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Vocabulary Builder Reference from...

Karl Skjonnemand: The self-assembling computer chips of the future | TED Talk https://www.ted.com/talks/karl_skjonnemand_the_self _assembling_computer_chips_of_the_future



All Words

IMPORTANT

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Session 1: Word List

wrist

n. the joint between the hand and the forearm; the narrow part of the hand near this joint

synonym: carpus

(1) **wrist** bones, (2) glance at my **wrist** watch He sprained his **wrist** while playing basketball.

implant

v. to insert or fix an artificial device in a person's body; to put an idea, attitude, etc., firmly in the mind

synonym: insert, fix, place

(1) **implant** genes in the animals, (2) **implant** into the uterus The doctor will **implant** a pacemaker to regulate his heart rate.

miniature

adj. being on a very small scalesynonym: mini, scaled-down, pint-sized

(1) **miniature** camera, (2) **miniature** version

He did complicated pen-and-ink drawings like medieval **miniatures**.

transistor

 a semiconductor device that can be used to amplify or switch electronic signals and power which is an essential component in modern electronics

synonym: semiconductor, microchip, circuit

(1) transistor radio, (2) transistor circuit

The invention of the **transistor** revolutionized the field of electronics.

circuit

 (in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area

synonym: route, course, rotation

(1) circuit breaker, (2) federal circuit courts

An intelligent battery has a voltage monitoring circuit.

achieve

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

synonym: accomplish, attain, reach

(1) achieve success, (2) achieve milestones

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

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.

breakthrough

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

synonym: advance, progress, innovation

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

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

engineer

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.

invest

v. to put money, effort, time, etc. into something to make a profit or achieve a result

synonym: fund, sponsor, support

(1) **invest** in stocks, (2) **invest** capital

The government should view children as national assets and actively **invest** in them.

vast

adj. enormous in size, number, amount, or quantity *synonym*: expansive, extended, boundless

(1) vast majority, (2) vast desert

A vast audience viewed the broadcast.

compute

v. to make a mathematical calculation

synonym: calculate

(1) **compute** an average score, (2) **compute** the value I tried to **compute** the efficiency of the investment.

digital

adj. processing or storing information as a succession of 1 and 0 to show that a signal is present or missing; relating to the use of computer technology, especially the internet

synonym: numerical, computerized, cyber

(1) a **digital** watch, (2) **digital** electronic signature Sensors convert physical phenomena into **digital** signals.

revolution

a large-scale attempt to overthrow the government of a country, often using violence or war;

synonym: coup, innovation, rebellion

(1) beginning of the industrial **revolution**, (2) a political **revolution**

The **revolution** by the citizen resulted in a redistribution of wealth.

roadblock

 a physical barrier or obstacle that prevents progress or movement; a situation that impedes progress or creates difficulty in achieving a goal or objective

synonym: obstacle, barrier, blockade

biological roadblock, (2) bypass roadblock
 The accident caused a roadblock on the highway, causing

traffic to come to a standstill.

innovation

 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.

software

 a set of computer programs and associated documentation and data for doing particular computational jobs

synonym: program, system, operating system

(1) **software** architect, (2) copyrighted **software**

The company specializes in both hardware and **software**.

relentless

adj. persistent and determined; continuing despite difficulties or setbacks

synonym: unyielding, tireless, unremitting

(1) **relentless** attack, (2) face **relentless** pressure

The athlete's **relentless** training paid off in the end.

intelligence

 the ability to learn, comprehend, or make judgments or conclusions based on reasons

synonym: brains, brightness, cleverness

(1) an **intelligence** test, (2) field of artificial **intelligence** In terms of **intelligence**, he was head and shoulders above his classmates.

device

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

synonym: gadget, instrument, tool

(1) electronic device, (2) tracking device

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

regularly

adv. at regular intervals or times

synonym: repeatedly, routinely, usually

(1) regularly arranged, (2) post regularly to a blog

This site **regularly** shares high-quality academic materials.

facial

adj. of or relating to a person's face

synonym: forward, front, surface

(1) facial nerve, (2) facial expressions

Facial profiling is a new form of airport security.

recognition

 the action or process of recognizing or being recognized, especially by remembering; an agreement that something is true or legal

synonym: acknowledgement, identification, credit

(1) recognition award, (2) joint recognition

He was given **recognition** for his outstanding work in the field of medicine.

augment

v. to increase the size, extent, quantity, etc. of something by adding something to it

synonym: boost, increase, expand

(1) augment the reality, (2) augment immunity

Economic factors and monetary policy **augmented** inflation.

treacherous

adj. that cannot be trusted; malicious; hazardous, even while seeming safe

synonym: dangerous, unfaithful, disloyal

(1) treacherous territory, (2) treacherous act

Due to snow and ice, many roads have become **treacherous**, and motorists are advised to travel gently.

chaotic

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

synonym: disorderly, cluttered, topsy-turvy

(1) the **chaotic** economic situation, (2) **chaotic** theory Change is also occurring in Turkey as a result of **chaotic** reform.

amazing

adj. extremely surprising, especially in a way that you like or admire

synonym: exceptional, extraordinary, wonderful

(1) **amazing** advances, (2) the most **amazing** feeling. The golfer recorded an **amazing** distance.

appetite

 a natural desire or craving for food or drink; a strong desire or liking for something

synonym: hunger, appetite, craving

(1) **appetite** suppression, (2) loss of **appetite**After a long hike, I had a huge **appetite** and devoured my meal in minutes.

hardware

 durable tools, machinery, and other equipment; the physical and electronic parts of a computer or other electronic systems

synonym: gear, apparatus, gadget

(1) the **hardware** department, (2) a vast inventory of **hardware**

The mouse and keyboard are essential **hardware** for operating a PC.

frustration

 the feeling of being upset or annoyed as a result of being unable to change or achieve something

synonym: disappointment, discouragement, dissatisfaction

(1) frustration level, (2) express frustration

He felt a deep **frustration** as he realized the project would not be completed on time.

smartphone

- 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**.

tablet

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

synonym: notepad, pill, medication

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

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

grind

to reduce something to small particles or powder by crushing or rubbing it; to work hard over a long period of time

synonym: mill, crush, grate

(1) **grind** away at my work, (2) **grind** your teeth She had to **grind** the coffee beans before making a fresh cup.

halt

v. to bring or come to a stop; to force to stop moving or operating

synonym: stop, cease, terminate

(1) halt production, (2) halt progress

The train came to a **halt** at the station.

feat

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

synonym: achievement, accomplishment, exploit

(1) intellectual **feat**, (2) **feat** accomplishment It is an incredible **feat** to climb Mount Everest, the highest

mountain in the world.

semiconductor

 a material or substance that can conduct electricity under certain conditions but not others, often used in electronic devices

synonym: chip, wafer

(1) **semiconductor** industry, (2) **semiconductor** device The company develops and sells **semiconductor** memory for use in computers and servers.

industrious

- adj. hardworking, diligent, and persistent in effortsynonym: diligent, hardworking, assiduous
- (1) **industrious** worker, (2) **industrious** student He was known to be very **industrious** and would often work late into the night.

creative

- adj. relating to or involving the use of skill and original and unusual ideas to create something
- synonym: imaginative, innovative, inventive
- (1) **creative** writing, (2) barren of **creative** spirit All the supervisor has to do is assign tasks that make his subordinates more **creative**.

quantum

- n. the smallest amount or unit of something, especially (electromagnetic) energy
- (1) probabilistic **quantum** theory, (2) laws of **quantum** mechanics

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

alternative

- n. one of two or more available possibilities or choice synonym: choice, option
- (1) an **alternative** plan, (2) there is no other **alternative** Doctors are gradually coming around to the idea of using **alternative** medicines.

architecture

n. the art and science of designing and constructing buildings

synonym: design, structure, layout

(1) **architecture** design, (2) classic **architecture**The city is known for its impressive **architecture** and beautiful old buildings.

neural

adj. of or relating to a nerve or the nervous system that includes the brain

synonym: sensory, neuronic, nervous

(1) **neural** stem cells, (2) **neural** networks in Al There was a disturbance of **neural** function.

robust

adj. sturdy and healthy in form, constitution, or construction;
 strong enough to withstand or overcome intellectual
 challenges or adversity

synonym: healthy, strong, booming

(1) robust growth, (2) a robust appetite

The experiment yielded **robust** results that support his theory.

efficient

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

synonym: productive, effective, competent

(1) **efficient** operation, (2) energy- **efficient** appliances The new washing machine is much more **efficient** than the old one.

immediate

adj. happening or done without delay or occurring shortly after something else

synonym: prompt, quick, instantaneous

(1) take **immediate** effect, (2) the **immediate** past Both forts were subject to **immediate** attacks.

complexity

 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.

manufacture

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

synonym: create, fabricate, assemble

(1) **manufacture** an enzyme, (2) **manufacture** a product The majority of synthetic vitamins are **manufactured** from oil.

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.

bulky

 adj. taking up much space or being difficult to move because of its size or weight; large and unwieldy

synonym: large, cumbersome, unwieldy

(1) bulky material, (2) bulky packaging

The **bulky** furniture made it difficult to move around the small room.

invention

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

synonym: creation, design, innovation

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

integrate

v. to combine one thing with another so that they form a whole or work together; to accept equal participation for members of all races and ethnic groups

synonym: mix, merge, combine

(1) **integrate** into the existing system, (2) **integrate** both businesses

He found that it is difficult to **integrate** socially.

purity

 the state of being undiluted or unmixed with anything else; the state of being free from immorality, especially of a sexual nature

synonym: sinlessness, innocence, cleanliness

(1) the degree of purity, (2) high purity

Higher **purity** requires additional equipment and energy.

crystalline

 adj. resembling crystal in clarity, transparency, or brilliance;
 having a highly ordered and symmetrical molecular structure

synonym: crystallized, clear, transparent

(1) crystalline structure, (2) crystalline water

The geologist found a beautiful specimen of a **crystalline** mineral.

silicon

- n. a chemical element with the symbol Si that is a hard, brittle crystalline solid with a blue-grey metallic luster and used for the transistors and integrated circuit chips in computers
- (1) silicon wafer, (2) crystalline silicon

Silicon is the second most abundant element on earth after oxygen.

wafer

n. a thin, flat, crisp biscuit or cake, often used as a communion element in religious services; a thin slice or piece of semiconductor material used in the production of computer chips and other electronic devices

synonym: thin cake, biscuit, disk

(1) strawberry wafer, (2) wafer cleaning system

The solar panel uses high-quality silicon **wafers** to convert sunlight into electricity efficiently.

continuous

adj. occurring or existing without a pause or interruption synonym: ceaseless, regular, repeated

(1) **continuous** improvement, (2) a **continuous** row of warehouses

The heavy snow has been **continuous** since last morning.

dimension

 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.

nanoscale

- adj. on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
- (1) **nanoscale** device, (2) things at the **nanoscale**This process improves the strength of the metal by controlling the **nanoscale** lattice structure of the metal.

perspective

a confident attitude toward something; a particular style of thinking about something

synonym: viewpoint, standpoint, outlook

- (1) a **perspective** view, (2) the **perspective** of the battle His father's death changed his whole **perspective** on life.
- a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms

synonym: micrometer

micron measurements, (2) micron imaging
 width of a single human hair is around 100 microns.

essentially

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

micron

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

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.

comparison

 the consideration or examination of the similarities between two or more people or things

synonym: equivalence, analogy, contrast

(1) ease of **comparison**, (2) **comparison** of foods on a caloric basis

I've included the two designs for a **comparison**.

fraction

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

synonym: piece, part, fragment

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

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

incredible

adj. unbelievable; enormous

synonym: unbelievable, fantastical, inconceivable

(1) incredible amount, (2) at incredible speed

Her response revealed **incredible** idiocy.

obvious

adj. easy to see, discover or understand *synonym*: apparent, conspicuous, evident

(1) **obvious** reasons, (2) his conclusion was **obvious** There are **obvious** differences between the two wine-producing regions.

chip

n. a small fragment of something broken off from the whole; a long and thin piece of potato fried in oil or fat

synonym: flake, fragment, chunk

(1) a **chip** of wood, (2) I don't care a **chip**We can use this campaign as a bargaining **chip** in the negotiations.

combination

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.

efficiency

- n. the state or quality of doing something well with no waste of input such as time or moneysynonym: effectiveness, efficacy, productivity
- (1) better fuel efficiency,(2) an energy efficiencyOur company must continue to strive for greater efficiency.

electron

- n. a tiny particle with the negative electrical charge synonym: negatron
- (1) flow of **electrons**, (2) beam of **electrons**The outermost **electron** shell determines the chemical properties of an atom.

oversimplify

- v. to describe or explain something in a way that is too simple and no longer holds true
- (1) **oversimplify** the problem, (2) **oversimplify** a complex reality

People may **oversimplify** natural phenomena due to the improved accessibility of knowledge.

sensitive

 adj. able to notice slight changes, signals, or influences; able to feel or perceive other's feelings; susceptible to the things people say or do

synonym: exposed, susceptible, keen

(1) **sensitive** documents, (2) baby with **sensitive** skin The teacher is very **sensitive** to children's feelings.

etch

v. to carve, cut, or engrave (a design or text) into a hard surface; to corrode, erode or eat away at a metal surface using acid or another chemical substance to create a design or pattern

synonym: engrave, inscribe, carve

(1) **etch** a metal plate, (2) **etch** a design into wood He used a sharp tool to **etch** his initials onto the metal.

underlying

adj. significant as a cause or basis of something but not immediately apparent or stated clearly

synonym: fundamental, latent, basic

(1) an **underlying** motive, (2) an **underlying** cause of an accident

The **underlying** principle of every business was identical.

dramatically

adv. in a very impressive mannersynonym: greatly, noticeably, suddenly

(1) he confessed **dramatically**, (2) the cabin pressure fell **dramatically**

Life expectancy has grown dramatically this century.

improvisation

- the act of making something up on the spot or creating or performing something without preparation
 synonym: spontaneity, ad-lib, extemporization
- (1) **improvisation** on stage, (2) jazz **improvisation** He created a beautiful piece of music using only **improvisation**.

technique

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.

viable

adj. capable of being done as intended; able to succeed *synonym*: feasible, possible, attainable

(1) achieve a **viable** relationship, (2) develop a **viable** therapy

Male gorillas with good drumming skills are more viable.

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.

mimic

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

synonym: mirror, imitate, ape

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

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.

structure

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

synonym: construction, architecture, establishment

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

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

array

 a large group or collection of things or people, especially one that is impressive or attractive

synonym: collection, display, batch

(1) a two-dimensional **array**, (2) an **array** of troops

The customer on the Internet has to choose one from a formidable **array** of products.

periodic

- adj. happening at regular intervals over a while synonym: regular, frequent, recurring
- (1) the **periodic** blooming of the cherry-blossom,
- (2) **periodic** payments

Astronomers are examining whether the **periodic** signals emanating from this star are artificial.

advantage

 a condition or circumstance that puts one in a favorable or superior position; a beneficial feature or asset that someone or something has

synonym: benefit, edge, asset

(1) score an **advantage**, (2) take **advantage** of his weak points

One of the main **advantages** of the new product is its increased efficiency.

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.

naturally

adv. as might be expected; by natural mannerssynonym: by nature, inherently, intrinsically

(1) **naturally** arising, (2) **naturally** regenerated forest He was **naturally** gifted.

lipid

 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.

membrane

- n. a soft, thin layer that forms animal or vegetable tissuesynonym: tissue layer
- cell membranes,
 nuclear membrane
 Loud noises might harm the fragile ear membrane.

assembly

 a group of people who have been elected, especially one that meets regularly and makes decisions or laws for a specific region or country

synonym: crowd, gathering, mass

(1) assembly line, (2) assembly hall

This company's **assembly** plant is an enormous facility.

polymer

- a substance composed of macromolecules (= large groups of atoms) made from many smaller and simpler molecules
- (1) **polymer** fiber, (2) biological **polymer**We are developing plant-derived **polymers** to reduce environmental impact.

consist

- v. to be composed or made up of synonym: lie in, comprise, exist
- (1) **consist** mainly of cells, (2) **consist** only in knowing facts This examination **consists** of five problems to solve.

chain

 a series of connected links or objects; a system or group of interconnected elements; a restraint or shackle

synonym: series, string, link

chain reaction, (2) supply chain
 The chain on my bike broke, leaving me stranded.

repel

- v. to force an attack or attacker to withdraw or retreat synonym: turn away, fight off, force back
- (1) repel bandits, (2) repel bad luck

This material can **repel** moisture swiftly.

cruel

adj. feeling or showing pleasure in causing pain or suffering to others

synonym: heartless, sadistic, vicious

(1) a **cruel** and unusual punishment, (2) **cruel** joke The dictator was known for his **cruel** and oppressive regime.

bond

 a close emotional connection between two or more people; a certificate of debt that a government or corporation issues to raise money

synonym: bind, adhesion, attachment

(1) **bond** as a family, (2) global **bond** market They had formed a friendship **bond**.

built-in

adj. included as an integral part of somethingsynonym: integrated, inherent, equipped

(1) **built-in** feature, (2) **built-in** battery

The new car had a **built-in** navigation system.

separate

- v. to force, take, or pull apart; mark as different synonym: disunite, isolate, ramify
- (1) **separate** video into chapter, (2) **separate** cream from milk

We need to **separate** the aspect of his personality from the part of his competence when making an investment decision.

bulk

 the quantity or size of something that is very large; the main part of something

synonym: majority, largeness, amount

(1) buy in bulk, (2) bulk data transfer

I received a parcel of great bulk.

component

n. one of several parts that combines with others to form something bigger

synonym: element, part, factor

(1) key **component**, (2) spare **components** for cars

The researchers try to discover a common **component** in all types of successful organizations.

stick

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

synonym: pierce, adhere, stay

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

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

opposing

adj. competing, fighting, or working against each other *synonym*: disagreeing, dissenting, conflicting

(1) **opposing** counsel, (2) in an **opposing** direction We have no intention of **opposing** his idea.

squirm

v. to twist, wiggle, or contort the body uncomfortably or awkwardly, often due to embarrassment, discomfort, or nervousness

synonym: squiggle, wiggle, writhe

(1) **squirm** uncomfortably, (2) **squirm** with excitement The child **squirmed** out of his mother's grasp and ran off.

symmetrical

 adj. having similarity in size, shape, and relative position of corresponding parts

synonym: harmonious, balanced, proportional

(1) **symmetrical** triangle, (2) **symmetrical** pattern This figure is **symmetrical** about the x-axis.

molecule

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

synonym: particle, element, atom

small molecules, (2) molecule behavior
 shape of the DNA molecule is a double helix.

meander

 to wander or roam aimlessly or leisurely; to follow a winding or circuitous course, as a river or road

synonym: wander, zigzag, twist

(1) **meander** down the river, (2) **meander** aimlessly We decided to **meander** through the park and enjoy the scenery.

fingerprint

 a unique pattern of ridges and valleys on the surface of a finger that can be used to identify a person

synonym: print, mark, impression
(1) fingerprint at a crime scene (2)

(1) **fingerprint** at a crime scene, (2) **fingerprint** identification

The police used a **fingerprint** scanner to identify the suspect.

distance

n. the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance

synonym: space, gap, span

(1) driving distance, (2) social distance

The marathon runner covered a long **distance** in a short amount of time.

determinant

 a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result

synonym: cause, factor, element

(1) environmental **determinant**, (2) a **determinant** of crop yields

One **determinant** of success is having a positive attitude and a strong work ethic.

elaborate

adj. containing a lot of carefully prepared and organized or many complicated and detailed parts

synonym: detailed, intricate, complicated

(1) an **elaborate** hat, (2) **elaborate** Ponzi scheme He proposed an **elaborate** program of public works.

asymmetrical

 adj. lacking symmetry or balance; unevenly or irregularly shaped; not corresponding in terms of quantity, size, or position

synonym: uneven, lopsided, crooked

(1) **asymmetrical** design, (2) **asymmetrical** haircut The **asymmetrical** shape of the vase made it unique and exciting.

tight

adj. fixed, fastened, or kept together firmly or closely synonym: closed, secured, cramped

(1) a **tight** game, (2) student on a **tight** budget The national election was held amid **tight** security.

surround

- v. to be all around something or somebody synonym: encircle, encompass, envelop
- (1) **surround** a town, (2) a stone wall **surrounds** the palace On three sides, mountains **surround** the settlement.

cylinder

- a solid or hollow geometric figure with two round ends and long straight sides, or an object shaped like this
- (1) a six- **cylinder** engine, (2) a ventilation **cylinder** The gas was trapped inside the **cylinders** under high pressure.

chemistry

- the branch of the natural sciences dealing with the composition of substances and their properties and reactions
- (1) professor of **chemistry**, (2) the **chemistry** of soil He is familiar with **chemistry** and biology.

chemical

adj. relating to or connected with chemistry;synonym: chemic, synthetic

toxic chemicals, (2) a chemical compound
 The firm has grown into a large chemical manufacturing.

relative

adj. considered and evaluated through comparison with something else synonym: comparative, proximate, congeneric

(1) a remote **relative**, (2) **relative** factors

Most countries prohibit sexual activity between certain close relatives.

anchor

 a device, typically made of metal, that is used to moor a ship or boat in a particular place, typically by being dropped to the seabed; a central cohesive source of support and stability

synonym: mainstay, ballast, backbone

(1) anchor bolt, (2) anchor weight

The ship dropped **anchor** in the bay.

parallel

 adj. being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations

synonym: aligned, side-by-side, similar

(1) a parallel case, (2) parallel processing

He walked a road parallel to the railroad.

align

v. to put or arrange two or more things in a straight line or to form a straight line

synonym: coordinate, regulate, adjust

(1) **align** the economic interest of each other, (2) **align** with a historical trend

Both parties are now entirely ideologically aligned.

norm

- n. something that is regarded as usual, typical, or standardsynonym: criterion, mean, standard
- (1) norm of action, (2) cultural norm

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

defect

 an imperfection, shortcoming, or lack of something or someone

synonym: fault, blemish, flaw

(1) visual defects, (2) defects of character

Defects in the design could cause much worse issues.

extraordinary

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

synonym: exceptional, noteworthy, astonishing

(1) **extraordinary** ability, (2) **extraordinary** weather He narrated the **extraordinary** story of his adventure.

cleanliness

 the state of being clean or free from dirt, dust, or foreign substances; the practice of maintaining good hygiene and cleanliness

synonym: neatness, hygiene, sanitation

(1) **cleanliness** standards, (2) **cleanliness** of the kitchen We must prioritize our workplace's **cleanliness** for our employees' safety.

microscopic

adj. tiny; exceedingly precise and detail-oriented; of or used in microscopy

synonym: infinitesimal, tiny, atomic

(1) **microscopic** inquiry, (2) **microscopic** analysis Inspectors noticed **microscopic** cracks in the submarine's hull.

exciting

adj. causing a lot of interest or excitement synonym: exhilarating, stimulating, thrilling

(1) **exciting** football player, (2) **exciting** news The findings of the experiment were both **exciting** and unexpected.

disrupt

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

synonym: interrupt, disturb, break into

(1) **disrupt** a well-ordered condition, (2) **disrupt** sleep I'm so sorry to **disrupt** you when you're pretty busy.

confidence

 the feeling or attitude that one can trust or rely on the abilities or good qualities of someone or something

synonym: self-trust, certainty, belief

(1) **confidence** as a teacher, (2) boost my **confidence** Skill and **confidence** are an unconquered army.

introduction

n. a preliminary explanation or remarks given before the start of a text, performance, or event; the act of bringing something new into existence or introducing something to a wider audience or new market

synonym: initiation, preamble, prologue

(1) **introduction** education, (2) self- **introduction**The **introduction** to the new class was informative and engaging.

revolutionary

adj. relating to or characterized by a complete or dramatic change

synonym: radical, innovative, groundbreaking

(1) **revolutionary** change, (2) enforce **revolutionary** justice The **revolutionary** leader inspired others to join the fight for freedom and democracy.

spectacular

adj. striking or impressive to look at or in performance or achievement

synonym: breathtaking, impressive, grand

(1) **spectacular** view, (2) achieve **spectacular** growth The **spectacular** fireworks display was the highlight of the festival.

expansion

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

synonym: growth, enlargement, development

(1) industrial **expansion**, (2) **expansion** project
The company is undergoing an **expansion**, opening new locations in several states.

dawn

n. the time of day when the sun's light starts to show in the sky

synonym: daybreak, sunrise, advent

(1) the wan light of dawn,(2) crack of dawnMissile assaults on the capital continued around dawn.

Session 2: Spelling

1.	a conus row of warehouses	adj.	occurring or existing without a pause or interruption
2.	buin feature	adj.	included as an integral part of something
3.	por fiber	n.	a substance composed of macromolecules (= large groups of atoms) made from many smaller and simpler molecules
4.	breugh in the negotiations	n.	a sudden, dramatic, and important discovery or development that helps to improve a situation or provide an answer to a problem
5.	crystalline sin	n.	a chemical element with the symbol Si that is a hard, brittle crystalline solid with a blue-grey metallic luster and used for the transistors and integrated circuit chips in computers
6.	asle your colleagues	<i>v</i> .	to collect in one place as a single group
7.	he confessed drally	adv.	in a very impressive manner
8.	mer down the river	<i>v</i> .	to wander or roam aimlessly or leisurely; to follow a winding or circuitous course, as a river or road
9.	cless of the kitchen	n.	the state of being clean or free from dirt, dust, or foreign substances; the practice of maintaining good hygiene and cleanliness

ANSWERS: 1. continuous, 2. built-in, 3. polymer, 4. breakthrough, 5. silicon, 6. assemble, 7. dramatically, 8. meander, 9. cleanliness

а

10.	the imte past	adj.	happening or done without delay or occurring shortly after something else
11.	aln with a historical trend	<i>v</i> .	to put or arrange two or more things in a straight line or to form a straight line
12.	micic inquiry	adj.	tiny; exceedingly precise and detail-oriented; of or used in microscopy
13.	pael processing	adj.	being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations
14.	buy material	adj.	taking up much space or being difficult to move because of its size or weight; large and unwieldy
15.	cryne structure	adj.	resembling crystal in clarity, transparency, or brilliance; having a highly ordered and symmetrical molecular structure
16.	indus worker	adj.	hardworking, diligent, and persistent in effort
17.	a numerator in a fron	n.	a small part or item forming a piece of a whole; the quotient of two rational numbers
18.	incle amount	adj.	unbelievable; enormous
19.	indus student	adj.	hardworking, diligent, and persistent in effort
20.	wr_t bones	n.	the joint between the hand and the forearm; the narrow part of the hand near this joint

ANSWERS: 10. immediate, 11. align, 12. microscopic, 13. parallel, 14. bulky, 15. crystalline, 16. industrious, 17. fraction, 18. incredible, 19. industrious, 20. wrist

21. achieve a vi e relationship adj. capable of being done as intended; able to succeed 22. li d metabolism 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 23. mo____le behavior a group of two or more atoms held together by attractive forces known as chemical bonds 24. biological ro____ck a physical barrier or obstacle that n. prevents progress or movement; a situation that impedes progress or creates difficulty in achieving a goal or objective 25. better fuel eff cy the state or quality of doing something n. well with no waste of input such as time or money 26. self-int ion a preliminary explanation or remarks n. given before the start of a text, performance, or event; the act of bringing something new into existence or introducing something to a wider audience or new market 27. rel___ss attack adj. persistent and determined; continuing despite difficulties or setbacks 28. buy in b k the quantity or size of something that is very large; the main part of something 29. al n the economic interest of each to put or arrange two or more things in a ν. straight line or to form a straight line other

ANSWERS: 21. viable, 22. lipid, 23. molecule, 24. roadblock, 25. efficiency, 26. introduction, 27. relentless, 28. bulk, 29. align

ANSWERS: 30. software, 31. treacherous, 32. meander, 33. hardware, 34. bulk, 35. assembly, 36. membrane, 37. introduction, 38. advantage

someone or something has

ANSWERS: 39. quantum, 40. invest, 41. elaborate, 42. electron, 43. determinant, 44. bond, 45. symmetrical, 46. tablet, 47. defect, 48. advantage

a beneficial feature or asset that

someone or something has

49.	become essly same	adv.	relating to the essential features or concepts of anything
50.	intellectual ft	n.	a notable or impressive achievement, especially one that requires great skill or bravery
51.	an altve plan	n.	one of two or more available possibilities or choice
52.	naly arising	adv.	as might be expected; by natural manners
53.	efnt operation	adj.	performing at the highest level of productivity with the least wasted effort or resources; capable of achieving maximum output with minimum wasted effort, time, or materials
54.	environmental detnt	n.	a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result
55.	a connal style	adj.	based on or following traditional rules, standards, customs, etc.
56.	federal cit courts	n.	(in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area
57.	amg advances	adj.	extremely surprising, especially in a way that you like or admire
58.	a ventilation cyer	n.	a solid or hollow geometric figure with two round ends and long straight sides, or an object shaped like this

ANSWERS: 49. essentially, 50. feat, 51. alternative, 52. naturally, 53. efficient, 54. determinant, 55. conventional, 56. circuit, 57. amazing, 58. cylinder

Vocab-Builder Ref from "Karl Skjonnemand: The self-assembling computer chips of the future | TED Talk" (133 words)

ANSWERS: 59. continuous, 60. process, 61. revolutionary, 62. silicon, 63. digital, 64. comparison, 65. perspective, 66. expansion

ANSWERS: 67. roadblock, 68. opposing, 69. purity, 70. underlying, 71. amazing, 72. bulky, 73. digital, 74. chemistry, 75. built-in

76.	chn reaction	n.	a series of connected links or objects; a system or group of interconnected elements; a restraint or shackle
77.	sund a town	<i>v</i> .	to be all around something or somebody
78.	spare conts for cars	n.	one of several parts that combines with others to form something bigger
79.	grd your teeth	ν.	to reduce something to small particles or powder by crushing or rubbing it; to work hard over a long period of time
80.	energy-efnt appliances	adj.	performing at the highest level of productivity with the least wasted effort or resources; capable of achieving maximum output with minimum wasted effort, time, or materials
81.	an ary of troops	n.	a large group or collection of things or people, especially one that is impressive or attractive
82.	an intnce test	n.	the ability to learn, comprehend, or make judgments or conclusions based on reasons
83.	copyrighted sore	n.	a set of computer programs and associated documentation and data for doing particular computational jobs
84.	finnt identification	n.	a unique pattern of ridges and valleys on the surface of a finger that can be used to identify a person
85.	moar structure	adj.	of or relating to molecules (= a group of two or more atoms held together by attractive forces known as chemical bonds)

ANSWERS: 76. chain, 77. surround, 78. component, 79. grind, 80. efficient, 81. array, 82. intelligence, 83. software, 84. fingerprint, 85. molecular

86.	social dice	n.	the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance
87.	comon number	n.	a collection of things that have been combined; an assemblage of separate parts or qualities
88.	a perve view	n.	a confident attitude toward something; a particular style of thinking about something
89.	imt genes in the animals	<i>v</i> .	to insert or fix an artificial device in a person's body; to put an idea, attitude, etc., firmly in the mind
90.	face relss pressure	adj.	persistent and determined; continuing despite difficulties or setbacks
91.	reve factors	adj.	considered and evaluated through comparison with something else
92.	coe an average score	<i>v</i> .	to make a mathematical calculation
93.	probabilistic qum theory	n.	the smallest amount or unit of something, especially (electromagnetic) energy
94.	n_m of action	n.	something that is regarded as usual, typical, or standard
95.	student on a tit budget	adj.	fixed, fastened, or kept together firmly or closely
96.	cognitive comty	n.	the state or quality of being complicated or intricate and difficult to understand

ANSWERS: 86. distance, 87. combination, 88. perspective, 89. implant, 90. relentless, 91. relative, 92. compute, 93. quantum, 94. norm, 95. tight, 96. complexity

97. fire stk	ν.	to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
98. extary ability	adj.	exceptional, unexpected, very unusual; surpassing the ordinary or usual
99. glance at my wrt watch	n.	the joint between the hand and the forearm; the narrow part of the hand near this joint
100. high puy	n.	the state of being undiluted or unmixed with anything else; the state of being free from immorality, especially of a sexual nature
101. a multivitamin tat	n.	a small flat electronic device used for browsing the internet, reading, writing, or playing games; a small, solid pill of medicine
102. smane app developer	n.	a mobile phone that functions as a computer and connects to the Internet
103. reI bandits	<i>v</i> .	to force an attack or attacker to withdraw or retreat
104. a political revon	n.	a large-scale attempt to overthrow the government of a country, often using violence or war;
105. exng football player	adj.	causing a lot of interest or excitement
106. the stre of a machine	n.	the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts

ANSWERS: 97. stick, 98. extraordinary, 99. wrist, 100. purity, 101. tablet, 102. smartphone, 103. repel, 104. revolution, 105. exciting, 106. structure

107. a two-dimensional ary	n.	a large group or collection of things or people, especially one that is impressive or attractive
108. cit breaker	n.	(in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area
109. inle stars	adj.	impossible or nearly impossible to see
110. crack of dn	n.	the time of day when the sun's light starts to show in the sky
111. key cont	n.	one of several parts that combines with others to form something bigger
112. a teue in martial arts	n.	a particular way or art of doing something that needs skill
113. stk a key in a lock	<i>v</i> .	to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
114. dit a well-ordered condition	ν.	to prevent or stop something, especially an event, activity, or process, from continuing in the usual way by causing a problem or disturbance
115. anr weight	n.	a device, typically made of metal, that is used to moor a ship or boat in a particular place, typically by being dropped to the seabed; a central cohesive source of support and stability
116. sete cream from milk	<i>v</i> .	to force, take, or pull apart; mark as different

ANSWERS: 107. array, 108. circuit, 109. invisible, 110. dawn, 111. component, 112. technique, 113. stick, 114. disrupt, 115. anchor, 116. separate

123. his conclusion was ob s adj. easy to see, discover or understand

124. mi n measurements a unit of measurement equal to n. one-millionth of a meter, used for measuring the size of particles and

microorganisms

a device, typically made of metal, that is used to moor a ship or boat in a particular place, typically by being dropped to the seabed; a central cohesive source of support and stability

adj. of or relating to a person's face

126. fa___I expressions

125. an___r bolt

ANSWERS: 117. invention, 118. squirm, 119. transistor, 120. appetite, 121. electron, 122. chemical, 123. obvious, 124. micron, 125. anchor, 126. facial

127. peic payments	adj.	happening at regular intervals over a while
128. manre a product	v.	to make goods in large numbers, usually in a factory using machines
129. a cp of wood	n.	a small fragment of something broken off from the whole; a long and thin piece of potato fried in oil or fat
130. neI networks in AI	adj.	of or relating to a nerve or the nervous system that includes the brain
131. a stone wall sunds the palace	<i>v</i> .	to be all around something or somebody
132. asly hall	n.	a group of people who have been elected, especially one that meets regularly and makes decisions or laws for a specific region or country
133. dep a strategy	ν.	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
134. symal pattern	adj.	having similarity in size, shape, and relative position of corresponding parts
135. war cleaning system	n.	a thin, flat, crisp biscuit or cake, often used as a communion element in religious services; a thin slice or piece of semiconductor material used in the production of computer chips and other

ANSWERS: 127. periodic, 128. manufacture, 129. chip, 130. neural, 131. surround, 132. assembly, 133. develop, 134. symmetrical, 135. wafer

electronic devices

make judgments or conclusions based on reasons

146. 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)

ANSWERS: 136. naturally, 137. frustration, 138. augment, 139. integrate, 140. tight, 141. feat, 142. mimic, 143. breakthrough, 144. chemical, 145. intelligence, 146. molecular

147. sqm uncomfortably	v.	to twist, wiggle, or contort the body uncomfortably or awkwardly, often due to embarrassment, discomfort, or nervousness
148. an inle asset	adj.	impossible or nearly impossible to see
149. seve documents	adj.	able to notice slight changes, signals, o influences; able to feel or perceive other's feelings; susceptible to the things people say or do
150. achieve spear growth	adj.	striking or impressive to look at or in performance or achievement
151. strawberry war	n.	a thin, flat, crisp biscuit or cake, often used as a communion element in religious services; a thin slice or piece of semiconductor material used in the production of computer chips and other electronic devices
152. spear view	adj.	striking or impressive to look at or in performance or achievement
153. cless standards	n.	the state of being clean or free from dirt dust, or foreign substances; the practice of maintaining good hygiene and cleanliness
154. a vast inventory of hare	n.	durable tools, machinery, and other equipment; the physical and electronic parts of a computer or other electronic systems
155. cutting-edge innon	n.	the creation of a new device or process resulting from study and experimentation

ANSWERS: 147. squirm, 148. invisible, 149. sensitive, 150. spectacular, 151. wafer, 152. spectacular, 153. cleanliness, 154. hardware, 155. innovation

ANSWERS: 156. engineer, 157. implant, 158. develop, 159. nanoscale, 160. process, 161. robust, 162. fingerprint

adj.	happening or done without delay or occurring shortly after something else
v.	to describe or explain something in a way that is too simple and no longer holds true
adj.	of or relating to a person's face
v.	to be composed or made up of
n.	a semiconductor device that can be used to amplify or switch electronic signals and power which is an essential component in modern electronics
adj.	able to notice slight changes, signals, or influences; able to feel or perceive other's feelings; susceptible to the things people say or do
n.	the creation of a new device or process resulting from study and experimentation; the act of inventing
n.	a small fragment of something broken off from the whole; a long and thin piece of potato fried in oil or fat
<i>v</i> .	to collect in one place as a single group
n.	one of two or more available possibilities or choice
adj.	being on a very small scale
n.	a substance composed of macromolecules (= large groups of atoms) made from many smaller and simpler molecules
	v. adj. n. n. adj.

ANSWERS: 163. immediate, 164. oversimplify, 165. facial, 166. consist, 167. transistor, 168. sensitive, 169. invention, 170. chip, 171. assemble, 172. alternative, 173. miniature, 174. polymer

175. the cabin pressure fell drally	adv.	in a very impressive manner
176. reI bad luck	<i>v</i> .	to force an attack or attacker to withdraw or retreat
177. sete video into chapter	<i>v</i> .	to force, take, or pull apart; mark as different
178. recon award	n.	the action or process of recognizing or being recognized, especially by remembering; an agreement that something is true or legal
179. exng news	adj.	causing a lot of interest or excitement
180. boost my conce	n.	the feeling or attitude that one can trust or rely on the abilities or good qualities of someone or something
181. vt majority	adj.	enormous in size, number, amount, or quantity
182. an undng motive	adj.	significant as a cause or basis of something but not immediately apparent or stated clearly
183. beginning of the industrial revon	n.	a large-scale attempt to overthrow the government of a country, often using violence or war;
184. arcure design	n.	the art and science of designing and constructing buildings
185. a six-cyer engine	n.	a solid or hollow geometric figure with two round ends and long straight sides, or an object shaped like this
186. conce as a teacher	n.	the feeling or attitude that one can trust or rely on the abilities or good qualities of someone or something

ANSWERS: 175. dramatically, 176. repel, 177. separate, 178. recognition, 179. exciting, 180. confidence, 181. vast, 182. underlying, 183. revolution, 184. architecture, 185. cylinder, 186. confidence

187. a crl and unusual punishment	adj.	feeling or showing pleasure in causing pain or suffering to others
188. smane addict	n.	a mobile phone that functions as a computer and connects to the Internet
189. post rely to a blog	adv.	at regular intervals or times
190. min imaging	n.	a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms
191. professor of chry	n.	the branch of the natural sciences dealing with the composition of substances and their properties and reactions
192. semtor device	n.	a material or substance that can conduct electricity under certain conditions but not others, often used in electronic devices
193. nel stem cells	adj.	of or relating to a nerve or the nervous system that includes the brain
194. eh a metal plate	v.	to carve, cut, or engrave (a design or text) into a hard surface; to corrode, erode or eat away at a metal surface using acid or another chemical substance to create a design or pattern
195. visual dets	n.	an imperfection, shortcoming, or lack of something or someone
196. rot growth	adj.	sturdy and healthy in form, constitution, or construction; strong enough to withstand or overcome intellectual challenges or adversity

ANSWERS: 187. cruel, 188. smartphone, 189. regularly, 190. micron, 191. chemistry, 192. semiconductor, 193. neural, 194. etch, 195. defect, 196. robust

197. c	omty theory	n.	the state or quality of being complicated or intricate and difficult to understand
198. b	lood lid 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
199. e	eh a design into wood	v.	to carve, cut, or engrave (a design or text) into a hard surface; to corrode, erode or eat away at a metal surface using acid or another chemical substance to create a design or pattern
200. jo	oint recon	n.	the action or process of recognizing or being recognized, especially by remembering; an agreement that something is true or legal
201. e	express fruon	n.	the feeling of being upset or annoyed as a result of being unable to change or achieve something
202. e	essly correct	adv.	relating to the essential features or concepts of anything
203. b	arren of crve spirit	adj.	relating to or involving the use of skill and original and unusual ideas to create something
	omon of foods on a caloric pasis	n.	the consideration or examination of the similarities between two or more people or things
205. o	oveify a complex reality	<i>v</i> .	to describe or explain something in a way that is too simple and no longer holds true

ANSWERS: 197. complexity, 198. lipid, 199. etch, 200. recognition, 201. frustration, 202. essentially, 203. creative, 204. comparison, 205. oversimplify

206. manre an enzyme	<i>v</i> .	to make goods in large numbers, usually in a factory using machines
207. mire version	adj.	being on a very small scale
208. impion on stage	n.	the act of making something up on the spot or creating or performing something without preparation
209. innon leader	n.	the creation of a new device or process resulting from study and experimentation
210. exon project	n.	the process of becoming larger or more extensive, or the result of this process
211. a pael case	adj.	being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations
212. small moles	n.	a group of two or more atoms held together by attractive forces known as chemical bonds
213. classic arcure	n.	the art and science of designing and constructing buildings
214. ht progress	<i>v</i> .	to bring or come to a stop; to force to stop moving or operating
215. treus territory	adj.	that cannot be trusted; malicious; hazardous, even while seeming safe
216. aut immunity	v.	to increase the size, extent, quantity, etc. of something by adding something to it
217. int capital	ν.	to put money, effort, time, etc. into something to make a profit or achieve a result

ANSWERS: 206. manufacture, 207. miniature, 208. improvisation, 209. innovation, 210. expansion, 211. parallel, 212. molecule, 213. architecture, 214. halt, 215. treacherous, 216. augment, 217. invest

218. the wan light of dn	n.	the time of day when the sun's light starts to show in the sky
219. cryne water	adj.	resembling crystal in clarity, transparency, or brilliance; having a highly ordered and symmetrical molecular structure
220. the chc economic situation	adj.	without any order or organization; extremely disorganized, unpredictable, and confusing
221. grd away at my work	ν.	to reduce something to small particles or powder by crushing or rubbing it; to work hard over a long period of time
222. new dion	n.	a measurable extent of a particular kind, such as width, height, or length
223. nale device	adj.	on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
224. ace milestones	<i>v</i> .	to successfully complete a task or goal, often through hard work, perseverance, and dedication; to attain or accomplish something that one has set out to do
225. at incle speed	adj.	unbelievable; enormous
226. driving dice	n.	the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance
227. obs reasons	adj.	easy to see, discover or understand

ANSWERS: 218. dawn, 219. crystalline, 220. chaotic, 221. grind, 222. dimension, 223. nanoscale, 224. achieve, 225. incredible, 226. distance, 227. obvious

228. tracking dee	n.	a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic
229. cultural nm	n.	something that is regarded as usual, typical, or standard
230. vt desert	adj.	enormous in size, number, amount, or quantity
231. jazz impion	n.	the act of making something up on the spot or creating or performing something without preparation
232. loss of apte	n.	a natural desire or craving for food or drink; a strong desire or liking for something
233. extary weather	adj.	exceptional, unexpected, very unusual; surpassing the ordinary or usual
234. the teue applied to construction	n.	a particular way or art of doing something that needs skill
235. in an opng direction	adj.	competing, fighting, or working against each other
236. semtor industry	n.	a material or substance that can conduct electricity under certain conditions but not others, often used in electronic devices
237. bd as a family	n.	a close emotional connection between two or more people; a certificate of debt that a government or corporation issues to raise money
238. rely arranged	adv.	at regular intervals or times

ANSWERS: 228. device, 229. norm, 230. vast, 231. improvisation, 232. appetite, 233. extraordinary, 234. technique, 235. opposing, 236. semiconductor, 237. bond, 238. regularly

239. develop a vie therapy	adj.	capable of being done as intended; able to succeed
240. micic analysis	adj.	tiny; exceedingly precise and detail-oriented; of or used in microscopy
241. coe the value	ν.	to make a mathematical calculation
242. a remote reve	adj.	considered and evaluated through comparison with something else
243. an energy effcy	n.	the state or quality of doing something well with no waste of input such as time or money
244. an elte hat	adj.	containing a lot of carefully prepared and organized or many complicated and detailed parts
245. nuclear mene	n.	a soft, thin layer that forms animal or vegetable tissue
246. ace success	ν.	to successfully complete a task or goal, often through hard work, perseverance, and dedication; to attain or accomplish something that one has set out to do
247. stre and function of the k	orain <i>n</i> .	the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
248. cot mainly of cells	v.	to be composed or made up of
249. genic comons	n.	a collection of things that have been combined; an assemblage of separate parts or qualities
250. the peic blooming of the cherry-blossom	adj.	happening at regular intervals over a while

ANSWERS: 239. viable, 240. microscopic, 241. compute, 242. relative, 243. efficiency, 244. elaborate, 245. membrane, 246. achieve, 247. structure, 248. consist, 249. combination, 250. periodic

251. ht production	v.	to bring or come to a stop; to force to stop moving or operating
252. inte both businesses	ν.	to combine one thing with another so that they form a whole or work together; to accept equal participation for members of all races and ethnic groups
253. asycal design	adj.	lacking symmetry or balance; unevenly or irregularly shaped; not corresponding in terms of quantity, size, or position
254. crl joke	adj.	feeling or showing pleasure in causing pain or suffering to others
255. the crosswise dion	n.	a measurable extent of a particular kind, such as width, height, or length
256. asycal haircut	adj.	lacking symmetry or balance; unevenly or irregularly shaped; not corresponding in terms of quantity, size, or position
257. a civil ener	n.	a person whose job is designing, building, or maintaining something such as machines, structures, or software
258. get a connal loan	adj.	based on or following traditional rules, standards, customs, etc.
259. crve writing	adj.	relating to or involving the use of skill and original and unusual ideas to create something
260. a fronal share of the vote	n.	a small part or item forming a piece of a whole; the quotient of two rational numbers
261. mic a human voice	<i>v</i> .	to imitate someone's speech, movement, or behavior, especially to

ANSWERS: 251. halt, 252. integrate, 253. asymmetrical, 254. cruel, 255. dimension, 256. asymmetrical, 257. engineer, 258. conventional, 259. creative, 260. fraction, 261. mimic

make others laugh

- 262. ch___c theory
- 263. supply ch__n
- 264. di____t sleep
- 265. rev____ary change
- 266. electronic de___e

- adj. without any order or organization;extremely disorganized, unpredictable,and confusing
- a series of connected links or objects; a system or group of interconnected elements; a restraint or shackle
- v. to prevent or stop something, especially an event, activity, or process, from continuing in the usual way by causing a problem or disturbance
- adj. relating to or characterized by a complete or dramatic change
- a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic

ANSWERS: 262. chaotic, 263. chain, 264. disrupt, 265. revolutionary, 266. device

Session 3: Fill in the Blanks

1. The child out of his mother's grasp and ran off.
v. to twist, wiggle, or contort the body uncomfortably or awkwardly, often due to embarrassment, discomfort, or nervousness
2. You a bill in the change machine, and the coins pop out.
v. to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
3. All the supervisor has to do is assign tasks that make his subordinates more
adj. relating to or involving the use of skill and original and unusual ideas to create something
4. The organizational of start-ups is often flat and straightforward.
n. the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
5. We are developing plant-derived to reduce environmental impact.
 a substance composed of macromolecules (= large groups of atoms) made from many smaller and simpler molecules
6. He was known to be very and would often work late into the night.
adj. hardworking, diligent, and persistent in effort
7. Jockey's superior brought him victory.
n. a particular way or art of doing something that needs skill
ANSWERS: 1. squirmed, 2. stick, 3. creative, 4. structure, 5. polymers, 6. industrious 7. technique

ANSWERS: 16. wafers, 17. quantum, 18. digital, 19. frustration, 20. naturally, 21. chaotic, 22. revolutionary

periodic, 61. fingerprint, 62. cruel, 63. introduction

ANSWERS: 121. crystalline, 122. opposing, 123. regularly, 124. Defects, 125. architecture, 126. grind, 127. smartphones, 128. semiconductor