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Gokul Upadhyayula: The life unfolding inside your cells, revealed in 3D | TED Talk

https://www.ted.com/talks/gokul_upadhyayula_the_life_unfolding_inside_your_cells_revealed_in_3d

All Words

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Session 1: Word List

alien

n. a person who comes from a different country, race, or group; a form of life assumed to exist outside the Earth or its atmosphere

synonym: foreigner, unfamiliar, unknown

(1) **alien** fungi, (2) resident **aliens**

Alien species have drastically altered the ecosystem in this area.

snapshot

n. an informal photograph, especially one taken quickly

synonym: photo, picture, print

(1) take a **snapshot**, (2) developed **snapshot**

There were framed **snapshots** of family and friends in her room.

cheerleader

n. a person who leads cheers and chants at organized sports events, typically wearing a uniform and performing choreographed routines

(1) college **cheerleader**, (2) **cheerleader** tryouts

She was the captain of the **cheerleader** squad in high school.

ultimate

adj. furthest or highest in degree or order

synonym: highest, maximum, foremost

(1) the **ultimate** goal in life, (2) the **ultimate** luxury
Management must take **ultimate** responsibility for the accident.

essentially

adv. relating to the essential features or concepts of anything
synonym: fundamentally, basically, virtually

(1) **essentially** correct, (2) become **essentially** same
Essentially, a society is an organism.

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.

comp

v. short for "compensate," meaning to give goods or services to someone without asking for payment

synonym: waive, cover, provide

(1) **comp** their meal, (2) **comp** the employees with a bonus
The casino **comped** her room and meals for being a high-rolling gambler.

ant

n. a very small insect that lives under the ground or in a mound in highly organized groups

synonym: pismire, insect

(1) a white **ant**, (2) **ant** bite

We can find many large **ant** mounds in this area.

volume

n. the amount of space occupied by an object or substance; the magnitude of sound

synonym: capacity, amount, intensity

(1) **volume** of work, (2) high **volume**

This container has a **volume** of 10 cubic meters.

invisible

adj. impossible or nearly impossible to see

synonym: hidden, imperceptible, unseen

(1) an **invisible** asset, (2) **invisible** stars
The phenomenon is **invisible** at optical wavelengths.

visible

adj. capable of being seen; or open to easy view
synonym: clear, observable, seeable

(1) **visible** stars, (2) **visible** by X-ray
My home is easily **visible** from the shore.

microscope

n. an instrument used to see objects or substances that are too small to be seen with the naked eye
synonym: lens, magnifier, eyepiece

(1) **microscope** slide, (2) electron **microscope**
I used an optical **microscope** to observe the small organisms in the water sample.

paparazzi

n. (plural of "paparazzo") a group of freelance photographers who doggedly follow, often aggressively, celebrities, public figures, or socialites to take their photographs in the hope of selling them to newspapers, magazines, or media outlets
synonym: photographer, pap, shutterbug

(1) **paparazzi** photos, (2) celebrity **paparazzi**
The actress had to hire security to fend off the relentless **paparazzi** outside her home.

windy

adj. characterized by or affected by strong winds; of or relating to the wind; describing a person who talks a lot, often in an exaggerated way or without saying much substance
synonym: airy, gusty, breezy

(1) **windy** hillside, (2) **windy** eloquence
The weather is too **windy** for us to go on a boat ride.

obsession

n. the state in which a person's mind is filled with thoughts of one single object or particular person
synonym: compulsion, fixation, enthusiasm

(1) **obsession** with character, (2) national **obsession**

Gambling became an **obsession** for him, and he eventually lost everything.

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.

engineer

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

synonym: architect, creator, builder

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

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

biology

n. the scientific study of life and the natural processes of living things

(1) evolutionary **biology**, (2) cell and molecular **biology**

In junior high school, we had to dissect a frog in **biology** class.

combination

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

synonym: blend, hybrid, compounding

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

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

discipline

n. the practice of training people to obey rules or a code of behavior, using and punishments if these are broken; a region of activity, knowledge, or influence

synonym: training, restraint, field

(1) break **discipline**, (2) rigid **discipline**

He quickly learned the military **discipline**.

interdisciplinary

adj. involving or combining several academic disciplines or fields of study

synonym: multidisciplinary, transdisciplinary

(1) **interdisciplinary** research, (2) an **interdisciplinary** conference

The **interdisciplinary** approach to solving the problem involved experts from multiple fields working together.

advance

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

synonym: progress, boost, come along

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

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

innovation

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

synonym: invention, initiation, creation

(1) **innovation** leader, (2) cutting-edge **innovation**

The vegetarian burger was an **innovation** that quickly spread to the United Kingdom.

discovery

n. the act or process of finding information, a place, or an object, or learning about something that was previously not known

synonym: finding, uncovering, detection

(1) a scientific **discovery**, (2) the great **discovery** of the century

Her research team made an important **discovery**.

trillion

n. the number 1,000,000,000,000; a million million

(1) **trillion** cubic feet, (2) many **trillions** of dollars

One light year is nearly 6 **trillion** miles.

inanimate

adj. not having life or spirit; not animate

synonym: lifeless, inert, passive

(1) **inanimate** nature, (2) **inanimate** matter

The **inanimate** object was not capable of movement or

feeling.

molecule

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

synonym : particle, element, atom

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

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

protein

n. a molecule made up of a long chain of amino acids, which is essential for the structure and function of the body's tissues

(1) stress **protein**, (2) **protein** synthesis

The body needs a certain amount of **protein** to build and repair tissues.

carbohydrate

n. (also carb) any of a class of organic compounds that includes sugars, starch, and cellulose and are a principal source of energy in the diet of animals

synonym : sugar, starch, cellulose

(1) complex **carbohydrate**, (2) **carbohydrate** metabolism

Foods high in **carbohydrates** include bread, pasta, and rice.

lipid

n. any of a group of organic compounds, including fats, oils, and waxes, that are insoluble in water but soluble in organic solvents and are essential constituents of living cells

synonym : fat, oil, phospholipid

(1) **lipid** metabolism, (2) blood **lipid** profile

Omega-3 fatty acids, found in foods like fish and nuts, are a type of **lipid** that is good for heart health.

molecular

adj. of or relating to molecules (= a group of two or more atoms held together by attractive forces known as chemical bonds)

synonym : microscopic, atomic

(1) **molecular** structure, (2) **molecular** biology

Molecular weight is the sum of all the atoms.

biochemical

adj. relating to the chemical processes and substances that occur within living organisms

synonym: molecular, biological

(1) **biochemical** reaction, (2) complex **biochemical**

Biochemical research is essential to understanding the complex chemical reactions in living organisms.

glow

v. to give out a steady, strong light

synonym: shine, radiate, beam

(1) **glow** a pale orange, (2) **glow** gold in the light

The sun was setting, and the sky **glowed** with beautiful colors.

firefly

n. a flying nocturnal insect common in warm regions with a tail that shines in the dark

(1) the glow of a **firefly**, (2) sparkle like **firefly**

In that country, there is a culture of eating live **firefly** squid.

develop

v. to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created

synonym: evolve, progress, advance

(1) **develop** a strategy, (2) **develop** a skill

We must **develop** a new system to streamline our workflow and increase efficiency.

instrument

n. an object used to make musical sounds, such as a piano, guitar, or drum; a tool or device used for a specific activity, particularly in specialist or scientific work

synonym: apparatus, tool, device

(1) musical **instruments**, (2) surgical **instruments**

This electronic **instrument** is required to undergo periodic inspections to ensure precision.

capture

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

synonym: catch, arrest, imprison

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

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

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.

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**.

essence

n. the basic or most important part or quality of something that makes it what it is

synonym: core, nature, disposition

(1) vanilla **essence**, (2) universal **essence**

University teaches the art of understanding the **essence** of the matter.

traditionally

adv. in accordance with tradition; typically or commonly done in a particular way

synonym: conventionally, commonly, generally

(1) **traditionally** accepted concept, (2) **traditionally** sung at a banquet

Traditionally, the ceremony was held outdoors.

confine

v. to restrict the movement of someone or something

synonym: restrict, limit, contain

(1) **confine** themselves solely, (2) **confine** the scope of use
The animal was **confined** in a small cage.

dimension

n. a measurable extent of a particular kind, such as width, height, or length

synonym: extent, measurement, size

(1) new **dimension**, (2) the crosswise **dimension**

Overall **dimensions** are approximately 400x200mm.

straightforward

adj. easy to do or understand, or simple; free from ambiguity

synonym: honest, candid, forthright

(1) **straightforward** manner, (2) make a **straightforward** dash

The defendant gave a **straightforward** and accurate description of the accident.

stack

n. a pile of something arranged or laid one on top of another; a large tall chimney through which combustion gases and smoke can be evacuated

synonym: accumulation, heap, pile

(1) high **stack**, (2) a large **stack** of paper

The earthquake caused a **stack** of lumber to crumble noisily.

tradition

n. a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society

synonym: custom, practice, ritual

(1) a **tradition** of a culture, (2) against **tradition**

It is a **tradition** in many families to have a big Thanksgiving dinner with all their relatives.

dump

v. to deposit or dispose of something, such as trash, waste, etc., carelessly or hurriedly

synonym: throw away, dispose

(1) **dump** the gravel on the road, (2) **dump** hazardous waste

The company **dumped** him after several years of service.

toxic

adj. of or relating to or caused by a poison; poisonous
synonym : poisonous, harmful, contaminated

(1) **toxic** molecule, (2) exposure to **toxic** chemicals

This chemical compound is a thousand-fold more **toxic**.

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.

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.

linger

v. to stay in a place or exist longer than expected

synonym : dawdle, tarry, loiter

(1) **linger** in the mind, (2) **linger** over your work

She **lingered** for a moment before leaving the room.

equivalent

n. having the same value, quality, meaning, purpose, etc.

synonym : equal, counterpart, match

(1) **equivalent** amounts, (2) **equivalent** in meaning

The European Central Bank is Europe's **equivalent** of the Federal Reserve.

sunlight

n. the light emitted by the sun; the rays of the sun

synonym : daylight, rays, sunshine

(1) a glare of **sunlight**, (2) in direct **sunlight**

Radiation from **sunlight** has a different wavelength.

normally

adv. usually; under normal conditions

synonym : commonly, generally, naturally

(1) complete **normally**, (2) not **normally** drink much

I don't **normally** take a vacation in the middle of summer.

consequence

n. the outcome of a particular action or event, especially relative to an individual

synonym : result, impact, outcome

(1) unintended **consequences**, (2) the **consequence** of an argument

These economic activities had disastrous environmental **consequences**.

exposed

adj. having no protection or shield from something, such as bad weather, attack, or criticism

synonym : endangered, revealed, disclosed

(1) **exposed** to radiation, (2) an **exposed** rock

Tech companies often employ **exposed** ducts and other materials in their office interiors.

conventional

adj. based on or following traditional rules, standards, customs, etc.

synonym : ancestral, customary, established

(1) a **conventional** style, (2) get a **conventional** loan

She is very **conventional** in her thoughts.

dam

n. a wall constructed over a river to block the flow of water, mainly used to generate energy

synonym : barricade, barrier, embankment

(1) **dam-building** program, (2) **dam** collapsing

The break in the **dam** threatened the valley.

spot

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

synonym : dot, mark, place

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

This remote **spot** is rarely visited.

represent

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

synonym: depict, express, describe

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

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

assemble

v. to collect in one place as a single group

synonym: gather, congregate, collect

(1) **assemble** your colleagues, (2) **assemble** a jigsaw puzzle

The president began to **assemble** an army.

shuttle

n. a vehicle or boat that regularly moves between two places; bobbin that passes the weft thread between the warp threads

synonym: ferry, transport, convey

(1) space **shuttle**, (2) **shuttle** service

The **shuttle** bus will take you to the airport in 15 minutes.

lab

n. a workplace for the conduct of scientific research; a laboratory

synonym: workshop, laboratory, research chamber

(1) **lab** instrument, (2) medical **lab**

The Prime Minister will pay a courtesy visit to the Nobel laureate's **lab**.

lattice

n. an arrangement of points or particles in a regular, repeating pattern in two or three dimensions; a structure consisting of an ornamental design made of strips of wood or metal

synonym: grid, trellis, mesh

(1) **lattice** ornament, (2) a door with a **lattice** frame

The **lattice** pattern on the fence allowed the vines to climb up

and create a natural privacy screen.

microscopy

n. the scientific study of small structures or substances using microscopes, including the anatomical, physiological, and pathological aspects of cells, tissues, and organs

synonym : microanalysis, magnification

(1) clinical **microscopy**, (2) electron **microscopy**

The scientist used a **microscopy** technique to study the cells at a microscopic level.

damage

v. to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity

synonym : harm, impair, injure

(1) **damage** a relationship, (2) **damage** assessment

During the surgery, the doctor had to be extremely cautious not to **damage** a blood vessel.

dynamics

n. the branch of mechanics that deals with the motion of bodies under the action of forces, including the particular case in which a body remains at rest; forces that produce or stimulate movement, growth, or change

synonym : mechanics, kinetics, kinematics

(1) **dynamics** of group, (2) **dynamics** of economy

The relationship **dynamics** between the two countries were complex and constantly changing.

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.

technique

n. a particular way or art of doing something that needs skill

synonym: approach, procedure, strategy

(1) a **technique** in martial arts, (2) the **technique** applied to construction

Jockey's superior **technique** brought him victory.

virus

n. a tiny infectious organic material that causes disease in people, animals, and plants

synonym: bacterium, germ, ailment

(1) spread of the **virus**, (2) a strain of **virus**

An infected person in the hospital will likely pass the **virus** to others.

infect

v. to affect a person, an animal, or a plant with a disease-causing organism

synonym: pollute, contaminate, affect

(1) **infect** other animal species, (2) **infect** a computer with a virus

Children often **infect** parents with this head cold.

rotavirus

n. a virus commonly causes gastroenteritis, an inflammation of the stomach and intestines, particularly in young children. It is spread via contaminated food, water, and surfaces

synonym: gastroenteritis, stomach flu, intestinal virus

(1) **rotavirus** infection, (2) spread of **rotavirus**

The symptoms of **rotavirus** include diarrhea, vomiting, and fever.

contagious

adj. able to be passed on to others through contact or proximity, especially by infection or disease

synonym: infectious, transmissible, communicable

(1) **contagious** enthusiasm, (2) **contagious** virus

The disease is highly **contagious** and spreads quickly.

pathogen

n. a bacterium, virus, or other microorganism that causes disease

synonym: germ, microbe, bacterium

(1) plant **pathogen**, (2) the **pathogen** in the air

mRNA vaccines are approved faster because they do not contain inactivated **pathogens**.

particle

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

synonym: atom, grain, bit

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

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

diffuse

adj. spread out widely; not concentrated in one place

synonym: spread, scatter

(1) **diffuse** bleeding, (2) **diffuse** cloud

Direct lighting is preferable to **diffuse** lighting when reading.

outsmart

v. to defeat or best someone through cleverness, cunning, or intelligence, to prevail over someone by being smarter or more strategic

synonym: outwit, beat, surpass

(1) **outsmart** the competition, (2) **outsmart** a conspiracy

He could **outsmart** his opponents with his quick thinking and strategic planning.

intelligent

adj. having the capacity for thought and reason, especially to a high degree

synonym: brilliant, clever, competent

(1) an **intelligent** person, (2) **intelligent** assisting system

Intelligent robots that can cooperate with humans have limited motor output for safety.

therapy

n. the act of caring for someone through medication, remedial training, etc.

synonym : antidote, medicine, treatment

(1) **therapy** for a patient, (2) field of gene **therapy**

I underwent aversion **therapy** for my addiction to alcohol.

mitigate

v. to make less severe or less intense; to alleviate or lessen the adverse effects of something

synonym : alleviate, relieve, reduce

(1) **mitigate** risk, (2) **mitigate** a natural disaster

Efforts to **mitigate** the effects of climate change require a coordinated and sustained effort by governments, businesses, and individuals.

bind

v. to tie or fasten someone or something tightly with rope, string, etc. so that they cannot move or are held together strongly

synonym : tie, stick to, adhere

(1) **bind** the man's hands, (2) **bind** old letters into a bundle

The company's rules **bind** the employee's working hours.

petri

n. (petri dish) a small, clear, and round dish with a lid used in laboratories, especially for growing bacteria

(1) **petri** dish test, (2) bacteria on **petri** dishes

Glass **petri** dishes are used to culture microorganisms.

isolation

n. the condition of being alone or lonely; the act or state of separation between persons or groups

synonym : aloneness, seclusion, separateness

(1) **isolation** booth, (2) the country's **isolation**

That incident led to his **isolation**.

physiological

adj. relating to the normal functioning of living organisms and their organs and systems; concerning the physical or biochemical processes and activities that occur within the body

synonym : biological, organic, bodily

(1) **physiological** response, (2) **physiological** activity

The doctor explained the various **physiological** changes that

occur during pregnancy.

context

n. the circumstances, facts, or conditions that surround a particular event, situation, or statement and that give it meaning

synonym: background, setting, environment

(1) historical **context**, (2) legal **context**

It's important to understand the **context** of a situation before making a decision.

turf

n. a layer of grass and soil covering a particular area of land, especially used as a playing surface in sports or as a lawn

synonym: territory, ground, land

(1) artificial **turf**, (2) **turf** battle

The soccer players fought for control of the **turf** during the game.

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.

zebra

n. a wild, horse-like mammal native to Africa with distinctive black-and-white stripes

synonym: striped horse, wild horse

(1) **zebra** pattern, (2) **zebra** crossing

The **zebra's** distinctive black and white stripes help it blend into its surroundings in the wild.

embryo

n. an animal organism in the early stages of growth, either in its mother's womb or in an egg, or a plant that is developing in a seed

synonym: fetus, seed, origin

(1) destruction of human **embryos**, (2) **embryo** cloning

Our latest project is still at the **embryo** stage.

tissue

n. an ensemble of similar cells of the animal or plant that together carry out a specific function

synonym : structure, texture, anatomy

(1) a facial **tissue**, (2) loss of muscle **tissue**

The researcher separated the nervous **tissue** for microscopic examinations.

resolve

v. to find a suitable answer to the problems or difficulty

synonym : decide, determine, fix

(1) **resolve** a dispute, (2) **resolve** the computer error

This company **resolves** its battery problem completely.

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.

scramble

v. to move or climb quickly and awkwardly, often using your hands to help you

synonym : jumble, disarrange

(1) **scramble** my mind, (2) **scramble** for support

Local business owners **scrambled** to find skilled workers.

blur

n. a faint or indistinct image or sound; something that is not clear or distinct; (verb) to become unclear; to lose clear vision

synonym : smudge, smear, fuzz

(1) **blur** image, (2) motion **blur**

The camera's focus was off, and the image was a **blur** of colors and shapes.

astronomer

n. a physicist who studies astronomy

synonym : stargazer, cosmologist, astrophysicist

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

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

distant

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

synonym: far, isolated, remote

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

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

telescope

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

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

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

turbulent

adj. marked by a lot of sudden changes, confusion, or uncertainty; characterized by intense activity or agitation

synonym: chaotic, stormy, tumultuous

(1) **turbulent** waves, (2) **turbulent** age

The stock market has been **turbulent** lately, with prices fluctuating rapidly.

atmosphere

n. the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work

synonym: air, ambiance, circumstances

(1) carbon dioxide in the **atmosphere**, (2) a convivial **atmosphere**

The spaceship began to burn up as it approached the Earth's **atmosphere**.

compensate

v. to make up for a loss, injury, or inconvenience by giving something of value

synonym: reimburse, pay, recompense

(1) **compensate** a loss, (2) **compensate** for a car accident

The company offered to **compensate** the employees for the overtime they worked.

undo

v. to reverse the effect of an action or event, typically one that is recent or specific

synonym : reverse, retract, revoke

(1) **undo** changes, (2) **undo** a belt

I accidentally deleted the file, so can you **undo** that action?

implement

v. to put a decision, plan, or system into effect

synonym : execute, enforce, put through

(1) **implement** a corporate strategy, (2) **implement** security measures

The government promised to **implement** a new system to control the financial crisis.

fuzzy

adj. having a soft and indistinct outline or covered with fine, soft, and hairlike fibers

synonym : hazy, blurry, indistinct

(1) **fuzzy** logic, (2) **fuzzy** memory

The picture was **fuzzy** because it was taken with an old camera.

vertebrate

adj. relating to animals that have a backbone or spinal column, such as mammals, birds, reptiles, amphibians, and fish

synonym : animal, chordate, backboned

(1) the muscle tissue of a **vertebrate**, (2) **vertebrate** biology

The presence of a backbone is a defining characteristic of **vertebrate** animals.

transparent

adj. easy to perceive, detect, or understand; (of a material or article) permitting light to pass through freely

synonym : translucent, evident, diaphanous

(1) a **transparent** lie, (2) **transparent** crystal

The focus of these initiatives is to make the financial system more **transparent**.

cellular

adj. of or connected with the cells of animals or plants; of or connected with a mobile telephone system that uses

several short-range radio stations instead of wires

synonym : organic, biological, nuclear

(1) **cellular** and molecular biology, (2) a **cellular** phone handset

This factory employs a **cellular** manufacturing system.

spine

n. the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column

synonym : backbone, vertebra, column

(1) the **spine** of a book, (2) a cervical **spine** injury

She has a minor curved **spine** due to desk work for many years.

presence

n. the fact or state that someone or something exists, occurs, or is present

synonym : existence, actuality, fact

(1) the evidence of the **presence**, (2) his majestic **presence**

The path to a solid online **presence** necessitates a high technical ability.

absence

n. the fact or condition of being away from a place where they are typically anticipated to be

synonym : dearth, scarcity, lack

(1) **absence** from work, (2) a leave of **absence**

Another critical factor of child poverty is the father's **absence**.

adaptive

adj. capable of adjusting to new situations or changing conditions

synonym : flexible, adjustable, pliant

(1) the **adaptive** coloring, (2) **adaptive** technology

The **adaptive** learning system adjusts the difficulty level of the lessons based on the student's performance.

optics

n. the academic study of vision and light

(1) **optics** technology, (2) fiber **optics**

Einstein's new **optics** theory transformed traditional scientific notions about light.

specific

adj. clearly defined or particular to a certain thing or situation; distinct, explicit, and precise

synonym : particular, definite, distinct

(1) **specific** instructions, (2) industry- **specific** regulations

The scientist conducted a study that provided **specific** details about the species' behavior.

commotion

n. a state of confused and noisy disturbance

synonym : disturbance, fuss, uproar

(1) a few minutes of **commotion**, (2) make **commotion**

The **commotion** in the classroom made it hard for the teacher to teach.

divide

v. to separate or cause to separate into parts or groups

synonym : separate, disconnect, split

(1) **divide** the cake into two pieces, (2) **divide** money equally

Can you **divide** 123321 by eleven?

squeeze

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

synonym : compress, crush, clamp

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

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

rowdy

n. a person who behaves in a loud, rough, or disorderly manner, causing a disturbance or annoyance to others

synonym : hooligan, troublemaker, ruffian

(1) **rowdy** behavior, (2) **rowdy** fans

The **rowdy** crowd at the concert caused a disturbance and had to be escorted out by security.

punch

v. to strike someone or something with one's fist; to make a hole in something

synonym: hit, strike, slap

(1) **punch** out numbers, (2) **punch** a ticket

He **punched** the wall in anger.

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?

cancer

n. abnormal growth of cells that can invade and destroy surrounding tissues and organs; a disease characterized by the uncontrolled growth and spread of abnormal cells

synonym: tumor, carcinoma, malignancy

(1) **cancer** diagnosis, (2) **cancer** research

Breast **cancer** is the most common type of cancer in women.

breast

n. either of the two round soft parts of a woman's chest which secrete milk after childbirth

synonym: bosom, chest, bust

(1) **breast** cancer, (2) the mountain's **breast**

He grilled the **breast** meat of a chicken.

migrate

v. to move from one country or region to another and settle there; to move from one place to another periodically or seasonally

synonym: relocate, emigrate, roam

(1) **migrate** across borders, (2) **migrate** a service

Many Germans **migrated** to South America in the mid-19th century.

vessel

n. a ship or large boat

synonym: boat, ship, craft

(1) blood **vessels**, (2) naval **vessels**

The **vessel** arrived in port the following day.

magenta

n. a bright, purplish-red color named after a plant that was once used to produce a dye with a similar hue

synonym : purple-red, fuchsia

(1) **magenta** flowers, (2) **magenta** ink

The artist used **magenta** paint to make her painting pop with color.

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.

cabin

n. a small, simple dwelling or shelter, typically made of wood and located in a remote or rural area; an enclosed compartment or area within a larger structure, such as an aircraft or ship, where passengers or crew members can sit or sleep

synonym : hut, cottage, shack

(1) **cabin** crew, (2) log **cabin**

The quaint **cabin** in the woods was the perfect retreat for a weekend getaway.

roll

v. to move in a particular direction by turning over and over or from side to side

synonym : spin, swirl, wheel

(1) **roll** a ball, (2) **roll** down his cheeks

He was exhausted and **rolled** into bed as soon as he got home.

trail

n. a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular purpose; (verb) to lag or linger behind

synonym : footpath, track, course

(1) a warm **trail**, (2) follow the **trail**

The storm left a **trail** of destruction behind it.

claw

- n.* a curved, pointed appendage found on the foot or leg of an animal, used for gripping or grasping; a human hand with long, narrow fingers that are curved like a claw; a machine or tool with a claw-like opening used for gripping or lifting objects

synonym: paw, talon, nail

(1) **claw** marks, (2) **claw** hammer

The bear used its **claw** to catch a fish in the river.

invade

- v.* to enter aggressively into another's territory by military force for conquest and occupation

synonym: intrude, raid, overrun

(1) **invade** other tissues, (2) **invade** his privacy

I have no intention to **invade** your privacy.

upstage

- v.* to distract attention from someone or something else, often intentionally; to move upstage in a theater, away from the audience, thus taking a more prominent position on the stage; (adverb) at or toward the rear of the stage

synonym: outdo, overshadow, eclipse

(1) **upstage** a co-star, (2) move **upstage**

The musician's incredible solo momentarily **upstaged** the lead singer.

crawl

- v.* to move forward slowly, as people or animals with their bodies near the ground

synonym: creep, drag

(1) **crawl** across the floor, (2) **crawl** away from a car

Along the gravel roads, sizeable yellow school buses **crawl**.

neutrophil

- n.* the most common type of white blood cell in the human body, which helps the immune system by attacking and destroying harmful foreign substances, such as bacteria and viruses

synonym: white blood cell, immune cell, phagocyte

(1) **neutrophil** infiltration, (2) **neutrophil** migration

High levels of **neutrophils** can indicate an infection or inflammation in the body.

immune

adj. protected against a particular disease or toxin due to the presence of specific antibodies or sensitized white blood cells

synonym : resistant, unsusceptible, unaffected

(1) **immune** from criminal prosecution, (2) the cell of the **immune** system

The vaccination does not necessarily make you completely **immune**.

patrol

n. the act of guarding an area or conducting surveillance of an area to maintain order, perform security functions, or prevent crime; a group of officers or soldiers that conducts such an operation

synonym : guard, watch, surveillance

(1) **patrol** car, (2) border **patrol**

The highway **patrol** officer pulled over the speeding vehicle on the freeway.

constantly

adv. all the time

synonym : continuously, always, frequently

(1) a **constantly** innovative enterprise, (2) a **constantly** varying mind

The mobile application industry is **constantly** changing.

infection

n. a condition in which pathogenic microorganisms or viruses have entered the body

synonym : contagion, disease, transmission

(1) a bacterial **infection**, (2) treat the **infection** with antibiotics

Hospitals must meet various standards to prevent nosocomial **infections**.

environment

n. the natural world such as air, water, and land in which humans, animals, and plants live

synonym : atmosphere, surroundings, climate

(1) **environment** affairs, (2) chaotic **environment**

Every human is responsible for taking care of the Earth's **environment**.

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.

byte

n. a unit of digital information that consists of 8 bits, typically used to represent a single character of text or a small amount of computer code

(1) **byte** code, (2) **byte** array

The computer hard drive had plenty of storage space but was running low on available **bytes**.

floppy

adj. not stiff or firm; hanging loosely

synonym : limp, flaccid, pliable

(1) **floppy** infant, (2) **floppy** hat

The puppy's ears were still too long and **floppy** for its head.

disk

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

synonym : record, platter, plate

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

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

roughly

adv. approximately but not precisely; with a violent manner

synonym : approximately, more or less, around

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

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

smartphone

n. a mobile phone that functions as a computer and connects to the Internet

(1) **smartphone** app developer, (2) **smartphone** addict
Internet traffic volumes have increased significantly with the advent of **smartphones**.

visualize

v. to form a mental image or concept of something; to make something visible

synonym: imagine, picture, envision

(1) **visualize** data, (2) **visualize** flying through space
She tried to **visualize** the layout of the new house in her mind.

extract

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

synonym: excerpt, quote, distillation

(1) a brief **extract** from the book, (2) botanical **extract**
Anesthetize the gum before **extracting** the teeth.

collaborate

v. to work with someone else to produce or achieve something

synonym: cooperate, unite, get together

(1) **collaborate** with the police, (2) **collaborate** on a press release

She agreed to **collaborate** with him in creating new artwork.

chemical

adj. relating to or connected with chemistry;

synonym: chemic, synthetic

(1) toxic **chemicals**, (2) a **chemical** compound

The firm has grown into a large **chemical** manufacturing.

academic

adj. associated with schools, colleges, and universities, especially studying and thinking, not with practical skills

synonym: educational, scholarly, theoretical

(1) **academic** probation, (2) an **academic** discussion

An excellent historian must possess an **academic** mentality.

nonprofit

adj. not established for commercial profit

synonym : charitable

(1) a **nonprofit** organization, (2) **nonprofit** agency

Our law firm also focuses on **nonprofit** activities.

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.

individually

adv. separately or apart from others

synonym : separately, one by one, independently

(1) answer questions **individually**, (2) **individually**

designed product

Each department has done its product costing **individually**.

frontier

n. a border that separates two countries, or the area near this line

synonym : border, boundary, borderland

(1) **frontier** disputes, (2) the Italian **frontier** with Switzerland

He worked at the **frontier** of behavioral economics.

Session 2: Spelling

- | | |
|----------------------------------|---|
| 1. tra_____lly sung at a banquet | <i>adv.</i> in accordance with tradition; typically or commonly done in a particular way |
| 2. against tr_____on | <i>n.</i> a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society |
| 3. make co_____on | <i>n.</i> a state of confused and noisy disturbance |
| 4. pr_____n synthesis | <i>n.</i> a molecule made up of a long chain of amino acids, which is essential for the structure and function of the body's tissues |
| 5. ha___ed the incident | <i>v.</i> to deal with a situation, problem, or strong emotion |
| 6. new di_____on | <i>n.</i> a measurable extent of a particular kind, such as width, height, or length |
| 7. complex car_____ate | <i>n.</i> (also carb) any of a class of organic compounds that includes sugars, starch, and cellulose and are a principal source of energy in the diet of animals |
| 8. sma_____ne app developer | <i>n.</i> a mobile phone that functions as a computer and connects to the Internet |
| 9. mi_____te risk | <i>v.</i> to make less severe or less intense; to alleviate or lessen the adverse effects of something |
| 10. ex_____d to radiation | <i>adj.</i> having no protection or shield from something, such as bad weather, attack, or criticism |

ANSWERS: 1. traditionally, 2. tradition, 3. commotion, 4. protein, 5. handle, 6. dimension, 7. carbohydrate, 8. smartphone, 9. mitigate, 10. exposed

- | | |
|------------------------------------|---|
| 11. unintended con_____ces | <i>n.</i> the outcome of a particular action or event, especially relative to an individual |
| 12. pe__i dish test | <i>n.</i> (petri dish) a small, clear, and round dish with a lid used in laboratories, especially for growing bacteria |
| 13. dem_____te mastery | <i>v.</i> to display something or give an exhibition to an interested audience |
| 14. his majestic pr_____ce | <i>n.</i> the fact or state that someone or something exists, occurs, or is present |
| 15. g__w a pale orange | <i>v.</i> to give out a steady, strong light |
| 16. com_____te a loss | <i>v.</i> to make up for a loss, injury, or inconvenience by giving something of value |
| 17. solar ast_____er | <i>n.</i> a physicist who studies astronomy |
| 18. get a con_____nal loan | <i>adj.</i> based on or following traditional rules, standards, customs, etc. |
| 19. re_____e the computer error | <i>v.</i> to find a suitable answer to the problems or difficulty |
| 20. a civil en_____er | <i>n.</i> a person whose job is designing, building, or maintaining something such as machines, structures, or software |
| 21. a man of ex_____te sensitivity | <i>adj.</i> extremely beautiful and delicate |
| 22. parallel com_____on | <i>n.</i> the act or process of calculating something, especially an answer or amount, by using a machine or calculator |

ANSWERS: 11. consequence, 12. petri, 13. demonstrate, 14. presence, 15. glow, 16. compensate, 17. astronomer, 18. conventional, 19. resolve, 20. engineer, 21. exquisite, 22. computation

23. tu_____nt waves *adj.* marked by a lot of sudden changes, confusion, or uncertainty; characterized by intense activity or agitation
24. d_m collapsing *n.* a wall constructed over a river to block the flow of water, mainly used to generate energy
25. ca___r research *n.* abnormal growth of cells that can invade and destroy surrounding tissues and organs; a disease characterized by the uncontrolled growth and spread of abnormal cells
26. al__n fungi *n.* a person who comes from a different country, race, or group; a form of life assumed to exist outside the Earth or its atmosphere
27. im___e from criminal prosecution *adj.* protected against a particular disease or toxin due to the presence of specific antibodies or sensitized white blood cells
28. ensure a smooth tra_____on *n.* the process or period of changing from one state or circumstance to another
29. tra_____on phase *n.* the process or period of changing from one state or circumstance to another
30. sh_____e service *n.* a vehicle or boat that regularly moves between two places; bobbin that passes the weft thread between the warp threads
31. re_____nt by a diagram *v.* to speak, act, or be present on behalf of another person or group; to form or constitute

ANSWERS: 23. turbulent, 24. dam, 25. cancer, 26. alien, 27. immune, 28. transition, 29. transition, 30. shuttle, 31. represent

32. artificial t__f *n.* a layer of grass and soil covering a particular area of land, especially used as a playing surface in sports or as a lawn
33. in_____te matter *adj.* not having life or spirit; not animate
34. op___s technology *n.* the academic study of vision and light
35. cell and molecular bi_____y *n.* the scientific study of life and the natural processes of living things
36. int_____ary research *adj.* involving or combining several academic disciplines or fields of study
37. neu_____il infiltration *n.* the most common type of white blood cell in the human body, which helps the immune system by attacking and destroying harmful foreign substances, such as bacteria and viruses
38. complete no_____ly *adv.* usually; under normal conditions
39. de_____p a strategy *v.* to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
40. ev___e over the past decade *v.* to develop gradually, or to cause the development of something or someone gradually
41. ro_____y speaking *adv.* approximately but not precisely; with a violent manner
42. a scientific di_____ry *n.* the act or process of finding information, a place, or an object, or learning about something that was previously not known

ANSWERS: 32. turf, 33. inanimate, 34. optics, 35. biology, 36. interdisciplinary, 37. neutrophil, 38. normally, 39. develop, 40. evolve, 41. roughly, 42. discovery

43. log ca__n *n.* a small, simple dwelling or shelter, typically made of wood and located in a remote or rural area; an enclosed compartment or area within a larger structure, such as an aircraft or ship, where passengers or crew members can sit or sleep
44. b__e code *n.* a unit of digital information that consists of 8 bits, typically used to represent a single character of text or a small amount of computer code
45. che_____er tryouts *n.* a person who leads cheers and chants at organized sports events, typically wearing a uniform and performing choreographed routines
46. exposure to to__c chemicals *adj.* of or relating to or caused by a poison; poisonous
47. ess_____ly correct *adv.* relating to the essential features or concepts of anything
48. d__k space *n.* a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music
49. the muscle tissue of a ver_____te *adj.* relating to animals that have a backbone or spinal column, such as mammals, birds, reptiles, amphibians, and fish
50. the con_____ce of an argument *n.* the outcome of a particular action or event, especially relative to an individual
51. medical l_b *n.* a workplace for the conduct of scientific research; a laboratory

ANSWERS: 43. cabin, 44. byte, 45. cheerleader, 46. toxic, 47. essentially, 48. disk, 49. vertebrate, 50. consequence, 51. lab

52. 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
53. a glare of su____ht *n.* the light emitted by the sun; the rays of the sun
54. electron mic____pe *n.* an instrument used to see objects or substances that are too small to be seen with the naked eye
55. the mountain's br____t *n.* either of the two round soft parts of a woman's chest which secrete milk after childbirth
56. a ce____ar phone handset *adj.* of or connected with the cells of animals or plants; of or connected with a mobile telephone system that uses several short-range radio stations instead of wires
57. equ____nt amounts *n.* having the same value, quality, meaning, purpose, etc.
58. fu__y memory *adj.* having a soft and indistinct outline or covered with fine, soft, and hairlike fibers
59. as____le your colleagues *v.* to collect in one place as a single group
60. a white a_t *n.* a very small insect that lives under the ground or in a mound in highly organized groups

ANSWERS: 52. process, 53. sunlight, 54. microscope, 55. breast, 56. cellular, 57. equivalent, 58. fuzzy, 59. assemble, 60. ant

61. b__r image *n.* a faint or indistinct image or sound; something that is not clear or distinct; (verb) to become unclear; to lose clear vision
62. inn_____on leader *n.* the creation of a new device or process resulting from study and experimentation
63. national ob_____on *n.* the state in which a person's mind is filled with thoughts of one single object or particular person
64. ro__y fans *n.* a person who behaves in a loud, rough, or disorderly manner, causing a disturbance or annoyance to others
65. to__c molecule *adj.* of or relating to or caused by a poison; poisonous
66. li__d metabolism *n.* any of a group of organic compounds, including fats, oils, and waxes, that are insoluble in water but soluble in organic solvents and are essential constituents of living cells
67. a good grounding in mat_____cs *n.* the science dealing with the logic of quantities, shapes, spaces, and arrangement
68. li___r over your work *v.* to stay in a place or exist longer than expected
69. look through a te_____pe *n.* a device like a tube in shape containing lenses used to magnify and observe distant objects
70. dy_____cs of economy *n.* the branch of mechanics that deals with the motion of bodies under the action of forces, including the particular case in which a body remains at rest; forces that produce or stimulate movement, growth, or change

ANSWERS: 61. blur, 62. innovation, 63. obsession, 64. rowdy, 65. toxic, 66. lipid, 67. mathematics, 68. linger, 69. telescope, 70. dynamics

71. com_____te for a car accident *v.* to make up for a loss, injury, or inconvenience by giving something of value
72. wi__y hillside *adj.* characterized by or affected by strong winds; of or relating to the wind; describing a person who talks a lot, often in an exaggerated way or without saying much substance
73. ma_____a flowers *n.* a bright, purplish-red color named after a plant that was once used to produce a dye with a similar hue
74. e__t a gamma ray *v.* to give off or send out something such as light, heat, sound, gas, etc.
75. cognitive com_____ty *n.* the state or quality of being complicated or intricate and difficult to understand
76. the pa_____en in the air *n.* a bacterium, virus, or other microorganism that causes disease
77. destruction of human em___os *n.* an animal organism in the early stages of growth, either in its mother's womb or in an egg, or a plant that is developing in a seed
78. com_____ty theory *n.* the state or quality of being complicated or intricate and difficult to understand
79. the ad_____ve coloring *adj.* capable of adjusting to new situations or changing conditions
80. g__w gold in the light *v.* to give out a steady, strong light
81. d__p hazardous waste *v.* to deposit or dispose of something, such as trash, waste, etc., carelessly or hurriedly

ANSWERS: 71. compensate, 72. windy, 73. magenta, 74. emit, 75. complexity, 76. pathogen, 77. embryo, 78. complexity, 79. adaptive, 80. glow, 81. dump

82. sma_____ne addict *n.* a mobile phone that functions as a computer and connects to the Internet
83. cr__l across the floor *v.* to move forward slowly, as people or animals with their bodies near the ground
84. hi_____y system *n.* a main road, especially one connecting major towns or cities
85. ca_____e a glimpse *v.* to catch a person or an animal and confine them in an area which they cannot escape
86. mi_____e across borders *v.* to move from one country or region to another and settle there; to move from one place to another periodically or seasonally
87. theory of com_____on *n.* the act or process of calculating something, especially an answer or amount, by using a machine or calculator
88. the evidence of the pr_____ce *n.* the fact or state that someone or something exists, occurs, or is present
89. border pa____l *n.* the act of guarding an area or conducting surveillance of an area to maintain order, perform security functions, or prevent crime; a group of officers or soldiers that conducts such an operation
90. many tr_____ons of dollars *n.* the number 1,000,000,000,000; a million million
91. sc_____le my mind *v.* to move or climb quickly and awkwardly, often using your hands to help you

ANSWERS: 82. smartphone, 83. crawl, 84. highway, 85. capture, 86. migrate, 87. computation, 88. presence, 89. patrol, 90. trillion, 91. scramble

92. rigid dis_____ne *n.* the practice of training people to obey rules or a code of behavior, using and punishments if these are broken; a region of activity, knowledge, or influence
93. mo_____ar biology *adj.* of or relating to molecules (= a group of two or more atoms held together by attractive forces known as chemical bonds)
94. a con_____ly innovative enterprise *adv.* all the time
95. de_____p a skill *v.* to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
96. vo_____e of work *n.* the amount of space occupied by an object or substance; the magnitude of sound
97. pu__h out numbers *v.* to strike someone or something with one's fist; to make a hole in something
98. a brief ex_____t from the book *n.* a short passage taken from a book, piece of music, etc.; a substance obtained from something through a specific process; (verb) to obtain from something or to remove something by effort or force
99. motion b____r *n.* a faint or indistinct image or sound; something that is not clear or distinct; (verb) to become unclear; to lose clear vision

ANSWERS: 92. discipline, 93. molecular, 94. constantly, 95. develop, 96. volume, 97. punch, 98. extract, 99. blur

100. da___e assessment *v.* to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity
101. a s__t on his honor *n.* a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
102. as_____le a jigsaw puzzle *v.* to collect in one place as a single group
103. follow the tr__l *n.* a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular purpose; (verb) to lag or linger behind
104. blood ve___ls *n.* a ship or large boat
105. sp_____ic instructions *adj.* clearly defined or particular to a certain thing or situation; distinct, explicit, and precise
106. 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
107. a no_____it organization *adj.* not established for commercial profit
108. resident al__ns *n.* a person who comes from a different country, race, or group; a form of life assumed to exist outside the Earth or its atmosphere

ANSWERS: 100. damage, 101. spot, 102. assemble, 103. trail, 104. vessel, 105. specific, 106. planet, 107. nonprofit, 108. alien

109. a cervical sp__e injury
110. ad_____e the technology
111. move up_____e
112. t__f battle
113. pa_____zi photos
114. carbon dioxide in the atm_____re
115. the great di_____ry of the century
- n.* the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column
- v.* to go or move forward; to develop in a positive way
- v.* to distract attention from someone or something else, often intentionally; to move upstage in a theater, away from the audience, thus taking a more prominent position on the stage; (adverb) at or toward the rear of the stage
- n.* a layer of grass and soil covering a particular area of land, especially used as a playing surface in sports or as a lawn
- n.* (plural of "paparazzo") a group of freelance photographers who doggedly follow, often aggressively, celebrities, public figures, or socialites to take their photographs in the hope of selling them to newspapers, magazines, or media outlets
- n.* the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work
- n.* the act or process of finding information, a place, or an object, or learning about something that was previously not known

ANSWERS: 109. spine, 110. advance, 111. upstage, 112. turf, 113. paparazzi, 114. atmosphere, 115. discovery

116. ca___r diagnosis *n.* abnormal growth of cells that can invade and destroy surrounding tissues and organs; a disease characterized by the uncontrolled growth and spread of abnormal cells
117. the Italian fr_____er with Switzerland *n.* a border that separates two countries, or the area near this line
118. an int_____nt person *adj.* having the capacity for thought and reason, especially to a high degree
119. electron mic_____py *n.* the scientific study of small structures or substances using microscopes, including the anatomical, physiological, and pathological aspects of cells, tissues, and organs
120. co_____e the scope of use *v.* to restrict the movement of someone or something
121. a door with a la_____e frame *n.* an arrangement of points or particles in a regular, repeating pattern in two or three dimensions; a structure consisting of an ornamental design made of strips of wood or metal
122. u__o a belt *v.* to reverse the effect of an action or event, typically one that is recent or specific
123. r__l down his cheeks *v.* to move in a particular direction by turning over and over or from side to side
124. ac_____ic probation *adj.* associated with schools, colleges, and universities, especially studying and thinking, not with practical skills

ANSWERS: 116. cancer, 117. frontier, 118. intelligent, 119. microscopy, 120. confine, 121. lattice, 122. undo, 123. roll, 124. academic

125. in direct su____ht
n. the light emitted by the sun; the rays of the sun
126. a warm tr__l
n. a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular purpose; (verb) to lag or linger behind
127. fl____y infant
adj. not stiff or firm; hanging loosely
128. ro__y behavior
n. a person who behaves in a loud, rough, or disorderly manner, causing a disturbance or annoyance to others
129. college che_____er
n. a person who leads cheers and chants at organized sports events, typically wearing a uniform and performing choreographed routines
130. ad____ve technology
adj. capable of adjusting to new situations or changing conditions
131. sc_____le for support
v. to move or climb quickly and awkwardly, often using your hands to help you
132. vi____e stars
adj. capable of being seen; or open to easy view
133. treat the in_____on with antibiotics
n. a condition in which pathogenic microorganisms or viruses have entered the body
134. a ch____al compound
adj. relating to or connected with chemistry;
135. d__k drive
n. a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music

ANSWERS: 125. sunlight, 126. trail, 127. floppy, 128. rowdy, 129. cheerleader, 130. adaptive, 131. scramble, 132. visible, 133. infection, 134. chemical, 135. disk

136. a con_____nal style *adj.* based on or following traditional rules, standards, customs, etc.
137. a con_____ly varying mind *adv.* all the time
138. in___e other tissues *v.* to enter aggressively into another's territory by military force for conquest and occupation
139. la_____e ornament *n.* an arrangement of points or particles in a regular, repeating pattern in two or three dimensions; a structure consisting of an ornamental design made of strips of wood or metal
140. sq_____e a lemon *v.* to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness
141. di_____e cloud *adj.* spread out widely; not concentrated in one place
142. fr_____er disputes *n.* a border that separates two countries, or the area near this line
143. b__e array *n.* a unit of digital information that consists of 8 bits, typically used to represent a single character of text or a small amount of computer code
144. di___e the cake into two pieces *v.* to separate or cause to separate into parts or groups
145. car_____ate metabolism *n.* (also carb) any of a class of organic compounds that includes sugars, starch, and cellulose and are a principal source of energy in the diet of animals

ANSWERS: 136. conventional, 137. constantly, 138. invade, 139. lattice, 140. squeeze, 141. diffuse, 142. frontier, 143. byte, 144. divide, 145. carbohydrate

146. ob_____on with character *n.* the state in which a person's mind is filled with thoughts of one single object or particular person
147. in___t a computer with a virus *v.* to affect a person, an animal, or a plant with a disease-causing organism
148. the characters that re_____nt numbers *v.* to speak, act, or be present on behalf of another person or group; to form or constitute
149. space sh_____e *n.* a vehicle or boat that regularly moves between two places; bobbin that passes the weft thread between the warp threads
150. tu_____nt age *adj.* marked by a lot of sudden changes, confusion, or uncertainty; characterized by intense activity or agitation
151. int_____nt assisting system *adj.* having the capacity for thought and reason, especially to a high degree
152. spread of the vi___s *n.* a tiny infectious organic material that causes disease in people, animals, and plants
153. ou_____rt a conspiracy *v.* to defeat or best someone through cleverness, cunning, or intelligence, to prevail over someone by being smarter or more strategic
154. musical ins_____nts *n.* an object used to make musical sounds, such as a piano, guitar, or drum; a tool or device used for a specific activity, particularly in specialist or scientific work

ANSWERS: 146. obsession, 147. infect, 148. represent, 149. shuttle, 150. turbulent, 151. intelligent, 152. virus, 153. outsmart, 154. instrument

155. r__l a ball *v.* to move in a particular direction by turning over and over or from side to side
156. pa___l car *n.* the act of guarding an area or conducting surveillance of an area to maintain order, perform security functions, or prevent crime; a group of officers or soldiers that conducts such an operation
157. the country's is _____ on *n.* the condition of being alone or lonely; the act or state of separation between persons or groups
158. a binocular te_____pe *n.* a device like a tube in shape containing lenses used to magnify and observe distant objects
159. c__p their meal *v.* short for "compensate," meaning to give goods or services to someone without asking for payment
160. di_____t ancestors *adj.* far away in space, time, or where you are; far apart in relevance, relationship, or kinship
161. complex bio_____al *adj.* relating to the chemical processes and substances that occur within living organisms
162. phy_____cal response *adj.* relating to the normal functioning of living organisms and their organs and systems; concerning the physical or biochemical processes and activities that occur within the body
163. bio_____al reaction *adj.* relating to the chemical processes and substances that occur within living organisms

ANSWERS: 155. roll, 156. patrol, 157. isolation, 158. telescope, 159. comp, 160. distant, 161. biochemical, 162. physiological, 163. biochemical

164. c__p the employees with a bonus *v.* short for "compensate," meaning to give goods or services to someone without asking for payment
165. re____e a dispute *v.* to find a suitable answer to the problems or difficulty
166. ind_____lly designed product *adv.* separately or apart from others
167. a leave of ab____e *n.* the fact or condition of being away from a place where they are typically anticipated to be
168. phy_____cal activity *adj.* relating to the normal functioning of living organisms and their organs and systems; concerning the physical or biochemical processes and activities that occur within the body
169. the ul____te luxury *adj.* furthest or highest in degree or order
170. b__d the man's hands *v.* to tie or fasten someone or something tightly with rope, string, etc. so that they cannot move or are held together strongly
171. vi____ze flying through space *v.* to form a mental image or concept of something; to make something visible
172. a convivial atm_____re *n.* the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work
173. botanical ex____t *n.* a short passage taken from a book, piece of music, etc.; a substance obtained from something through a specific process; (verb) to obtain from something or to remove something by effort or force

ANSWERS: 164. comp, 165. resolve, 166. individually, 167. absence, 168. physiological, 169. ultimate, 170. bind, 171. visualize, 172. atmosphere, 173. extract

174. a te_____ue in martial arts *n.* a particular way or art of doing something that needs skill
175. vi_____ze data *v.* to form a mental image or concept of something; to make something visible
176. ev____e *v.* to develop gradually, or to cause the development of something or someone gradually
177. evolutionary bi_____y *n.* the scientific study of life and the natural processes of living things
178. neu_____il migration *n.* the most common type of white blood cell in the human body, which helps the immune system by attacking and destroying harmful foreign substances, such as bacteria and viruses
179. the sp__e of a book *n.* the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column
180. fiber op____s *n.* the academic study of vision and light
181. legal co_____t *n.* the circumstances, facts, or conditions that surround a particular event, situation, or statement and that give it meaning
182. pu__h a ticket *v.* to strike someone or something with one's fist; to make a hole in something
183. d_m-building program *n.* a wall constructed over a river to block the flow of water, mainly used to generate energy
184. small mo_____les *n.* a group of two or more atoms held together by attractive forces known as chemical bonds

ANSWERS: 174. technique, 175. visualize, 176. evolve, 177. biology, 178. neutrophil, 179. spine, 180. optics, 181. context, 182. punch, 183. dam, 184. molecule

185. ro____y explain my idea *adv.* approximately but not precisely; with a violent manner
186. ex_____te crafts *adj.* extremely beautiful and delicate
187. ma_____a ink *n.* a bright, purplish-red color named after a plant that was once used to produce a dye with a similar hue
188. in_____te nature *adj.* not having life or spirit; not animate
189. up_____e a co-star *v.* to distract attention from someone or something else, often intentionally; to move upstage in a theater, away from the audience, thus taking a more prominent position on the stage; (adverb) at or toward the rear of the stage
190. beauty s__t *n.* a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
191. an interstate hi_____y *n.* a main road, especially one connecting major towns or cities
192. naval ve___ls *n.* a ship or large boat
193. br___t cancer *n.* either of the two round soft parts of a woman's chest which secrete milk after childbirth
194. ab_____e from work *n.* the fact or condition of being away from a place where they are typically anticipated to be
195. developed sn_____ot *n.* an informal photograph, especially one taken quickly

ANSWERS: 185. roughly, 186. exquisite, 187. magenta, 188. inanimate, 189. upstage, 190. spot, 191. highway, 192. vessel, 193. breast, 194. absence, 195. snapshot

196. tra_____lly accepted concept *adv.* in accordance with tradition; typically or commonly done in a particular way
197. ro_____us infection *n.* a virus commonly causes gastroenteritis, an inflammation of the stomach and intestines, particularly in young children. It is spread via contaminated food, water, and surfaces
198. li___r in the mind *v.* to stay in a place or exist longer than expected
199. mat_____cs competition *n.* the science dealing with the logic of quantities, shapes, spaces, and arrangement
200. u__o changes *v.* to reverse the effect of an action or event, typically one that is recent or specific
201. em___o cloning *n.* an animal organism in the early stages of growth, either in its mother's womb or in an egg, or a plant that is developing in a seed
202. ze__a crossing *n.* a wild, horse-like mammal native to Africa with distinctive black-and-white stripes
203. high vo___e *n.* the amount of space occupied by an object or substance; the magnitude of sound
204. a facial ti___e *n.* an ensemble of similar cells of the animal or plant that together carry out a specific function
205. in___e his privacy *v.* to enter aggressively into another's territory by military force for conquest and occupation

ANSWERS: 196. traditionally, 197. rotavirus, 198. linger, 199. mathematics, 200. undo, 201. embryo, 202. zebra, 203. volume, 204. tissue, 205. invade

206. dy_____cs of group *n.* the branch of mechanics that deals with the motion of bodies under the action of forces, including the particular case in which a body remains at rest; forces that produce or stimulate movement, growth, or change
207. become ess_____ly same *adv.* relating to the essential features or concepts of anything
208. con_____us virus *adj.* able to be passed on to others through contact or proximity, especially by infection or disease
209. blood li__d profile *n.* any of a group of organic compounds, including fats, oils, and waxes, that are insoluble in water but soluble in organic solvents and are essential constituents of living cells
210. an ex_____d rock *adj.* having no protection or shield from something, such as bad weather, attack, or criticism
211. high st__k *n.* a pile of something arranged or laid one on top of another; a large tall chimney through which combustion gases and smoke can be evacuated
212. an int_____ary conference *adj.* involving or combining several academic disciplines or fields of study
213. ha___e a precious object *v.* to deal with a situation, problem, or strong emotion
214. con_____us enthusiasm *adj.* able to be passed on to others through contact or proximity, especially by infection or disease

ANSWERS: 206. dynamics, 207. essentially, 208. contagious, 209. lipid, 210. exposed, 211. stack, 212. interdisciplinary, 213. handle, 214. contagious

215. surgical ins_____nts *n.* an object used to make musical sounds, such as a piano, guitar, or drum; a tool or device used for a specific activity, particularly in specialist or scientific work
216. the glow of a fi_____y *n.* a flying nocturnal insect common in warm regions with a tail that shines in the dark
217. amateur ast_____er *n.* a physicist who studies astronomy
218. en_____er shortage *n.* a person whose job is designing, building, or maintaining something such as machines, structures, or software
219. e__t air pollution *v.* to give off or send out something such as light, heat, sound, gas, etc.
220. industry-sp_____ic regulations *adj.* clearly defined or particular to a certain thing or situation; distinct, explicit, and precise
221. c__w marks *n.* a curved, pointed appendage found on the foot or leg of an animal, used for gripping or grasping; a human hand with long, narrow fingers that are curved like a claw; a machine or tool with a claw-like opening used for gripping or lifting objects
222. universal es_____e *n.* the basic or most important part or quality of something that makes it what it is
223. wi__y eloquence *adj.* characterized by or affected by strong winds; of or relating to the wind; describing a person who talks a lot, often in an exaggerated way or without saying much substance

ANSWERS: 215. instrument, 216. firefly, 217. astronomer, 218. engineer, 219. emit, 220. specific, 221. claw, 222. essence, 223. windy

224. d__p the gravel on the road *v.* to deposit or dispose of something, such as trash, waste, etc., carelessly or hurriedly
225. a large st__k of paper *n.* a pile of something arranged or laid one on top of another; a large tall chimney through which combustion gases and smoke can be evacuated
226. chaotic env_____nt *n.* the natural world such as air, water, and land in which humans, animals, and plants live
227. charged pa_____le *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
228. a tr_____on of a culture *n.* a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society
229. com_____on number *n.* a collection of things that have been combined; an assemblage of separate parts or qualities
230. no_____it agency *adj.* not established for commercial profit
231. str_____ard manner *adj.* easy to do or understand, or simple; free from ambiguity
232. co_____e themselves solely *v.* to restrict the movement of someone or something
233. mic_____pe slide *n.* an instrument used to see objects or substances that are too small to be seen with the naked eye
234. col_____te with the police *v.* to work with someone else to produce or achieve something

ANSWERS: 224. dump, 225. stack, 226. environment, 227. particle, 228. tradition, 229. combination, 230. nonprofit, 231. straightforward, 232. confine, 233. microscope, 234. collaborate

235. a few minutes of co_____on	<i>n.</i> a state of confused and noisy disturbance
236. plant pa_____en	<i>n.</i> a bacterium, virus, or other microorganism that causes disease
237. env_____nt affairs	<i>n.</i> the natural world such as air, water, and land in which humans, animals, and plants live
238. l_b instrument	<i>n.</i> a workplace for the conduct of scientific research; a laboratory
239. fun_____al rights	<i>adj.</i> forming an essential base or core from which everything else develops or is affected
240. stress pr_____n	<i>n.</i> a molecule made up of a long chain of amino acids, which is essential for the structure and function of the body's tissues
241. a strain of vi___s	<i>n.</i> a tiny infectious organic material that causes disease in people, animals, and plants
242. field of gene th_____y	<i>n.</i> the act of caring for someone through medication, remedial training, etc.
243. answer questions ind_____lly	<i>adv.</i> separately or apart from others
244. im_____nt security measures	<i>v.</i> to put a decision, plan, or system into effect
245. di_____e bleeding	<i>adj.</i> spread out widely; not concentrated in one place
246. loss of muscle ti___e	<i>n.</i> an ensemble of similar cells of the animal or plant that together carry out a specific function

ANSWERS: 235. commotion, 236. pathogen, 237. environment, 238. lab, 239. fundamental, 240. protein, 241. virus, 242. therapy, 243. individually, 244. implement, 245. diffuse, 246. tissue

247. ver_____te biology *adj.* relating to animals that have a backbone or spinal column, such as mammals, birds, reptiles, amphibians, and fish
248. mi_____te a natural disaster *v.* to make less severe or less intense; to alleviate or lessen the adverse effects of something
249. c__w hammer *n.* a curved, pointed appendage found on the foot or leg of an animal, used for gripping or grasping; a human hand with long, narrow fingers that are curved like a claw; a machine or tool with a claw-like opening used for gripping or lifting objects
250. fu__y logic *adj.* having a soft and indistinct outline or covered with fine, soft, and hairlike fibers
251. di___e money equally *v.* to separate or cause to separate into parts or groups
252. not no_____ly drink much *adv.* usually; under normal conditions
253. ze__a pattern *n.* a wild, horse-like mammal native to Africa with distinctive black-and-white stripes
254. make a str_____ard dash *adj.* easy to do or understand, or simple; free from ambiguity
255. the ul_____te goal in life *adj.* furthest or highest in degree or order
256. the crosswise di_____on *n.* a measurable extent of a particular kind, such as width, height, or length

ANSWERS: 247. vertebrate, 248. mitigate, 249. claw, 250. fuzzy, 251. divide, 252. normally, 253. zebra, 254. straightforward, 255. ultimate, 256. dimension

257. an in_____le asset *adj.* impossible or nearly impossible to see
258. historical co_____t *n.* the circumstances, facts, or conditions that surround a particular event, situation, or statement and that give it meaning
259. ca__n crew *n.* a small, simple dwelling or shelter, typically made of wood and located in a remote or rural area; an enclosed compartment or area within a larger structure, such as an aircraft or ship, where passengers or crew members can sit or sleep
260. genic com_____ons *n.* a collection of things that have been combined; an assemblage of separate parts or qualities
261. ca_____e customers' hearts *v.* to catch a person or an animal and confine them in an area which they cannot escape
262. a bacterial in_____on *n.* a condition in which pathogenic microorganisms or viruses have entered the body
263. the te_____ue applied to construction *n.* a particular way or art of doing something that needs skill
264. mi_____e a service *v.* to move from one country or region to another and settle there; to move from one place to another periodically or seasonally
265. ou_____rt the competition *v.* to defeat or best someone through cleverness, cunning, or intelligence, to prevail over someone by being smarter or more strategic

ANSWERS: 257. invisible, 258. context, 259. cabin, 260. combination, 261. capture, 262. infection, 263. technique, 264. migrate, 265. outsmart

266. in___t other animal species *v.* to affect a person, an animal, or a plant with a disease-causing organism
267. fun_____al education *adj.* forming an essential base or core from which everything else develops or is affected
268. an ac_____ic discussion *adj.* associated with schools, colleges, and universities, especially studying and thinking, not with practical skills
269. ce_____ar and molecular biology *adj.* of or connected with the cells of animals or plants; of or connected with a mobile telephone system that uses several short-range radio stations instead of wires
270. b__d old letters into a bundle *v.* to tie or fasten someone or something tightly with rope, string, etc. so that they cannot move or are held together strongly
271. bacteria on pe__i dishes *n.* (petri dish) a small, clear, and round dish with a lid used in laboratories, especially for growing bacteria
272. cr__l away from a car *v.* to move forward slowly, as people or animals with their bodies near the ground
273. cutting-edge inn_____on *n.* the creation of a new device or process resulting from study and experimentation
274. 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

ANSWERS: 266. infect, 267. fundamental, 268. academic, 269. cellular, 270. bind, 271. petri, 272. crawl, 273. innovation, 274. process

275. a di_____t memory *adj.* far away in space, time, or where you are; far apart in relevance, relationship, or kinship
276. mo_____le behavior *n.* a group of two or more atoms held together by attractive forces known as chemical bonds
277. dem_____te a difference *v.* to display something or give an exhibition to an interested audience
278. in_____le stars *adj.* impossible or nearly impossible to see
279. fl_____y hat *adj.* not stiff or firm; hanging loosely
280. ad_____e a cooperative relationship *v.* to go or move forward; to develop in a positive way
281. da_____e a relationship *v.* to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity
282. col_____te on a press release *v.* to work with someone else to produce or achieve something
283. vi_____e by X-ray *adj.* capable of being seen; or open to easy view
284. a tra_____nt lie *adj.* easy to perceive, detect, or understand; (of a material or article) permitting light to pass through freely
285. equ_____nt in meaning *n.* having the same value, quality, meaning, purpose, etc.

ANSWERS: 275. distant, 276. molecule, 277. demonstrate, 278. invisible, 279. floppy, 280. advance, 281. damage, 282. collaborate, 283. visible, 284. transparent, 285. equivalent

286. toxic ch____als *adj.* relating to or connected with chemistry;
287. sparkle like fi____y *n.* a flying nocturnal insect common in warm regions with a tail that shines in the dark
288. celebrity pa_____zi *n.* (plural of "paparazzo") a group of freelance photographers who doggedly follow, often aggressively, celebrities, public figures, or socialites to take their photographs in the hope of selling them to newspapers, magazines, or media outlets
289. clinical mic_____py *n.* the scientific study of small structures or substances using microscopes, including the anatomical, physiological, and pathological aspects of cells, tissues, and organs
290. vanilla es_____e *n.* the basic or most important part or quality of something that makes it what it is
291. a_t bite *n.* a very small insect that lives under the ground or in a mound in highly organized groups
292. pa_____le energy *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
293. mo_____ar structure *adj.* of or relating to molecules (= a group of two or more atoms held together by attractive forces known as chemical bonds)

ANSWERS: 286. chemical, 287. firefly, 288. paparazzi, 289. microscopy, 290. essence, 291. ant, 292. particle, 293. molecular

294. sq_____e a confession *v.* to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness
295. take a sn_____ot *n.* an informal photograph, especially one taken quickly
296. tra_____nt crystal *adj.* easy to perceive, detect, or understand; (of a material or article) permitting light to pass through freely
297. break dis_____ne *n.* the practice of training people to obey rules or a code of behavior, using and punishments if these are broken; a region of activity, knowledge, or influence
298. tr_____on cubic feet *n.* the number 1,000,000,000,000; a million million
299. th_____y for a patient *n.* the act of caring for someone through medication, remedial training, etc.
300. spread of ro_____us *n.* a virus commonly causes gastroenteritis, an inflammation of the stomach and intestines, particularly in young children. It is spread via contaminated food, water, and surfaces
301. the cell of the im_____e system *adj.* protected against a particular disease or toxin due to the presence of specific antibodies or sensitized white blood cells
302. 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

ANSWERS: 294. squeeze, 295. snapshot, 296. transparent, 297. discipline, 298. trillion, 299. therapy, 300. rotavirus, 301. immune, 302. planet

303. im_____nt a corporate strategy

v. to put a decision, plan, or system into effect

304. is_____on booth

n. the condition of being alone or lonely; the act or state of separation between persons or groups

ANSWERS: 303. implement, 304. isolation

Session 3: Fill in the Blanks

1. An infected person in the hospital will likely pass the _____ to others.
n. a tiny infectious organic material that causes disease in people, animals, and plants
2. This chemical compound is a thousand-fold more _____.
adj. of or relating to or caused by a poison; poisonous
3. Internet traffic volumes have increased significantly with the advent of _____.
n. a mobile phone that functions as a computer and connects to the Internet
4. The _____ pattern on the fence allowed the vines to climb up and create a natural privacy screen.
n. an arrangement of points or particles in a regular, repeating pattern in two or three dimensions; a structure consisting of an ornamental design made of strips of wood or metal
5. Direct lighting is preferable to _____ lighting when reading.
adj. spread out widely; not concentrated in one place
6. The company _____ him after several years of service.
v. to deposit or dispose of something, such as trash, waste, etc., carelessly or hurriedly
7. The musician's incredible solo momentarily _____ the lead singer.
v. to distract attention from someone or something else, often intentionally; to move upstage in a theater, away from the audience, thus taking a more prominent position on the stage; (adverb) at or toward the rear of the stage

ANSWERS: 1. virus, 2. toxic, 3. smartphones, 4. lattice, 5. diffuse, 6. dumped, 7. upstaged

8. Another critical factor of child poverty is the father's _____.
- n.* the fact or condition of being away from a place where they are typically anticipated to be
9. _____ the ceremony was held outdoors.
- adv.* in accordance with tradition; typically or commonly done in a particular way
10. He was exhausted and _____ into bed as soon as he got home.
- v.* to move in a particular direction by turning over and over or from side to side
11. The bear used its _____ to catch a fish in the river.
- n.* a curved, pointed appendage found on the foot or leg of an animal, used for gripping or grasping; a human hand with long, narrow fingers that are curved like a claw; a machine or tool with a claw-like opening used for gripping or lifting objects
12. The defendant gave a _____ and accurate description of the accident.
- adj.* easy to do or understand, or simple; free from ambiguity
13. It is a _____ in many families to have a big Thanksgiving dinner with all their relatives.
- n.* a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society
14. This container has a _____ of 10 cubic meters.
- n.* the amount of space occupied by an object or substance; the magnitude of sound
15. The sun set over the crest of _____ hills.
- adj.* far away in space, time, or where you are; far apart in relevance, relationship, or kinship

ANSWERS: 8. absence, 9. Traditionally, 10. rolled, 11. claw, 12. straightforward, 13. tradition, 14. volume, 15. distant

16. Each department has done its product costing _____.
- adv.* separately or apart from others
17. The computer hard drive had plenty of storage space but was running low on available _____.
- n.* a unit of digital information that consists of 8 bits, typically used to represent a single character of text or a small amount of computer code
18. The artist used _____ paint to make her painting pop with color.
- n.* a bright, purplish-red color named after a plant that was once used to produce a dye with a similar hue
19. She _____ the toothpaste tube from the middle to get the last bit out.
- v.* to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness
20. Hospitals must meet various standards to prevent nosocomial _____.
- n.* a condition in which pathogenic microorganisms or viruses have entered the body
21. Five miles is _____ similar to eight kilometers.
- adv.* approximately but not precisely; with a violent manner
22. He quickly learned the military _____.
- n.* the practice of training people to obey rules or a code of behavior, using and punishments if these are broken; a region of activity, knowledge, or influence
23. The stock market has been _____ lately, with prices fluctuating rapidly.
- adj.* marked by a lot of sudden changes, confusion, or uncertainty; characterized by intense activity or agitation

ANSWERS: 16. individually, 17. bytes, 18. magenta, 19. squeezed, 20. infections, 21. roughly, 22. discipline, 23. turbulent

24. 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
25. This electronic _____ is required to undergo periodic inspections to ensure precision.
- n.* an object used to make musical sounds, such as a piano, guitar, or drum; a tool or device used for a specific activity, particularly in specialist or scientific work
26. Eyeless fish _____ in dark caves.
- v.* to develop gradually, or to cause the development of something or someone gradually
27. He worked at the _____ of behavioral economics.
- n.* a border that separates two countries, or the area near this line
28. The weather is too _____ for us to go on a boat ride.
- adj.* characterized by or affected by strong winds; of or relating to the wind; describing a person who talks a lot, often in an exaggerated way or without saying much substance
29. He grilled the _____ meat of a chicken.
- n.* either of the two round soft parts of a woman's chest which secrete milk after childbirth
30. Gambling became an _____ for him, and he eventually lost everything.
- n.* the state in which a person's mind is filled with thoughts of one single object or particular person

ANSWERS: 24. process, 25. instrument, 26. evolved, 27. frontier, 28. windy, 29. breast, 30. obsession

31. I'm going to take the _____ to get to my destination faster.
n. a main road, especially one connecting major towns or cities
32. The company's rules _____ the employee's working hours.
v. to tie or fasten someone or something tightly with rope, string, etc. so that they cannot move or are held together strongly
33. My home is easily _____ from the shore.
adj. capable of being seen; or open to easy view
34. This question has fascinated solar _____ for decades.
n. a physicist who studies astronomy
35. The _____ will repair my telephone tomorrow morning.
n. a person whose job is designing, building, or maintaining something such as machines, structures, or software
36. The mobile application industry is _____ changing.
adv. all the time
37. The puppy's ears were still too long and _____ for its head.
adj. not stiff or firm; hanging loosely
38. Management must take _____ responsibility for the accident.
adj. furthest or highest in degree or order
39. Local business owners _____ to find skilled workers.
v. to move or climb quickly and awkwardly, often using your hands to help you

ANSWERS: 31. highway, 32. bind, 33. visible, 34. astronomers, 35. engineer, 36. constantly, 37. floppy, 38. ultimate, 39. scrambled

40. The _____ to the safe was a secret.

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

41. The spaceship began to burn up as it approached the Earth's _____.

n. the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work

42. _____ weight is the sum of all the atoms.

adj. of or relating to molecules (= a group of two or more atoms held together by attractive forces known as chemical bonds)

43. Anesthetize the gum before _____ the teeth.

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

44. Along the gravel roads, sizeable yellow school buses _____.

v. to move forward slowly, as people or animals with their bodies near the ground

45. The symptoms of _____ include diarrhea, vomiting, and fever.

n. a virus commonly causes gastroenteritis, an inflammation of the stomach and intestines, particularly in young children. It is spread via contaminated food, water, and surfaces

46. The company offered to _____ the employees for the overtime they worked.

v. to make up for a loss, injury, or inconvenience by giving something of value

47. 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

ANSWERS: 40. combination, 41. atmosphere, 42. Molecular, 43. extracting, 44. crawl, 45. rotavirus, 46. compensate, 47. planet

48. The _____ learning system adjusts the difficulty level of the lessons based on the student's performance.

adj. capable of adjusting to new situations or changing conditions

49. This factory employs a _____ manufacturing system.

adj. of or connected with the cells of animals or plants; of or connected with a mobile telephone system that uses several short-range radio stations instead of wires

50. We must _____ a new system to streamline our workflow and increase efficiency.

v. to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created

51. The European Central Bank is Europe's _____ of the Federal Reserve.

n. having the same value, quality, meaning, purpose, etc.

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

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

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

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

54. University teaches the art of understanding the _____ of the matter.

n. the basic or most important part or quality of something that makes it what it is

55. Glass _____ dishes are used to culture microorganisms.

n. (petri dish) a small, clear, and round dish with a lid used in laboratories, especially for growing bacteria

ANSWERS: 48. adaptive, 49. cellular, 50. develop, 51. equivalent, 52. emits, 53. transition, 54. essence, 55. petri

56. High levels of _____ can indicate an infection or inflammation in the body.
- n.* the most common type of white blood cell in the human body, which helps the immune system by attacking and destroying harmful foreign substances, such as bacteria and viruses
57. I accidentally deleted the file, so can you _____ that action?
- v.* to reverse the effect of an action or event, typically one that is recent or specific
58. Einstein's new _____ theory transformed traditional scientific notions about light.
- n.* the academic study of vision and light
59. The soccer players fought for control of the _____ during the game.
- n.* a layer of grass and soil covering a particular area of land, especially used as a playing surface in sports or as a lawn
60. This remote _____ is rarely visited.
- n.* a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
61. These economic activities had disastrous environmental _____.
- n.* the outcome of a particular action or event, especially relative to an individual
62. _____ robots that can cooperate with humans have limited motor output for safety.
- adj.* having the capacity for thought and reason, especially to a high degree
63. The shape of the DNA _____ is a double helix.
- n.* a group of two or more atoms held together by attractive forces known as chemical bonds

ANSWERS: 56. neutrophils, 57. undo, 58. optics, 59. turf, 60. spot, 61. consequences, 62. Intelligent, 63. molecule

64. The highway _____ officer pulled over the speeding vehicle on the freeway.
n. the act of guarding an area or conducting surveillance of an area to maintain order, perform security functions, or prevent crime; a group of officers or soldiers that conducts such an operation
65. The sun was setting, and the sky _____ with beautiful colors.
v. to give out a steady, strong light
66. I don't _____ take a vacation in the middle of summer.
adv. usually; under normal conditions
67. She was the captain of the _____ squad in high school.
n. a person who leads cheers and chants at organized sports events, typically wearing a uniform and performing choreographed routines
68. The focus of these initiatives is to make the financial system more _____.
adj. easy to perceive, detect, or understand; (of a material or article) permitting light to pass through freely
69. Foods high in _____ include bread, pasta, and rice.
n. (also carb) any of a class of organic compounds that includes sugars, starch, and cellulose and are a principal source of energy in the diet of animals
70. The firm has grown into a large _____ manufacturing.
adj. relating to or connected with chemistry;
71. The casino _____ her room and meals for being a high-rolling gambler.
v. short for "compensate," meaning to give goods or services to someone without asking for payment

ANSWERS: 64. patrol, 65. glowed, 66. normally, 67. cheerleader, 68. transparent, 69. carbohydrates, 70. chemical, 71. comped

72. Our law firm also focuses on _____ activities.

adj. not established for commercial profit

73. 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

74. 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

75. The _____ approach to solving the problem involved experts from multiple fields working together.

adj. involving or combining several academic disciplines or fields of study

76. The animal was _____ in a small cage.

v. to restrict the movement of someone or something

77. Radiation from _____ has a different wavelength.

n. the light emitted by the sun; the rays of the sun

78. Our latest project is still at the _____ stage.

n. an animal organism in the early stages of growth, either in its mother's womb or in an egg, or a plant that is developing in a seed

79. Overall _____ are approximately 400x200mm.

n. a measurable extent of a particular kind, such as width, height, or length

80. One light year is nearly 6 _____ miles.

n. the number 1,000,000,000,000; a million million

ANSWERS: 72. nonprofit, 73. computation, 74. complexity, 75. interdisciplinary, 76. confined, 77. sunlight, 78. embryo, 79. dimensions, 80. trillion

81. mRNA vaccines are approved faster because they do not contain inactivated _____.
- n.* a bacterium, virus, or other microorganism that causes disease
82. The presence of a backbone is a defining characteristic of _____ animals.
- adj.* relating to animals that have a backbone or spinal column, such as mammals, birds, reptiles, amphibians, and fish
83. I was able to _____ the moment on film.
- v.* to catch a person or an animal and confine them in an area which they cannot escape
84. That incident led to his _____.
- n.* the condition of being alone or lonely; the act or state of separation between persons or groups
85. _____ research is essential to understanding the complex chemical reactions in living organisms.
- adj.* relating to the chemical processes and substances that occur within living organisms
86. The scientist conducted a study that provided _____ details about the species' behavior.
- adj.* clearly defined or particular to a certain thing or situation; distinct, explicit, and precise
87. The _____ arrived in port the following day.
- n.* a ship or large boat
88. The _____ crowd at the concert caused a disturbance and had to be escorted out by security.
- n.* a person who behaves in a loud, rough, or disorderly manner, causing a disturbance or annoyance to others

ANSWERS: 81. pathogens, 82. vertebrate, 83. capture, 84. isolation, 85. Biochemical, 86. specific, 87. vessel, 88. rowdy

89. The researcher separated the nervous _____ for microscopic examinations.
- n.* an ensemble of similar cells of the animal or plant that together carry out a specific function
90. The Prime Minister will pay a courtesy visit to the Nobel laureate's ____.
- n.* a workplace for the conduct of scientific research; a laboratory
91. I underwent aversion _____ for my addiction to alcohol.
- n.* the act of caring for someone through medication, remedial training, etc.
92. In that country, there is a culture of eating live _____ squid.
- n.* a flying nocturnal insect common in warm regions with a tail that shines in the dark
93. He _____ the wall in anger.
- v.* to strike someone or something with one's fist; to make a hole in something
94. Omega-3 fatty acids, found in foods like fish and nuts, are a type of _____ that is good for heart health.
- n.* any of a group of organic compounds, including fats, oils, and waxes, that are insoluble in water but soluble in organic solvents and are essential constituents of living cells
95. The vegetarian burger was an _____ that quickly spread to the United Kingdom.
- n.* the creation of a new device or process resulting from study and experimentation
96. The body needs a certain amount of _____ to build and repair tissues.
- n.* a molecule made up of a long chain of amino acids, which is essential for the structure and function of the body's tissues

ANSWERS: 89. tissue, 90. lab, 91. therapy, 92. firefly, 93. punched, 94. lipid, 95. innovation, 96. protein

97. The _____ object was not capable of movement or feeling.

adj. not having life or spirit; not animate

98. The picture was _____ because it was taken with an old camera.

adj. having a soft and indistinct outline or covered with fine, soft, and hairlike fibers

99. Can you _____ 123321 by eleven?

v. to separate or cause to separate into parts or groups

100. There were framed _____ of family and friends in her room.

n. an informal photograph, especially one taken quickly

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

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

102. The path to a solid online _____ necessitates a high technical ability.

n. the fact or state that someone or something exists, occurs, or is present

103. I have no intention to _____ your privacy.

v. to enter aggressively into another's territory by military force for conquest and occupation

104. We can find many large _____ mounds in this area.

n. a very small insect that lives under the ground or in a mound in highly organized groups

105. The doctor explained the various _____ changes that occur during pregnancy.

adj. relating to the normal functioning of living organisms and their organs and systems; concerning the physical or biochemical processes and activities that occur within the body

ANSWERS: 97. inanimate, 98. fuzzy, 99. divide, 100. snapshots, 101. represent, 102. presence, 103. invade, 104. ant, 105. physiological

106. The earthquake caused a _____ of lumber to crumble noisily.

n. a pile of something arranged or laid one on top of another; a large tall chimney through which combustion gases and smoke can be evacuated

107. We can calculate the position of the _____ statistically.

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

108. Many Germans _____ to South America in the mid-19th century.

v. to move from one country or region to another and settle there; to move from one place to another periodically or seasonally

109. The relationship _____ between the two countries were complex and constantly changing.

n. the branch of mechanics that deals with the motion of bodies under the action of forces, including the particular case in which a body remains at rest; forces that produce or stimulate movement, growth, or change

110. The disease is highly _____ and spreads quickly.

adj. able to be passed on to others through contact or proximity, especially by infection or disease

111. In junior high school, we had to dissect a frog in _____ class.

n. the scientific study of life and the natural processes of living things

112. He has a flair for _____.

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

113. The actress had to hire security to fend off the relentless _____ outside her home.

n. (plural of "paparazzo") a group of freelance photographers who doggedly follow, often aggressively, celebrities, public figures, or socialites to take their photographs in the hope of selling them to newspapers, magazines, or media outlets

ANSWERS: 106. stack, 107. particles, 108. migrated, 109. dynamics, 110. contagious, 111. biology, 112. mathematics, 113. paparazzi

114. Every human is responsible for taking care of the Earth's _____.
- n.* the natural world such as air, water, and land in which humans, animals, and plants live
115. The break in the ____ threatened the valley.
- n.* a wall constructed over a river to block the flow of water, mainly used to generate energy
116. Breast _____ is the most common type of cancer in women.
- n.* abnormal growth of cells that can invade and destroy surrounding tissues and organs; a disease characterized by the uncontrolled growth and spread of abnormal cells
117. We can hear an _____ piano melody from his room.
- adj.* extremely beautiful and delicate
118. The phenomenon is _____ at optical wavelengths.
- adj.* impossible or nearly impossible to see
119. She _____ for a moment before leaving the room.
- v.* to stay in a place or exist longer than expected
120. We all should learn how to _____ stress.
- v.* to deal with a situation, problem, or strong emotion
121. This facility has the largest astronomical _____ in the country.
- n.* a device like a tube in shape containing lenses used to magnify and observe distant objects

ANSWERS: 114. environment, 115. dam, 116. cancer, 117. exquisite, 118. invisible, 119. lingered, 120. handle, 121. telescope

122. He could _____ his opponents with his quick thinking and strategic planning.

- v. to defeat or best someone through cleverness, cunning, or intelligence, to prevail over someone by being smarter or more strategic

123. _____ a society is an organism.

- adv. relating to the essential features or concepts of anything

124. Efforts to _____ the effects of climate change require a coordinated and sustained effort by governments, businesses, and individuals.

- v. to make less severe or less intense; to alleviate or lessen the adverse effects of something

125. The camera's focus was off, and the image was a _____ of colors and shapes.

- n. a faint or indistinct image or sound; something that is not clear or distinct; (verb) to become unclear; to lose clear vision

126. During the surgery, the doctor had to be extremely cautious not to _____ a blood vessel.

- v. to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity

127. How can you _____ that the earth is a sphere?

- v. to display something or give an exhibition to an interested audience

128. An excellent historian must possess an _____ mentality.

- adj. associated with schools, colleges, and universities, especially studying and thinking, not with practical skills

ANSWERS: 122. outsmart, 123. Essentially, 124. mitigate, 125. blur, 126. damage, 127. demonstrate, 128. academic

129. Human behavior has _____ characteristics.

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

130. The _____ in the classroom made it hard for the teacher to teach.

n. a state of confused and noisy disturbance

131. Children often _____ parents with this head cold.

v. to affect a person, an animal, or a plant with a disease-causing organism

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

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

133. The storm left a _____ of destruction behind it.

n. a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular purpose; (verb) to lag or linger behind

134. Scientific knowledge will _____ significantly with the power of AI.

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

135. The scientist used a _____ technique to study the cells at a microscopic level.

n. the scientific study of small structures or substances using microscopes, including the anatomical, physiological, and pathological aspects of cells, tissues, and organs

136. Jockey's superior _____ brought him victory.

n. a particular way or art of doing something that needs skill

ANSWERS: 129. fundamental, 130. commotion, 131. infect, 132. disk, 133. trail, 134. advance, 135. microscopy, 136. technique

137. This company _____ its battery problem completely.

v. to find a suitable answer to the problems or difficulty

138. She is very _____ in her thoughts.

adj. based on or following traditional rules, standards, customs, etc.

139. She tried to _____ the layout of the new house in her mind.

v. to form a mental image or concept of something; to make something visible

140. The government promised to _____ a new system to control the financial crisis.

v. to put a decision, plan, or system into effect

141. She agreed to _____ with him in creating new artwork.

v. to work with someone else to produce or achieve something

142. Her research team made an important _____.

n. the act or process of finding information, a place, or an object, or learning about something that was previously not known

143. Tech companies often employ _____ ducts and other materials in their office interiors.

adj. having no protection or shield from something, such as bad weather, attack, or criticism

144. I used an optical _____ to observe the small organisms in the water sample.

n. an instrument used to see objects or substances that are too small to be seen with the naked eye

ANSWERS: 137. resolves, 138. conventional, 139. visualize, 140. implement, 141. collaborate, 142. discovery, 143. exposed, 144. microscope

145. The quaint _____ in the woods was the perfect retreat for a weekend getaway.

- n.* a small, simple dwelling or shelter, typically made of wood and located in a remote or rural area; an enclosed compartment or area within a larger structure, such as an aircraft or ship, where passengers or crew members can sit or sleep

146. The president began to _____ an army.

- v.* to collect in one place as a single group

147. The _____ bus will take you to the airport in 15 minutes.

- n.* a vehicle or boat that regularly moves between two places; bobbin that passes the weft thread between the warp threads

148. It's important to understand the _____ of a situation before making a decision.

- n.* the circumstances, facts, or conditions that surround a particular event, situation, or statement and that give it meaning

149. The _____ distinctive black and white stripes help it blend into its surroundings in the wild.

- n.* a wild, horse-like mammal native to Africa with distinctive black-and-white stripes

150. _____ species have drastically altered the ecosystem in this area.

- n.* a person who comes from a different country, race, or group; a form of life assumed to exist outside the Earth or its atmosphere

151. She has a minor curved _____ due to desk work for many years.

- n.* the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column

ANSWERS: 145. cabin, 146. assemble, 147. shuttle, 148. context, 149. zebra's, 150. Alien, 151. spine

152. The vaccination does not necessarily make you completely _____.

adj. protected against a particular disease or toxin due to the presence of specific antibodies or sensitized white blood cells

ANSWERS: 152. immune