **drill** hit the well, (2) fire **drill**
Several military **drill** programs have become popular methods of exercise.

superb *adj.* extremely good; excellent in quality; superbly done
synonym: outstanding, excellent, fabulous
(1) **superb** quality, (2) **superb** performance
The meal we had at the restaurant was **superb**; I highly recommend it.

paperweight *n.* a small, heavy object, often made of glass or metal, that is designed to hold down papers or other items on a desk or table; an object, usually an electronic device or piece of machinery, that is non-functional or useless for its intended purpose
synonym: desk weight, document holder
(1) metallic **paperweight**, (2) **paperweight** gift
The stained-glass **paperweight** added a pop of color to the desk.

demonstrate *v.* to display something or give an exhibition to an interested audience
synonym: show, illustrate, display
(1) **demonstrate** a difference, (2) **demonstrate** mastery
How can you **demonstrate** that the earth is a sphere?

crack *v.* to break or cause to break without dividing into separate parts; (noun) a line on the surface of something along which it has separated without breaking
synonym: snap, burst, break
(1) **crack** an eggshell, (2) a **crack** in a board
He that would eat the kernel must **crack** the nut.

coconut

n. the large, hard-shelled seed of a tropical palm, which has a fibrous husk surrounding a single-seeded nut

(1) **coconut** milk, (2) **coconut** oil

He cracked open a **coconut** to drink the milk.

deduce

v. to arrive at an answer, a conclusion, or a decision by reasoning

synonym: conclude, infer, suppose

(1) **deduce** facts from the evidence, (2) **deduce** the meaning of a word

The researcher **deduced** the momentum of the particles from meteoritic velocities.

peel

v. to remove the skin of fruit and vegetables

synonym: pare, unclothe, disrobe

(1) **peel** a fruit, (2) **peel** off easily

The storm had **peeled** all paint off the siding.

computation

n. the act or process of calculating something, especially an answer or amount, by using a machine or calculator

synonym: calculation, estimation, arithmetic

(1) parallel **computation**, (2) theory of **computation**

The researcher demonstrated the superiority of quantum **computation** in several mathematical tasks.

deduct

v. to take away an amount or part of the money, points, etc. from a total

synonym: remove, subtract, withdraw

(1) **deduct** the interest, (2) **deduct** \$100 from the price

The bank **deducted** the premium amount from his bank account.

innovate

v. to introduce new methods, ideas, or products

synonym: bring in, introduce, found

(1) **innovate** a new method, (2) **innovate** the quality of his life

Companies developing self-driving cars consistently **innovate** the emerging technologies.

adapt

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

synonym: adjust, acclimate, accustom

(1) **adapt** fully to the environment, (2) **adapt** as needed
I advised him to **adapt** to his new surroundings.

regulation

n. an official rule made and maintained by a government or some other authority; the act of controlling or directing something according to a rule

synonym: constraint, restriction, rule

(1) a company **regulation**, (2) **regulation** by the government

The **regulation** approved by Congress was perfunctorily implemented.

flee

v. to leave by running away, especially out of fear or danger

synonym: exit, escape, run away

(1) **flee** their homes, (2) **flee** abroad

It is a basic instinct to **flee** from a dangerous situation.

enzyme

n. a substance produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction

synonym: catalyst, activator, accelerator

(1) **enzyme** reaction, (2) lack of digestive **enzymes**

A deficiency in the **enzyme** can lead to a medical condition.

mathematics

n. the science dealing with the logic of quantities, shapes, spaces, and arrangement

synonym: arithmetic, calculation, calculus

(1) a good grounding in **mathematics**, (2) **mathematics** competition

He has a flair for **mathematics**.

economy

n. the system by which a country or region produces, manages, and distributes goods and services, including the money and finances involved in these activities; (of an airline) the lowest-priced, most basic option for seating in commercial travel

synonym: finance, trade, business

(1) **economy** of scale, (2) **economy** class

The **economy** of the country is struggling due to the recent political instability.

fantastic

adj. extremely good; excellent

synonym: incredible, unbelievable, marvelous

(1) a **fantastic** dress, (2) absolutely **fantastic** event

The new amusement park ride was **fantastic**, with twists, turns, and drops that left riders screaming with excitement.

phase

n. any stage in a series of events, change, or development

synonym: degree, stage, step

(1) enter on the last **phase**, (2) two- **phase** structure

The era of the industrial revolution was a crucial **phase** of history.

transition

n. the process or period of changing from one state or circumstance to another

synonym: change, growth, shift

(1) **transition** phase, (2) ensure a smooth **transition**

The nation's healthcare system is in **transition** at the moment.

Newtonian

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

synonym: classical, physics, mechanics

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

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

quantum

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

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

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

mechanics

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

synonym: kinematics, dynamics

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

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

exquisite

adj. extremely beautiful and delicate

synonym: magnificent, glorious, gorgeous

(1) **exquisite** crafts, (2) a man of **exquisite** sensitivity

We can hear an **exquisite** piano melody from his room.

clockwork

n. a mechanism in which a series of gears, springs and other mechanical elements are used to power a device, especially a clock

synonym: mechanism, movement, gears

(1) run like **clockwork**, (2) **clockwork** precision

The **clockwork** mechanism in the grandfather clock needed to be wound up every week.

statistics

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

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

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

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.

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.

combine

v. to join or merge to form a single thing or group

synonym : coalesce, cohere, blend

(1) **combine** chemically with another substance,

(2) **combine** augmented reality

Hydrogen and oxygen **combine** to form water.

equation

n. the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign

(1) the **equation** of poverty with ignorance, (2) a chemical **equation**

In this class, you will learn how to solve quadratic **equations**.

recombine

v. to combine or put together again or differently; to cause genetic recombination (= the process by which genetic material is broken and joined to other genetic material)

(1) **recombine** at the surface, (2) ability to **recombine**

Some scientists argue that the genes in food should not be artificially **recombined**.

fiddle

v. to continuously touch or manipulate something with someone's hands, mainly when bored or nervous; to act dishonestly to try to get money, information, etc., or gain an advantage

synonym : tinker, diddle, play

(1) **fiddle** with a PC, (2) **fiddle** away the whole afternoon
She was able to **fiddle** a free trip to the United States.

property

n. a thing or things that belong to someone

synonym : belongings, possessions, equity

(1) a man of **property**, (2) chemical **property**

He stood to inherit a million-dollar **property**.

stunning

adj. causing a strong emotional reaction of admiration, surprise, or shock due to its beauty, rarity, or excellence

synonym : beautiful, breathtaking, magnificent

(1) **stunning** beauty, (2) **stunning** disclosure

The **stunning** sunset took everyone's breath away.

stick

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

synonym : pierce, adhere, stay

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

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

infinity

n. the state or quality of having no end or limit; (mathematics) a number greater than any natural number

synonym : endlessness, boundlessness, continuity

(1) the **infinity** of the universe, (2) negative **infinity**

That investor saw an **infinity** of possibilities in this company.

finite

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

synonym : delimited, defined, limited

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

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

singularity

n. (of black holes) a point or region in space-time where the gravitational field is infinite, and matter and energy are infinitely dense; the state, fact, quality, or condition of being one of a kind

synonym: black hole, individualism, uniqueness

(1) black hole **singularity**, (2) the **singularity** of the Divine
Scientists have predicted that the universe will end in a **singularity**, where all matter will collapse into an infinitely dense point.

evolution

n. a gradual process of transformation of living things

synonym: elaboration, expansion, transition

(1) human **evolution**, (2) **evolution** theory

They study the **evolution** of the universe.

Australopithecus

n. any of several extinct hominid species that lived in Africa between 4 million and 1 million years ago and are considered to be among the earliest ancestors of modern humans

synonym: hominid, primate, ape

(1) **Australopithecus** skull, (2) **Australopithecus africanus**
Australopithecus fossils have been found in Eastern and Southern Africa.

flourish

v. to grow or develop vigorously or successfully

synonym: boom, advance, succeed

(1) **flourish** economically, (2) **flourish** worldwide

The Ottoman Empire **flourished** for over five centuries.

homosexual

adj. sexually attracted to people of one's own sex

synonym: gay, same-sex attracted

(1) **homosexual** rights, (2) **homosexual** marriage

The law was repealed to protect the rights of **homosexual** citizens.

erect

v. to construct or build something; to cause to rise;
(adjective) upright or vertical

synonym : build, set up, construct

(1) **erect** structure, (2) keep the flagpole **erect**

The workers were able to **erect** the tent in just a few minutes.

crude

adj. being in an unrefined or natural state; (noun) the unprocessed form of oil

synonym : unrefined, native, vulgar

(1) price of **crude** oil, (2) **crude** manners

His **crude** jokes made her angry.

mere

adj. used to emphasize how insignificant or minor someone or something is

synonym : bare, minor, sheer

(1) **mere** acquaintance, (2) **mere** incident

He lost the election by **mere** votes.

flake

n. a small, thin piece or layer of something, often with a flat or irregular shape; a person who is unreliable or inconsistent

synonym : chip, bit, shred

(1) **flakes** of snow, (2) **flake** graphite

She found a paint **flake** on the wall and realized it was time to repaint the room.

needle

n. a thin, pointed object typically used for sewing or medical purposes; a metal or plastic instrument used for administering injections or drawing blood

synonym : thorn, spike, pin

(1) **needle** prick, (2) sewing **needle**

The acupuncturist inserted **needles** into specific points on my body to alleviate my pain.

chariot

n. a two-wheeled horse-drawn battle vehicle used in ancient Egypt, Greece, and Rome for warfare and racing

(1) **chariot** builder, (2) **chariot** race

The ancient Romans enjoyed spectating **chariot** races.

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**.

writ

n. a written legal order or command

synonym: legal document, order, legal process

(1) a **writ** of summons, (2) issue a **writ**

He was served with a **writ** of eviction, giving him the notice to vacate the property.

clay

n. a natural, earthy material that is made up of very small particles of minerals and can be molded when wet and then fired to produce ceramics

synonym: ceramics, pottery, dirt

(1) **clay** animation, (2) soft **clay** ground

The sculptor carefully molded the **clay** into the desired shape.

tablet

n. a small flat electronic device used for browsing the internet, reading, writing, or playing games; a small, solid pill of medicine

synonym: notepad, pill, medication

(1) a multivitamin **tablet**, (2) **tablet** keyboard

The new **tablet** device has a faster processor and better graphics than its predecessor.

complement

v. to improve or make something more appealing by adding or contributing extra features to it

synonym: complete, integrate

(1) **complement** existing rules, (2) **complement** each other

Our application aims to **complement** the feature of web browsers.

stylus

n. a thin, pointed tool used to write, draw, or select items on a touchscreen device

synonym : pen, pointer, cursor

(1) **stylus** pen, (2) **stylus** pocket

Many artists prefer to use a **stylus** over their fingers when drawing on a digital canvas.

niche

n. a specialized role or position that a species occupies within an ecosystem; a job or position particularly well suited to the person who occupies it

synonym : role, position, habitat

(1) **niche** market, (2) every **niche** of society

The species occupies a unique **niche** in the ecosystem as a top predator.

knit

v. to make a garment or fabric by interlocking loops of yarn with needles or a machine

synonym : weave, crochet, knot

(1) **knit** my eyebrows, (2) **knit** a pair of socks

The grandmother **knit** a warm sweater for her grandchild.

bow

v. to bend your knee or body, or lower your head; (noun) a weapon made of a curved piece of wood or other flexible material, strung with a cord and used to shoot arrows

synonym : bend, curve, arch

(1) **bow** and greet, (2) a **bow** wave

She **bowed** to the audience after her performance.

crossbow

n. a weapon consisting of a bow mounted on a stock that shoots projectiles, such as arrows, by pulling a trigger

synonym : bow, arrow gun, slingshot

(1) medieval **crossbow**, (2) **crossbow** bolts

The hunter aimed his **crossbow** at the deer in the forest.

habitat

n. the type of natural environment in which an organism or group usually lives or occurs

synonym : dwelling, environment, home ground

(1) a marine **habitat**, (2) threatened **habitat**

The **habitat** of this bird is freshwater areas and saltwater

marshes.

horizontal

adj. parallel to the ground or in a baseline; being at the same level as all members of a group

synonym: even, lying, parallel

(1) **horizontal** lines, (2) **horizontal** stripes

Airplanes need **horizontal** tails to improve stability.

vertical

adj. upright or perpendicular to a horizontal surface or line

synonym: perpendicular, upright, plumb

(1) **vertical** takeoff, (2) **vertical** axis

The ladder leaned against the **vertical** surface of the building.

logarithm

n. a mathematical function that indicates the power to which a fixed number (the base) must be raised to produce another given number expressed as an exponent

synonym: mathematical function, exponent, power

(1) **logarithm** function, (2) **logarithm** table

To solve this equation, you must take both sides' **logarithms**.

settlement

n. an official agreement that brings an argument to a close; the process of establishing permanent residence in a place.

synonym: agreement, accommodation, colonization

(1) the **settlement** of a dispute, (2) **settlement** in a new house

Our goal must be to achieve a peaceful **settlement**.

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**.

Christ

n. the man that Christians believe is the prophet and the son of God, and whose life and sermons form the basis for Christianity

synonym : Savior, Jesus Christ, Jesus

(1) teaching of **Christ**, (2) before **Christ**

Christmas is the day to celebrate the birth of Christ.

lift

v. to raise something to a higher position or level; to pick up something or somebody and move them to a different position

synonym : raise, elevate, move up

(1) **lift** sagging skin, (2) **lift** a ban on alcohol

The drought **lifted** the prices of grain globally.

poverty

n. the condition of being extremely poor

synonym : deprivation, destitution, poorness

(1) **poverty** alleviation, (2) the cycle of **poverty**

Many studies have investigated the relationship between **poverty** and academic achievement.

delay

v. to cause something to happen at a later time than originally intended or expected

synonym : block, adjourn, detain

(1) **delay** a flight three hours, (2) **delay** the new project

We **delayed** the payment because of an incorrect invoice.

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.

profit

n. money that is earned in business or by selling things after deducting the costs involved

synonym : earnings, gain, proceeds

(1) gross **profit**, (2) make a **profit**

This business yields little **profit**.

lifetime

n. the duration of someone's life or something's existence;
synonym : lifespan, duration

(1) **lifetime** benefits, (2) **lifetime** ban from the sport
She had lived through two world wars in her **lifetime**.

existence

n. the state or fact of someone or something existing
synonym : fact, being, reality

(1) the biggest tree in **existence**, (2) the struggle for **existence**

He was an atheist and therefore did not believe in the **existence** of heaven or hell.

helicopter

n. a type of aircraft that is capable of hovering in place and moving vertically, as well as flying horizontally; often used for emergency medical services, military operations, and transport in areas with limited access
synonym : chopper, copter, whirlybird

(1) **helicopter** ride, (2) police **helicopter**

The company's CEO arrived at the meeting via **helicopter** to avoid traffic congestion

lone

adj. solitary or single
synonym : solitary, single, alone

(1) a **lone** flight, (2) a **lone** house in the field

The **lone** traveler walked along the deserted road.

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.

microwave

n. a form of electromagnetic radiation with wavelengths ranging from about one millimeter to one meter and

frequencies between 300 MHz (0.3 GHz) and 300 GHz; an electric oven that cooks food by exposing it to high-frequency electromagnetic radiation, which causes the food molecules to vibrate and heat up quickly

synonym : oven, waveguide, radar range

(1) **microwave** radiation, (2) **microwave** popcorn

I heated my leftover food in the **microwave** oven, which tasted just as good as freshly cooked.

laser

n. a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification

synonym : beam, bar, ray

(1) **laser** printer, (2) pulse **laser**

The company holds patents on core components of **laser** jet printers.

acceleration

n. a rate of increase in velocity; the rate of change of velocity with respect to time

synonym : speed up, quicken, hastening

(1) a unit of **acceleration**, (2) **acceleration** of an object

The car's **acceleration** was impressive, going from 0 to 60 mph in just 5 seconds.

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.

signature

n. a person's name, often handwritten, written in a distinctive way as a form of identification or authorization; a distinctive feature or characteristic that is a hallmark or identifying mark of something or someone

synonym : autograph, mark, handwriting

(1) **signature** dish, (2) artist's **signature**

The lawyer confirmed that the **signature** on the contract was genuine.

ramp

n. a sloping surface connecting two levels or inclines, typically used for the movement of people, vehicles, or goods

synonym : slope, incline, gradient

(1) the **ramp** of a chasm, (2) an exit **ramp**

The wheelchair user needed a **ramp** to access the building's entrance.

soil

n. the top layer of Earth in which plants grow

synonym : earth, ground, mud

(1) **soils** retentive of moisture, (2) parched **soil**

Soil moisture is another significant component controlling soil respiration.

compost

n. a mixture of organic matter, such as food scraps, yard waste, and manure, that is allowed to decompose and is used as fertilizer for plants and garden soil

synonym : fertilizer, humus, manure

(1) organic **compost**, (2) **compost** pile

You can add coffee grounds and crushed eggshells to your **compost** to improve the pH balance.

terribly

adv. very badly; to a great extent or very much

synonym : awfully, abominably, badly

(1) suffer **terribly**, (2) I am **terribly** sorry

His arm was swollen and **terribly** red.

degradation

n. the condition or process of changing to a lower state, or a less respected state

synonym : depravity, degeneration, deterioration

(1) **degradation** by heat, (2) live in **degradation**

Many researchers are monitoring environmental **degradation** in real-time through satellites.

extinction

n. the complete disappearance of a species from the earth
synonym : disappearance, eradication, annihilation

(1) **extinction** prevention, (2) brink of **extinction**

The **extinction** of the dinosaurs is thought to have been caused by an asteroid impact.

pandemic

n. an outbreak of a disease that affects many people over a very wide area

synonym : outbreak

(1) flu **pandemic**, (2) global **pandemic**

They fear a **pandemic** of a new type of virus.

rid

v. to make someone or something free of unwanted or unpleasant tasks, objects, or person

synonym : do away with, free, clear

(1) get **rid** of the rats, (2) **rid** the body of waste products

We must **rid** ourselves of pollution.

fertilizer

n. a natural or chemical substance added to soil to make plants grow more successfully

synonym : manure

(1) a chemical **fertilizer**, (2) nonsynthetic **fertilizer**

Nitrogen fixation by the Haber-Bosch method leads to the mass production of **fertilizers**.

emit

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

synonym : give off, radiate, expel

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

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

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.

oxide

n. a chemical compound that contains at least one oxygen atom and one other element

(1) silver **oxide**, (2) combined **oxide**

The blood's red coloring comes from iron **oxide**.

landscape

n. an expanse of scenery that can be seen in a single view; a large area of land, especially in the country and relating to its appearance

synonym: geography, terrain, topography

(1) a peaceful **landscape**, (2) **landscape** painting

Recent electoral shocks have shaken the political **landscape** in Europe.

fungus

n. a type of organism that includes yeasts, molds, and mushrooms, which are heterotrophic, meaning they do not produce their food and must consume organic matter to survive

synonym: mold, mildew, yeast

(1) **fungus** infection, (2) symbiotic **fungus**

Certain types of **fungus** can be toxic to humans, causing severe illness if ingested.

communal

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

synonym: collaborative, combined, collective

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

Communal elections were held in several European countries.

seed

n. a small, hard, often round, a reproductive structure that contains a plant's genetic material and is capable of growing into a new plant

synonym: germ, kernel, ovule

(1) a **seed** coat, (2) **seed** money

He planted the **seed** in the soil and waited for it to sprout.

biochar

n. a material produced by heating organic matter under low-oxygen conditions often used as a fertilizer or soil amendment

synonym : biocharcoal, charcoal

(1) **biochar** carbon, (2) **biochar** soil amendment

Biochar production can be a way to manage organic waste while also generating renewable energy.

matrix

n. a rectangular array of numbers, symbols, or expressions, arranged in rows and columns and often enclosed in brackets; an enclosure within which something originates or develops

synonym : grid, cast, table

(1) the **matrix** of Western civilization, (2) **matrix** multiplication

The **matrix** of numbers on the spreadsheet allowed the accountant to track the company's profits and losses easily.

precise

adj. sharply exact or accurate or delimited

synonym : accurate, exact, distinct

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

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

novel

n. an extended fictional work in prose; usually in the form of a story; (adjective) original and of a kind not seen before

synonym : fiction, story, (adjective) innovative

(1) historical **novel**, (2) **novel** effect

The **novel** has largely gotten positive feedback.

Session 2: Spelling

1. st____ng disclosure *adj.* causing a strong emotional reaction of admiration, surprise, or shock due to its beauty, rarity, or excellence
2. a w__t of summons *n.* a written legal order or command
3. sl__e a glance *v.* to move or cause to move smoothly along a surface without interruption
4. a company reg____on *n.* an official rule made and maintained by a government or some other authority; the act of controlling or directing something according to a rule
5. fi___e away the whole afternoon *v.* to continuously touch or manipulate something with someone's hands, mainly when bored or nervous; to act dishonestly to try to get money, information, etc., or gain an advantage
6. ec____y class *n.* the system by which a country or region produces manages, and distributes goods and services, including the money and finances involved in these activities; (of an airline) the lowest-priced, most basic option for seating in commercial travel
7. a man of ex____te sensitivity *adj.* extremely beautiful and delicate
8. economic bu___e *n.* a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses

ANSWERS: 1. stunning, 2. writ, 3. slide, 4. regulation, 5. fiddle, 6. economy, 7. exquisite, 8. bubble

- | | | |
|---------------------------------|------|---|
| 9. de__y the new project | v. | to cause something to happen at a later time than originally intended or expected |
| 10. de___t the interest | v. | to take away an amount or part of the money, points, etc. from a total |
| 11. cr____ve writing | adj. | relating to or involving the use of skill and original and unusual ideas to create something |
| 12. site of the ex_____on | n. | a violent release induced by a chemical or nuclear reaction |
| 13. fl__e graphite | n. | a small, thin piece or layer of something, often with a flat or irregular shape; a person who is unreliable or inconsistent |
| 14. ha___ed the incident | v. | to deal with a situation, problem, or strong emotion |
| 15. dem_____te mastery | v. | to display something or give an exhibition to an interested audience |
| 16. the dr__l hit the well | n. | a tool or machine used for making round holes or driving fasteners; a training or practice |
| 17. a l__e house in the field | adj. | solitary or single |
| 18. ev___e over the past decade | v. | to develop gradually, or to cause the development of something or someone gradually |
| 19. cr__e manners | adj. | being in an unrefined or natural state; (noun) the unprocessed form of oil |
| 20. parched s__l | n. | the top layer of Earth in which plants grow |

ANSWERS: 9. delay, 10. deduct, 11. creative, 12. explosion, 13. flake, 14. handle, 15. demonstrate, 16. drill, 17. lone, 18. evolve, 19. crude, 20. soil

21. ev_____on theory *n.* a gradual process of transformation of living things
22. b_w and greet *v.* to bend your knee or body, or lower your head; (noun) a weapon made of a curved piece of wood or other flexible material, strung with a cord and used to shoot arrows
23. electric scr_____er *n.* a tool used for turning screws, typically consisting of a handle and a metal rod with a flattened tip that fits into the slot on the head of a screw; a popular cocktail made with vodka and orange juice
24. su_____n a wellness lifestyle *v.* to supply enough of what somebody or something needs to survive or exist; to accept as valid
25. fun_____al education *adj.* forming an essential base or core from which everything else develops or is affected
26. Aus_____cus africanus *n.* any of several extinct hominid species that lived in Africa between 4 million and 1 million years ago and are considered to be among the earliest ancestors of modern humans
27. s__ls retentive of moisture *n.* the top layer of Earth in which plants grow
28. or__n bleeding *n.* a part of the body of an animal or plant that has a particular purpose and performs a specific job
29. cognitive com_____ty *n.* the state or quality of being complicated or intricate and difficult to understand

ANSWERS: 21. evolution, 22. bow, 23. screwdriver, 24. sustain, 25. fundamental, 26. Australopithecus, 27. soil, 28. organ, 29. complexity

30. immune fu____on
- n.* the purpose or use of an object, system, or process; a particular activity or operation that is designed to serve a specific purpose; a mathematical concept that describes a relationship between two sets of values, called the input and output sets; (verb) to operate or work in a specific way, or to perform a particular task or purpose
31. fl____sh worldwide
- v.* to grow or develop vigorously or successfully
32. parallel com_____on
- n.* the act or process of calculating something, especially an answer or amount, by using a machine or calculator
33. de___e facts from the evidence
- v.* to arrive at an answer, a conclusion, or a decision by reasoning
34. flu pa_____ic
- n.* an outbreak of a disease that affects many people over a very wide area
35. intellectual f__t
- n.* a notable or impressive achievement, especially one that requires great skill or bravery
36. p__p a secret out of success
- v.* to cause water, air, gas, etc. to move from one place to another by using mechanical equipment; to get or supply something such as money, information, etc. in significant quantities
37. ca___l chain
- adj.* relating to or indicating a cause or the relationship between causes and effects; resulting from a cause

ANSWERS: 30. function, 31. flourish, 32. computation, 33. deduce, 34. pandemic, 35. feat, 36. pump, 37. causal

38. metallic pap_____ht *n.* a small, heavy object, often made of glass or metal, that is designed to hold down papers or other items on a desk or table; an object, usually an electronic device or piece of machinery, that is non-functional or useless for its intended purpose
39. set_____nt in a new house *n.* an official agreement that brings an argument to a close; the process of establishing permanent residence in a place.
40. a lot of ex_____ons *n.* a violent release induced by a chemical or nuclear reaction
41. ad__t fully to the environment *v.* to make fit for or change to suit a new purpose or environment
42. ca___l effect *adj.* relating to or indicating a cause or the relationship between causes and effects; resulting from a cause
43. me_____cs of the game *n.* the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles
44. live in deg_____on *n.* the condition or process of changing to a lower state, or a less respected state
45. 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
46. co_____al combination of funds *adj.* belonging to or used by a group rather than individuals; for common use

ANSWERS: 38. paperweight, 39. settlement, 40. explosion, 41. adapt, 42. causal, 43. mechanics, 44. degradation, 45. planet, 46. communal

47. 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.
48. ext_____ary ability *adj.* exceptional, unexpected, very unusual; surpassing the ordinary or usual
49. artist's si_____re *n.* a person's name, often handwritten, written in a distinctive way as a form of identification or authorization; a distinctive feature or characteristic that is a hallmark or identifying mark of something or someone
50. la__r printer *n.* a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification
51. every ni__e of society *n.* a specialized role or position that a species occupies within an ecosystem; a job or position particularly well suited to the person who occupies it
52. the eq_____on of poverty with ignorance *n.* the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign
53. ext_____on prevention *n.* the complete disappearance of a species from the earth
54. li_____me benefits *n.* the duration of someone's life or something's existence;
55. the set_____nt of a dispute *n.* an official agreement that brings an argument to a close; the process of establishing permanent residence in a place.

ANSWERS: 47. tap, 48. extraordinary, 49. signature, 50. laser, 51. niche, 52. equation, 53. extinction, 54. lifetime, 55. settlement

56. get r_d of the rats *v.* to make someone or something free of unwanted or unpleasant tasks, objects, or person
57. ec____y of scale *n.* the system by which a country or region produces manages, and distributes goods and services, including the money and finances involved in these activities; (of an airline) the lowest-priced, most basic option for seating in commercial travel
58. st___s pocket *n.* a thin, pointed tool used to write, draw, or select items on a touchscreen device
59. cl_____rk precision *n.* a mechanism in which a series of gears, springs and other mechanical elements are used to power a device, especially a clock
60. a chemical eq_____on *n.* the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign
61. co_____t pile *n.* a mixture of organic matter, such as food scraps, yard waste, and manure, that is allowed to decompose and is used as fertilizer for plants and garden soil
62. hom_____al marriage *adj.* sexually attracted to people of one's own sex
63. nuclear ph_____s *n.* the science of matter and energy and their interactions

ANSWERS: 56. rid, 57. economy, 58. stylus, 59. clockwork, 60. equation, 61. compost, 62. homosexual, 63. physics

64. pos_____ty for growth *n.* a chance that something may happen or be true
65. laws of ph_____s *n.* the science of matter and energy and their interactions
66. silver ox__e *n.* a chemical compound that contains at least one oxygen atom and one other element
67. gross pr____t *n.* money that is earned in business or by selling things after deducting the costs involved
68. hor_____al stripes *adj.* parallel to the ground or in a baseline; being at the same level as all members of a group
69. negative in_____ty *n.* the state or quality of having no end or limit; (mathematics) a number greater than any natural number
70. em____e from poverty *v.* to move out of or away from something and become visible
71. ne____e prick *n.* a thin, pointed object typically used for sewing or medical purposes; a metal or plastic instrument used for administering injections or drawing blood
72. Aus_____cus skull *n.* any of several extinct hominid species that lived in Africa between 4 million and 1 million years ago and are considered to be among the earliest ancestors of modern humans
73. co_____e chemically with another substance *v.* to join or merge to form a single thing or group

ANSWERS: 64. possibility, 65. physics, 66. oxide, 67. profit, 68. horizontal, 69. infinity, 70. emerge, 71. needle, 72. Australopithecus, 73. combine

74. art cr___c *n.* someone who expresses opinions about the quality of books, music, etc.
75. st__k a key in a lock *v.* to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
76. severe cr___c *n.* someone who expresses opinions about the quality of books, music, etc.
77. pu__y work *n.* a soft, pliable substance, typically made of clay, plaster, or dough, used for filling cracks, sealing glass panes, or molding
78. mi_____ve radiation *n.* a form of electromagnetic radiation with wavelengths ranging from about one millimeter to one meter and frequencies between 300 MHz (0.3 GHz) and 300 GHz; an electric oven that cooks food by exposing it to high-frequency electromagnetic radiation, which causes the food molecules to vibrate and heat up quickly
79. co_____t milk *n.* the large, hard-shelled seed of a tropical palm, which has a fibrous husk surrounding a single-seeded nut
80. human ev_____on *n.* a gradual process of transformation of living things
81. before Ch___t *n.* the man that Christians believe is the prophet and the son of God, and whose life and sermons form the basis for Christianity

ANSWERS: 74. critic, 75. stick, 76. critic, 77. putty, 78. microwave, 79. coconut, 80. evolution, 81. Christ

82. historical no__l *n.* an extended fictional work in prose; usually in the form of a story; (adjective) original and of a kind not seen before
83. ta___t keyboard *n.* a small flat electronic device used for browsing the internet, reading, writing, or playing games; a small, solid pill of medicine
84. deg_____on by heat *n.* the condition or process of changing to a lower state, or a less respected state
85. proper su___t *n.* a set of things that are contained within another larger set; a portion or division of a group or category
86. a b_w wave *v.* to bend your knee or body, or lower your head; (noun) a weapon made of a curved piece of wood or other flexible material, strung with a cord and used to shoot arrows
87. reg_____on by the government *n.* an official rule made and maintained by a government or some other authority; the act of controlling or directing something according to a rule
88. the in_____ty of the universe *n.* the state or quality of having no end or limit; (mathematics) a number greater than any natural number
89. threatened ha_____t *n.* the type of natural environment in which an organism or group usually lives or occurs
90. price of cr__e oil *adj.* being in an unrefined or natural state; (noun) the unprocessed form of oil

ANSWERS: 82. novel, 83. tablet, 84. degradation, 85. subset, 86. bow, 87. regulation, 88. infinity, 89. habitat, 90. crude

91. official sta_____cs *n.* the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data
92. lo_____hm table *n.* a mathematical function that indicates the power to which a fixed number (the base) must be raised to produce another given number expressed as an exponent
93. the r__p of a chasm *n.* a sloping surface connecting two levels or inclines, typically used for the movement of people, vehicles, or goods
94. sewing ne___e *n.* a thin, pointed object typically used for sewing or medical purposes; a metal or plastic instrument used for administering injections or drawing blood
95. medieval cr_____ow *n.* a weapon consisting of a bow mounted on a stock that shoots projectiles, such as arrows, by pulling a trigger
96. ge___e downward slope *adj.* having or showing a kindly or tender nature; soft and mild
97. go there af_____rd *adv.* after the time mentioned
98. symbiotic fu___s *n.* a type of organism that includes yeasts, molds, and mushrooms, which are heterotrophic, meaning they do not produce their food and must consume organic matter to survive
99. ability to re_____ne *v.* to combine or put together again or differently; to cause genetic recombination (= the process by which genetic material is broken and joined to other genetic material)

ANSWERS: 91. statistics, 92. logarithm, 93. ramp, 94. needle, 95. crossbow, 96. gentle, 97. afterward, 98. fungus, 99. recombine

100. mi_____ve popcorn *n.* a form of electromagnetic radiation with wavelengths ranging from about one millimeter to one meter and frequencies between 300 MHz (0.3 GHz) and 300 GHz; an electric oven that cooks food by exposing it to high-frequency electromagnetic radiation, which causes the food molecules to vibrate and heat up quickly
101. a steam en___e *n.* a machine that converts thermal energy to mechanical work; something that has an important role used to achieve a purpose
102. an air-cooled en___e *n.* a machine that converts thermal energy to mechanical work; something that has an important role used to achieve a purpose
103. dem_____te a difference *v.* to display something or give an exhibition to an interested audience
104. com_____ty theory *n.* the state or quality of being complicated or intricate and difficult to understand
105. 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
106. bring fo__h a beautiful vase *adv.* forward, outward, or onward in location, direction, or progress; into view or consideration; with confidence, boldness, or in the open
107. the cycle of po_____y *n.* the condition of being extremely poor

ANSWERS: 100. microwave, 101. engine, 102. engine, 103. demonstrate, 104. complexity, 105. carbon, 106. forth, 107. poverty

108. damage to internal or__ns *n.* a part of the body of an animal or plant that has a particular purpose and performs a specific job
109. the in_____on of new techniques *n.* the creation of a new device or process resulting from study and experimentation; the act of inventing
110. pathogenic ba_____ia *n.* single-celled or noncellular spherical or spiral or rod-shaped organisms that exist in large numbers in the air, water, and soil, and also in living and dead creatures and plants, and are often a cause of disease
111. ad__t as needed *v.* to make fit for or change to suit a new purpose or environment
112. su___t selection *n.* a set of things that are contained within another larger set; a portion or division of a group or category
113. sh_____w people *adj.* not having much distance from the top to the bottom
114. mat_____cs competition *n.* the science dealing with the logic of quantities, shapes, spaces, and arrangement
115. er__t structure *v.* to construct or build something; to cause to rise; (adjective) upright or vertical
116. open the can with a scr_____er *n.* a tool used for turning screws, typically consisting of a handle and a metal rod with a flattened tip that fits into the slot on the head of a screw; a popular cocktail made with vodka and orange juice

ANSWERS: 108. organ, 109. invention, 110. bacteria, 111. adapt, 112. subset, 113. shallow, 114. mathematics, 115. erect, 116. screwdriver

117. ex_____te crafts *adj.* extremely beautiful and delicate
118. r_g an election *v.* to prepare or set up something in a certain way, typically in a carefully planned or fraudulent manner; to equip with sails or masts
119. ha___e a precious object *v.* to deal with a situation, problem, or strong emotion
120. clothes ha___r *n.* a device or object used for hanging or supporting something, often used for hanging clothes; a loop-shaped object used to hang clothes in a closet
121. coat ha___r *n.* a device or object used for hanging or supporting something, often used for hanging clothes; a loop-shaped object used to hang clothes in a closet
122. a cr__k in a board *v.* to break or cause to break without dividing into separate parts; (noun) a line on the surface of something along which it has separated without breaking
123. 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
124. ni__e market *n.* a specialized role or position that a species occupies within an ecosystem; a job or position particularly well suited to the person who occupies it
125. ch_____t builder *n.* a two-wheeled horse-drawn battle vehicle used in ancient Egypt, Greece, and Rome for warfare and racing

ANSWERS: 117. exquisite, 118. rig, 119. handle, 120. hanger, 121. hanger, 122. crack, 123. planet, 124. niche, 125. chariot

126. r_g a ship with new sails *v.* to prepare or set up something in a certain way, typically in a carefully planned or fraudulent manner; to equip with sails or masts
127. hom_____al rights *adj.* sexually attracted to people of one's own sex
128. sh_____w water *adj.* not having much distance from the top to the bottom
129. m__e acquaintance *adj.* used to emphasize how insignificant or minor someone or something is
130. si_____re dish *n.* a person's name, often handwritten, written in a distinctive way as a form of identification or authorization; a distinctive feature or characteristic that is a hallmark or identifying mark of something or someone
131. em___e as a butterfly *v.* to move out of or away from something and become visible
132. e__t a gamma ray *v.* to give off or send out something such as light, heat, sound, gas, etc.
133. ex_____e in anger *v.* to burst or break open violently and noisily; to cause something to burst or break open
134. plant ph___m *n.* a major group or category of animals or plants characterized by shared physical, developmental, and evolutionary characteristics
135. common in_____on *n.* the creation of a new device or process resulting from study and experimentation; the act of inventing

ANSWERS: 126. rig, 127. homosexual, 128. shallow, 129. mere, 130. signature, 131. emerge, 132. emit, 133. explode, 134. phylum, 135. invention

136. fi___e with a PC *v.* to continuously touch or manipulate something with someone's hands, mainly when bored or nervous; to act dishonestly to try to get money, information, etc., or gain an advantage
137. j___y duty *n.* a group of people called upon to render a verdict or judgment in a legal trial; a group of people chosen for a special purpose or task
138. a l___e flight *adj.* solitary or single
139. lo_____hm function *n.* a mathematical function that indicates the power to which a fixed number (the base) must be raised to produce another given number expressed as an exponent
140. 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
141. issue a w___t *n.* a written legal order or command
142. tra_____on phase *n.* the process or period of changing from one state or circumstance to another
143. enter on the last ph___e *n.* any stage in a series of events, change, or development
144. fl_____sh economically *v.* to grow or develop vigorously or successfully
145. l___t sagging skin *v.* to raise something to a higher position or level; to pick up something or somebody and move them to a different position

ANSWERS: 136. fiddle, 137. jury, 138. lone, 139. logarithm, 140. upward, 141. writ, 142. transition, 143. phase, 144. flourish, 145. lift

146. animal ph___m *n.* a major group or category of animals or plants characterized by shared physical, developmental, and evolutionary characteristics
147. sl__e a card across the table *v.* to move or cause to move smoothly along a surface without interruption
148. a chemical fer_____er *n.* a natural or chemical substance added to soil to make plants grow more successfully
149. pr_____e analyses *adj.* sharply exact or accurate or delimited
150. hor_____al lines *adj.* parallel to the ground or in a baseline; being at the same level as all members of a group
151. the sin_____ty of the Divine *n.* (of black holes) a point or region in space-time where the gravitational field is infinite, and matter and energy are infinitely dense; the state, fact, quality, or condition of being one of a kind
152. absolutely fa_____ic event *adj.* extremely good; excellent
153. me_____cs equation *n.* the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles
154. theory of com_____on *n.* the act or process of calculating something, especially an answer or amount, by using a machine or calculator
155. in_____te the quality of his life *v.* to introduce new methods, ideas, or products

ANSWERS: 146. phylum, 147. slide, 148. fertilizer, 149. precise, 150. horizontal, 151. singularity, 152. fantastic, 153. mechanics, 154. computation, 155. innovate

156. ex____e in popularity *v.* to burst or break open violently and noisily; to cause something to burst or break open
157. a female sc__w *v.* to turn something, such as a bolt, with a driver or wrench to tighten or loosen it; (noun) a cylindrical rod with a helical ridge used to fasten things together
158. com_____nt each other *v.* to improve or make something more appealing by adding or contributing extra features to it
159. 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.
160. no__l effect *n.* an extended fictional work in prose; usually in the form of a story; (adjective) original and of a kind not seen before
161. aerobic or____sm *n.* a tiny living thing
162. po____y alleviation *n.* the condition of being extremely poor
163. cr__k an eggshell *v.* to break or cause to break without dividing into separate parts; (noun) a line on the surface of something along which it has separated without breaking
164. ve_____al axis *adj.* upright or perpendicular to a horizontal surface or line
165. sta_____cs for cancer *n.* the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data

ANSWERS: 156. explode, 157. screw, 158. complement, 159. tap, 160. novel, 161. organism, 162. poverty, 163. crack, 164. vertical, 165. statistics

166. a peaceful la_____pe *n.* an expanse of scenery that can be seen in a single view; a large area of land, especially in the country and relating to its appearance
167. ve_____al takeoff *adj.* upright or perpendicular to a horizontal surface or line
168. in_____te a new method *v.* to introduce new methods, ideas, or products
169. I am te_____ly sorry *adv.* very badly; to a great extent or very much
170. fire dr___l *n.* a tool or machine used for making round holes or driving fasteners; a training or practice
171. 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
172. group of or_____sms *n.* a tiny living thing
173. teaching of Ch____t *n.* the man that Christians believe is the prophet and the son of God, and whose life and sermons form the basis for Christianity
174. harmless ba_____ia *n.* single-celled or noncellular spherical or spiral or rod-shaped organisms that exist in large numbers in the air, water, and soil, and also in living and dead creatures and plants, and are often a cause of disease

ANSWERS: 166. landscape, 167. vertical, 168. innovate, 169. terribly, 170. drill, 171. process, 172. organism, 173. Christ, 174. bacteria

175. en___e reaction *n.* a substance produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction
176. f__t accomplishment *n.* a notable or impressive achievement, especially one that requires great skill or bravery
177. st___s pen *n.* a thin, pointed tool used to write, draw, or select items on a touchscreen device
178. artificial bi_____re *n.* the part of the Earth and its atmosphere in which living organisms exist, including plants, animals, and microorganisms
179. fire st__k *v.* to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
180. ad_____nt houses *adj.* next to, close to, or adjoining something
181. r_d the body of waste products *v.* to make someone or something free of unwanted or unpleasant tasks, objects, or person
182. chemical pr_____ty *n.* a thing or things that belong to someone
183. pulse la__r *n.* a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification
184. ev___e *v.* to develop gradually, or to cause the development of something or someone gradually

ANSWERS: 175. enzyme, 176. feat, 177. stylus, 178. biosphere, 179. stick, 180. adjacent, 181. rid, 182. property, 183. laser, 184. evolve

185. de__y a flight three hours *v.* to cause something to happen at a later time than originally intended or expected
186. acc_____ion of an object *n.* a rate of increase in velocity; the rate of change of velocity with respect to time
187. in a ge___e voice *adj.* having or showing a kindly or tender nature; soft and mild
188. the struggle for ex_____ce *n.* the state or fact of someone or something existing
189. l__t a ban on alcohol *v.* to raise something to a higher position or level; to pick up something or somebody and move them to a different position
190. call fo__h demand *adv.* forward, outward, or onward in location, direction, or progress; into view or consideration; with confidence, boldness, or in the open
191. probabilistic qu_____m theory *n.* the smallest amount or unit of something, especially (electromagnetic) energy
192. sc_____ng tools *n.* the act of removing a thin layer of material from a surface, often to clean or smooth it; a sound or sensation that is produced by something being removed or rubbed against another surface; (of computer technology) the automated extraction or collection of data from websites
193. bi_____r soil amendment *n.* a material produced by heating organic matter under low-oxygen conditions often used as a fertilizer or soil amendment

ANSWERS: 185. delay, 186. acceleration, 187. gentle, 188. existence, 189. lift, 190. forth, 191. quantum, 192. scraping, 193. biochar

194. k__t my eyebrows *v.* to make a garment or fabric by interlocking loops of yarn with needles or a machine
195. f__e their homes *v.* to leave by running away, especially out of fear or danger
196. fu___s infection *n.* a type of organism that includes yeasts, molds, and mushrooms, which are heterotrophic, meaning they do not produce their food and must consume organic matter to survive
197. a unit of acc_____ion *n.* a rate of increase in velocity; the rate of change of velocity with respect to time
198. brink of ext_____on *n.* the complete disappearance of a species from the earth
199. ma___x multiplication *n.* a rectangular array of numbers, symbols, or expressions, arranged in rows and columns and often enclosed in brackets; an enclosure within which something originates or develops
200. la_____pe painting *n.* an expanse of scenery that can be seen in a single view; a large area of land, especially in the country and relating to its appearance
201. ensure a smooth tra_____on *n.* the process or period of changing from one state or circumstance to another
202. global pa_____ic *n.* an outbreak of a disease that affects many people over a very wide area
203. p__l a fruit *v.* to remove the skin of fruit and vegetables

ANSWERS: 194. knit, 195. flee, 196. fungus, 197. acceleration, 198. extinction, 199. matrix, 200. landscape, 201. transition, 202. pandemic, 203. peel

204. laws of qu____m mechanics *n.* the smallest amount or unit of something, especially (electromagnetic) energy
205. 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
206. ad____nt to his house *adj.* next to, close to, or adjoining something
207. 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
208. nonsynthetic fer____er *n.* a natural or chemical substance added to soil to make plants grow more successfully
209. sc____d dog *adj.* afraid or frightened
210. c__y animation *n.* a natural, earthy material that is made up of very small particles of minerals and can be molded when wet and then fired to produce ceramics
211. fl__es of snow *n.* a small, thin piece or layer of something, often with a flat or irregular shape; a person who is unreliable or inconsistent
212. cr____ow bolts *n.* a weapon consisting of a bow mounted on a stock that shoots projectiles, such as arrows, by pulling a trigger

ANSWERS: 204. quantum, 205. universe, 206. adjacent, 207. process, 208. fertilizer, 209. scared, 210. clay, 211. flake, 212. crossbow

213. two-ph__e structure *n.* any stage in a series of events, change, or development
214. a man of pr____ty *n.* a thing or things that belong to someone
215. ext_____ary weather *adj.* exceptional, unexpected, very unusual; surpassing the ordinary or usual
216. co_____al swimming pool *adj.* belonging to or used by a group rather than individuals; for common use
217. st_____ng beauty *adj.* causing a strong emotional reaction of admiration, surprise, or shock due to its beauty, rarity, or excellence
218. fu_____on properly *n.* the purpose or use of an object, system, or process; a particular activity or operation that is designed to serve a specific purpose; a mathematical concept that describes a relationship between two sets of values, called the input and output sets; (verb) to operate or work in a specific way, or to perform a particular task or purpose
219. combined ox__e *n.* a chemical compound that contains at least one oxygen atom and one other element
220. bi_____r carbon *n.* a material produced by heating organic matter under low-oxygen conditions often used as a fertilizer or soil amendment
221. li_____me ban from the sport *n.* the duration of someone's life or something's existence;

ANSWERS: 213. phase, 214. property, 215. extraordinary, 216. communal, 217. stunning, 218. function, 219. oxide, 220. biochar, 221. lifetime

222. k__t a pair of socks *v.* to make a garment or fabric by interlocking loops of yarn with needles or a machine
223. keep the flagpole er__t *v.* to construct or build something; to cause to rise; (adjective) upright or vertical
224. de___e the meaning of a word *v.* to arrive at an answer, a conclusion, or a decision by reasoning
225. metal sc_____ng *n.* the act of removing a thin layer of material from a surface, often to clean or smooth it; a sound or sensation that is produced by something being removed or rubbed against another surface; (of computer technology) the automated extraction or collection of data from websites
226. s__d money *n.* a small, hard, often round, a reproductive structure that contains a plant's genetic material and is capable of growing into a new plant
227. co_____t oil *n.* the large, hard-shelled seed of a tropical palm, which has a fibrous husk surrounding a single-seeded nut
228. black hole sin_____ty *n.* (of black holes) a point or region in space-time where the gravitational field is infinite, and matter and energy are infinitely dense; the state, fact, quality, or condition of being one of a kind
229. the biggest tree in ex_____ce *n.* the state or fact of someone or something existing

ANSWERS: 222. knit, 223. erect, 224. deduce, 225. scraping, 226. seed, 227. coconut, 228. singularity, 229. existence

230. a good grounding in mat_____cs *n.* the science dealing with the logic of quantities, shapes, spaces, and arrangement
231. an interstate hi_____y *n.* a main road, especially one connecting major towns or cities
232. j____y verdict *n.* a group of people called upon to render a verdict or judgment in a legal trial; a group of people chosen for a special purpose or task
233. fun_____al rights *adj.* forming an essential base or core from which everything else develops or is affected
234. run like cl_____rk *n.* a mechanism in which a series of gears, springs and other mechanical elements are used to power a device, especially a clock
235. p____l off easily *v.* to remove the skin of fruit and vegetables
236. a fa_____ic dress *adj.* extremely good; excellent
237. Ne_____an physics *adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation
238. barren of cr_____ve spirit *adj.* relating to or involving the use of skill and original and unusual ideas to create something
239. Ne_____an mechanics *adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation
240. su_____n a good relationship with him *v.* to supply enough of what somebody or something needs to survive or exist; to accept as valid

ANSWERS: 230. mathematics, 231. highway, 232. jury, 233. fundamental, 234. clockwork, 235. peel, 236. fantastic, 237. Newtonian, 238. creative, 239. Newtonian, 240. sustain

241. lack of digestive en___es *n.* a substance produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction
242. fi___e resources *adj.* having a limit or restriction of size, time, etc.
243. f___e abroad *v.* to leave by running away, especially out of fear or danger
244. su___b quality *adj.* extremely good; excellent in quality; superbly done
245. re_____ne at the surface *v.* to combine or put together again or differently; to cause genetic recombination (= the process by which genetic material is broken and joined to other genetic material)
246. sc___w the cap *v.* to turn something, such as a bolt, with a driver or wrench to tighten or loosen it; (noun) a cylindrical rod with a helical ridge used to fasten things together
247. the ma___x of Western civilization *n.* a rectangular array of numbers, symbols, or expressions, arranged in rows and columns and often enclosed in brackets; an enclosure within which something originates or develops
248. sc___d all the time *adj.* afraid or frightened
249. estimate pr_____e costs *adj.* sharply exact or accurate or delimited
250. make a pr___t *n.* money that is earned in business or by selling things after deducting the costs involved

ANSWERS: 241. enzyme, 242. finite, 243. flee, 244. superb, 245. recombine, 246. screw, 247. matrix, 248. scared, 249. precise, 250. profit

251. hel_____er ride *n.* a type of aircraft that is capable of hovering in place and moving vertically, as well as flying horizontally; often used for emergency medical services, military operations, and transport in areas with limited access
252. co_____e augmented reality *v.* to join or merge to form a single thing or group
253. organic co_____t *n.* a mixture of organic matter, such as food scraps, yard waste, and manure, that is allowed to decompose and is used as fertilizer for plants and garden soil
254. ch_____t race *n.* a two-wheeled horse-drawn battle vehicle used in ancient Egypt, Greece, and Rome for warfare and racing
255. soft c__y ground *n.* a natural, earthy material that is made up of very small particles of minerals and can be molded when wet and then fired to produce ceramics
256. look up____d *adv.* toward the top or highest point, or a higher position or level; (adjective) extending or moving toward a higher place
257. su____b performance *adj.* extremely good; excellent in quality; superbly done
258. terrestrial bi_____re *n.* the part of the Earth and its atmosphere in which living organisms exist, including plants, animals, and microorganisms

ANSWERS: 251. helicopter, 252. combine, 253. compost, 254. chariot, 255. clay, 256. upward, 257. superb, 258. biosphere

259. p__p blood throughout the body *v.* to cause water, air, gas, etc. to move from one place to another by using mechanical equipment; to get or supply something such as money, information, etc. in significant quantities
260. de___t \$100 from the price *v.* to take away an amount or part of the money, points, etc. from a total
261. fi___e decimal *adj.* having a limit or restriction of size, time, etc.
262. bu___e in the champagne glass *n.* a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses
263. hi_____y system *n.* a main road, especially one connecting major towns or cities
264. m__e incident *adj.* used to emphasize how insignificant or minor someone or something is
265. a few years af_____rd *adv.* after the time mentioned
266. a s__d coat *n.* a small, hard, often round, a reproductive structure that contains a plant's genetic material and is capable of growing into a new plant
267. pap_____ht gift *n.* a small, heavy object, often made of glass or metal, that is designed to hold down papers or other items on a desk or table; an object, usually an electronic device or piece of machinery, that is non-functional or useless for its intended purpose

ANSWERS: 259. pump, 260. deduct, 261. finite, 262. bubble, 263. highway, 264. mere, 265. afterward, 266. seed, 267. paperweight

268. com_____nt existing rules *v.* to improve or make something more appealing by adding or contributing extra features to it
269. e__t air pollution *v.* to give off or send out something such as light, heat, sound, gas, etc.
270. an exit r__p *n.* a sloping surface connecting two levels or inclines, typically used for the movement of people, vehicles, or goods
271. pos_____ty of a major earthquake *n.* a chance that something may happen or be true
272. a multivitamin ta____t *n.* a small flat electronic device used for browsing the internet, reading, writing, or playing games; a small, solid pill of medicine
273. police hel_____er *n.* a type of aircraft that is capable of hovering in place and moving vertically, as well as flying horizontally; often used for emergency medical services, military operations, and transport in areas with limited access
274. moldable pu__y *n.* a soft, pliable substance, typically made of clay, plaster, or dough, used for filling cracks, sealing glass panes, or molding
275. suffer te_____ly *adv.* very badly; to a great extent or very much
276. 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

ANSWERS: 268. complement, 269. emit, 270. ramp, 271. possibility, 272. tablet, 273. helicopter, 274. putty, 275. terribly, 276. carbon

277. 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

278. a marine ha_____t

n. the type of natural environment in which an organism or group usually lives or occurs

ANSWERS: 277. universe, 278. habitat

Session 3: Fill in the Blanks

1. Airplanes need _____ tails to improve stability.
adj. parallel to the ground or in a baseline; being at the same level as all members of a group
2. Big techs are now eager to develop _____ computers.
n. the smallest amount or unit of something, especially (electromagnetic) energy
3. 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
4. The _____ has largely gotten positive feedback.
n. an extended fictional work in prose; usually in the form of a story; (adjective) original and of a kind not seen before
5. She struggled to _____ the children's reading habits.
v. to supply enough of what somebody or something needs to survive or exist; to accept as valid
6. The company's CEO arrived at the meeting via _____ to avoid traffic congestion
n. a type of aircraft that is capable of hovering in place and moving vertically, as well as flying horizontally; often used for emergency medical services, military operations, and transport in areas with limited access
7. 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.

ANSWERS: 1. horizontal, 2. quantum, 3. universe, 4. novel, 5. sustain, 6. helicopter, 7. tap

8. I'm going to take the _____ to get to my destination faster.
n. a main road, especially one connecting major towns or cities
9. The researcher demonstrated the superiority of quantum _____ in several mathematical tasks.
n. the act or process of calculating something, especially an answer or amount, by using a machine or calculator
10. He narrated the _____ story of his adventure.
adj. exceptional, unexpected, very unusual; surpassing the ordinary or usual
11. The wheelchair user needed a _____ to access the building's entrance.
n. a sloping surface connecting two levels or inclines, typically used for the movement of people, vehicles, or goods
12. _____ moisture is another significant component controlling soil respiration.
n. the top layer of Earth in which plants grow
13. Eyeless fish _____ in dark caves.
v. to develop gradually, or to cause the development of something or someone gradually
14. He was an atheist and therefore did not believe in the _____ of heaven or hell.
n. the state or fact of someone or something existing
15. He _____ the game so he could win the prize.
v. to prepare or set up something in a certain way, typically in a carefully planned or fraudulent manner; to equip with sails or masts

ANSWERS: 8. highway, 9. computation, 10. extraordinary, 11. ramp, 12. Soil, 13. evolved, 14. existence, 15. rigged

16. He studied _____ in college and now works as an engineer.

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

17. His arm was swollen and _____ red.

- adv.* very badly; to a great extent or very much

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

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

19. If necessary, you can _____ the front seats forward.

- v.* to move or cause to move smoothly along a surface without interruption

20. The sculptor carefully molded the _____ into the desired shape.

- n.* a natural, earthy material that is made up of very small particles of minerals and can be molded when wet and then fired to produce ceramics

21. It is a basic instinct to _____ from a dangerous situation.

- v.* to leave by running away, especially out of fear or danger

22. Our goal must be to achieve a peaceful _____.

- n.* an official agreement that brings an argument to a close; the process of establishing permanent residence in a place.

23. In this class, you will learn how to solve quadratic _____.

- n.* the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign

ANSWERS: 16. mechanics, 17. terribly, 18. stick, 19. slide, 20. clay, 21. flee, 22. settlement, 23. equations

24. Advocates for legal reform hear less harsh words from their _____.
- n.* someone who expresses opinions about the quality of books, music, etc.
25. The _____ of getting the disease will drastically increase.
- n.* a chance that something may happen or be true
26. All the supervisor has to do is assign tasks that make his subordinates more _____.
- adj.* relating to or involving the use of skill and original and unusual ideas to create something
27. Recent electoral shocks have shaken the political _____ in Europe.
- n.* an expanse of scenery that can be seen in a single view; a large area of land, especially in the country and relating to its appearance
28. The species occupies a unique _____ in the ecosystem as a top predator.
- n.* a specialized role or position that a species occupies within an ecosystem; a job or position particularly well suited to the person who occupies it
29. This business yields little _____.
- n.* money that is earned in business or by selling things after deducting the costs involved
30. A diversified plant species generally enhances beneficial _____ populations.
- n.* a tiny living thing
31. The _____ sunset took everyone's breath away.
- adj.* causing a strong emotional reaction of admiration, surprise, or shock due to its beauty, rarity, or excellence

ANSWERS: 24. critics, 25. possibility, 26. creative, 27. landscape, 28. niche, 29. profit, 30. organism, 31. stunning

32. She was able to _____ a free trip to the United States.

- v. to continuously touch or manipulate something with someone's hands, mainly when bored or nervous; to act dishonestly to try to get money, information, etc., or gain an advantage

33. I advised him to _____ to his new surroundings.

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

34. Hydrogen and oxygen _____ to form water.

- v. to join or merge to form a single thing or group

35. The law was repealed to protect the rights of _____ citizens.

- adj. sexually attracted to people of one's own sex

36. He was alert and could not _____ any critical information out of him.

- v. to cause water, air, gas, etc. to move from one place to another by using mechanical equipment; to get or supply something such as money, information, etc. in significant quantities

37. The ladder leaned against the _____ surface of the building.

- adj. upright or perpendicular to a horizontal surface or line

38. We will explain the countermeasure concerning this problem _____.

- adv. after the time mentioned

39. It is an incredible _____ to climb Mount Everest, the highest mountain in the world.

- n. a notable or impressive achievement, especially one that requires great skill or bravery

ANSWERS: 32. fiddle, 33. adapt, 34. combine, 35. homosexual, 36. pump, 37. vertical, 38. afterward, 39. feat

40. I heated my leftover food in the _____ oven, which tasted just as good as freshly cooked.
- n.* a form of electromagnetic radiation with wavelengths ranging from about one millimeter to one meter and frequencies between 300 MHz (0.3 GHz) and 300 GHz; an electric oven that cooks food by exposing it to high-frequency electromagnetic radiation, which causes the food molecules to vibrate and heat up quickly
41. _____ is the day to celebrate the birth of Christ.
- n.* the man that Christians believe is the prophet and the son of God, and whose life and sermons form the basis for Christianity
42. Many artists prefer to use a _____ over their fingers when drawing on a digital canvas.
- n.* a thin, pointed tool used to write, draw, or select items on a touchscreen device
43. The content is _____ and informative for me.
- adj.* sharply exact or accurate or delimited
44. They fear a _____ of a new type of virus.
- n.* an outbreak of a disease that affects many people over a very wide area
45. He studied the _____ of radiation.
- n.* the science of matter and energy and their interactions
46. A broken gas pipe triggered the _____.
- n.* a violent release induced by a chemical or nuclear reaction
47. Human beings have a _____ lifespan, so we yearn for the idea of immortality.
- adj.* having a limit or restriction of size, time, etc.

ANSWERS: 40. microwave, 41. Christmas, 42. stylus, 43. precise, 44. pandemic, 45. physics, 46. explosion, 47. finite

48. The researcher _____ the momentum of the particles from meteoritic velocities.
- v.* to arrive at an answer, a conclusion, or a decision by reasoning
49. The hunter aimed his _____ at the deer in the forest.
- n.* a weapon consisting of a bow mounted on a stock that shoots projectiles, such as arrows, by pulling a trigger
50. He was served with a _____ of eviction, giving him the notice to vacate the property.
- n.* a written legal order or command
51. 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
52. The policies he announces can be the _____ of economic growth in the country.
- n.* a machine that converts thermal energy to mechanical work; something that has an important role used to achieve a purpose
53. Companies developing self-driving cars consistently _____ the emerging technologies.
- v.* to introduce new methods, ideas, or products
54. He lost the election by _____ votes.
- adj.* used to emphasize how insignificant or minor someone or something is
55. Many studies have investigated the relationship between _____ and academic achievement.
- n.* the condition of being extremely poor

ANSWERS: 48. deduced, 49. crossbow, 50. writ, 51. complexity, 52. engine, 53. innovate, 54. mere, 55. poverty

56. The motion of planets can be described using _____ mechanics.

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

57. 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

58. Certain types of _____ can be toxic to humans, causing severe illness if ingested.

n. a type of organism that includes yeasts, molds, and mushrooms, which are heterotrophic, meaning they do not produce their food and must consume organic matter to survive

59. I'm _____ of insects.

adj. afraid or frightened

60. The brain is an incredibly complex organ that controls the body's _____.

n. the purpose or use of an object, system, or process; a particular activity or operation that is designed to serve a specific purpose; a mathematical concept that describes a relationship between two sets of values, called the input and output sets; (verb) to operate or work in a specific way, or to perform a particular task or purpose

61. He cracked open a _____ to drink the milk.

n. the large, hard-shelled seed of a tropical palm, which has a fibrous husk surrounding a single-seeded nut

62. The stained-glass _____ added a pop of color to the desk.

n. a small, heavy object, often made of glass or metal, that is designed to hold down papers or other items on a desk or table; an object, usually an electronic device or piece of machinery, that is non-functional or useless for its intended purpose

ANSWERS: 56. Newtonian, 57. planet, 58. fungus, 59. scared, 60. function, 61. coconut, 62. paperweight

63. We _____ the payment because of an incorrect invoice.
- v. to cause something to happen at a later time than originally intended or expected
64. The old building _____ in a fiery inferno.
- v. to burst or break open violently and noisily; to cause something to burst or break open
65. The Ottoman Empire _____ for over five centuries.
- v. to grow or develop vigorously or successfully
66. He had to _____ the loose knob back onto the cabinet door.
- v. to turn something, such as a bolt, with a driver or wrench to tighten or loosen it; (noun) a cylindrical rod with a helical ridge used to fasten things together
67. Some scientists argue that the genes in food should not be artificially _____.
- v. to combine or put together again or differently; to cause genetic recombination (= the process by which genetic material is broken and joined to other genetic material)
68. _____ prevalent in hospitals are often resistant to antibiotics.
- n. single-celled or noncellular spherical or spiral or rod-shaped organisms that exist in large numbers in the air, water, and soil, and also in living and dead creatures and plants, and are often a cause of disease
69. Human behavior has _____ characteristics.
- adj. forming an essential base or core from which everything else develops or is affected

ANSWERS: 63. delayed, 64. exploded, 65. flourished, 66. screw, 67. recombined, 68. Bacteria, 69. fundamental

70. The balance of the _____ is crucial for the survival of species.
- n.* the part of the Earth and its atmosphere in which living organisms exist, including plants, animals, and microorganisms
71. The new _____ device has a faster processor and better graphics than its predecessor.
- n.* a small flat electronic device used for browsing the internet, reading, writing, or playing games; a small, solid pill of medicine
72. Our country has military alliances with _____ countries.
- adj.* next to, close to, or adjoining something
73. She _____ to the audience after her performance.
- v.* to bend your knee or body, or lower your head; (noun) a weapon made of a curved piece of wood or other flexible material, strung with a cord and used to shoot arrows
74. The _____ demonstrate that poverty and unemployment are genuine problems.
- n.* the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data
75. Arthropoda is the largest _____ in the animal kingdom, comprising insects, spiders, and crustaceans.
- n.* a major group or category of animals or plants characterized by shared physical, developmental, and evolutionary characteristics
76. The judge instructed the _____ on the law and the evidence presented in the trial.
- n.* a group of people called upon to render a verdict or judgment in a legal trial; a group of people chosen for a special purpose or task

ANSWERS: 70. biosphere, 71. tablet, 72. adjacent, 73. bowed, 74. statistics, 75. phylum, 76. jury

77. Several military _____ programs have become popular methods of exercise.
- n.* a tool or machine used for making round holes or driving fasteners; a training or practice
78. Nitrogen fixation by the Haber-Bosch method leads to the mass production of _____.
- n.* a natural or chemical substance added to soil to make plants grow more successfully
79. The lawyer confirmed that the _____ on the contract was genuine.
- n.* a person's name, often handwritten, written in a distinctive way as a form of identification or authorization; a distinctive feature or characteristic that is a hallmark or identifying mark of something or someone
80. _____ brooks are noisier than deep rivers.
- adj.* not having much distance from the top to the bottom
81. Many people worry that the current real estate market is a _____ that could burst soon.
- n.* a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses
82. We all should learn how to _____ stress.
- v.* to deal with a situation, problem, or strong emotion
83. The car's _____ was impressive, going from 0 to 60 mph in just 5 seconds.
- n.* a rate of increase in velocity; the rate of change of velocity with respect to time

ANSWERS: 77. drill, 78. fertilizers, 79. signature, 80. Shallow, 81. bubble, 82. handle, 83. acceleration

84. These infections have the potential to impact practically every _____ system.
- n.* a part of the body of an animal or plant that has a particular purpose and performs a specific job
85. We can hear an _____ piano melody from his room.
- adj.* extremely beautiful and delicate
86. The acupuncturist inserted _____ into specific points on my body to alleviate my pain.
- n.* a thin, pointed object typically used for sewing or medical purposes; a metal or plastic instrument used for administering injections or drawing blood
87. The _____ sound coming from the engine made us worry about the car's condition.
- n.* the act of removing a thin layer of material from a surface, often to clean or smooth it; a sound or sensation that is produced by something being removed or rubbed against another surface; (of computer technology) the automated extraction or collection of data from websites
88. Necessity is the mother of _____.
- n.* the creation of a new device or process resulting from study and experimentation; the act of inventing
89. His _____ jokes made her angry.
- adj.* being in an unrefined or natural state; (noun) the unprocessed form of oil
90. How can you _____ that the earth is a sphere?
- v.* to display something or give an exhibition to an interested audience
91. Scientists have predicted that the universe will end in a _____ where all matter will collapse into an infinitely dense point.
- n.* (of black holes) a point or region in space-time where the gravitational field is infinite, and matter and energy are infinitely dense; the state, fact, quality, or condition of being one of a kind

ANSWERS: 84. organ, 85. exquisite, 86. needles, 87. scraping, 88. invention, 89.

crude, 90. demonstrate, 91. singularity,

92. Her _____ manner relaxed everyone there.

adj. having or showing a kindly or tender nature; soft and mild

93. The era of the industrial revolution was a crucial _____ of history.

n. any stage in a series of events, change, or development

94. He that would eat the kernel must _____ the nut.

v. to break or cause to break without dividing into separate parts; (noun) a line on the surface of something along which it has separated without breaking

95. The workers were able to _____ the tent in just a few minutes.

v. to construct or build something; to cause to rise; (adjective) upright or vertical

96. We must _____ ourselves of pollution.

v. to make someone or something free of unwanted or unpleasant tasks, objects, or person

97. She had lived through two world wars in her _____.

n. the duration of someone's life or something's existence;

98. The _____ traveler walked along the deserted road.

adj. solitary or single

99. Our application aims to _____ the feature of web browsers.

v. to improve or make something more appealing by adding or contributing extra features to it

100. The blood's red coloring comes from iron _____.

n. a chemical compound that contains at least one oxygen atom and one other element

ANSWERS: 92. gentle, 93. phase, 94. crack, 95. erect, 96. rid, 97. lifetime, 98. lone, 99. complement, 100. oxide

101. _____ elections were held in several European countries.

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

102. A _____ of the employees will be trained in the new software program.

n. a set of things that are contained within another larger set; a portion or division of a group or category

103. The nation's healthcare system is in _____ at the moment.

n. the process or period of changing from one state or circumstance to another

104. I hung the coat on a _____ in the closet.

n. a device or object used for hanging or supporting something, often used for hanging clothes; a loop-shaped object used to hang clothes in a closet

105. The _____ of numbers on the spreadsheet allowed the accountant to track the company's profits and losses easily.

n. a rectangular array of numbers, symbols, or expressions, arranged in rows and columns and often enclosed in brackets; an enclosure within which something originates or develops

106. She used a _____ knife to smooth out the surface of the wall.

n. a soft, pliable substance, typically made of clay, plaster, or dough, used for filling cracks, sealing glass panes, or molding

107. The ancient Romans enjoyed spectating _____ races.

n. a two-wheeled horse-drawn battle vehicle used in ancient Egypt, Greece, and Rome for warfare and racing

108. The bank _____ the premium amount from his bank account.

v. to take away an amount or part of the money, points, etc. from a total

ANSWERS: 101. Communal, 102. subset, 103. transition, 104. hanger, 105. matrix, 106. putty, 107. chariot, 108. deducted

109. The study aimed to establish a _____ relationship between smoking and lung cancer.

adj. relating to or indicating a cause or the relationship between causes and effects; resulting from a cause

110. They study the _____ of the universe.

n. a gradual process of transformation of living things

111. The drought _____ the prices of grain globally.

v. to raise something to a higher position or level; to pick up something or somebody and move them to a different position

112. The _____ of the country is struggling due to the recent political instability.

n. the system by which a country or region produces manages, and distributes goods and services, including the money and finances involved in these activities; (of an airline) the lowest-priced, most basic option for seating in commercial travel

113. The company holds patents on core components of _____ jet printers.

n. a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification

114. The _____ approved by Congress was perfunctorily implemented.

n. an official rule made and maintained by a government or some other authority; the act of controlling or directing something according to a rule

115. The _____ of this bird is freshwater areas and saltwater marshes.

n. the type of natural environment in which an organism or group usually lives or occurs

ANSWERS: 109. causal, 110. evolution, 111. lifted, 112. economy, 113. laser, 114. regulation, 115. habitat

116. He planted the _____ in the soil and waited for it to sprout.

- n.* a small, hard, often round, a reproductive structure that contains a plant's genetic material and is capable of growing into a new plant

117. During the unloading, the container box _____ a clicking sound.

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

118. 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

119. The grandmother _____ a warm sweater for her grandchild.

- v.* to make a garment or fabric by interlocking loops of yarn with needles or a machine

120. He has a flair for _____.

- n.* the science dealing with the logic of quantities, shapes, spaces, and arrangement

121. The _____ mechanism in the grandfather clock needed to be wound up every week.

- n.* a mechanism in which a series of gears, springs and other mechanical elements are used to power a device, especially a clock

122. The _____ of the dinosaurs is thought to have been caused by an asteroid impact.

- n.* the complete disappearance of a species from the earth

123. She found a paint _____ on the wall and realized it was time to repaint the room.

- n.* a small, thin piece or layer of something, often with a flat or irregular shape; a person who is unreliable or inconsistent

ANSWERS: 116. seed, 117. emits, 118. carbon, 119. knit, 120. mathematics, 121. clockwork, 122. extinction, 123. flake

124. I need a flathead _____ to tighten the loose screws on this cabinet.
- n.* a tool used for turning screws, typically consisting of a handle and a metal rod with a flattened tip that fits into the slot on the head of a screw; a popular cocktail made with vodka and orange juice
125. You can add coffee grounds and crushed eggshells to your _____ to improve the pH balance.
- n.* a mixture of organic matter, such as food scraps, yard waste, and manure, that is allowed to decompose and is used as fertilizer for plants and garden soil
126. The new amusement park ride was _____ with twists, turns, and drops that left riders screaming with excitement.
- adj.* extremely good; excellent
127. The meal we had at the restaurant was _____ I highly recommend it.
- adj.* extremely good; excellent in quality; superbly done
128. A deficiency in the _____ can lead to a medical condition.
- n.* a substance produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction
129. 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
130. The storm had _____ all paint off the siding.
- v.* to remove the skin of fruit and vegetables

ANSWERS: 124. screwdriver, 125. compost, 126. fantastic, 127. superb;, 128. enzyme, 129. process, 130. peeled

131. I pushed _____ with my new project, even though it would take much hard work.

adv. forward, outward, or onward in location, direction, or progress; into view or consideration; with confidence, boldness, or in the open

132. _____ production can be a way to manage organic waste while also generating renewable energy.

n. a material produced by heating organic matter under low-oxygen conditions often used as a fertilizer or soil amendment

133. 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

134. To solve this equation, you must take both sides' _____.

n. a mathematical function that indicates the power to which a fixed number (the base) must be raised to produce another given number expressed as an exponent

135. During colonial eras, new migratory patterns _____.

v. to move out of or away from something and become visible

136. _____ fossils have been found in Eastern and Southern Africa.

n. any of several extinct hominid species that lived in Africa between 4 million and 1 million years ago and are considered to be among the earliest ancestors of modern humans

137. Many researchers are monitoring environmental _____ in real-time through satellites.

n. the condition or process of changing to a lower state, or a less respected state

ANSWERS: 131. forth, 132. Biochar, 133. upward, 134. logarithms, 135. emerged, 136. Australopithecus, 137. degradation

138. That investor saw an _____ of possibilities in this company.

n. the state or quality of having no end or limit; (mathematics) a number greater than any natural number

139. He stood to inherit a million-dollar _____.

n. a thing or things that belong to someone

ANSWERS: 138. infinity, 139. property