Englist.me

Vocabulary Builder Reference from...

Sean Follmer: Shape-shifting tech will change work as we know it | TED Talk https://www.ted.com/talks/sean_follmer_shape_shiftin

nttps://www.ted.com/talks/sean_foilmer_snape_sniftin

g_tech_will_change_work_as_we_know_it



All Words

IMPORTANT

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Session 1: Word List

evolve

v. to develop gradually, or to cause the development of something or someone gradually

synonym: develop, mature, grow

(1) **evolve**, (2) **evolve** over the past decade

Eyeless fish evolved in dark caves.

ancestor

n. a person from whom one is descended; a forefathersynonym: forebear, forefather, progenitor

(1) **ancestor** language, (2) earliest human **ancestor**My remote **ancestor** immigrated to the United States from

Ireland in the 1800s.

ax

 a tool with a metal blade that is usually attached to a wooden handle and is used for chopping wood or other materials

synonym: hatchet, chopper, tomahawk

(1) chop wood with an **ax**, (2) an **ax** in the toolbox He used an **ax** to chop the firewood for the campfire.

sculpt

v. to create a work of art by carving, casting, or other shaping techniques

synonym: carve, mold, shape

(1) sculpt an image, (2) sculpt prototype

He spent hours every day **sculpting** figures out of clay.

function

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

synonym: purpose, mapping, job

(1) function properly, (2) immune function

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

lever

 a handle used to operate a vehicle or a machine; a rigid bar resting on a pivot so that one end of it can be pushed or pulled easily

synonym: lifter, crowbar, bar

(1) a gear change **lever**, (2) **lever** for reform

This initiative will be a **lever** for increasing company sales.

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.

manipulate

v. to influence or control something or someone to your advantage, often in an unfair or dishonest way

synonym: control, exploit, abuse

(1) **manipulate** figures, (2) vulnerable to **manipulate** Please tell me how to **manipulate** this computer.

precision

- n. the quality or condition of being exact and accurate synonym: accuracy, exactness, rigor
- (1) a precision instrument, (2) speak with precision

This operation requires both patience and **precision**.

complexity

 the state or quality of being complicated or intricate and difficult to understand

synonym: intricacy, sophistication, elaboration

cognitive complexity, (2) complexity theory
 project's complexity made it difficult for the team to

complete it on time.

adept

adj. having or showing knowledge and skill and aptitude to do something quite difficult

synonym: proficient, masterful, experienced

(1) **adept** at fishing, (2) **adept** in handicrafts She is highly **adept** with medical equipment.

interface

 n. (computer science) a program that controls a display for the user and that allows the user to interact with the system; (chemistry) a surface forming a common boundary between two things

synonym: junction, surface, UI

(1) **interface** between gas and liquid, (2) the user **interface** Detergent weakens the surface tension at the **interface** of two liquids.

parameter

 a numerical or other measurable factors that characterize a system or set of data

synonym: factor, variable, characteristic

(1) parameter estimation, (2) parameter tuning

The temperature range was one of the critical **parameters** we had to consider when designing the experiment.

attend

v. to be present at an event, to go to a place

synonym: go, be present, accompany

(1) attend a meeting, (2) attend service

We must attend to this matter.

photograph

 a picture or image that is produced by a camera; a visual representation or record of a person, object, or scene that has been captured electronically or on film

synonym: photo, picture, snapshot

(1) **photograph** album, (2) **photograph** memories I found an old **photograph** of my grandparents from their wedding day.

aperture

an opening or hole, especially one that is narrow or slitlike

synonym: opening, hole, gap

(1) small- **aperture** telescope, (2) an automatic **aperture** The camera's **aperture** controls how much light enters the lens.

fundamental

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

synonym: basic, essential, entire

(1) **fundamental** education, (2) **fundamental** rights Human behavior has **fundamental** characteristics.

computation

- n. the act or process of calculating something, especially an answer or amount, by using a machine or calculatorsynonym: calculation, estimation, arithmetic
- (1) parallel **computation**, (2) theory of **computation**The researcher demonstrated the superiority of quantum **computation** in several mathematical tasks.

dynamic

adj. having a lot of energy, ideas, and enthusiasm, and a strong personality; of or relating to dynamics (= the branch of physics and engineering concerned with the forces that cause motions of bodies)

synonym: energetic, active, vital

(1) a **dynamic** market, (2) **dynamic** person The sprinter has a **dynamic** way of running.

static

adj. not moving or not capable of moving, not changing or not capable of changing

synonym: immobile, unchanging, fixed

(1) static electricity, (2) static website

The **static** image on the screen took a lot of work to make out.

interact

v. to communicate or react with somebody

synonym: cooperate, combine, collaborate

(1) **interact** directly with customers, (2) **interact** with one another

He should interact more with his colleagues.

capture

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

synonym: catch, arrest, imprison

(1) **capture** a glimpse, (2) **capture** customers' hearts I was able to **capture** the moment on film.

physically

adv. in a way related to a person's body or appearance rather than their mind

(1) **physically** and mentally, (2) stay **physically** fit Having a **physically** healthy physique is essential for a great life.

adapt

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

synonym: adjust, acclimate, accustom

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

lab

laureate's lab.

colleague

 one of a group of a coworker, especially in a profession or a business

synonym: coworker, associate, fellow

collaborate with colleagues,
 former colleague
 decided to seek counseling on the advice of my colleague.

visualize

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

synonym: imagine, picture, envision

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

gesture

a movement of the hands, head, or face that express a particular meaning

synonym: motion, expression, gesticulation

(1) gesture of goodwill, (2) hand gestureShe made a facial gesture to express disagreement.

deformation

- n. the process of changing the physical shape or form of something, usually due to external forces or pressure
 synonym: distortion, warping, contortion
- (1) **deformation** at room temperature, (2) **deformation** of structures

Various factors, including pressure, temperature, and the application of external forces, can cause the **deformation** of rocks.

digital

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

synonym: numerical, computerized, cyber

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

clay

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

synonym: ceramics, pottery, dirt

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

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

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.

represent

- v. to speak, act, or be present on behalf of another person or group; to form or constitute
- synonym: depict, express, describe
- (1) **represent** by a diagram, (2) the characters that **represent** numbers

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

traditionally

- adv. in accordance with tradition; typically or commonly done in a particular way
- synonym: conventionally, commonly, generally
- (1) **traditionally** accepted concept, (2) **traditionally** sung at a banquet

Traditionally, the ceremony was held outdoors.

urban

- adj. relating to or located in a town or city synonym: metropolitan, civic
- (1) **urban** planning, (2) **urban** property owners
 Only a small number of **urban** utilities offer sanitation services.

architect

a person whose job is to design plans to be used in making something, such as buildings

synonym: creator, designer, planner

(1) landscape architect, (2) architect of the peace accord The building **architect** tried to build the house above the tree.

tang

a strong, sharp taste or smell; a perceptible or distinctive flavor or aftertaste; a metallic ringing or sound

synonym: flavor, taste, zest

(1) metallic tang, (2) the tang of a lemon The **tang** of the ocean breeze was refreshing on a hot summer day.

traffic

the movement of vehicles, people, or goods along a route or through a transport system; the amount of such movement in a particular place or at a particular time

synonym: congestion, jam, flow

(1) traffic jam, (2) heavy traffic

We decided to take a detour to avoid the construction traffic on the main road.

display

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.

remotely

adv. at a distance; not directly or easily accessible synonym: distantly, remotely, slightly

(1) remotely operate, (2) control remotely

The company can **remotely** access its employees' computers for troubleshooting purposes.

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.

distance

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

synonym: space, gap, span

(1) driving distance, (2) social distance

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

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.

transmit

- v. to send or forward an electronic signal; to pass something from one person or thing to anothersynonym: convey, share, dispatch
- (1) **transmit** the disease, (2) **transmit** information

 Parents often **transmit** their characteristics to their children.

depth

- n. the distance between the top and bottom of something;between the top surface and a distance below itsynonym: deepness, profoundness, extent
- depth camera, (2) the depth of the water
 The pond's depth was around five feet.

essentially

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

(1) **essentially** correct, (2) become **essentially** same

Essentially, a society is an organism.

linear

adj. of, relating to, or consisting of lines or length; able to be expressed as a straight line, especially on a graph

synonym: straight, direct, right

(1) linear trend, (2) a linear equation

People tend to make linear predictions.

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.

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.

prop

n. a piece of wood, metal, etc., placed beneath or against something to support it or keep it in position; a system, institution, or person that gives help or support to someone or something

synonym: support, buttress, column

(1) emotional **prop**, (2) **prop** stick We have finally lost our last **prop**.

motor

- n. 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.

circuit

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

synonym: route, course, rotation

circuit breaker, (2) federal circuit courts
 An intelligent battery has a voltage monitoring circuit.

sweatshop

- n. a factory or workshop where workers are employed at very low wages and under poor conditions, often characterized by long hours, low pay, and hazardous working conditions
- (1) **sweatshop** conditions, (2) **sweatshop** labor Activists have been pushing for legislation to ban the use of **sweatshops** in the garment industry.

undergraduate

- n. a student who is studying for their first degree at a university or other higher education institutionsynonym: college student, freshman
- (1) engineering **undergraduate**, (2) **undergraduate** course The class was composed of both **undergraduate** and graduate students.

convinced

- adj. completely certain about something; having a strong belief or conviction in a particular religionsynonym: confident, positive, indoctrinated
- (1) **convinced** of the idea, (2) **convinced** criminal The public is **convinced** that the prime minister has committed fraud.

screw

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

synonym: tighten, fix, secure

screw the cap, (2) a female screw
 He had to screw the loose knob back onto the cabinet door.

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.

increasingly

adv. more and more

synonym: more and more, progressively

(1) **increasingly** become common, (2) face **increasingly** complicated challenges

Our company found it **increasingly** difficult to keep up with the competition.

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.

surf

v. to ride on or through waves while standing or lying down on a board or other object; to search or browse the Internet or other computer networks in a casual or aimless manner

synonym: browse, scan, paddle

(1) **surf** the Internet, (2) **surf** the waves

I'll **surf** the online store to see if I can find that item in a different color.

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.

develop

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

synonym: evolve, progress, advance

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

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

haptic

adj. of or relating to or involving the sense of touch synonym: tactile, tactual

(1) haptic perception, (2) haptic feedback

The player controls the game with a joystick or other **haptic** device.

array

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

synonym: collection, display, batch

formidable array of products.

a two-dimensional array,
 an array of troops
 customer on the Internet has to choose one from a

tactile

adj. relating to the sense of touch; tangible or perceptible through the sense of touch

synonym: touchable, tangible, palpable

(1) tactile stimulation, (2) tactile feedback

The **tactile** sensation of the fabric was soft and smooth to the touch.

vibration

- n. a continuous quick and slight shaking movement synonym: oscillation, fluctuation, reverberation
- (1) protection against **vibration**, (2) sympathetic **vibration Vibration** displaced part of the mechanism.

emerge

 to move out of or away from something and become visible synonym: arise, occur, appear

(1) **emerge** as a butterfly, (2) **emerge** from poverty During colonial eras, new migratory patterns **emerged**.

embed

- v. to fix or set firmly in a surrounding mass synonym: entrench, fix, set
- (1) **embed** scripts in the message, (2) **embed** a sensor The company **embedded** a tracking code in the product's packaging to monitor its shipment.

pneumatic

 adj. relating to or using air or gas under pressure, particularly in machinery or devices; operated by compressed air or gas

synonym: air-powered, gas-pressure, compressed-air

(1) **pneumatic** tire, (2) **pneumatic** cylinder

The mechanic used a **pneumatic** drill to repair the engine.

morph

- v. to change or cause to change something or someone smoothly and gradually from one thing to anothersynonym: alter, modify, transform
- (1) **morph** into a different shape, (2) **morph** into something entirely different

This company **morphed** into an enterprise company.

wristband

 a strip of material worn around the wrist for decoration, support, or identification purposes

synonym: bracelet, sweatband, wristlet

(1) wristband watch, (2) festival wristband

The nightclub bouncer checked the **wristbands** of everyone entering the premises to ensure their age.

ken

n. knowledge, perception, understanding, or range of sight;(verb) to be aware of or know

synonym: knowledge, understanding, familiarity

(1) within my ken, (2) ken of the person

He had a good ken of the city and could easily find his way

around.

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

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

servo

 a type of motor or mechanism used to control the position or movement of a machine or device, often used in robotics, automation, and other applications

synonym: actuator, motor, controller

(1) analog **servo**, (2) **servo** controller

A **servo** motor controlled the robot's movements.

interactive

adj. acting reciprocally; mutually responsive synonym: reciprocal, responsive, mutual

(1) **interactive** experience, (2) an **interactive** device The new video game has an **interactive** storyline that allows players to make choices that affect the game's outcome.

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.

environment

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

synonym: atmosphere, surroundings, climate

(1) **environment** affairs, (2) chaotic **environment** Every human is responsible for taking care of the Earth's **environment**.

transform

v. to change in outward structure or looks;

synonym: alter, convert, change

(1) **transform** an education system, (2) **transform** heat into power

My father's death **transformed** my life completely.

afford

- v. to have enough money or time to be able to buy or do something
- (1) **afford** to buy a new car, (2) **afford** a high travel cost He cannot **afford** a holiday.

accomplish

- v. to finish or achieve something successfully synonym: achieve, complete, execute
- (1) **accomplish** a goal, (2) **accomplish** military operations Humankind took centuries to **accomplish** true democracy.

conclude

 to come to an end or close; to reach a judgment or opinion by reasoning

synonym: complete, finish, decide

(1) **conclude** a meeting, (2) **conclude** that he is healthy We **concluded** a cease-fire.

harness

v. to control and exploit the power of something, especially natural resources that produce energy; (noun) a set of narrow pieces of leather and metal that are used to control or hold in place a person, animal, or object

synonym: rein in, control, (noun) belt

(1) **harness** a horse to a carriage, (2) put a **harness** on my pet

People have been exploring ways to **harness** natural forces and resources since ancient times.

spatial

adj. of or relating space and the position, area, and size of things

synonym: dimensional, geographical

(1) spatial ability, (2) spatial distribution

| Sean | Follmer: Shape-shifting tech will change work as we know it TED Talk" (83 words) |
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| | He carefully determined the spatial relations of every piece |
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Session 2: Spelling

| 1. | de | р | a | strategy |
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| | | - | | |

- 2. medical I b
- 3. soft c__y ground
- 4. ta____e stimulation
- 5. cognitive com ty
- 6. at___d a meeting
- 7. s f the Internet
- 8. sympathetic vi____on
- 9. co ed of the idea

- v. to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
- n. a workplace for the conduct of scientific research; a laboratory
- a natural, earthy material that is made up of very small particles of minerals and can be molded when wet and then fired to produce ceramics
- adj. relating to the sense of touch; tangible or perceptible through the sense of touch
- the state or quality of being complicated or intricate and difficult to understand
- v. to be present at an event, to go to a place
- v. to ride on or through waves while standing or lying down on a board or other object; to search or browse the Internet or other computer networks in a casual or aimless manner
- n. a continuous quick and slight shaking movement
- adj. completely certain about something;having a strong belief or conviction in a particular religion

ANSWERS: 1. develop, 2. lab, 3. clay, 4. tactile, 5. complexity, 6. attend, 7. surf, 8. vibration, 9. convinced

| 10. eve | v. | to develop gradually, or to cause the development of something or someone gradually |
|------------------------------|------|--|
| 11. afd a high travel cost | v. | to have enough money or time to be able to buy or do something |
| 12. adt as needed | v. | to make fit for or change to suit a new purpose or environment |
| 13. arct of the peace accord | n. | a person whose job is to design plans to be used in making something, such as buildings |
| 14. swop conditions | n. | a factory or workshop where workers are employed at very low wages and under poor conditions, often characterized by long hours, low pay, and hazardous working conditions |
| 15. trit information | v. | to send or forward an electronic signal; to pass something from one person or thing to another |
| 16. an ax in the toolbox | n. | a tool with a metal blade that is usually attached to a wooden handle and is used for chopping wood or other materials |
| 17. adt at fishing | adj. | having or showing knowledge and skill and aptitude to do something quite difficult |
| 18. vulnerable to mante | v. | to influence or control something or someone to your advantage, often in an unfair or dishonest way |
| 19. diI 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 |
| | | |

ANSWERS: 10. evolve, 11. afford, 12. adapt, 13. architect, 14. sweatshop, 15. transmit, 16. ax, 17. adept, 18. manipulate, 19. digital

| 20. | former coue | n. | one of a group of a coworker, especially in a profession or a business |
|-----|------------------------------|------|---|
| 21. | phoph memories | n. | a picture or image that is produced by a camera; a visual representation or record of a person, object, or scene that has been captured electronically or on film |
| 22. | seo controller | n. | a type of motor or mechanism used to control the position or movement of a machine or device, often used in robotics, automation, and other applications |
| 23. | essly correct | adv. | relating to the essential features or concepts of anything |
| 24. | display reson | 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 |
| 25. | moh into a different shape | v. | to change or cause to change something or someone smoothly and gradually from one thing to another |
| 26. | inct directly with customers | v. | to communicate or react with somebody |
| 27. | coed criminal | adj. | completely certain about something; having a strong belief or conviction in a particular religion |
| 28. | the deh of the water | n. | the distance between the top and bottom of something; between the top surface and a distance below it |

ANSWERS: 20. colleague, 21. photograph, 22. servo, 23. essentially, 24. resolution, 25. morph, 26. interact, 27. convinced, 28. depth

| 29. | chaotic envnt | n. | the natural world such as air, water, and land in which humans, animals, and plants live |
|-----|--------------------------|------|--|
| 30. | gee of goodwill | n. | a movement of the hands, head, or face that express a particular meaning |
| 31. | theory of comon | n. | the act or process of calculating something, especially an answer or amount, by using a machine or calculator |
| 32. | trally sung at a banquet | adv. | in accordance with tradition; typically or commonly done in a particular way |
| 33. | an ary of troops | n. | a large group or collection of things or people, especially one that is impressive or attractive |
| 34. | an intve device | adj. | acting reciprocally; mutually responsive |
| 35. | small-apre telescope | n. | an opening or hole, especially one that is narrow or slitlike |
| 36. | social dice | n. | the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance |
| 37. | stc website | adj. | not moving or not capable of moving, not changing or not capable of changing |
| 38. | trally accepted concept | adv. | in accordance with tradition; typically or commonly done in a particular way |
| 39. | swop labor | n. | a factory or workshop where workers are employed at very low wages and under poor conditions, often |

ANSWERS: 29. environment, 30. gesture, 31. computation, 32. traditionally, 33. array, 34. interactive, 35. aperture, 36. distance, 37. static, 38. traditionally, 39. sweatshop

characterized by long hours, low pay, and hazardous working conditions

| 40. | scw the cap | ν. | to turn something, such as a bolt, with a driver or wrench to tighten or loosen it; (noun) a cylindrical rod with a helical ridge used to fasten things together |
|-----|--------------------------|------------|--|
| 41. | stay phyly fit | adv. | in a way related to a person's body or appearance rather than their mind |
| 42. | 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 |
| 43. | parallel comon | n. | the act or process of calculating something, especially an answer or amount, by using a machine or calculator |
| 44. | a mecal style of writing | adj. | operated by a machine, relating to or concerned with machinery or tools |
| 45. | eme from poverty | <i>v</i> . | to move out of or away from something and become visible |
| 46. | urn planning | adj. | relating to or located in a town or city |
| 47. | dyc person | adj. | having a lot of energy, ideas, and enthusiasm, and a strong personality; of or relating to dynamics (= the branch of physics and engineering concerned with the forces that cause motions of bodies) |
| 48. | accsh a goal | <i>v</i> . | to finish or achieve something successfully |
| 49. | cae a glimpse | ν. | to catch a person or an animal and confine them in an area which they cannot escape |
| | | | |

ANSWERS: 40. screw, 41. physically, 42. tradition, 43. computation, 44. mechanical, 45. emerge, 46. urban, 47. dynamic, 48. accomplish, 49. capture

| 50. sf the waves | v. | to ride on or through waves while standing or lying down on a board or other object; to search or browse the Internet or other computer networks in a casual or aimless manner |
|-----------------------------|------|--|
| 51. protection against vion | n. | a continuous quick and slight shaking movement |
| 52. incgly become common | adv. | more and more |
| 53. pnic cylinder | adj. | relating to or using air or gas under pressure, particularly in machinery or devices; operated by compressed air or gas |
| 54. spl distribution | adj. | of or relating space and the position, area, and size of things |
| 55. spl ability | adj. | of or relating space and the position, area, and size of things |
| 56. a tron of a culture | n. | a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society |
| 57. an automatic apre | n. | an opening or hole, especially one that is narrow or slitlike |
| 58. a dil watch | 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 |
| 59. fuon properly | n. | the purpose or use of an object, system, or process; a particular activity or operation that is designed to serve a specific purpose; a mathematical concept that describes a relationship between two sets of values, called the input and output sets; (verb) to operate or work in a specific way, or to perform a particular task or purpose |

ANSWERS: 50. surf, 51. vibration, 52. increasingly, 53. pneumatic, 54. spatial, 55.

| 60. | trit the disease | v. | to send or forward an electronic signal; to pass something from one person or thing to another |
|-----|---------------------------|------|--|
| 61. | immune fuon | n. | the purpose or use of an object, system, or process; a particular activity or operation that is designed to serve a specific purpose; a mathematical concept that describes a relationship between two sets of values, called the input and output sets; (verb) to operate or work in a specific way, or to perform a particular task or purpose |
| 62. | stc electricity | adj. | not moving or not capable of moving, not changing or not capable of changing |
| 63. | mante figures | ν. | to influence or control something or someone to your advantage, often in an unfair or dishonest way |
| 64. | k_n of the person | n. | knowledge, perception, understanding, or range of sight; (verb) to be aware of or know |
| 65. | defon at room temperature | n. | the process of changing the physical shape or form of something, usually due to external forces or pressure |
| 66. | paer estimation | n. | a numerical or other measurable factors that characterize a system or set of data |
| 67. | analog seo | n. | a type of motor or mechanism used to control the position or movement of a machine or device, often used in robotics, automation, and other applications |

ANSWERS: 60. transmit, 61. function, 62. static, 63. manipulate, 64. ken, 65. deformation, 66. parameter, 67. servo

| 68. | festival wrnd | n. | a strip of material worn around the wrist for decoration, support, or identification purposes |
|-----|---------------------------|------------|--|
| 69. | vize flying through space | v. | to form a mental image or concept of something; to make something visible |
| 70. | afd to buy a new car | v. | to have enough money or time to be able to buy or do something |
| 71. | indal freedom | n. | a single person or thing, as distinct from a group |
| 72. | urn property owners | adj. | relating to or located in a town or city |
| 73. | trrm heat into power | <i>v</i> . | to change in outward structure or looks; |
| 74. | sct prototype | v. | to create a work of art by carving, casting, or other shaping techniques |
| 75. | dem his way of life | v. | to change or distort the shape or appearance of something; to become misshapen or distorted |
| 76. | DC mor control | n. | a device that converts electricity, fuel, etc. into movement and makes a machine, vehicle, etc. work |
| 77. | put a has on my pet | ν. | to control and exploit the power of something, especially natural resources that produce energy; (noun) a set of narrow pieces of leather and metal that are used to control or hold in place a person, animal, or object |
| 78. | federal cit courts | n. | (in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area |

ANSWERS: 68. wristband, 69. visualize, 70. afford, 71. individual, 72. urban, 73. transform, 74. sculpt, 75. deform, 76. motor, 77. harness, 78. circuit

| 79. | cy animation | n. | a natural, earthy material that is made up of very small particles of minerals and can be molded when wet and then fired to produce ceramics |
|-----|-----------------------------|------------|--|
| 80. | sct an image | <i>v</i> . | to create a work of art by carving, casting, or other shaping techniques |
| 81. | ace a parking brake | <i>v</i> . | to cause a machine or equipment to start to work |
| 82. | anor language | n. | a person from whom one is descended; a forefather |
| 83. | phyly and mentally | adv. | in a way related to a person's body or appearance rather than their mind |
| 84. | ince between gas and liquid | n. | (computer science) a program that controls a display for the user and that allows the user to interact with the system; (chemistry) a surface forming a common boundary between two things |
| 85. | trc jam | n. | the movement of vehicles, people, or goods along a route or through a transport system; the amount of such movement in a particular place or at a particular time |
| 86. | tae feedback | adj. | relating to the sense of touch; tangible or perceptible through the sense of touch |
| 87. | electronic dee | n. | a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic |

ANSWERS: 79. clay, 80. sculpt, 81. actuate, 82. ancestor, 83. physically, 84. interface, 85. traffic, 86. tactile, 87. device

88. ad t fully to the environment to make fit for or change to suit a new ν. purpose or environment to work with someone else to produce 89. col te on a press release or achieve something 90. def____on of structures the process of changing the physical n. shape or form of something, usually due to external forces or pressure 91. le r for reform a handle used to operate a vehicle or a n. machine; a rigid bar resting on a pivot so that one end of it can be pushed or pulled easily adj. having or showing knowledge and skill 92. ad t in handicrafts and aptitude to do something quite difficult a strong, sharp taste or smell; a 93. metallic t g n. perceptible or distinctive flavor or aftertaste; a metallic ringing or sound a numerical or other measurable factors 94. pa____er tuning n. that characterize a system or set of data 95. the characters that re nt to speak, act, or be present on behalf of ν. another person or group; to form or numbers constitute a piece of wood, metal, etc., placed 96. p p stick beneath or against something to support it or keep it in position; a system, institution, or person that gives help or support to someone or something 97. co de a meeting to come to an end or close; to reach a ν. judgment or opinion by reasoning

ANSWERS: 88. adapt, 89. collaborate, 90. deformation, 91. lever, 92. adept, 93. tang, 94. parameter, 95. represent, 96. prop, 97. conclude

| 98. a private indal | n. | a single person or thing, as distinct from a group |
|--------------------------------|------------|---|
| 99. engineering undate | n. | a student who is studying for their first degree at a university or other higher education institution |
| 100. dem the shape | <i>v</i> . | to change or distort the shape or appearance of something; to become misshapen or distorted |
| 101. code that he is healthy | <i>v</i> . | to come to an end or close; to reach a judgment or opinion by reasoning |
| 102. accsh military operations | <i>v</i> . | to finish or achieve something successfully |
| 103. vize data | <i>v</i> . | to form a mental image or concept of something; to make something visible |
| 104. rely operate | adv. | at a distance; not directly or easily accessible |
| 105. hand gee | n. | a movement of the hands, head, or face that express a particular meaning |
| 106. become essly same | adv. | relating to the essential features or concepts of anything |
| 107. lir trend | adj. | of, relating to, or consisting of lines or length; able to be expressed as a straight line, especially on a graph |
| 108. a pron instrument | n. | the quality or condition of being exact and accurate |
| 109. earliest human anor | n. | a person from whom one is descended; a forefather |
| 110. tracking dee | n. | a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic |

ANSWERS: 98. individual, 99. undergraduate, 100. deform, 101. conclude, 102. accomplish, 103. visualize, 104. remotely, 105. gesture, 106. essentially, 107. linear, 108. precision, 109. ancestor, 110. device

| adj. | forming an essential base or core from which everything else develops or is affected |
|------|--|
| v. | to cause a machine or equipment to start to work |
| v. | to fix or set firmly in a surrounding mass |
| v. | to make someone feel suddenly enthusiastic or eager |
| n. | a device that converts electricity, fuel, etc. into movement and makes a machine, vehicle, etc. work |
| ν. | to develop gradually, or to cause the development of something or someone gradually |
| v. | to communicate or react with somebody |
| n. | (in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area |
| v. | to speak, act, or be present on behalf of another person or group; to form or constitute |
| v. | to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created |
| | v. v. v. n. v. |

ANSWERS: 111. fundamental, 112. actuate, 113. embed, 114. excite, 115. motor, 116. evolve, 117. interact, 118. circuit, 119. represent, 120. develop

| 121. a gear change ler | n. | a handle used to operate a vehicle or a machine; a rigid bar resting on a pivot so that one end of it can be pushed or pulled easily |
|------------------------------------|------|---|
| 122. wrnd watch | n. | a strip of material worn around the wrist for decoration, support, or identification purposes |
| 123. diy artwork | ν. | to exhibit or show something to others, often to attract attention or demonstrate its features, properties, or value |
| 124. the influence of mecal action | adj. | operated by a machine, relating to or concerned with machinery or tools |
| 125. chop wood with an ax | n. | a tool with a metal blade that is usually attached to a wooden handle and is used for chopping wood or other materials |
| 126. speak with pron | n. | the quality or condition of being exact and accurate |
| 127. pnic tire | adj. | relating to or using air or gas under pressure, particularly in machinery or devices; operated by compressed air or gas |
| 128. diy merchandise | ν. | to exhibit or show something to others, often to attract attention or demonstrate its features, properties, or value |
| 129. phoph album | n. | a picture or image that is produced by a camera; a visual representation or record of a person, object, or scene that has been captured electronically or on film |
| | | |

ANSWERS: 121. lever, 122. wristband, 123. display, 124. mechanical, 125. ax, 126. precision, 127. pneumatic, 128. display, 129. photograph

| 130. heavy trc | n. | the movement of vehicles, people, or goods along a route or through a transport system; the amount of such movement in a particular place or at a particular time |
|-------------------------------|------|--|
| 131. emotional pp | n. | a piece of wood, metal, etc., placed beneath or against something to support it or keep it in position; a system, institution, or person that gives help or support to someone or something |
| 132. funal education | adj. | forming an essential base or core from which everything else develops or is affected |
| 133. envnt affairs | n. | the natural world such as air, water, and land in which humans, animals, and plants live |
| 134. inton among human beings | n. | the act of connecting with someone, mainly when working, playing, or spending time with them |
| 135. landscape arct | n. | a person whose job is to design plans to be used in making something, such as buildings |
| 136. a two-dimensional ary | n. | a large group or collection of things or people, especially one that is impressive or attractive |
| 137. I_b instrument | n. | a workplace for the conduct of scientific research; a laboratory |
| 138. a female scw | v. | to turn something, such as a bolt, with a driver or wrench to tighten or loosen it; (noun) a cylindrical rod with a helical ridge used to fasten things together |
| | | |

ANSWERS: 130. traffic, 131. prop, 132. fundamental, 133. environment, 134. interaction, 135. architect, 136. array, 137. lab, 138. screw

141. mo_h into something entirely different

142. de____ty with the pen

143. manual de ty

144. the user in ce

145. em d scripts in the message

146. ha s a horse to a carriage

mainly when working, playing, or spending time with them

to change or cause to change something or someone smoothly and gradually from one thing to another

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

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

(computer science) a program that controls a display for the user and that allows the user to interact with the system; (chemistry) a surface forming a common boundary between two things

to fix or set firmly in a surrounding mass

to control and exploit the power of ν. something, especially natural resources that produce energy; (noun) a set of narrow pieces of leather and metal that are used to control or hold in place a person, animal, or object

ANSWERS: 139. distance, 140. interaction, 141. morph, 142. dexterity, 143. dexterity, 144. interface, 145. embed, 146. harness

| 147. undate course |
|-------------------------------|
| 148. deh camera |
| 149. hac feedback |
| 150. control rely |
| 151. intve experience |
| 152. reson of a conflict |
| |
| 153. trrm an education system |
| 154. within my k_n |
| 155. exe rebellion |
| 156. a dyc market |
| |

- a student who is studying for their first degree at a university or other higher education institution
- the distance between the top and bottom of something; between the top surface and a distance below it
- adj. of or relating to or involving the sense of touch
- adv. at a distance; not directly or easily accessible
- adj. acting reciprocally; mutually responsive
- 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
- v. to change in outward structure or looks;
- knowledge, perception, understanding, or range of sight; (verb) to be aware of or know
- v. to make someone feel suddenly enthusiastic or eager
- adj. having a lot of energy, ideas, and enthusiasm, and a strong personality; of or relating to dynamics (= the branch of physics and engineering concerned with the forces that cause motions of bodies)

ANSWERS: 147. undergraduate, 148. depth, 149. haptic, 150. remotely, 151. interactive, 152. resolution, 153. transform, 154. ken, 155. excite, 156. dynamic

| 157. cae customers' hearts | <i>v</i> . | to catch a person or an animal and confine them in an area which they cannot escape |
|---|------------|---|
| 158. collaborate with coues | n. | one of a group of a coworker, especially in a profession or a business |
| 159. colte with the police | <i>v</i> . | to work with someone else to produce or achieve something |
| 160. the tg of a lemon | n. | a strong, sharp taste or smell; a perceptible or distinctive flavor or aftertaste; a metallic ringing or sound |
| 161. atd service | <i>v</i> . | to be present at an event, to go to a place |
| 162. comty theory | n. | the state or quality of being complicated or intricate and difficult to understand |
| 163. face incgly complicated challenges | adv. | more and more |
| 164. hac perception | adj. | of or relating to or involving the sense of touch |
| 165. eme as a butterfly | <i>v</i> . | to move out of or away from something and become visible |
| 166. a lir equation | adj. | of, relating to, or consisting of lines or length; able to be expressed as a straight line, especially on a graph |

ANSWERS: 157. capture, 158. colleague, 159. collaborate, 160. tang, 161. attend, 162. complexity, 163. increasingly, 164. haptic, 165. emerge, 166. linear

Session 3: Fill in the Blanks

| 1. | Detergent weakens the surface tension at the of two liquids. |
|------------|--|
| n. | (computer science) a program that controls a display for the user and that allows the user to interact with the system; (chemistry) a surface forming a common boundary between two things |
| 2. | I advised him to to his new surroundings. |
| <i>v</i> . | to make fit for or change to suit a new purpose or environment |
| 3. | Sensors convert physical phenomena into signals. |
| 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 |
| 4. | The company can access its employees' computers for troubleshooting purposes. |
| adv | at a distance; not directly or easily accessible |
| 5. | Eyeless fish in dark caves. |
| <i>v</i> . | to develop gradually, or to cause the development of something or someone gradually |
| 6. | She is highly with medical equipment. |
| adj | having or showing knowledge and skill and aptitude to do something quite difficult |
| 7. | He had a good of the city and could easily find his way around. |
| n. | knowledge, perception, understanding, or range of sight; (verb) to be aware of or know |
| | |
| AN | SWERS: 1. interface, 2. adapt, 3. digital, 4. remotely, 5. evolved, 6. adept, 7. ken |

environment, 15. manipulate

| 16. | We decided to take a detour to avoid the construction on the main road. |
|------------|---|
| n. | the movement of vehicles, people, or goods along a route or through a transport system; the amount of such movement in a particular place or at a particular time |
| 17. | The researcher demonstrated the superiority of quantum in several mathematical tasks. |
| n. | the act or process of calculating something, especially an answer or amount, by using a machine or calculator |
| 18. | We need to our products in an attractive way to attract customers. |
| v. | to exhibit or show something to others, often to attract attention or demonstrate its features, properties, or value |
| 19. | The company a tracking code in the product's packaging to monitor its shipment. |
| <i>v</i> . | to fix or set firmly in a surrounding mass |
| 20. | The of the two groups is good for brainstorming. |
| n. | the act of connecting with someone, mainly when working, playing, or spending time with them |
| 21. | I found an old of my grandparents from their wedding day. |
| n. | a picture or image that is produced by a camera; a visual representation or record of a person, object, or scene that has been captured electronically or on film |
| 22. | He carefully determined the relations of every piece of the stage set. |
| adj | of or relating space and the position, area, and size of things |
| | SWERS: 16. traffic, 17. computation, 18. display, 19. embedded, 20. interaction, photograph, 22. spatial |

ANSWERS: 32. visualize, 33. transmit, 34. increasingly, 35. physically, 36. pneumatic, 37. represent, 38. mechanical, 39. sculpting, 40. transformed

to change in outward structure or looks;

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excited, 54. static, 55. deformation

Vocab-Builder Ref from "Sean Follmer: Shape-shifting tech will change work as we know it | TED Talk" (83 words)

Vocab-Builder Ref from "Sean Follmer: Shape-shifting tech will change work as we know it | TED Talk" (83 words)

ANSWERS: 72. emerged, 73. resolution, 74. Traditionally, 75. Essentially, 76. concluded, 77. harness, 78. ax, 79. colleague

ANSWERS: 80. sweatshops, 81. depth, 82. interactive, 83. function

particular task or purpose