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Vocabulary Builder Reference from...

Christoph Keplinger: The artificial muscles that will power robots of the future | TED Talk https://www.ted.com/talks/christoph_keplinger_the_ar tificial_muscles_that_will_power_robots_of_the_futur e



All Words

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Session 1: Word List

compete

v. to strive to achieve more success than someone or something

synonym: contend, contest, vie

(1) **compete** against a friend, (2) **compete** fiercely You must **compete** with others to obtain this position.

disaster

 an unexpected event or series of events that cause widespread damage, destruction, or loss of life

synonym: catastrophe, calamity, tragedy

(1) global **disaster**, (2) **disaster** recovery

The **disaster** response team worked around the clock to aid those affected by the earthquake.

uneven

adj. not level or flat; not balanced or symmetrical

synonym: irregular, rough, bumpy

(1) uneven numbers, (2) uneven coating

The road was **uneven**, causing the car to bounce up and down as it drove.

terrain

n. the physical features of a piece of land, including hills, valleys, rivers, and forests

synonym: land, geography, topography

(1) terrain map, (2) permafrost terrain

The mountainous **terrain** was rough and rocky.

impressive

adj. arousing admiration due to size, quality, or skill synonym: impactful, remarkable, exceptional

(1) **impressive** performances, (2) an **impressive** array of facts

The budget reduction was an **impressive** feat for our nation.

state-of-the-art

adj. characterized by the use of the latest and most advanced technology or methods; cutting-edgesynonym: advanced, cutting-edge, innovative

(1) **state-of-the-art** technology, (2) **state-of-the-art** software

The hospital has **state-of-the-art** equipment and facilities to ensure the best healthcare for its patients.

competition

 a situation in which someone is attempting to beat or outperform another

synonym: contest, match, fight

(1) the first round of the **competition**, (2) intraspecific **competition**

Global competition is rising in virtually every industry.

movement

 a group of people working together to achieve a shared goal, especially a political, social, or artistic one; the process of moving or being moved, physically or figuratively

synonym: motion, progression, action

(1) a circular **movement**, (2) **movement** of troops

The **movement** of the dancers on stage was graceful and elegant.

robotic

adj. of or relating to mechanical robots; (robotics) the interdisciplinary branch of computer science and engineering with the practical use of robots

synonym: automated, mechanical, laborsaving

(1) **robotic** arm, (2) **robotic** guide operation

The surgeon removed the tumor using **robotic** video assistance.

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.

mechanical

adj. operated by a machine, relating to or concerned with machinery or tools

synonym: machinelike, automated, automatic

(1) a **mechanical** style of writing, (2) the influence of **mechanical** action

A **mechanical** engineer is still in demand in many companies.

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.

rigid

adj. extremely strict and difficult to change or adapt;incapable of or resistant to bending

synonym: strict, inflexible, stringent

(1) rigid rules, (2) rigid structure

He was unpopular because of his **rigid** adherence to the rules.

tradition

 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.

motor

 a device that converts electricity, fuel, etc. into movement and makes a machine, vehicle, etc. work

synonym: actuator, engine, machine

(1) a motor mechanic, (2) DC motor control

Energy-efficient **motors** are needed to maximize the cruising distance of electric vehicles.

adaptable

adj. able or willing to modify or be modified to deal with new situations

synonym: flexible, adjustable, elastic

(1) **adaptable** enough for the environment, (2) an **adaptable** person

We seek a candidate who possesses **adaptable** fighting potential.

unpredictable

adj. not capable of being foreseen or calculated; not regular or certain

synonym: uncertain, variable, random

(1) dangerously **unpredictable** person, (2) **unpredictable** outcome

The weather in this region is often **unpredictable**, with sudden rainstorms and strong winds.

progression

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

synonym: advancement, development, evolution

(1) **progression** of civilization, (2) **progression** of disease The company has made great strides in its **progression**

toward sustainability.

brain

- the organ inside the head that is responsible for one's movement, thought, memory, and feeling
- synonym: intellect, mind, encephalon
- basic brain function, (2) permanent brain damage
 rays revealed a small tumor in his brain.

primitive

- adj. of or relating to an early stage of society with no industry or technological development; simple, naive, or old-fashioned in style
- synonym: elementary, naive, rudimental
- (1) **primitive** society, (2) artifact of a **primitive** humankind The industry in this country is still **primitive**.

contrast

- v. to put in opposition to show or emphasize differences synonym: differ, vary, counterpoint
- (1) **contrast** with a decade ago, (2) **contrast** two things It's intriguing to compare and **contrast** the two authors.

extensive

- adj. covering a large area; having a wide range synonym: ample, comprehensive, vast
- (1) **extensive** experience, (2) have **extensive** vocabulary The incident attracted **extensive** media coverage throughout the world.

deform

- v. to change or distort the shape or appearance of something; to become misshapen or distortedsynonym: distort, contort, mangle
- (1) **deform** the shape, (2) **deform** his way of life The heat from the fire **deformed** the plastic parts of the appliance.

inspire

v. to make somebody fill with the desire, confidence, or enthusiasm, especially to do something creative

synonym: boost, encourage, enlighten

(1) **inspire** a feeling of curiosity, (2) **inspire** him to write a novel

The unique style of this martial arts **inspired** many action film producers.

elegance

 the quality of being graceful and stylish in appearance or manner

synonym: grace, refinement, poise

(1) austere elegance, (2) natural elegance

The **elegance** of her dress was breathtaking.

efficiency

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

synonym: effectiveness, efficacy, productivity

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

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

collaborate

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.

component

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

synonym: element, part, factor

key component, (2) spare components for cars
 The researchers try to discover a common component in all

types of successful organizations.

agility

 the ability to move quickly and easily, often in a way that is graceful and controlled

synonym: nimbleness, quickness, dexterity

(1) ninja-like agility, (2) agility training

The coach had the team run through the agility ladder to

improve their coordination.

dexterity

 skill and speed in performing physical tasks, especially with the hands; mental skill or adroitness in dealing with situations or problems

synonym: skillfulness, agility, expertise

(1) **dexterity** with the pen, (2) manual **dexterity**The surgeon's **dexterity** was impressive during the delicate surgery.

astonishing

adj. surprising or shocking; difficult to believesynonym: surprising, shocking, astounding

(1) **astonishing** achievement, (2) make **astonishing** gains The news of her sudden death was **astonishing** to everyone who knew her.

biology

- 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.

masterpiece

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

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

(1) literary **masterpiece**, (2) a **masterpiece** of design The Mona Lisa is widely considered to be a **masterpiece** of art.

evolution

- n. a gradual process of transformation of living thingssynonym: elaboration, expansion, transition
- (1) human **evolution**, (2) **evolution** theory They study the **evolution** of the universe.

heal

v. to make a wound or injury to become well again synonym: recover, bring around, mend

(1) **heal** a broken bone, (2) **heal** the hurt mind It will take time for her mental scars to **heal**.

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.

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.

integrate

 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.

neuron

- a cell that is specialized to carry information within the brain and between the brain and other parts of the body
 synonym: nerve cell
- (1) excite the **neurons**, (2) **neuron** cell body

 Our body transfers information along each **neuron** using an electrical impulse.

 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

environment

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

contract

 a legally binding agreement between two or more parties, setting out their rights and obligations to each other, typically in writing and enforceable by law

synonym: agreement, deal, arrangement

(1) employment contract, (2) contract law

The company signed a **contract** with the supplier for the delivery of goods.

hummingbird

- a small bird with a highly specialized beak and wings that allow it to hover in place, known for its rapid wingbeats and ability to fly in any direction
- (1) **hummingbird** feeder, (2) **hummingbird** nest Watching a **hummingbird** at a flower is like observing a miniature ballet of nature.

versatile

adj. able to do many things in different fields; having many talents

synonym: adaptable, protean, universal

(1) provide a **versatile** solution, (2) a **versatile** writer He's a **versatile** actor who has acted in various parts.

octopus

 a sea creature with a soft round body and eight long tentacles (= long parts like arms)

synonym: devilfish

(1) giant octopus, (2) venomous octopus

He experienced nausea after eating live octopus.

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.

actuate

- v. to cause a machine or equipment to start to work synonym: motivate, spark, drive
- (1) **actuate** the circuits, (2) **actuate** a parking brake A desire for success **actuated** her.

interaction

- the act of connecting with someone, mainly when working, playing, or spending time with them
- synonym: dealings, exchange, relations
- (1) the **interaction** between man and his environment,
- (2) interaction among human beings

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

surprisingly

adv. in a way that causes amazement or wonder synonym: exceptionally, notably, unusually

(1) **surprisingly** advanced culture, (2) have **surprisingly** little effect

The exam was **surprisingly** tricky for everyone.

colleague

- one of a group of a coworker, especially in a profession or a business
- synonym: coworker, associate, fellow
- (1) collaborate with colleagues,(2) former colleagueI decided to seek counseling on the advice of my colleague.

rediscover

- v. to discover or find again something that was previously known but lost
- synonym: recover, get back, revive
- (1) **rediscover** a value, (2) **rediscover** an old truth The painting was **rediscovered** in an attic and turned out to be a long-lost masterpiece.

volume

- 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.

dielectric

- adj. of or relating to a type of material that is a poor conductor of electricity, often used as an insulator in electronics; not allowing electric charges to flow easily through it
- (1) **dielectric** substance, (2) **dielectric** constant
 The engineer used **dielectric** insulation in the electrical wiring to prevent fires.

electrify

v. to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something

synonym: wire, amaze, astonish

(1) **electrify** the audience, (2) **electrify** a manufacturing process

The product developed through years of research continues to **electrify** the market.

germ

 a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one

synonym: bacterium, microbe, pathogen

(1) antibiotic-resistant **germ**, (2) a **germ-free** environment The **germ** of his idea came from watching birds flying in flocks.

physicist

- n. a scientist who specializes in the field of physics
- (1) talented **physicist**, (2) theoretical **physicist**Einstein was an outstanding and famous **physicist** of the 20th century.

discovery

 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.

X-ray

 a type of electromagnetic radiation that has a wavelength shorter than visible light allowing hidden objects such as bones and organs inside the body to be photographed

synonym: roentgenogram, photon radiography

(1) X-ray scan, (2) an X-ray of arteries

The doctor ordered an **X-ray** to see if there was any damage to the bones.

instruction

 detailed direction, order, etc., on how to do or use something

synonym: education, direction, guidance

(1) individual **instruction**, (2) follow his **instructions**They needed further **instruction** to perform their duties efficiently.

needle

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

synonym: thorn, spike, pin

(1) needle prick, (2) sewing needle

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

voltage

- n. the difference in the force of an electric current between two points
- (1) the voltage spiked, (2) low voltage

Connecting batteries in series increase the **voltage** of the circuit.

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**.

rub

v. to move one's hand or an object over the surface of something with pressure

synonym: scrub, massage, stroke

(1) rub shoulders, (2) rub a glass window

She **rubbed** the sore spot on her leg to ease the pain.

stretch

v. to make or be capable of making anything longer or broader without hurting or breaking

synonym: lengthen, prolong, extend

(1) **stretch** along the coast, (2) **stretch** a story

Some herds have been observed to **stretch** hundreds of kilometers.

frame

n. a strong border or structure of the wood, metal, etc. that surrounds something such as a picture, door, or window

synonym: body, skeleton, scaffolding

(1) a picture **frame**, (2) the **frame** of the policy

The detective looked for fingerprints on the window **frame**.

deformity

n. a physical abnormality or distortion

synonym: abnormality, malformation, disfigurement

(1) deformity of character, (2) physical deformity

The **deformity** in the steel beam caused the bridge to collapse.

biceps

 a muscle located in the upper arm that enables the arm to bend at the elbow

synonym: muscle, arm, flexor

(1) flexed biceps, (2) biceps curl

He injured his **biceps** during the game and had to sit out for the rest of the season.

flex

v. to show off one's strength, power, or possessions; to bend or be capable of bending easily

synonym: bend, stretch, extend

(1) flex a finger, (2) flex diplomatic muscle

The gymnast was able to **flex** his muscles to perform the difficult routine.

magic

 beliefs and actions employed to influence supernatural beings and forces; any art or performance that invokes supernatural powers

synonym: fascination, illusion, wizardry

(1) a magic spell, (2) she is magic

He performed **magic** tricks with sophisticated moves.

practical

adj. of or connected with actual use or real situation rather than with theory and ideas

synonym: applicable, functional, realistic

(1) **practical** English, (2) gain **practical** experience Her concept is highly **practical** and helpful.

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.

experiment

n. the scientific test conducted to observe what happens and gain new knowledge

synonym: experimentation, investigation

experiment design, (2) series of experiments
 experiments showed highly positive results.

hooked

adj. being caught or caught up in something; curved down like an eagle's beak

synonym: caught, captivated, addicted

(1) hooked hair, (2) hooked on drugs

My son was **hooked** on the Internet.

topic

n. a subject that is being discussed or written about

synonym: subject, theme, issue

(1) a serious topic, (2) the topic of the book

The **topic** of the discussion was the current state of the economy.

overcome

v. to succeed in controlling or dealing with something, such as a problem or difficulty; to defeat or overwhelm someone

synonym: beat, confound, overwhelm

- (1) **overcome** opponents, (2) **overcome** all difficulties He tried to **overcome** a bad reputation and win the election.
- 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**.

boulder

lab

 a large, smooth rock, typically one that has been worn away from a cliff or mountain by erosion

synonym: rock, stone, clump

(1) boulder field, (2) lava boulder

The hikers had to climb over a **boulder** that was blocking their path.

entirely

adv. completely

synonym: completely, fully, totally

(1) **entirely** satisfied with the meal, (2) he was **entirely** to blame

Later, his claim was found to be entirely false.

combine

- v. to join or merge to form a single thing or groupsynonym: coalesce, cohere, blend
- (1) combine chemically with another substance,
- (2) combine augmented reality

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

electrical

adj. relating to electricity

(1) an **electrical** storm, (2) degree in **electrical** engineering Actuators convert **electrical** pulses into motion.

fluid

n. a substance that can flow and is not solid

synonym: liquid, aqua, sap

(1) plenty of fluids, (2) fluid assets

She was diagnosed with a **fluid** buildup in her lungs.

diagram

 a simplified illustration of the appearance, structure, or workings of something

synonym: chart, figure, graph

(1) 3D diagram, (2) in a diagram

He is drawing a **diagram** illustrating how the equipment operates.

outstanding

adj. superior to others in excellence; not yet paid, completed, etc.

synonym: distinguished, excellent, unprecedented

(1) an **outstanding** new record, (2) pay **outstanding** debts It's an area of **outstanding** natural beauty.

develop

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.

gentle

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

synonym: mild, delicate, soft

(1) in a **gentle** voice, (2) **gentle** downward slope Her **gentle** manner relaxed everyone there.

Page 16 / 78

raspberry

 a sweet and tart edible fruit that grows on bushes, usually with a soft red or black color and a rough texture on the outside

synonym: blackberry, bramble, dewberry

(1) raspberry flavor, (2) raspberry tea

The **raspberry** cheesecake at that restaurant is out of this world.

dam

 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.

expand

v. to increase or to make something greater in size, number, or importance

synonym: extend, grow, boost

(1) **expand** a lineup, (2) **expand** agricultural output They hope to **expand** their business worldwide.

lift

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

synonym: raise, elevate, move up

(1) **lift** sagging skin, (2) **lift** a ban on alcohol The drought **lifted** the prices of grain globally.

gallon

- a unit for measuring volume, in the US, it is equal to about 3.79 liters, and in the UK, Canada, and other countries, it is equal to about 4.55 liters
- (1) 5- **gallon** square can, (2) ten- **gallon** hat The imperial **gallon** was standardized legally by the British Empire.

precise

adj. sharply exact or accurate or delimited synonym: accurate, exact, distinct

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

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

submerge

v. to put something under water or to go under water; to bury or hide something deeply or completely

synonym: deluge, drench, dunk

(1) **submerge** in a liquid, (2) **submerge** my head completely

The ship was **submerged** in the ocean for many years before it was finally discovered.

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.

inexpensive

adj. costing little; having a low price synonym: cheap, affordable, economical

(1) **inexpensive** option, (2) an **inexpensive** inn

The restaurant offered delicious food at an **inexpensive** price.

recommend

v. to suggest that someone or something would be a suitable fit for a particular purpose or role

synonym: advise, suggest, instruct

(1) **recommend** a hospitalization, (2) **recommend** reading We **recommend** taking media training every six months.

principle

 a fundamental law or truth that explains or controls how something happens or works

synonym: rule, creed, code

(1) **principle** of treatment, (2) **principle** in business Efficiency isn't an essential **principle** here; fairness is.

olive

 a small green or black fruit with a bitter taste that is eaten or used to produce oil or a tree on which this fruit grows

(1) olive branch, (2) olive oil

They enjoyed reading under the **olive** trees.

bubble

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

synonym: blob, balloon, mania

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

contraction

 the act or process of becoming smaller or shorter in size, volume, or amount

synonym: shrinking, compression, reduction

(1) **contraction** of a disease, (2) **contraction** in the industry The **contraction** of the economy has led to job losses.

medium

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

synonym: average, intermediate, (noun) channel

(1) **medium** color, (2) an advertising **medium** The **medium** size shirt fits him perfectly.

replace

v. to take the place of something

synonym: substitute, supersede, displace

(1) **replace** one word with another, (2) **replace** a phone Eventually, the new design will **replace** all older models.

hydra

n. a freshwater polyp with a tubular body and several tentacles; (of mythology) a serpentine monster with many heads that regrow when cut off; a problem or a situation that is difficult to overcome because it multiplies or gets worse as soon as one aspect of it is solved or eliminated

synonym: monster, serpent

(1) **hydra-headed** problem, (2) antibacterial **hydra**The new software system was a **hydra** of complications, with one problem leading to another.

amplify

- v. to enhance something, particularly sound or brightness synonym: intensify, boost, argument
- (1) **amplify** a signal, (2) **amplify** the effect You might need to **amplify** this point.

healing

 the process of becoming or making somebody or something well again

synonym: recovery, recuperation, convalescence

(1) natural **healing** ability, (2) part of the **healing** process Each ancient tribe has its **healing** traditions.

electrostatic

- adj. relating to the static electric charge produced by friction or other means; describing the behavior of insulators and conductors in electrical systems
- (1) **electrostatic** repulsion, (2) **electrostatic** discharge The experiment showed a strong **electrostatic** charge between the two objects.

geometry

- the area of pure mathematics that deals with the points, lines, curves, and surfaces
- (1) Euclidean **geometry**, (2) spherical **geometry**. The mathematician pioneered fractal **geometry**.

flexible

adj. able to change or be changed to suit new conditions or situations; able to bend easily

synonym: adaptable, elastic, pliable

(1) flexible schedules, (2) a flexible wire

You can be more **flexible** and creative in your approach.

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.

insulate

liquid

v. to protect something by interposing material that prevents heat, noise, electricity, etc.

synonym: isolate, protect, seclude

- (1) **insulate** the room from sound, (2) **insulate** electricity We had our bedroom **insulated** before winter came.
- a substance, such as water or oil that flows freely and is neither a solid nor a gas

synonym: fluid

(1) colorless **liquid**, (2) hazardous **liquid**The sponge takes up the **liquid** well.

conductor

n. someone who leads the performance of musicians or a piece of music; (in physics) an object, substance, or material that readily allows the flow of electricity, heat, etc.

synonym: director, manager

- (1) **conductor** directing a symphony, (2) oxide **conductor** Diamonds are employed as thermal **conductors** as well.
- a small bag or container with a drawstring or zipper used to carry small items; a small sac or pocket within an organ or tissue in the body

synonym: bag, sack, pocket

(1) paper **pouch**, (2) kangaroo **pouch**My wallet wasn't big enough, so I kept my coins in a small **pouch**.

fiber

pouch

 thread or filament used to make a vegetable tissue, mineral material, or textile

synonym: yarn, thread, wool

(1) carbon **fiber**, (2) synthetic **fiber**

We must consume dietary fiber to maintain good health.

attach

- v. to fasten, join, or connect one thing to another synonym: fix, fasten, bind
- (1) **attach** firmly, (2) **attach** a file to an e-mail He does not **attach** importance to these rumors.

displace

v. to force someone or something to leave their home or place of origin, especially as a result of conflict, natural disaster, or manipulation

synonym: evict, exile, remove

(1) **displace** workers, (2) **displace** the explosive power The construction of the new dam will **displace** hundreds of families living downstream.

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.

sect

 a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream

synonym: group, faction, cult

(1) sect beliefs, (2) secret sect

The minority **sect** believed in a set of unconventional religious practices.

quadrant

- n. a quarter of a circle or sphere or any of the four parts of an area divided by two intersecting lines or planessynonym: section, division, sector
- (1) Northeast **quadrant**, (2) **quadrant** chart The map was divided into four **quadrants** to examine the geographical region closely.

dough

n. a mixture of flour, liquid, and other ingredients, typically used to make bread, pastry, or pasta

synonym: flour, mix

(1) work dough, (2) dough for pastry

She mixed flour, yeast, sugar, and water to make **dough** for the bread.

incredibly

adv. in a way that is very difficult to believe; exceedingly or extremely

synonym: enormously, exceptionally, extraordinarily

(1) **incredibly** cheerful character, (2) get **incredibly** insecure

Several cities are experiencing **incredibly** high unemployment rates.

superhuman

adj. possessing abilities or characteristics that exceed those of normal humans; beyond human capacity or capability

synonym: supernatural, inhuman, beyond human

(1) **superhuman** beings, (2) **superhuman** effort

The athlete's **superhuman** strength allowed him to lift twice his body weight.

excess

n. an amount or quantity beyond what is acceptable, expected, or reasonable

synonym: exuberance, glut, surplus

(1) lose **excess** weight, (2) an **excess** of exports The road of **excess** leads to the palace of wisdom.

compatible

adj. capable of coexisting or working together without conflict or inconsistency; harmonious or well-matched

synonym: harmonious, congruent, consistent

(1) fully compatible, (2) compatible with HTML5

The new software is not **compatible** with the old operating system, causing compatibility issues and errors.

large-scale

 adj. involving many people or things and involving a lot of change or activity

synonym: big, massive, grand

(1) large-scale project, (2) large-scale agriculture

The company is planning to make a **large-scale** expansion of its factory.

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.

drastic

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

synonym: extreme, fierce, radical

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

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

improve

- v. to make or become better
- synonym: enhance, ameliorate, enrich
- (1) **improve** a process, (2) **improve** the test score We want to **improve** ties between our two countries.

moving

adj. causing strong emotions or feelings, especially sadness or sympathy

synonym: emotional, poignant, touching

(1) **moving** experience, (2) **moving** ceremony
His **moving** speech about his struggles with addiction brought tears to the audience's eyes.

scorpion

 a small creature similar to an insect with a segmented body, a pair of pincers, and a long, thin tail that ends in a venomous sting

synonym: arachnid, stinger

(1) **scorpion** fish, (2) poisonous **scorpion**

The **scorpion's** venom can be lethal to humans.

hunt

v. to go after and try to catch wild animals to kill them for food, sport, or profit

synonym: chase, pursuit, quest

(1) hunt a job, (2) hunt after knowledge

Hounds **hunt** their prey by using their keen scent.

prey

the object of a hunt; an animal hunted or trapped for n. eating

synonym: target, quarry, chase

(1) **prey** of beast, (2) become **prey** to terrorists

The majority of snakes swallow their **prey** whole.

balloon

a small bag made of thin rubber or other light material that can be inflated with air or gas, used as a toy or as a decoration; (verb) to become inflated

synonym: aerostat, blimp, (verb) billow out

(1) **balloon** ride, (2) **balloon** into a severe political problem The satellite **balloon** slowly ascended into the sky.

initial

adj. of or happening at the beginning; (noun) the first letter of a word, especially a person's name

synonym: basic, primary, beginning

(1) initial velocity, (2) an initial letter

They took the **initial** step toward reconciliation.

inspiration

something that motivates or encourages someone to n. create or achieve something, or a feeling of excitement or creativity

synonym: motivation, drive, encouragement

- (1) source of inspiration, (2) get inspiration from nature He found **inspiration** in the works of his favorite authors.
- the main stem or body of a tree which its branches grow trunk *synonym*: body, chest, torso
 - (1) the **trunk** of the tree, (2) the **trunk** of the body Destructive fungi thrive in moist environments, such as those seen in wounds on the trunk.

continuum

 a series of similar items in which no part or portion is distinct or distinguishable from adjacent parts

synonym: continuation, continuity

(1) a space-time **continuum**, (2) the **continuum** of events Our life is a **continuum** of experience in which events pass from the future through the present to the past.

excite

- v. to make someone feel suddenly enthusiastic or eager synonym: thrill, exhilarate, animate
- (1) **excite** the crowd, (2) **excite** rebellion The news of her promotion **excited** her.

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.

lifelike

 adj. resembling or appearing similar to something alive or real, often realistically or vividly; convincing or authentic in appearance or behavior

synonym: realistic, naturalistic, vivid

(1) **lifelike** painting, (2) **lifelike** animation

The artist created a **lifelike** sculpture of a famous politician for the town square.

prosthetic

- adj. of or relating to an artificial part of the body, such as a limb, a heart, or a breast implant
- have prosthetic arms, (2) prosthetic limbs
 New prosthetic joints are less prone to metal poisoning.

merge

v. to combine or integrate things, or to cause this to happen

synonym: combine, join, coalesce

(1) merge into a new party, (2) merge those systems into a

Page 26 / 78

new one

This consulting firm decided to **merge** the two companies into one.

scary

adj. causing fear or fright; frightening; intimidatingsynonym: terrifying, frightening, alarming

(1) scary dream, (2) scary story

The horror movie was so **scary** that I couldn't watch it alone.

grandparent

- *n.* a parent of one's father or mother
- (1) great- **grandparent**, (2) person of **grandparent** age She was close to her paternal **grandparents** and often spent summers with them.

burden

 a duty, responsibility, etc. that is oppressive or worrisome; a load, typically a heavy one that is difficult to carry

synonym: obligation, duty, load

(1) carry a burden, (2) burden of disease

That car has a low environmental **burden**.

enhance

v. to increase or improve the quality, amount, or strength of someone or something

synonym: improve, enrich, refine

(1) **enhance** value, (2) **enhance** the flavor of the vanilla The new strategy will **enhance** the profitability of our company.

thereby

adv. as a result; consequence of a particular action or set of conditions

synonym: thus, hence, as a result

(1) **thereby-obtained** data, (2) **thereby** improving overall health

The new software will streamline the workflow, **thereby** increasing productivity.

maintain

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

synonym: preserve, uphold, sustain

(1) **maintain** order, (2) **maintain** good health I need to **maintain** my car regularly to prevent any major mechanical issues.

autonomy

 the right of an organization, country, or region to govern itself independently

synonym: independence, sovereignty, self-sufficiency

(1) regional **autonomy**, (2) establish **autonomy**Demonstrators strongly demanded immediate **autonomy** for their country.

anti-aging

- adj. designed to prevent or reverse the effects of aging, often referring to cosmetic or medical interventions intended to improve skin elasticity, reduce wrinkles, or promote overall wellness in older adults
- (1) **anti-aging** cream, (2) **anti-aging** supplements Many people invest in **anti-aging** skincare products to help reduce the signs of aging on their skin.

counterpart

 a person or thing that corresponds to or has the same function as another person or thing

synonym: equivalent, analogue, match

(1) **counterpart** agreement, (2) negotiating **counterpart** His **counterpart** in the other company is responsible for marketing.

background

n. the details of a person's social heritage, such as family, vocational or educational experience; past information that is essential to understanding a situation or problem

synonym: ground, experience, backdrop

(1) a **background** color, (2) a criminal **background**The company's hiring criteria emphasize personality, not a person's **background**.

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.

introductory

adj. intended as an introduction or preliminary; serving as a base or starting point

synonym: beginning, preliminary, initial

(1) **introductory** biology text, (2) product **introductory** sale The **introductory** class was designed to give students a basic understanding of the subject.

concept

- n. an idea or principle associated with something abstractsynonym: idea, notion, vision
- (1) learn new concepts,(2) concept carOne such rapidly growing concept is quantum cryptography.

Session 2: Spelling

1.

5.

6.

7.

8.

9.

cou____rt agreement

person of gra____nt age

in e a feeling of curiosity

im e the test score

austere el ce

h la broken bone

10. lar____le project

			person or thing
2.	dep a skill	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
3.	dem his way of life	v.	to change or distort the shape or appearance of something; to become misshapen or distorted
4.	astng achievement	adj.	surprising or shocking; difficult to believe

- n. a parent of one's father or mother
- v. to make somebody fill with the desire, confidence, or enthusiasm, especially to do something creative

n. a person or thing that corresponds to or

- v. to make or become better
- n. the quality of being graceful and stylish in appearance or manner
- to make a wound or injury to become well again
- adj. involving many people or things and involving a lot of change or activity

ANSWERS: 1. counterpart, 2. develop, 3. deform, 4. astonishing, 5. grandparent, 6. inspire, 7. improve, 8. elegance, 9. heal, 10. large-scale

Vocab-Builder Ref from "Christoph Keplinger: The artificial muscles that will power robots of the future | TED Talk" (153 words)

ANSWERS: 11. prey, 12. robotic, 13. rub, 14. anti-aging, 15. hydra, 16. combine, 17. excess, 18. replace, 19. outstanding

20.	carry a bun	n.	a duty, responsibility, etc. that is oppressive or worrisome; a load, typically a heavy one that is difficult to carry		
21.	talented phst	n.	a scientist who specializes in the field of physics		
22.	incly cheerful character	adv.	in a way that is very difficult to believe; exceedingly or extremely		
23.	against tron	n.	a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society		
24.	DC mor control	n.	a device that converts electricity, fuel, etc. into movement and makes a machine, vehicle, etc. work		
25.	the first round of the comon	n.	a situation in which someone is attempting to beat or outperform another		
26.	product intory sale	adj.	intended as an introduction or preliminary; serving as a base or starting point		
27.	like painting	adj.	resembling or appearing similar to something alive or real, often realistically or vividly; convincing or authentic in appearance or behavior		
28.	permafrost ten	n.	the physical features of a piece of land, including hills, valleys, rivers, and forests		
29.	coe augmented reality	<i>v</i> .	to join or merge to form a single thing or group		
ANSWERS: 20. burden, 21. physicist, 22. incredibly, 23. tradition, 24. motor, 25. competition, 26. introductory, 27. lifelike, 28. terrain, 29. combine					

Vocab-Builder Ref from "Christoph Keplinger: The artificial muscles that will power robots of the future | TED Talk" (153 words)

Vocab-Builder Ref from "Christoph Keplinger: The artificial muscles that will power robots of the future | TED Talk" (153 words)

transparent, 36. primitive, 37. geometry, 38. discovery, 39. excite, 40. robotic

ANSWERS: 41. scary, 42. raspberry, 43. unpredictable, 44. compete, 45. movement,

46. tight, 47. continuum, 48. germ, 49. primitive, 50. balloon

n.

a small bag made of thin rubber or other

light material that can be inflated with

decoration; (verb) to become inflated

air or gas, used as a toy or as a

50. ba___n into a severe political

problem

ANSWERS: 51. prosthetic, 52. excite, 53. compatible, 54. gallon, 55. flexible, 56. magic, 57. flex, 58. amplify, 59. autonomy, 60. damage

thing, or entity

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

ANSWERS: 61. entirely, 62. component, 63. invisible, 64. healing, 65. superhuman, 66. flex, 67. pouch, 68. fiber, 69. biology, 70. contract, 71. damage

72.	in a dim	n.	a simplified illustration of the appearance, structure, or workings of something
73.	expnt design	n.	the scientific test conducted to observe what happens and gain new knowledge
74.	a vele writer	adj.	able to do many things in different fields; having many talents
75.	an impve array of facts	adj.	arousing admiration due to size, quality, or skill
76.	inI velocity	adj.	of or happening at the beginning; (noun) the first letter of a word, especially a person's name
77.	dety of character	n.	a physical abnormality or distortion
78.	colorless lid	n.	a substance, such as water or oil that flows freely and is neither a solid nor a gas
79.	series of expnts	n.	the scientific test conducted to observe what happens and gain new knowledge
80.	ovme all difficulties	ν.	to succeed in controlling or dealing with something, such as a problem or difficulty; to defeat or overwhelm someone
81.	colte on a press release	<i>v</i> .	to work with someone else to produce or achieve something
82.	provide a vele solution	adj.	able to do many things in different fields; having many talents
83.	the toc of the book	n.	a subject that is being discussed or written about

ANSWERS: 72. diagram, 73. experiment, 74. versatile, 75. impressive, 76. initial, 77. deformity, 78. liquid, 79. experiment, 80. overcome, 81. collaborate, 82. versatile, 83. topic

92. medical l_b

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

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

ANSWERS: 84. lift, 85. dam, 86. lift, 87. pouch, 88. physicist, 89. balloon, 90. rediscover, 91. agility, 92. lab, 93. dam

93. d m-building program

ANSWERS: 94. evolution, 95. dielectric, 96. actuate, 97. scary, 98. inspiration, 99. interaction, 100. agility, 101. biceps, 102. hydra

ANSWERS: 103. collaborate, 104. autonomy, 105. tight, 106. boulder, 107. amazing, 108. unpredictable, 109. electrify, 110. overcome, 111. biology, 112. manufacture, 113. progression, 114. enhance

ANSWERS: 115. develop, 116. outstanding, 117. electrical, 118. burden, 119. trunk, 120. thereby, 121. precise, 122. insulate, 123. inspire, 124. impressive, 125. hummingbird

a small bird with a highly specialized beak and wings that allow it to hover in place, known for its rapid wingbeats and

ability to fly in any direction

125. hum____rd feeder

126. proic limbs	adj.	of or relating to an artificial part of the body, such as a limb, a heart, or a breast implant
127. conon in the industry	n.	the act or process of becoming smaller or shorter in size, volume, or amount
128. employment coct	n.	a legally binding agreement between two or more parties, setting out their rights and obligations to each other, typically in writing and enforceable by law
129. collaborate with coues	n.	one of a group of a coworker, especially in a profession or a business
130. global dier	n.	an unexpected event or series of events that cause widespread damage, destruction, or loss of life
131. thy-obtained data	adv.	as a result; consequence of a particular action or set of conditions
132. I_b instrument	n.	a workplace for the conduct of scientific research; a laboratory
133. a space-time coum	n.	a series of similar items in which no part or portion is distinct or distinguishable from adjacent parts
134. ten-gan hat	n.	a unit for measuring volume, in the US, it is equal to about 3.79 liters, and in the UK, Canada, and other countries, it is equal to about 4.55 liters
135. envnt affairs	n.	the natural world such as air, water, and land in which humans, animals, and plants live

ANSWERS: 126. prosthetic, 127. contraction, 128. contract, 129. colleague, 130. disaster, 131. thereby, 132. lab, 133. continuum, 134. gallon, 135. environment

136. the trk of the body	n.	the main stem or body of a tree which its branches grow
137. a serious toc	n.	a subject that is being discussed or written about
138. Xy scan	n.	a type of electromagnetic radiation that has a wavelength shorter than visible light allowing hidden objects such as bones and organs inside the body to be photographed
139. the great diry of the century	n.	the act or process of finding information, a place, or an object, or learning about something that was previously not known
140. the influence of mecal action	adj.	operated by a machine, relating to or concerned with machinery or tools
141. a picture fre	n.	a strong border or structure of the wood, metal, etc. that surrounds something such as a picture, door, or window
142. gee downward slope	adj.	having or showing a kindly or tender nature; soft and mild
143. in a gee voice	adj.	having or showing a kindly or tender nature; soft and mild
144. a flle wire	adj.	able to change or be changed to suit new conditions or situations; able to bend easily
145. get incly insecure	adv.	in a way that is very difficult to believe; exceedingly or extremely
146. make drc revision	adj.	radical and extreme; likely to have a significant or far-reaching impact

ANSWERS: 136. trunk, 137. topic, 138. X-ray, 139. discovery, 140. mechanical, 141. frame, 142. gentle, 143. gentle, 144. flexible, 145. incredibly, 146. drastic

ANSWERS: 147. mechanical, 148. healing, 149. counterpart, 150. stretch, 151. adaptable, 152. bubble, 153. displace, 154. device, 155. cylinder, 156. quadrant

the four parts of an area divided by two

intersecting lines or planes

ANSWERS: 157. background, 158. integrate, 159. anti-aging, 160. volume, 161. quadrant, 162. geometry, 163. merge, 164. precise, 165. moving

especially sadness or sympathy

166. ho d hair adj. being caught or caught up in something; curved down like an eagle's beak 167. the most am___g feeling adj. extremely surprising, especially in a way that you like or admire 168. former co____ue one of a group of a coworker, especially n. in a profession or a business a device that converts electricity, fuel, 169. a mo__r mechanic n. etc. into movement and makes a machine, vehicle, etc. work 170. pr le in business a fundamental law or truth that explains or controls how something happens or works 171. an in____le asset adj. impossible or nearly impossible to see 172. physical de____ty a physical abnormality or distortion n. 173. a tr____on of a culture a belief, custom, or way of doing n. something that has been passed down from generation to generation within a group or society to combine or integrate things, or to 174. me e into a new party ν. cause this to happen 175. plenty of fl ds a substance that can flow and is not n. solid 176. a circular mo____nt a group of people working together to achieve a shared goal, especially a political, social, or artistic one; the process of moving or being moved, physically or figuratively to go after and try to catch wild animals 177. h_t after knowledge ν. to kill them for food, sport, or profit

ANSWERS: 166. hooked, 167. amazing, 168. colleague, 169. motor, 170. principle, 171. invisible, 172. deformity, 173. tradition, 174. merge, 175. fluid, 176. movement, 177. hunt

n.	a solid or hollow geometric figure with two round ends and long straight sides, or an object shaped like this
adj.	relating to the static electric charge produced by friction or other means; describing the behavior of insulators and conductors in electrical systems
n.	a thin, pointed object typically used for sewing or medical purposes; a metal or plastic instrument used for administering injections or drawing blood
adj.	causing a lot of interest or excitement
adv.	in a way that causes amazement or wonder
n.	a small creature similar to an insect with a segmented body, a pair of pincers, and a long, thin tail that ends in a venomous sting
n.	the difference in the force of an electric current between two points
n.	a gradual process of transformation of living things
<i>v</i> .	to make a wound or injury to become well again
n.	an idea or principle associated with something abstract
adj.	extremely strict and difficult to change or adapt; incapable of or resistant to bending
	adj. n. n. n. n.

ANSWERS: 178. cylinder, 179. electrostatic, 180. needle, 181. exciting, 182. surprisingly, 183. scorpion, 184. voltage, 185. evolution, 186. heal, 187. concept, 188. rigid

ANSWERS: 189. brain, 190. drastic, 191. submerge, 192. magic, 193. progression, 194. recommend, 195. inexpensive, 196. efficiency, 197. polymer, 198. olive, 199. lifelike

200. great-grant	n.	a parent of one's father or mother
201. main good health	ν.	to continue to uphold or sustain; to keep in a particular state or condition; to assert or declare something to be true
202. cost two things	v.	to put in opposition to show or emphasize differences
203. better fuel effcy	n.	the state or quality of doing something well with no waste of input such as time or money
204. gain pral experience	adj.	of or connected with actual use or real situation rather than with theory and ideas
205. a masce of design	n.	a work of art that is exceptionally good or highly skilled; a great achievement
206. an exs of exports	n.	an amount or quantity beyond what is acceptable, expected, or reasonable
207. trant crystal	adj.	easy to perceive, detect, or understand; (of a material or article) permitting light to pass through freely
208. get inson from nature	n.	something that motivates or encourages someone to create or achieve something, or a feeling of excitement or creativity
209. an inI letter	adj.	of or happening at the beginning; (noun) the first letter of a word, especially a person's name
210. work doh	n.	a mixture of flour, liquid, and other ingredients, typically used to make bread, pastry, or pasta

ANSWERS: 200. grandparent, 201. maintain, 202. contrast, 203. efficiency, 204. practical, 205. masterpiece, 206. excess, 207. transparent, 208. inspiration, 209. initial, 210. dough

ANSWERS: 211. contraction, 212. dexterity, 213. structure, 214. liquid, 215. submerge, 216. extensive, 217. squeeze, 218. sect, 219. octopus

ANSWERS: 220. hummingbird, 221. improve, 222. device, 223. elegance, 224. neuron, 225. medium, 226. masterpiece, 227. brain, 228. replace, 229. adaptable, 230. recommend

- 231. 3D di____m
- 232. cognitive com____ty
- 233. fl dassets
- 234. a criminal bac____nd
- 235. ol__e oil
- 236. pr____le of treatment
- 237. at___h firmly
- 238. do_h for pastry
- 239. he was en____ly to blame
- 240. co____st with a decade ago
- 241. po____r fiber

- a simplified illustration of the appearance, structure, or workings of something
- the state or quality of being complicated or intricate and difficult to understand
- a substance that can flow and is not solid
- n. the details of a person's social heritage, such as family, vocational or educational experience; past information that is essential to understanding a situation or problem
- a small green or black fruit with a bitter taste that is eaten or used to produce oil or a tree on which this fruit grows
- a fundamental law or truth that explains or controls how something happens or works
- v. to fasten, join, or connect one thing to another
- a mixture of flour, liquid, and other ingredients, typically used to make bread, pastry, or pasta
- adv. completely
- v. to put in opposition to show or emphasize differences
- a substance composed of macromolecules (= large groups of atoms) made from many smaller and simpler molecules

ANSWERS: 231. diagram, 232. complexity, 233. fluid, 234. background, 235. olive, 236. principle, 237. attach, 238. dough, 239. entirely, 240. contrast, 241. polymer

242. unn coating	adj.	not level or flat; not balanced or symmetrical
243. make astng gains	adj.	surprising or shocking; difficult to believe
244. an Xy of arteries	n.	a type of electromagnetic radiation that has a wavelength shorter than visible light allowing hidden objects such as bones and organs inside the body to be photographed
245. unn numbers	adj.	not level or flat; not balanced or symmetrical
246. pral English	adj.	of or connected with actual use or real situation rather than with theory and ideas
247. nen cell body	n.	a cell that is specialized to carry information within the brain and between the brain and other parts of the body
248. exd a lineup	v.	to increase or to make something greater in size, number, or importance
249. an advertising mem	adj.	of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information
250. have exve vocabulary	adj.	covering a large area; having a wide range
251. exd agricultural output	v.	to increase or to make something greater in size, number, or importance
252. have surgly little effect	adv.	in a way that causes amazement or wonder

ANSWERS: 242. uneven, 243. astonishing, 244. X-ray, 245. uneven, 246. practical, 247. neuron, 248. expand, 249. medium, 250. extensive, 251. expand, 252. surprisingly

253. degree in eleal engineering	adj.	relating to electricity
254. manre an enzyme	ν.	to make goods in large numbers, usually in a factory using machines
255. spare conts for cars	n.	one of several parts that combines with others to form something bigger
256. larle agriculture	adj.	involving many people or things and involving a lot of change or activity
257. become py to terrorists	n.	the object of a hunt; an animal hunted or trapped for eating
258. rary tea	n.	a sweet and tart edible fruit that grows on bushes, usually with a soft red or black color and a rough texture on the outside
259. eletic repulsion	adj.	relating to the static electric charge produced by friction or other means; describing the behavior of insulators and conductors in electrical systems
260. stre and function of the brain	n.	the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
261. ten map	n.	the physical features of a piece of land including hills, valleys, rivers, and forests
262. coe fiercely	ν.	to strive to achieve more success than someone or something
263. cot car	n.	an idea or principle associated with something abstract

ANSWERS: 253. electrical, 254. manufacture, 255. component, 256. large-scale, 257. prey, 258. raspberry, 259. electrostatic, 260. structure, 261. terrain, 262. compete, 263. concept

ANSWERS: 264. deform, 265. instruction, 266. state-of-the-art, 267. displace, 268. germ, 269. rediscover, 270. hooked, 271. insulate, 272. boulder, 273. integrate

to combine one thing with another so that they form a whole or work together;

members of all races and ethnic groups

to accept equal participation for

273. in____te both businesses

ocab-Builder Ref from "Christoph Keplinger: The artificial m	nuscles	that will power robots of the future TED Talk" (153 words)
274. the fr_e of the policy	n.	a strong border or structure of the wood, metal, etc. that surrounds something such as a picture, door, or window
275. dieic substance	adj.	of or relating to a type of material that is a poor conductor of electricity, often used as an insulator in electronics; not allowing electric charges to flow easily through it
276. high voe	n.	the amount of space occupied by an object or substance; the magnitude of sound
277. ene value	v.	to increase or improve the quality, amount, or strength of someone or something
278. flexed bis	n.	a muscle located in the upper arm that enables the arm to bend at the elbow
279. bue in the champagne glass	n.	a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses
280. sqe a confession	v.	to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness

281. giant oc___s

282. am___y the effect

 a sea creature with a soft round body and eight long tentacles (= long parts like arms)

v. to enhance something, particularly sound or brightness

ANSWERS: 274. frame, 275. dielectric, 276. volume, 277. enhance, 278. biceps, 279. bubble, 280. squeeze, 281. octopus, 282. amplify

283. dier recovery	n.	an unexpe that cause destruction
284. comty theory	n.	the state o or intricate
285. oxide coor	n.	someone v musicians physics) ar material th electricity,
286. sth a story	ν.	to make or anything lo hurting or l
287. mog ceremony	adj.	causing stress
288. ht a job	<i>v</i> .	to go after to kill them
289. intraspecific comon	n.	a situation attempting another
290. staart technology	adj.	characteriz and most a methods; o
291. low voe	n.	the different before
292. st beliefs	n.	a group of

- an unexpected event or series of events that cause widespread damage, destruction, or loss of life
- the state or quality of being complicated or intricate and difficult to understand
- n. someone who leads the performance of musicians or a piece of music; (in physics) an object, substance, or material that readily allows the flow of electricity, heat, etc.
- v. to make or be capable of making anything longer or broader without hurting or breaking
- adj. causing strong emotions or feelings, especially sadness or sympathy
- v. to go after and try to catch wild animals to kill them for food, sport, or profit
- a situation in which someone is attempting to beat or outperform another
- adj. characterized by the use of the latest and most advanced technology or methods; cutting-edge
- the difference in the force of an electric current between two points
- a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream

ANSWERS: 283. disaster, 284. complexity, 285. conductor, 286. stretch, 287. moving, 288. hunt, 289. competition, 290. state-of-the-art, 291. voltage, 292. sect

Vocab-Builder Ref from "0	Christoph Keplinger:	The artificial muscles	that will power robots	of the future T	ED Talk" ((153 words)
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302. rid rules	adj.	extremely strict and difficult to change or adapt; incapable of or resistant to bending
303. coor directing a symphony	n.	someone who leads the performance of musicians or a piece of music; (in physics) an object, substance, or material that readily allows the flow of electricity, heat, etc.
304. scon fish	n.	a small creature similar to an insect with a segmented body, a pair of pincers, and a long, thin tail that ends in a venomous sting
305. individual inson	n.	detailed direction, order, etc., on how to do or use something
306. intory biology text	adj.	intended as an introduction or preliminary; serving as a base or starting point

ANSWERS: 302. rigid, 303. conductor, 304. scorpion, 305. instruction, 306. introductory

Session 3: Fill in the Blanks

1.	The athlete's strength allowed him to lift twice his body weight.
adj	possessing abilities or characteristics that exceed those of normal humans; beyond human capacity or capability
2.	He does not importance to these rumors.
<i>v</i> .	to fasten, join, or connect one thing to another
3.	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
4.	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
5.	The product developed through years of research continues to the market.
v.	to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something
6.	She agreed to with him in creating new artwork.
v.	to work with someone else to produce or achieve something
7.	The map was divided into four to examine the geographical region closely.
n.	a quarter of a circle or sphere or any of the four parts of an area divided by two intersecting lines or planes
	SWERS: 1. superhuman, 2. attach, 3. damage, 4. environment, 5. electrify, 6. aborate. 7. guadrants

8.	His speech about his struggles with addiction brought tears to the audience's eyes.
adj	causing strong emotions or feelings, especially sadness or sympathy
9. v.	The unique style of this martial arts many action film producers. to make somebody fill with the desire, confidence, or enthusiasm, especially to do something creative
10.	The researchers try to discover a common in all types of successful organizations.
n.	one of several parts that combines with others to form something bigger
	My son was on the Internet. being caught or caught up in something; curved down like an eagle's beak
12. v.	Eventually, the new design will all older models. to take the place of something
13.	The of her dress was breathtaking.
n.	the quality of being graceful and stylish in appearance or manner
14.	The golfer recorded an distance.
adj	extremely surprising, especially in a way that you like or admire
15.	Connecting batteries in series increase the of the circuit. the difference in the force of an electric current between two points
16	
n.	His showed highly positive results. the scientific test conducted to observe what happens and gain new knowledge
	SWERS: 8. moving, 9. inspired, 10. component, 11. hooked, 12. replace, 13. gance, 14. amazing, 15. voltage, 16. experiments

17.	A engineer is still in demand in many companies.
adj	operated by a machine, relating to or concerned with machinery or tools
18.	Destructive fungi thrive in moist environments, such as those seen in wounds on the
n.	the main stem or body of a tree which its branches grow
19.	The of his idea came from watching birds flying in flocks.
n.	a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one
20.	The satellite slowly ascended into the sky.
n.	a small bag made of thin rubber or other light material that can be inflated with air or gas, used as a toy or as a decoration; (verb) to become inflated
21.	You must with others to obtain this position.
v.	to strive to achieve more success than someone or something
22.	A desire for success her.
v.	to cause a machine or equipment to start to work
23.	The global community is undergoing changes at present.
adj	radical and extreme; likely to have a significant or far-reaching impact
24.	The Mona Lisa is widely considered to be a of art.
n.	a work of art that is exceptionally good or highly skilled; a great achievement
25.	Watching a at a flower is like observing a miniature ballet of nature.
n.	a small bird with a highly specialized beak and wings that allow it to hover in place, known for its rapid wingbeats and ability to fly in any direction
	SWERS: 17. mechanical, 18. trunk, 19. germ, 20. balloon, 21. compete, 22. uated, 23. drastic, 24. masterpiece, 25. hummingbird

Vocab-Builde	ler Ref from "Christoph Keplinger: The artificial muscles that will powe	r robots of the future TED Talk" (153 words
26. We	e seek a candidate who possesses fig	hting potential.
adj. ak	able or willing to modify or be modified to deal with	new situations
	ne new software will streamline the workflow,	
aav. as	as a result; consequence of a particular action or se	et of conditions
28. He	e performed tricks with sophisticated moves	.
	peliefs and actions employed to influence supernate art or performance that invokes supernatural power	
29. She ther	ne was close to her paternal and of em.	ten spent summers with
n. a	a parent of one's father or mother	
30. The	ne surgeon's was impressive during the	e delicate surgery.
	skill and speed in performing physical tasks, espec skill or adroitness in dealing with situations or probl	
31. X-ra	rays revealed a small tumor in his	
	he organ inside the head that is responsible for on nemory, and feeling	e's movement, thought,
32. The	ne national election was held amid security.	
adj. fix	ixed, fastened, or kept together firmly or closely	
33. The	ne mountainous was rough and rocky.	
	he physical features of a piece of land, including horests	ills, valleys, rivers, and
ANSWE	/ERS: 26. adaptable, 27. thereby, 28. magic, 29. g	randnarents 30 dexterity
	ain, 32. tight, 33. terrain	nanaparonio, ooi aomoniy,

51	We had our bedroom before winter came.
ν.	to protect something by interposing material that prevents heat, noise, electricity, etc.
52.	The new software system was a of complications, with one problem leading to another.
n.	a freshwater polyp with a tubular body and several tentacles; (of mythology) a serpentine monster with many heads that regrow when cut off; a problem or a situation that is difficult to overcome because it multiplies or gets worse as soon as one aspect of it is solved or eliminated
53.	The heat from the fire the plastic parts of the appliance.
v.	to change or distort the shape or appearance of something; to become misshapen or distorted
54.	They took the step toward reconciliation.
adj	of or happening at the beginning; (noun) the first letter of a word, especially a person's name
55.	The of the discussion was the current state of the economy.
n.	a subject that is being discussed or written about
56.	It's intriguing to compare and the two authors.
<i>v</i> .	to put in opposition to show or emphasize differences
57.	The artist created a sculpture of a famous politician for the town square.
adj	resembling or appearing similar to something alive or real, often realistically or vividly; convincing or authentic in appearance or behavior
	SWERS: 51. insulated, 52. hydra, 53. deformed, 54. initial, 55. topic, 56. contrast, lifelike

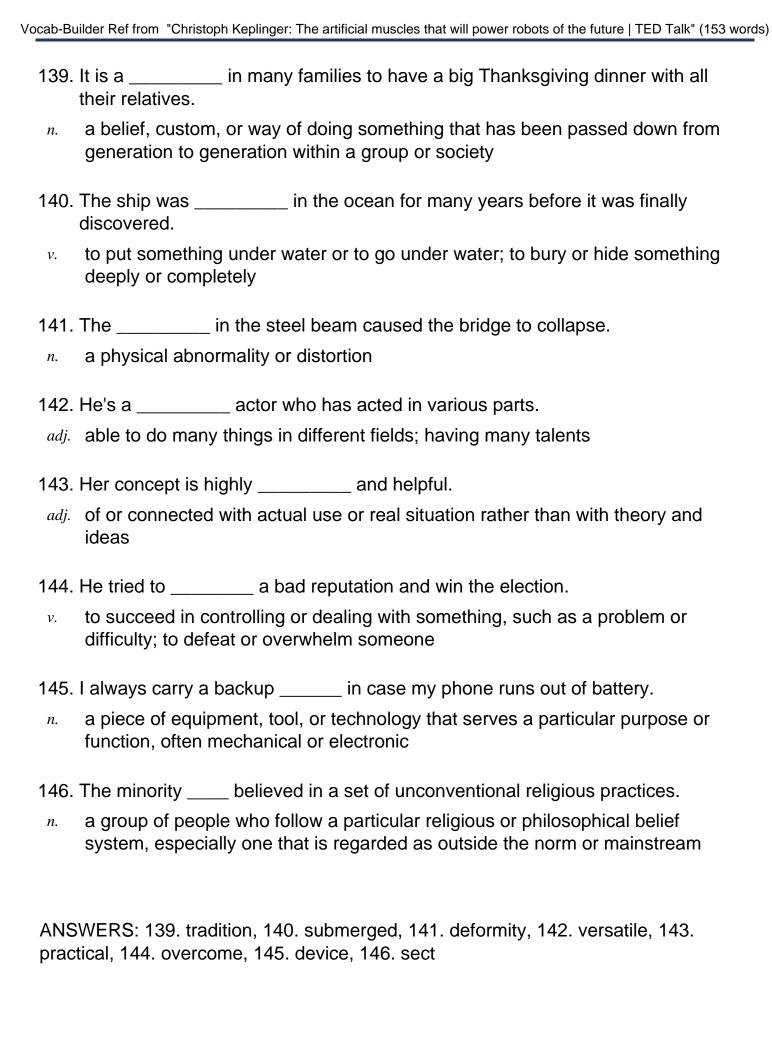
ocab-Builder Ref from "Christoph Keplinger: The artificial muscles that will power robots of the future TED Talk" (153 words)
58. The news of her sudden death was to everyone who knew her.
adj. surprising or shocking; difficult to believe
59. Our life is a of experience in which events pass from the future through the present to the past.
 a series of similar items in which no part or portion is distinct or distinguishable from adjacent parts
60. I decided to seek counseling on the advice of my
n. one of a group of a coworker, especially in a profession or a business
61. Her manner relaxed everyone there.
adj. having or showing a kindly or tender nature; soft and mild
62. The cheesecake at that restaurant is out of this world.
n. a sweet and tart edible fruit that grows on bushes, usually with a soft red or black color and a rough texture on the outside
63. The venom can be lethal to humans.
 a small creature similar to an insect with a segmented body, a pair of pincers, and a long, thin tail that ends in a venomous sting
64. The majority of synthetic vitamins are from oil.
v. to make goods in large numbers, usually in a factory using machines
65. The hikers had to climb over a that was blocking their path.
 a large, smooth rock, typically one that has been worn away from a cliff or mountain by erosion
ANSWERS: 58. astonishing, 59. continuum, 60. colleague, 61. gentle, 62. raspberry, 63. scorpion's, 64. manufactured, 65. boulder

ocab-Buil	der Ref from "Christoph Keplinger: The artificial muscles that will power robots of the future TED Talk" (153 wo
66. TI	ne phenomenon is at optical wavelengths.
adj.	impossible or nearly impossible to see
67. TI	ne focus of these initiatives is to make the financial system more
	easy to perceive, detect, or understand; (of a material or article) permitting light to pass through freely
	ne class was designed to give students a basic understanding the subject.
adj.	intended as an introduction or preliminary; serving as a base or starting point
69. TI	ne company signed a with the supplier for the delivery of goods.
	a legally binding agreement between two or more parties, setting out their rights and obligations to each other, typically in writing and enforceable by law
70. TI	ney study the of the universe.
n.	a gradual process of transformation of living things
	ne new software is not with the old operating system, causing ompatibility issues and errors.
	capable of coexisting or working together without conflict or inconsistency; harmonious or well-matched
72. TI	ne majority of snakes swallow their whole.
n.	the object of a hunt; an animal hunted or trapped for eating
73. D	emonstrators strongly demanded immediate for their country.
n.	the right of an organization, country, or region to govern itself independently
	VERS: 66. invisible, 67. transparent, 68. introductory, 69. contract, 70. evolution, ompatible, 72. prey, 73. autonomy

90.	It will take time for her mental scars to
v.	to make a wound or injury to become well again
	Actuators convert pulses into motion. i. relating to electricity
92.	My wallet wasn't big enough, so I kept my coins in a small
n.	a small bag or container with a drawstring or zipper used to carry small items; a small sac or pocket within an organ or tissue in the body
93.	I need to my car regularly to prevent any major mechanical issues.
v.	to continue to uphold or sustain; to keep in a particular state or condition; to assert or declare something to be true
94.	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
95.	She the sore spot on her leg to ease the pain.
<i>v</i> .	to move one's hand or an object over the surface of something with pressure
96.	He found in the works of his favorite authors.
n.	something that motivates or encourages someone to create or achieve something, or a feeling of excitement or creativity
97.	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
	SWERS: 90. heal, 91. electrical, 92. pouch, 93. maintain, 94. dam, 95. rubbed, 96. piration, 97. squeezed

98. You might need to this point. v. to enhance something, particularly sound or brightness
99. They needed further to perform their duties efficiently. n. detailed direction, order, etc., on how to do or use something
100. The detective looked for fingerprints on the windown. a strong border or structure of the wood, metal, etc. that surrounds something such as a picture, door, or window
 101. The gymnast was able to his muscles to perform the difficult routine. ν. to show off one's strength, power, or possessions; to bend or be capable of bending easily
102. Later, his claim was found to be false. adv. completely
103. The industry in this country is stilladj. of or relating to an early stage of society with no industry or technological development; simple, naive, or old-fashioned in style
104. This container has a of 10 cubic meters.n. the amount of space occupied by an object or substance; the magnitude of sound
105. She mixed flour, yeast, sugar, and water to make for the bread.n. a mixture of flour, liquid, and other ingredients, typically used to make bread, pastry, or pasta
ANSWERS: 98. amplify, 99. instruction, 100. frame, 101. flex, 102. entirely, 103. primitive, 104. volume, 105. dough

106. The size shirt fits him perfectly.
adj. of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information
107. 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
108. The coach had the team run through the ladder to improve their coordination.
n. the ability to move quickly and easily, often in a way that is graceful and controlled
109. The road of leads to the palace of wisdom.
n. an amount or quantity beyond what is acceptable, expected, or reasonable
110. Einstein was an outstanding and famous of the 20th century.
n. a scientist who specializes in the field of physics
111. Hounds their prey by using their keen scent.
v. to go after and try to catch wild animals to kill them for food, sport, or profit
112. He injured his during the game and had to sit out for the rest of the season.
n. a muscle located in the upper arm that enables the arm to bend at the elbow
113. Diamonds are employed as thermal as well.
n. someone who leads the performance of musicians or a piece of music; (in physics) an object, substance, or material that readily allows the flow of electricity, heat, etc.
ANSWERS: 106. medium, 107. biology, 108. agility, 109. excess, 110. physicist, 111. hunt, 112. biceps, 113. conductors



147. This consulting firm decided to the two companies into one.
v. to combine or integrate things, or to cause this to happen
148. He is drawing a illustrating how the equipment operates.
n. a simplified illustration of the appearance, structure, or workings of something
149. His in the other company is responsible for marketing.
 a person or thing that corresponds to or has the same function as another person or thing
150. Efficiency isn't an essential here; fairness is.
 n. a fundamental law or truth that explains or controls how something happens or works
151. The news of her promotion her.
v. to make someone feel suddenly enthusiastic or eager
152. That car has a low environmental
 a duty, responsibility, etc. that is oppressive or worrisome; a load, typically a heavy one that is difficult to carry
153. The mathematician pioneered fractal
 the area of pure mathematics that deals with the points, lines, curves, and surfaces
ANSWERS: 147. merge, 148. diagram, 149. counterpart, 150. principle, 151. excited, 152. burden, 153. geometry