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Vocabulary Builder Reference from...

Mary Lou Jepsen: Could future devices read images from our brains? | TED Talk https://www.ted.com/talks/mary_lou_jepsen_could_future_devices_read_images_from_our_brains



All Words

IMPORTANT

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Session 1: Word List

brain

- *n*. 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.

surgery

- medical treatment of injuries or diseases involving an incision with instruments and often removing or replacing some parts of the body; the branch of medical science that treats disease or injury by operative procedures
- synonym: operation, (medical) procedure
- (1) cardiac **surgery**, (2) the professor of **surgery** He had undergone heart **surgery** years before.

engineer

- n. a person whose job is designing, building, or maintaining something such as machines, structures, or softwaresynonym: architect, creator, builder
- a civil engineer,
 engineer shortage
 engineer will repair my telephone tomorrow morning.

moonshot

n. an ambitious, risky, and innovative project or goal, especially one that is intended to bring about radical

change or breakthroughs in a particular field or industry, often inspired by the lunar landing mission of Apollo 11 in 1969

synonym: initiative, endeavor, pursuit

(1) Al moonshot, (2) moonshot idea

The company's **moonshot** project aims to develop a revolutionary new technology within a tight deadline.

division

 the act or outcome of splitting into separate parts; a critical organizational unit or sector

synonym: branch, separator, section

(1) cellular division, (2) division chief

Which division of the company do you work in?

display

v. to exhibit or show something to others, often to attract attention or demonstrate its features, properties, or value

synonym: show, exhibit, present

(1) **display** merchandise, (2) **display** artwork

We need to **display** our products in an attractive way to attract customers.

stigma

 a mark of shame or disgrace associated with a particular circumstance, quality, or person

synonym: mark, blemish, disgrace

(1) social **stigma**, (2) **stigma** against obesity

The mental health **stigma** often prevents people from seeking treatment.

neurosurgery

- medical operations conducted on the nervous system, including the brain, spinal cord, and individual nerves
- (1) the department of **neurosurgery**, (2) specialize in **neurosurgery**

She has 20 years of experience in **neurosurgery**.

goo

 a sticky or slimy substance, often of indeterminate or unknown composition; a slang term used to describe something messy, chaotic, or confusing

synonym: slime, muck, gunk

(1) oozing goo, (2) slime goo

The science experiment involved mixing various liquids to create a bubbling **goo**.

hormone

- a chemical substance made by organs that encourages or influences the development, growth, sex, etc., of an animal and is carried around the body in the blood
- hormone secretion, (2) female hormone
 The doctor diagnosed me with a hormone disorder.

neurotransmitter

- a chemical that carries nerve impulses between neurons or between neurons and muscles
- (1) **neurotransmitter** receptor, (2) **neurotransmitters** released from the brain

Endorphins are a type of **neurotransmitter** that gives a sense of well-being.

immediately

adv. now or without delay

synonym: directly, instantly, promptly

(1) **immediately** recall a product, (2) write him an answer **immediately**

A suspension order from the court is effective **immediately**.

decide

- v. to make up someone's mind about something; to come to a conclusion or judgment after considering options
 synonym: choose, determine, settle
- (1) **decide** a question, (2) **decide** on a course of action She couldn't **decide** whether to order the pizza or the pasta for dinner.

chemical

adj. relating to or connected with chemistry;

synonym: chemic, synthetic

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

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.

mixture

 a combination of different elements, substances, or entities, usually in non-uniform proportions, resulting in a homogeneous or heterogeneous blend of physical or chemical properties

synonym: blend, amalgam, concoction

(1) mixture of emotions, (2) perfect mixture

The paint was a **mixture** of different pigments to achieve the desired color.

experimental

adj. relating to or based on new ideas, forms, methods, etc. that have not been tried before, usually to find out what effect they have

synonym: empirical, exploratory, observed

(1) **experimental** data, (2) **experimental** design

The product is still in the **experimental** stage.

experiment

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

synonym: experimentation, investigation

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

optimal

adj. the best; most likely to be successful or advantageous *synonym*: optimum, desirable, favorable

(1) achieve **optimal** health, (2) **optimal** for intellectual growth

Wild animals need to go forward with the optimal action to

survive.

dramatically

adv. in a very impressive manner

synonym: greatly, noticeably, suddenly

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

Life expectancy has grown **dramatically** this century.

dramatic

adj. very sudden, very excellent, or full of action and excitement

synonym: striking, theatrical, breathtaking

(1) make **dramatic** changes, (2) a **dramatic** rescue at sea The statement had a **dramatic** impact on house prices.

typical

adj. having the usual characteristics or traits of a specific group of things

synonym: characteristic, usual, distinctive

(1) **typical** leader, (2) fairly **typical** symptoms This artwork is **typical** of her work.

constantly

adv. all the time

synonym: continuously, always, frequently

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

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

extreme

adj. very great in amount or degree

synonym: farthermost, outermost, fierce

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

Solar gravity creates extreme pressures and temperatures.

arrogant

adj. having or revealing an exaggerated sense of one's importance or abilities

synonym: haughty, supercilious, disdainful

(1) an arrogant attitude, (2) grow arrogant

He was so arrogant that he thought he was always right.

insecure

adj. not firm or firmly fixed; likely to fail or give way, or not assured of safety

synonym: uncertain, unsure, unconfident

an insecure future, (2) insecure attachment
 Children in an unstructured environment often feel insecure.

handle

- v. to deal with a situation, problem, or strong emotion synonym: control, manage, deal with
- (1) **handle** a precious object, (2) **handled** the incident We all should learn how to **handle** stress.

appreciation

- n. the act of recognizing and valuing the worth or importance of something or someone; gratitude or thankfulness; an increase in value over time
- synonym: recognition, admiration, esteem
- (1) express my **appreciation**, (2) **appreciation** for diversity The artist received a lot of **appreciation** for his latest work.

intelligence

- *n.* 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.

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**.

metric

- adj. using or relating to the meter as a unit of length; a system of related measures that facilitates the quantification of some particular characteristic
- synonym: metrical, measured
- (1) metric units, (2) key performance metrics

In the **metric** system, measurements are made in meters and liters.

prototype

- n. a first or preliminary example of something such as a device or vehicle from which other forms are developed synonym: mock-up, precursor, model
- (1) complete a **prototype** product, (2) early **prototype**The flying car is presently in the **prototype** stage.

scenario

- n. a description of possible actions or events in the future;a written outline of a play, film, or literary worksynonym: plan, scheme, procedure
- (1) the worst case **scenario**, (2) number of different **scenarios**

The president prepared several possible **scenarios** for an enemy attack.

similarly

adv. in almost the same way synonym: also, likewise, ditto

(1) **similarly** situated, (2) have **similarly** great abilities We argue that wages for temporary workers should **similarly** rise.

dispute

- n. a disagreement, argument, or controversy between two people, groups, or countries, especially a formal onesynonym: argument, disagreement, quarrel
- (1) a legal **dispute** over the title, (2) **dispute** settlement The **dispute** over the ownership of the land has been ongoing for years.

debate

n. a formal discussion or argument of opposing viewpoints, often to persuade others to adopt a specific position; a public discussion, often on an issue of current interest, in which participants offer opinions and differing perspectives

synonym: argument, discussion, dispute

(1) debate topic, (2) debate competition

The **debate** over climate change continues to be a hot topic in politics.

inventive

adj. able to come up with novel and unique ideas *synonym*: imaginative, creative, innovative

(1) have the **inventive** talent, (2) **inventive** approach All language around the world is consistently **inventive** but not intrusive.

vivid

adj. producing very clear, powerful, and detailed images in the mind

synonym: intense, powerful, dazzling

(1) **vivid** colors, (2) still **vivid** in my memory She made a **vivid** impression.

sophistication

 the quality or state of having a great deal of worldly experience; the quality or state of being intellectually or culturally refined

synonym: refinement, culture, elegance

(1) cultural **sophistication**, (2) linguistic **sophistication**The new technology added a level of **sophistication** to the manufacturing process.

analytical

adj. relating to or using analysis (= the process of breaking down a complex system or concept into smaller, simpler parts to understand it better), or able to analyze

synonym: investigative, logical, cogent

(1) **analytical** approach, (2) **analytical** ability

He is **analytical** and can break down complex problems into manageable parts.

backbone

n. the spinal column of a vertebrate; a symbolic representation of strength and resilience

synonym: spine, courage, fortitude

(1) backbone of society, (2) backbone curve

She showed great backbone when standing up for her

beliefs in opposition.

imaginary

adj. existing only in someone's mind synonym: fictional, ideal, fantastical

(1) **imaginary** number, (2) **imaginary** pregnancy Little children tend to have **imaginary** friends.

incredible

adj. unbelievable; enormoussynonym: unbelievable, fantastical, inconceivable(1) incredible amount, (2) at incredible speed

Her response revealed **incredible** idiocy.

possibility

- n. a chance that something may happen or be truesynonym: chance, prospect, likelihood
- (1) **possibility** for growth, (2) **possibility** of a major earthquake

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

bottleneck

 a narrow or busy section of road or a junction where the traffic often gets slower and stops; anything that slows down development or progress, especially in business or industry

synonym: blockage, obstacle, barrier

(1) performance **bottleneck**, (2) **bottleneck** in production Memory bandwidth is a significant **bottleneck** in this computational simulation.

resolution

 a firm decision or determination to do or not do something; the action of solving a problem, dispute, or conflict; the quality of being resolved or determined; the clarity and sharpness of an image or display

synonym: determination, decision, settlement

(1) **resolution** of a conflict, (2) display **resolution**He made a New Year's **resolution** to exercise more and eat healthier.

scan

v. to examine something hastily, with the eyes or with a machine, to get information

synonym: look over, scrutinize, browse

(1) **scan** the face of the man, (2) **scan** a document into PDF She stood on the podium and **scanned** an audience.

neuroscience

- the scientific study of the function, structure, and disorder of the brain and the nervous system
- (1) the branch of **neuroscience**, (2) a theoretical concept in **neuroscience**

Our university is famous for its professors, who are well-versed in behavioral **neuroscience**.

MRI

- n. (abbreviation for magnetic resonance imaging) a medical imaging technique that uses a strong magnetic field and radio waves to produce detailed images of the inside of the body
- (1) MRI brain image, (2) cardiac MRI

The **MRI** machine uses powerful magnets to produce detailed images of the inside of the body.

functional

adj. designed for or capable of a particular activity, purpose, or task; practical or ready for use or service

synonym: applicable, practical, usable

(1) field of functional medicine, (2) functional deafness.
The mobile phone was still functional even after being dropped.

magnetic

adj. having the properties of attracting or repelling certain materials containing iron or steel

synonym: attractive, drawing, hypnotic

(1) magnetic field, (2) a magnetic tape

The magnetic force of the earth keeps our planet spinning.

resonance

 a deep, full, or reverberating sound or tone; a quality or feeling of a particular emotional or mental vibration or significance; a mutual or sympathetic connection or correspondence between two things synonym: echo, vibration, reverberation

(1) **resonance** frequency, (2) harmonic **resonance** The singer's voice filled the auditorium with beautiful **resonance**.

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.
- column n. one of t

one of the vertical blocks that split content on a page or screen from top to bottom; an upright pillar that often supports an arch, entablature, or other structure or stands alone as a monument

synonym: line, pillar, cue

the spinal column, (2) a column of water
 The newspaper devoted several columns to the affair.

individual

- n. a single person or thing, as distinct from a group synonym: person, being, self
- (1) a private **individual**, (2) **individual** freedom
 As an **individual**, he had the right to make his own decisions and live his life as he saw fit.

subtract

- v. to take away or deduct a quantity or amount from a total;to remove or eliminate something from a larger wholesynonym: deduct, take away, remove
- (1) **subtract** numbers, (2) **subtract** one from the total I need to **subtract** the cost of my expenses from my income to see how much money I have left.

jack

 a mechanical device used for lifting or supporting heavy objects

synonym: lever, crank, wrench

(1) a jack of all trades, (2) a line-in jackHe used a jack to lift the car to change the tire.

gallant

adj. brave, courageous, and honorable, often in a courteous manner; polite and attentive to women; elegant, stylish, or fashionable

synonym: brave, courageous, heroic

(1) gallant gesture, (2) gallant gentleman

The **gallant** knight saved the princess from the dragon, displaying bravery and chivalry.

lab

 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**.

decode

v. to convert something, such as a message or piece of information, from a specific form into one that you can understand

synonym: decipher, translate, interpret

(1) **decode** a message, (2) ability to **decode** the differences. The software could **decode** the encrypted data and reveal the hidden information.

brainwave

n. a sudden idea or inspiration; a moment of great insight or creativity

synonym: inspiration, brainstorm, revelation

(1) brainwave idea, (2) sudden brainwave

The engineer had a **brainwave** and redesigned the product to be more efficient.

recognizable

adj. easy to become aware of or identify *synonym*: noticeable, perceptible, definite

(1) to a recognizable degree, (2) recognizable landmark

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His car was easily **recognizable** in the parking lot.

visual

adj. relating to seeing or sight synonym: optical, graphical, visible

(1) visual navigation, (2) field of visual arts

The building makes a remarkable **visual** impact.

react

v. to take action in response to something

synonym: respond, reply, oppose

(1) **react** at a high temperature, (2) **react** against his way of thinking

How did he **react** to your idea?

sequence

 a series of related events, actions, numbers, etc., which have a particular order

synonym: arrangement, succession, series

(1) the **sequence** of the seasons, (2) the DNA **sequence** We do move forward with those tasks in **sequence** next week.

clip

 a small metal or plastic device used for holding an object or objects together or in place; a short part of electronic media, either an audio clip or video clip

synonym: buckle, hook, pin

(1) tie **clip**, (2) short video **clip**

He fastens some sheets of paper with a clip.

jaw

 either of the two bones at the bottom of the face that moves when you open your mouth; (verb) talk socially without exchanging too much information

synonym: mouth, (verb) chitchat

(1) snatch victory from the **jaws** of defeat, (2) **jaw** muscle He dropped his **jaw** at the unexpected sight.

hundredfold

adj. a hundred times as great or as much

(1) rise nearly hundredfold, (2) improve hundredfold

The development team reported two **hundredfold** increases in performance.

glimpse

 a brief or partial view; the act of seeing something or someone for a very short time or only partly

synonym: glance, peek, sighting

(1) a momentary **glimpse**, (2) passing **glimpse**Our team caught a **glimpse** of the world-class technique in this game.

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.

crack

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

synonym: snap, burst, break

(1) **crack** an eggshell, (2) a **crack** in a board He that would eat the kernel must **crack** the nut.

skull

 a bone framework that surrounds the brain and gives the head its shape

synonym: cranium, scalp, brain

(1) **skull** fracture, (2) have a thick **skull**

Archaeologists found a Neanderthal **skull** at that historic site.

electrode

- either of two points or ends of a conductor at which electricity enters or leaves an object, substance, or region
- (1) platinum **electrodes**, (2) **electrode** corrosion It is important to place the **electrodes** in the correct position for accurate electro-cardiogram recording.

propose

- v. to make a proposal, declare a plan for something synonym: suggest, offer, recommend
- (1) **propose** the amendment, (2) **propose** changes I want to **propose** a toast in honor of our longstanding relationship.

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.

wisdom

- n. the quality of being wise, or the ability to use your knowledge and experience to make sensible decisionssynonym: sagacity, discernment, insight
- (1) a fountain of **wisdom**, (2) **wisdom** literature

 The community greatly respected and sought after the older adult's **wisdom**.

magnet

 an object or substance that can attract certain materials, such as iron or steel

synonym: magnetite, lodestone, attracting substance

(1) **magnet** attraction, (2) permanent **magnet**The MRI machine uses **magnets** to produce images of the body's internal organs.

increment

 a regular increase in the amount of something, such as money; a process of becoming larger, longer, or more important

synonym: increase, expansion, addendum

steady incremental growth, (2) small increments
 the bid increment for this auction is \$100.

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.

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.

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.

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.

holography

- n. a technique for creating three-dimensional images using lasers to record and reconstruct interference patterns
 synonym: three-dimensional photography, laser holography, digital
- (1) optical **holography**, (2) 3D **holography Holography** technology uses light interference patterns to create a 3D image.

interference

n. the act or process of getting involved in and trying to influence a specific situation; the state of being affected and influenced with

holography

synonym: obstruction, hindrance, impedance

officious interference,
 interference wave
 unfortunately, the radio interference made it difficult to hear

the broadcast.

precision

- n. the quality or condition of being exact and accuratesynonym: accuracy, exactness, rigor
- (1) a **precision** instrument, (2) speak with **precision**This operation requires both patience and **precision**.

shifting

adj. constantly changing or moving *synonym*: unfirm, shifty, fluctuating

(1) **shifting** balance, (2) continuously **shifting** landscape Trends in the fashion industry are so **shifting** that it is challenging to keep up with them.

complicated

adj. involving a lot of different things or parts in a way that is difficult to understand or analyze

synonym: complex, convoluted, intricate

(1) a **complicated** process, (2) become increasingly **complicated**

He did **complicated** pen-and-ink drawings in just a few days.

slightly

adv. in a small degree or extent; a little synonym: barely, narrowly, scarcely

(1) increase **slightly**, (2) **slightly** alkaline soils He moved his body **slightly** to the left.

arrangement

- n. a plan or preparation for the future event; the action or process of placing things in a particular ordersynonym: placement, configuration, account
- (1) **arrangement** of the furniture, (2) **arrangement** committee

As a first **arrangement**, we agreed to meet the following Friday.

advance

- v. to go or move forward; to develop in a positive way synonym: progress, boost, come along
- (1) **advance** the technology, (2) **advance** a cooperative relationship

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

ingeniously

adv. in a clever, inventive, or resourceful manner; with great skill, creativity, or ingenuity

synonym: cleverly, resourcefully

(1) **ingeniously** planned, (2) **ingeniously** crafted

The engineer **ingeniously** solved the complex problem with a simple yet effective solution.

encode

v. to convert information into a code or format suitable for storage or transmission

synonym: transcribe, convert

(1) encode data, (2) encode information

The software can **encode** and decode encrypted messages.

frequency

 an ordered array of colors into which a light beam can be split

synonym: recurrence, repetition, regularity

(1) frequency band, (2) high frequency

The oscillator hunts for the correct **frequency**.

transmitter

 a piece of equipment used for generating and sending electronic signals, especially radio or television signals

synonym: sender

(1) a transmitter of a family line, (2) radio transmitter

This substance acts as a neural **transmitter** substance.

receiver

n. the part of a phone that you hold close to your ear and mouth; a person who receives something

synonym: acceptor, recipient, collector

(1) a GPS receiver, (2) aid receiver

Delivery companies often require the **receiver's** signature to certify the completion of package delivery.

uniform

adj. always the same; showing a single form or character in all occurrences; (noun) the special set of clothes worn by members of a particular group as a means of identification

synonym: livery, outfit

(1) at a **uniform** temperature, (2) our school **uniform** This country has a nationally **uniform** culture.

addition

 the act or process of adding something to something else; the process of adding numbers

synonym: accumulation, expansion, addendum

(1) chemical **addition**, (2) **addition** of vectors In **addition**, private corporations provide healthcare services.

combine

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

Hydrogen and oxygen combine to form water.

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.

massive

adj. enormous amount; very heavy and solid synonym: enormous, giant, immense

(1) massive amounts, (2) massive stars

The recent economic downturn has resulted in massive

layoffs.

extract

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

synonym: excerpt, quote, distillation

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

oxygen

- the chemical element with the symbol O that is present in air and water and is necessary for people, animals, and plants to live
- (1) the hydrogen binds the **oxygen**, (2) lack of **oxygen** The passenger grabbed for the **oxygen** mask.

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.

dump

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

synonym: throw away, dispose

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

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

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

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

leapfrog

 a children's game in which players take turns jumping over each other's stooped backs

synonym: hopping, jumpfrog

(1) **leapfrog** game, (2) **leapfrog** technology

During recess, the children played a game of **leapfrog** in the schoolyard.

communicate

v. to share or exchange information with others by speaking, writing, moving your body, or using other signals

synonym: convey, share, transmit

- (1) communicate his anxieties to the psychiatrist,
- (2) communicate well with my advisor

Dolphins use sound to **communicate** with each other.

filter

 any of several types of equipment or systems used to separate particles from liquids or gases or to remove specific forms of light

synonym: strainer

(1) gas filter, (2) clogged filter

Ozone is a primary **filter** to protect Earth's surface from harmful UV rays.

irresistible

adj. impossible to resist or refuse; very attractive, appealing, or compelling

synonym: resistless, overpowering, compelling

(1) irresistible charm, (2) irresistible force

The aroma of freshly baked cookies was irresistible to her.

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.

Alzheimer

 a neurodegenerative disease that causes memory loss, cognitive decline, and behavioral issues; is the most common cause of dementia in older adults synonym: dementia, memory loss, cognitive decline

(1) **Alzheimer's** brain, (2) **Alzheimer's** risk factors My grandmother has **Alzheimer's** disease requires special care and attention from her caregivers.

disease

 a disorder or illness that affects the body or mind, often characterized by specific symptoms or abnormal functioning of organs or systems

synonym: illness, ailment, affliction

(1) **disease** prevention, (2) **disease** control

The doctor diagnosed him with a rare **disease** that had no known cure.

regardless

 adv. not paying attention or considering something or someone even if the situation is bad or there are difficulties

synonym: anyhow, nevertheless, still

(1) **regardless** of the difficulties, (2) **regardless** tread People can pick out superior products **regardless** of the quality of the advertising.

Session 2: Spelling

arr nt of the furniture

6.

1. de___e a question v. to make up someone's mind about something; to come to a conclusion or

judgment after considering options

chemical ad____on
 the act or process of adding something to something else; the process of adding numbers

3. social st a n. a mark of shame or disgrace associated

with a particular circumstance, quality,

or person

4. di____l electronic signature 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

5. mo____ot idea
n. an ambitious, risky, and innovative project or goal, especially one that is intended to bring about radical change

or breakthroughs in a particular field or industry, often inspired by the lunar

landing mission of Apollo 11 in 1969

n. a plan or preparation for the future event; the action or process of placing

things in a particular order

7. 3D hol____hy

n. a technique for creating three-dimensional images using lasers

to record and reconstruct interference

patterns

ANSWERS: 1. decide, 2. addition, 3. stigma, 4. digital, 5. moonshot, 6. arrangement, 7. holography

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8.	imry pregnancy	adj.	existing only in someone's mind
9.	sily situated	adv.	in almost the same way
10.	radio traer	n.	a piece of equipment used for generating and sending electronic signals, especially radio or television signals
11.	the DNA sece	n.	a series of related events, actions, numbers, etc., which have a particular order
12.	ret at a high temperature	<i>v</i> .	to take action in response to something
13.	a civil ener	n.	a person whose job is designing, building, or maintaining something such as machines, structures, or software
14.	have the inve talent	adj.	able to come up with novel and unique ideas
15.	hoe secretion	n.	a chemical substance made by organs that encourages or influences the development, growth, sex, etc., of an animal and is carried around the body in the blood
16.	intnce wave	n.	the act or process of getting involved in and trying to influence a specific situation; the state of being affected and influenced with
17.	at a unm temperature	adj.	always the same; showing a single form or character in all occurrences; (noun) the special set of clothes worn by members of a particular group as a means of identification

ANSWERS: 8. imaginary, 9. similarly, 10. transmitter, 11. sequence, 12. react, 13. engineer, 14. inventive, 15. hormone, 16. interference, 17. uniform

19. su___ct one from the total

20. su____ct numbers

21. gas fi___r

22. speak with pr on

23. exp____nt design

24. perfect mi___e

25. ex___e weather events

26. the professor of su____y

 a brief or partial view; the act of seeing something or someone for a very short time or only partly

v. to take away or deduct a quantity or amount from a total; to remove or eliminate something from a larger whole

v. to take away or deduct a quantity or amount from a total; to remove or eliminate something from a larger whole

 any of several types of equipment or systems used to separate particles from liquids or gases or to remove specific forms of light

n. the quality or condition of being exact and accurate

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

 a combination of different elements, substances, or entities, usually in non-uniform proportions, resulting in a homogeneous or heterogeneous blend of physical or chemical properties

adj. very great in amount or degree

medical treatment of injuries or diseases involving an incision with instruments and often removing or replacing some parts of the body; the branch of medical science that treats disease or injury by operative procedures

ANSWERS: 18. glimpse, 19. subtract, 20. subtract, 21. filter, 22. precision, 23. experiment, 24. mixture, 25. extreme, 26. surgery

the quality of being wise, or the ability to 27. a fountain of wi m n. use your knowledge and experience to make sensible decisions 28. im___e the test score to make or become better 29. key performance me cs adj. using or relating to the meter as a unit of length; a system of related measures that facilitates the quantification of some particular characteristic 30. ma____e stars adj. enormous amount; very heavy and solid 31. small in nts a regular increase in the amount of something, such as money; a process of becoming larger, longer, or more important to convert information into a code or 32. en___e data format suitable for storage or transmission 33. co e chemically with another to join or merge to form a single thing or ν. substance group 34. the hydrogen binds the ox n the chemical element with the symbol O n. that is present in air and water and is necessary for people, animals, and plants to live an ordered array of colors into which a 35. fr cy band n. light beam can be split medical treatment of injuries or 36. cardiac su____y diseases involving an incision with instruments and often removing or replacing some parts of the body; the branch of medical science that treats disease or injury by operative procedures

ANSWERS: 27. wisdom, 28. improve, 29. metric, 30. massive, 31. increment, 32. encode, 33. combine, 34. oxygen, 35. frequency, 36. surgery

Vocab-Builder Ref from "Mary Lou Jepsen: Could future devices read images from our brains? | TED Talk" (113 words)

Vocab-Builder Ref from "Mary Lou Jepsen: Could future devices read images from our brains? | TED Talk" (113 words)

ANSWERS: 45. transmitter, 46. electrode, 47. bottleneck, 48. slightly, 49. display, 50. similarly, 51. individual, 52. increment, 53. sequence, 54. handle

ANSWERS: 55. mixture, 56. resonance, 57. technique, 58. extreme, 59. massive, 60. arrogant, 61. neurotransmitter, 62. wisdom, 63. scan, 64. glimpse

something or someone for a very short

time or only partly

Vocab-Builder Ref from "Mary Lou Jepsen: Could future devices read images from our brains? | TED Talk" (113 words)

ANSWERS: 65. gallant, 66. extract, 67. analytical, 68. dramatically, 69. incredible, 70. experimental, 71. holography, 72. oxygen

 a disagreement, argument, or controversy between two people, groups, or countries, especially a formal one

79. the worst case sc____io

n. a description of possible actions or events in the future; a written outline of a play, film, or literary work

80. ne I stem cells

81. de e a message

82. res on of a conflict

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

v. to convert something, such as a message or piece of information, from a specific form into one that you can understand

n. a firm decision or determination to do or not do something; the action of solving a problem, dispute, or conflict; the quality of being resolved or determined; the clarity and sharpness of an image or display

ANSWERS: 73. Alzheimer, 74. combine, 75. inventive, 76. arrangement, 77. advance, 78. dispute, 79. scenario, 80. neural, 81. decode, 82. resolution

83.	aid reer	n.	the part of a phone that you hold close to your ear and mouth; a person who receives something
84.	ime a process	<i>v</i> .	to make or become better
85.	ade the technology	v.	to go or move forward; to develop in a positive way
86.	s_n the face of the man	v.	to examine something hastily, with the eyes or with a machine, to get information
87.	collaborate with coues	n.	one of a group of a coworker, especially in a profession or a business
88.	platinum eldes	n.	either of two points or ends of a conductor at which electricity enters or leaves an object, substance, or region
89.	tie cp	n.	a small metal or plastic device used for holding an object or objects together or in place; a short part of electronic media, either an audio clip or video clip
90.	pre changes	<i>v</i> .	to make a proposal, declare a plan for something
91.	female hoe	n.	a chemical substance made by organs that encourages or influences the development, growth, sex, etc., of an animal and is carried around the body in the blood
92.	opI for intellectual growth	adj.	the best; most likely to be successful or advantageous
93.	d_p the gravel on the road	v.	to deposit or dispose of something, such as trash, waste, etc., carelessly or hurriedly

ANSWERS: 83. receiver, 84. improve, 85. advance, 86. scan, 87. colleague, 88. electrode, 89. clip, 90. propose, 91. hormone, 92. optimal, 93. dump

94. ene information	v.	to convert information into a code or format suitable for storage or transmission
95. posty for growth	n.	a chance that something may happen or be true
96. appion for diversity	n.	the act of recognizing and valuing the worth or importance of something or someone; gratitude or thankfulness; an increase in value over time
97. irrble force	adj.	impossible to resist or refuse; very attractive, appealing, or compelling
98. a jk of all trades	n.	a mechanical device used for lifting or supporting heavy objects
99. j_w muscle	n.	either of the two bones at the bottom of the face that moves when you open your mouth; (verb) talk socially without exchanging too much information
100. leog game	n.	a children's game in which players take turns jumping over each other's stooped backs
101. a connal style	adj.	based on or following traditional rules, standards, customs, etc.
102. die control	n.	a disorder or illness that affects the body or mind, often characterized by specific symptoms or abnormal functioning of organs or systems
103. field of artificial intnce	n.	the ability to learn, comprehend, or make judgments or conclusions based on reasons

ANSWERS: 94. encode, 95. possibility, 96. appreciation, 97. irresistible, 98. jack, 99. jaw, 100. leapfrog, 101. conventional, 102. disease, 103. intelligence

104. breugh discovery	n.	a sudden, dramatic, and important discovery or development that helps to improve a situation or provide an answer to a problem
105. have a thick skl	n.	a bone framework that surrounds the brain and gives the head its shape
106. permanent mat	n.	an object or substance that can attract certain materials, such as iron or steel
107. crve writing	adj.	relating to or involving the use of skill and original and unusual ideas to create something
108. cr_k an eggshell	<i>v</i> .	to break or cause to break without dividing into separate parts; (noun) a line on the surface of something along which it has separated without breaking
109. fairly tyI symptoms	adj.	having the usual characteristics or traits of a specific group of things
110. cardiac M_I	n.	(abbreviation for magnetic resonance imaging) a medical imaging technique that uses a strong magnetic field and radio waves to produce detailed images of the inside of the body
111. amy the effect	<i>v</i> .	to enhance something, particularly sound or brightness
112. the branch of neunce	n.	the scientific study of the function, structure, and disorder of the brain and the nervous system
113. slime g_o	n.	a sticky or slimy substance, often of indeterminate or unknown composition; a slang term used to describe something messy, chaotic, or confusing

ANSWERS: 104. breakthrough, 105. skull, 106. magnet, 107. creative, 108. crack, 109. typical, 110. MRI, 111. amplify, 112. neuroscience, 113. goo

adj.	very sudden, very excellent, or full of action and excitement
n.	the scientific test conducted to observe what happens and gain new knowledge
adj.	easy to become aware of or identify
n.	the act or outcome of splitting into separate parts; a critical organizational unit or sector
n.	the spinal column of a vertebrate; a symbolic representation of strength and resilience
adj.	relating to or based on new ideas, forms, methods, etc. that have not been tried before, usually to find out what effect they have
n.	the part of a phone that you hold close to your ear and mouth; a person who receives something
n.	a workplace for the conduct of scientific research; a laboratory
n.	a description of possible actions or events in the future; a written outline of a play, film, or literary work
n.	a bone framework that surrounds the brain and gives the head its shape
adj.	not firm or firmly fixed; likely to fail or give way, or not assured of safety
ν.	to make a proposal, declare a plan for something
	n. adj. n. adj. n. adj. adj.

ANSWERS: 114. dramatic, 115. experiment, 116. recognizable, 117. division, 118. backbone, 119. experimental, 120. receiver, 121. lab, 122. scenario, 123. skull, 124. insecure, 125. propose

126. leog technology	n.	a children's game in which players take turns jumping over each other's stooped backs
127. the department of neuery	n.	medical operations conducted on the nervous system, including the brain, spinal cord, and individual nerves
128. a chal compound	adj.	relating to or connected with chemistry;
129. 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
130. neuters released from the brain	n.	a chemical that carries nerve impulses between neurons or between neurons and muscles
131. a line-in jk	n.	a mechanical device used for lifting or supporting heavy objects
132. performance botck	n.	a narrow or busy section of road or a junction where the traffic often gets slower and stops; anything that slows down development or progress, especially in business or industry
133. a maic tape	adj.	having the properties of attracting or repelling certain materials containing iron or steel
134. regss of the difficulties	adv.	not paying attention or considering something or someone even if the situation is bad or there are difficulties
135. dee on a course of action	v.	to make up someone's mind about something; to come to a conclusion or judgment after considering options

ANSWERS: 126. leapfrog, 127. neurosurgery, 128. chemical, 129. structure, 130. neurotransmitter, 131. jack, 132. bottleneck, 133. magnetic, 134. regardless, 135. decide

ANSWERS: 136. functional, 137. brain, 138. decode, 139. analytical, 140. arrogant, 141. intelligence, 142. recognizable, 143. technique, 144. magnetic, 145. process

suitable for consumption or use in other

dairy products

ANSWERS: 146. brain, 147. nanoscale, 148. constantly, 149. dispute, 150. display, 151. debate, 152. clip, 153. sophistication, 154. creative

something

and original and unusual ideas to create

155. ret against his way of thinking		to take action in response to something		
156. neI networks in AI		of or relating to a nerve or the nervous system that includes the brain		
157. genic comons	n.	a collection of things that have been combined; an assemblage of separate parts or qualities		
158. comte well with my advisor	ν.	to share or exchange information with others by speaking, writing, moving your body, or using other signals		
159. posty of a major earthquake	n.	a chance that something may happen or be true		
160. imry number	adj.	existing only in someone's mind		
161. incle amount	adj.	unbelievable; enormous		
162. decision-making prs	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		
163. irrble charm	adj.	impossible to resist or refuse; very attractive, appealing, or compelling		
164. regss tread	adv.	not paying attention or considering something or someone even if the situation is bad or there are difficulties		
165. a pron instrument	n.	the quality or condition of being exact and accurate		

ANSWERS: 155. react, 156. neural, 157. combination, 158. communicate, 159. possibility, 160. imaginary, 161. incredible, 162. process, 163. irresistible, 164. regardless, 165. precision

display

173. a theoretical concept in neu____nce

note the scientific study of the function, structure, and disorder of the brain and the nervous system

174. di e prevention

 a disorder or illness that affects the body or mind, often characterized by specific symptoms or abnormal functioning of organs or systems

the clarity and sharpness of an image or

ANSWERS: 166. prototype, 167. goo, 168. typical, 169. lab, 170. interference, 171. dramatic, 172. resolution, 173. neuroscience, 174. disease

- 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
- adj. always the same; showing a single form or character in all occurrences; (noun) the special set of clothes worn by members of a particular group as a means of identification

ANSWERS: 175. brainwave, 176. amplify, 177. addition, 178. insecure, 179. gallant, 180. ingeniously, 181. nanoscale, 182. digital, 183. uniform

183. our school un____m

ANSWERS: 184. moonshot, 185. hundredfold, 186. conventional, 187. shifting, 188. column, 189. debate, 190. dramatically, 191. MRI, 192. visual

ANSWERS: 193. appreciation, 194. handle, 195. shifting, 196. complicated, 197. dump, 198. slightly, 199. functional, 200. ingeniously, 201. individual, 202. communicate, 203. constantly, 204. optimal

adj. the best; most likely to be successful or

advantageous

204. achieve op___I health

205. specialize in neuery	n.	medical operations conducted on the nervous system, including the brain, spinal cord, and individual nerves
206. high frcy	n.	an ordered array of colors into which a light beam can be split
207. vid colors	adj.	producing very clear, powerful, and detailed images in the mind
208. bane of society	n.	the spinal column of a vertebrate; a symbolic representation of strength and resilience
209. cultural sopion	n.	the quality or state of having a great deal of worldly experience; the quality or state of being intellectually or culturally refined
210. cellular dion	n.	the act or outcome of splitting into separate parts; a critical organizational unit or sector
211. still vid in my memory	adj.	producing very clear, powerful, and detailed images in the mind
212. 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
213. 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
214. former coue	n.	one of a group of a coworker, especially in a profession or a business

ANSWERS: 205. neurosurgery, 206. frequency, 207. vivid, 208. backbone, 209. sophistication, 210. division, 211. vivid, 212. breakthrough, 213. structure, 214. colleague

215. mat attraction
216. a con of water
217. brve idea
218. mec units
219. early prpe
220. ener shortage
221. vil navigation
222. comon number

- an object or substance that can attract n. certain materials, such as iron or steel
- one of the vertical blocks that split n. content on a page or screen from top to bottom; an upright pillar that often supports an arch, entablature, or other structure or stands alone as a monument
- a sudden idea or inspiration; a moment of great insight or creativity
- adj. using or relating to the meter as a unit of length; a system of related measures that facilitates the quantification of some particular characteristic
- a first or preliminary example of something such as a device or vehicle from which other forms are developed
- a person whose job is designing, n. building, or maintaining something such as machines, structures, or software
- adj. relating to seeing or sight
- a collection of things that have been n. combined; an assemblage of separate parts or qualities
- a neurodegenerative disease that n. causes memory loss, cognitive decline, and behavioral issues: is the most common cause of dementia in older adults

223. Al er's brain

ANSWERS: 215. magnet, 216. column, 217. brainwave, 218. metric, 219. prototype, 220. engineer, 221. visual, 222. combination, 223. Alzheimer

Vocab-Builder Ref from	"Mary Lou Jepsen:	Could future devices	read images from	our brains?	TED Talk"	(113 words)

224. sta a	gainst obesity	n.	a mark of shame or disgrace associated with a particular circumstance, quality, or person
225. rise near	ly hunld	adj.	a hundred times as great or as much
226. imm	ly recall a product	adv	now or without delay

ANSWERS: 224. stigma, 225. hundredfold, 226. immediately

Session 3: Fill in the Blanks

1.	Our university is famous for its professors, who are well-versed in behavioral
n.	the scientific study of the function, structure, and disorder of the brain and the nervous system
2.	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
	His car was easily in the parking lot. easy to become aware of or identify
4.	The doctor diagnosed him with a rare that had no known cure.
n.	a disorder or illness that affects the body or mind, often characterized by specific symptoms or abnormal functioning of organs or systems
5.	He used a to lift the car to change the tire.
n.	a mechanical device used for lifting or supporting heavy objects
6.	The newspaper devoted several to the affair.
n.	one of the vertical blocks that split content on a page or screen from top to bottom; an upright pillar that often supports an arch, entablature, or other structure or stands alone as a monument
7.	This process improves the strength of the metal by controlling thelattice structure of the metal.
adj	on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
	SWERS: 1. neuroscience, 2. creative, 3. recognizable, 4. disease, 5. jack, 6. umns, 7. nanoscale

display, 77. extreme, 78. sequence, 79. brainwave

111.	. Sensors convert physical phenomena	into	signals.		
adj.	processing or storing information as a signal is present or missing; relating to especially the internet				
112.	112. A suspension order from the court is effective				
adv.	now or without delay				
113.	. Dolphins use sound to v	vith each othe	er.		
<i>v</i> .	to share or exchange information with body, or using other signals	others by spe	eaking, writing, moving your		

ANSWERS: 111. digital, 112. immediately, 113. communicate