Englist.me

Vocabulary Builder Reference from...

Adam Savage: How simple ideas lead to scientific discoveries | TED Talk

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

ideas lead to scientific discoveries



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

(1) basic **brain** function, (2) permanent **brain** damage X-rays revealed a small tumor in his **brain**.

stick

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

synonym: pierce, adhere, stay

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

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

import

v. to bring goods or services into a country from another country; to transfer electronic data into a database or document;

synonym: bring, spell

(1) import goods, (2) import a style sheet

The company **imports** raw materials from other countries to manufacture its products.

wagon

 a four-wheeled vehicle used for transporting goods or people, often pulled by horses, oxen, or other animals; a compartment or container used for storage or transportation, such as a shopping cart or trolley

synonym: cart, buggy, chariot

(1) wagon wheel, (2) station wagon

The circus **wagon** was brightly painted with pictures of the animals inside.

inertia

 the quality or state of being inactive, sluggish, or slow to move or act

synonym: sluggishness, lethargy, idleness

(1) inertia resistance, (2) Newton's law of inertia

The object's **inertia** kept it moving in a straight line until acted upon by an outside force.

phenomenon

something that exists and can be perceptible, especially one that is not fully understood

synonym: marvel, wonder, splendor

(1) natural **phenomenon**, (2) historical **phenomenon** A rainbow is a natural **phenomenon**.

degree

 a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment

synonym: level, qualification, diploma

(1) bachelor's degree, (2) degree centigrade

She received her **degree** in psychology from the university.

challenger

 a person or thing that challenges or competes with someone or something else; a contestant in a competition or challenge

synonym: contender, rival, contestant

(1) challenger brand, (2) political challenger

The **challenger** in the boxing match put up a good fight.

disaster

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

synonym: catastrophe, calamity, tragedy

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

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

physics

- the science of matter and energy and their interactions
- (1) nuclear physics, (2) laws of physics

He studied the **physics** of radiation.

diagram

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

synonym: chart, figure, graph

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

He is drawing a diagram illustrating how the equipment operates.

movement

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

synonym: motion, progression, action

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

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

atomic

adj. of or relating to atom (= the smallest component of an element)

synonym: tiny, microscopic, nuclear

(1) atomic nucleus, (2) atomic bomb

Carbon has an **atomic** mass of 12.

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

(1) charged particle, (2) particle energy

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synonym: atom, grain, bit

particle

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

creditor

- n. a person, company, etc. to whom a debtor owes money
- (1) the **creditor's** claims, (2) bankrupt **creditor** I asked the lawyer to initiate **creditor** negotiations for voluntary liquidation.

conversation

 an informal talk between two or more people to exchange their views, ideas, information, etc.

synonym: chat, discussion, dialogue

(1) **conversation** in English, (2) a friendly **conversation** Your **conversation** reflects your thoughts.

quest

- n. a long or challenging search for somethingsynonym: exploration, inquisition, pursuit
- (1) the **quest** for truth, (2) on a **quest** for happiness That adventurer traveled in **quest** of buried treasure.

librarian

 a person who works in a library and is responsible for organizing and managing the collection of books and other materials

synonym: curator

(1) academic **librarian**, (2) the chief **librarian**The **librarian's** duties included organizing and cataloging the library's collection.

contribution

n. the act of giving something, especially money, to a particular cause or organization; a voluntary gift as of money or service or ideas made to some worthwhile cause

synonym: donation, gift, offering

(1) make a positive **contribution**, (2) **contribution** to society

His **contribution** to the charity was a generous donation of money.

solstice

- n. either of the two moments in a year when the sun is at its greatest distance from the celestial equator, resulting in the shortest or longest day of the year; the time of year associated with these events
- (1) celebrate **solstice**, (2) summer **solstice**

The winter **solstice** marks the shortest day of the year in the Northern Hemisphere.

reflection

n. the act of thinking deeply about something, or the ability to think deeply; the image of something that is seen in a mirror or other reflective surface

synonym: contemplation, meditation, consideration

(1) **reflection** question, (2) photon **reflection**

The teacher asked the students to write a **reflection** on the book they had just read.

discovery

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

synonym: finding, uncovering, detection

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

Her research team made an important discovery.

spherical

adj. having the shape of a sphere; round, spherical, or ball-shaped in appearance

synonym: round, orbicular, spherical

(1) **spherical** shape, (2) **spherical** object

The Earth is a nearly **spherical** planet.

bull

 a male bovine animal; an investor who has a positive outlook on the market or a particular investment and buys with the expectation of prices increasing

synonym: bovine, cattle, bruiser

(1) **bull** market, (2) **bull** fighter

The farmer raised a **bull** on his ranch for breeding purposes.

educated

adj. having received a high standard of education synonym: knowledgeable, erudite, enlightened

(1) educated adult, (2) educated speech

Excellent speech is a characteristic of an **educated** man.

observation

n. the act or activity of carefully examining or monitoring something or someone

synonym: watching, notice, reflection

(1) class **observation** day, (2) **observation** instrument In the hospital, she will remain under constant **observation**.

shadow

n. a dark area or shape cast by an object blocking the passage of light; an area in darkness or shade; a reflected image or copy of something; a person, activity, or influence that follows or accompanies someone or something closely and persistently, often in a secretive or ominous manner

synonym: shade, silhouette, outline

(1) shadow cast, (2) shadow puppetry

The tree cast a **shadow** over the picnic area, providing relief from the sun.

circular

adj. shaped like a circle; having a round formsynonym: round, loopy, oblique

(1) **circular** economy, (2) non- **circular** orbit

The **circular** shape of the planet makes it difficult to

determine which direction is north.

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.

sphere

 a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity synonym: ball, globe, scope

(1) **sphere** of influence, (2) business **sphere**

The **sphere** of the earth is divided into several layers including the crust, mantle, and core.

straight

 adj. extending or moving in one direction without bending or curving; having no deviations

synonym: linear, honest, consecutive

(1) a **straight** line, (2) **straight** for two months

He was sick for five **straight** days.

zenith

 the highest point or peak; the point in the sky directly above the observer; the culmination or apex of something

synonym: pinnacle, peak, summit

(1) zenith of success, (2) zenith of popularity

Reaching the **zenith** of his career was a long and difficult climb, but it was worth it.

cast

 to cause light or shadow to appear on a surface; to assing or choose someone such as an actor or representative, especially by selection process

synonym: throw, project, select

(1) cast a ballot, (2) cast a charming eye

This accident **cast** a dark shadow over their lives.

axis

 a real or imaginary straight line through a body or figure around which the object turns; a group of countries in special alliance

synonym: central, core, pole

(1) vertical axis, (2) a coordinate axis

The earth's **axis** of rotation is tilted 66.5 degrees to the ecliptic plane.

circumference

 the distance around the outside of a circular or curved object or area

synonym: perimeter, edge, outer boundary

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(1) angle of **circumference**, (2) chest **circumference**The **circumference** of the earth is approximately 24,901 miles.

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.

extrapolate

v. to guess or think about what might happen or estimate something using the facts that you have now

synonym: deduce, reason, infer

(1) **extrapolate** the results, (2) **extrapolate** animal dose This predictive model mechanically **extrapolates** past trends into the future.

divide

- v. to separate or cause to separate into parts or groups synonym: separate, disconnect, split
- (1) **divide** the cake into two pieces, (2) **divide** money equally

Can you divide 123321 by eleven?

suspicious

- adj. making you feel that someone has done something wrong, illegal, or dishonest without any evidencesynonym: fishy, questionable, doubtful
- (1) report **suspicious** activity, (2) a person who is **suspicious**

We carefully examine each **suspicious** transaction report we receive.

geography

a field of science devoted to the study of the lands, features, inhabitants, and phenomena of the Earth
 synonym: landscape, terrain, topography

(1) **geography** class, (2) economic **geography** She did well on her **geography** exam.

invention

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

synonym: creation, design, innovation

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

commerce

 the activity of buying and selling things, especially on a large scale

synonym: trade, transaction, dealings

(1) interstate **commerce**, (2) the local chamber of **commerce**

This company has invested heavily in Internet **commerce**.

precise

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

precise analyses, (2) estimate precise costs
 The content is precise and informative for me.

multiply

 to add a number to itself a specified number of times; to increase or cause to increase very much in number or quantity

synonym: boost, amplify, reproduce

(1) **multiply** 5 and 6, (2) **multiply** about hundredfold **Multiply** a number by itself twice.

diameter

- n. the length of a straight line passing through the center of a circle and connecting two points on the circumference synonym: diam, width
- (1) **diameter** of an oval, (2) a particle **diameter** Draw a circle five centimeters in **diameter**.

machinery

 a group of large machines or the components of a machine that make it work; social institution functions or structure for doing something synonym: apparatus, appliance, equipment

(1) heavy **machinery**, (2) inactive **machinery**The **machinery** of audit formally issued a business improvement order.

boson

 a type of subatomic particle that follows Bose-Einstein statistics, which determine how identical particles with integer spins behave

synonym: photon, gluon, particle

(1) weak **boson**, (2) Higgs **boson**

The search for new **boson** particles is one of the most exciting areas of modern physics.

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.

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.

physicist

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

specialty

 an area or field in which a person or thing excels or specializes; a particular branch of study, occupation, or expertise; a special or unique skill or talent synonym: expertise, specialization, skill

(1) coffee **specialty**, (2) regional **specialty**

The chef's **specialty** was a delicious seafood pasta dish that everyone loved.

refine

v. to make something more pure, polished, cultured, or effective; to improve, perfect, or enhance through a process of purification or development

synonym: purify, process, improve

(1) refine oil, (2) refine a language

The company is working to **refine** its production process to be more efficient.

confirm

v. to support or establish the truth or certainty of something previously believed or suspected to be the case

synonym: affirm, verify, assure

(1) **confirm** the diagnosis, (2) **confirm** a transaction Please write to **confirm** your reservation.

also-ran

 a candidate, competitor, or participant in a race, competition, or contest who finishes outside of the top positions and is not significantly successful or recognized

synonym: underdog, loser, runner-up

(1) sports also-ran, (2) academic also-ran

The company was once a frontrunner but is now considered an **also-ran** in the industry.

independence

- n. freedom from another's or others' control or influencesynonym: freedom, liberty, autonomy
- (1) financial **independence**, (2) **independence** ceremony There is nothing more valuable than **independence** and freedom.

corroborate

v. to confirm or support something that has already been suggested, particularly by providing evidence or witness testimony

synonym: confirm, substantiate, authenticate

(1) corroborate evidence, (2) corroborate story

The eyewitness testimony **corroborated** the suspect's alibi.

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.

determinant

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

synonym: cause, factor, element

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

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

assistant

someone who helps or supports someone else to do a job

synonym: aide, helper, associate

(1) an unwilling **assistant**, (2) **assistant** professor

An executive **assistant** director administers each branch.

hilltop

n. the top of a hill, rather than its sloping sides

synonym: peak, apex

(1) a windy **hilltop**, (2) **hilltop** residence

We looked down on the large wetland from the **hilltop**.

distant

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

synonym: far, isolated, remote

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

The sun set over the crest of distant hills.

assume

 to think or accept something to be true without having proof of it; to take or begin to have power; to begin to exhibit a specific quality or appearance

synonym: guess, presume, suppose

(1) **assume** a lousy attitude to his boss, (2) **assume** an important role

The following example **assumes** that the capacity of each battery is the same.

discernible

adj. able to be perceived or recognized; clear or distinguishable

synonym: apparent, noticeable, distinguishable

(1) **discernible** pattern, (2) lack of **discernible** progress There was a **discernible** change in the atmosphere when the boss walked into the room.

delay

v. to cause something to happen at a later time than originally intended or expected

synonym: block, adjourn, detain

(1) **delay** a flight three hours, (2) **delay** the new project We **delayed** the payment because of an incorrect invoice.

magnitude

- n. the extent, level, importance, or amount of somethingsynonym: size, extent, level
- (1) a star of the first **magnitude**, (2) the **magnitude** of the disaster

The **magnitude** of the earthquake was measured at 7.8 on the Richter scale.

roughly

adv. approximately but not precisely; with a violent manner synonym: approximately, more or less, around

(1) **roughly** explain my idea, (2) **roughly** speaking Five miles is **roughly** similar to eight kilometers.

statistics

- the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data
- (1) statistics for cancer, (2) official statistics

The **statistics** demonstrate that poverty and unemployment are genuine problems.

relative

adj. considered and evaluated through comparison with something else

synonym: comparative, proximate, congeneric

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

Most countries prohibit sexual activity between certain close relatives.

trivial

adj. of little value or importance synonym: insignificant, minor, unimportant

(1) a trivial man, (2) for trivial reasons

The problem seemed **trivial** initially, but it became a significant issue.

equip

to provide a person or a place with the things that are needed for a particular purpose or activity

synonym: prepare, furnish, provide

(1) **equip** an army, (2) **equip** our children with some special skills

The construction company **equipped** the building with an earthquake-resistant device.

engage

to attract and keep someone's attention and interest; to participate in or obtain services of something

synonym: confront, employ, amuse

- (1) **engage** in environmental protection activities,
- (2) **engage** a new employee

Many multinational companies are **engaged** in the reconstruction of that country.

bunch

 a grouping of several similar things which are growing or fastened together

synonym: group, assemblage, bundle

(1) a **bunch** of trees, (2) a **bunch** of schoolgirls One bad apple spoils the whole **bunch**.

notch

 a V-shaped cut or indentation made in a surface or edge; a level of achievement or success; a point or degree of measurement or comparison

synonym: groove, slit, incision

(1) top- **notch** service, (2) score a **notch**

The cake was decorated with a **notch** to represent the birthday boy's age.

discrete

adj. separate and distinct; not continuous; individually distinguishable

synonym: separate, distinct, individual

(1) discrete metric space, (2) discrete variable

The company divided the tasks into **discrete** segments to increase efficiency.

pulse

n. the regular heartbeat as it sends blood around the body, especially when it is felt at the wrist or side of the neck; a solid regular vibration of sound, electric current, light, or other waves

synonym: beat, vibration, throb

(1) a weak **pulse**, (2) **pulse** waves

The cardiac monitor displays the intensity of your **pulse**.

beam

 a long, sturdy piece of timber, metal, or other material used to support a structure or span a distance; a ray or stream of light emitted by a source

synonym: ray, ray of light, shaft of light

(1) **beam** of light, (2) a structural **beam** of a building The sun's **beam** shone through the window and illuminated the room.

bounce

spin

v. to cause to move up or away after hitting a surface; to spring back

synonym: bound, leap, spring

- (1) **bounce** across the floor, (2) **bounce** back from failure They will **bounce** between various emotional states.
- v. to cause something to rotate rapidly; to cause someone to feel dizzy or disoriented

synonym: rotate, twirl, swirl

(1) **spin** a top, (2) **spin** thread out of cotton

The tornado is **spinning** across the countryside, destroying everything in its path.

occlude

- v. to obstruct or block something, usually a passage or opening, in a way that prevents normal flow or access
 synonym: block, obstruct, close
- (1) **occlude** a blood vessel, (2) **occlude** the ureteral orifice The traffic jam **occluded** the road and caused a significant delay in the journey.

calculate

v. to judge or find out the amount or number of something by using mathematics

synonym: compute, figure, estimate

(1) **calculate** the distance, (2) **calculate** his credit score He couldn't **calculate** the actual value of the artwork.

concept

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

branch

 a division of a tree or woody shrub that grows out from the trunk or a main stem; a division of some larger or more complex organization

synonym: limb, twig, bough

(1) branch office, (2) a branch pipe

The **branch** of the tree had fallen and blocked the road.

explorer

- a person who travels to places where no one or few people have been before to find out what is there
 synonym: adventurer, trailblazer, scout
- (1) team of **explorers**, (2) a polar **explorer**Aboriginal people killed the **explorer** who entered the sacred land for them.

curiosity

- n. a strong desire to know or learn about somethingsynonym: interest, inquisitiveness, novelty
- (1) boundless **curiosity**, (2) satisfy my intellectual **curiosity** We are motivated by **curiosity** rather than necessity.

Session 2: Spelling

1.	ext	te the results	ν. to guess or think about what might	
			happen or estimate something using t	the t
			facts that you have now	

- nuclear ph___s the science of matter and energy and n. their interactions
 - to confirm or support something that has already been suggested, particularly by providing evidence or witness testimony
 - a candidate, competitor, or participant in n. a race, competition, or contest who finishes outside of the top positions and is not significantly successful or recognized
 - a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment
 - the amount of space between two n. points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance
 - a small piece of something; a word or n. piece of a term with grammatical function but little or no significance
 - either of the two moments in a year when the sun is at its greatest distance from the celestial equator, resulting in the shortest or longest day of the year; the time of year associated with these events

- 2.
- cor____te story 3.
- academic al an 4.
- de___e centigrade
- social di ce 6.
- 7. pa le energy
- 8. summer so____ce

ANSWERS: 1. extrapolate, 2. physics, 3. corroborate, 4. also-ran, 5. degree, 6. distance, 7. particle, 8. solstice

9. political chaer	n.	a person or thing that challenges or competes with someone or something else; a contestant in a competition or challenge
10. brh office	n.	a division of a tree or woody shrub that grows out from the trunk or a main stem; a division of some larger or more complex organization
11. ree a language	ν.	to make something more pure, polished, cultured, or effective; to improve, perfect, or enhance through a process of purification or development
12. pue waves	n.	the regular heartbeat as it sends blood around the body, especially when it is felt at the wrist or side of the neck; a solid regular vibration of sound, electric current, light, or other waves
13. charged pale	n.	a small piece of something; a word or piece of a term with grammatical function but little or no significance
14. dep a strategy	v.	to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
15. dep a skill	v.	to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created

ANSWERS: 9. challenger, 10. branch, 11. refine, 12. pulse, 13. particle, 14. develop, 15. develop

contributes to the shaping, influencing,

or determining of a particular outcome or result

adj. of or relating to atom (= the smallest 23. at___c nucleus component of an element)

ANSWERS: 16. notch, 17. movement, 18. explorer, 19. beam, 20. discovery, 21. stick, 22. determinant, 23. atomic

n.	a scientist who specializes in the field of physics
v.	to think or accept something to be true without having proof of it; to take or begin to have power; to begin to exhibit a specific quality or appearance
adj.	able to be perceived or recognized; clear or distinguishable
n.	a four-wheeled vehicle used for transporting goods or people, often pulled by horses, oxen, or other animals; a compartment or container used for storage or transportation, such as a shopping cart or trolley
n.	the length of a straight line passing through the center of a circle and connecting two points on the circumference
adj.	making you feel that someone has done something wrong, illegal, or dishonest without any evidence
n.	a long or challenging search for something
n.	a strong desire to know or learn about something
adj.	shaped like a circle; having a round form
adj.	having received a high standard of education
	adj. n. adj. n. adj.

ANSWERS: 24. physicist, 25. assume, 26. discernible, 27. wagon, 28. diameter, 29. suspicious, 30. quest, 31. curiosity, 32. circular, 33. educated

34.	a particle dier	n.	the length of a straight line passing through the center of a circle and connecting two points on the circumference
35.	s_n thread out of cotton	v.	to cause something to rotate rapidly; to cause someone to feel dizzy or disoriented
36.	atc bomb	adj.	of or relating to atom (= the smallest component of an element)
37.	spe of influence	n.	a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity
38.	ct a charming eye	v.	to cause light or shadow to appear on a surface; to assing or choose someone such as an actor or representative, especially by selection process
39.	series of expnts	n.	the scientific test conducted to observe what happens and gain new knowledge
40.	celebrate soce	n.	either of the two moments in a year when the sun is at its greatest distance from the celestial equator, resulting in the shortest or longest day of the year; the time of year associated with these events
41.	coffee spty	n.	an area or field in which a person or thing excels or specializes; a particular branch of study, occupation, or expertise; a special or unique skill or talent

ANSWERS: 34. diameter, 35. spin, 36. atomic, 37. sphere, 38. cast, 39. experiment, 40. solstice, 41. specialty

42.	dier recovery	n.	an unexpected event or series of events that cause widespread damage, destruction, or loss of life
43.	exptal data	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
44.	a weak pue	n.	the regular heartbeat as it sends blood around the body, especially when it is felt at the wrist or side of the neck; a solid regular vibration of sound, electric current, light, or other waves
45.	dite variable	adj.	separate and distinct; not continuous; individually distinguishable
46.	permanent brn damage	n.	the organ inside the head that is responsible for one's movement, thought, memory, and feeling
47.	eqp an army	<i>v</i> .	to provide a person or a place with the things that are needed for a particular purpose or activity
48.	economic gehy	n.	a field of science devoted to the study of the lands, features, inhabitants, and phenomena of the Earth
49.	spal shape	adj.	having the shape of a sphere; round, spherical, or ball-shaped in appearance
50.	ina resistance	n.	the quality or state of being inactive, sluggish, or slow to move or act
51.	zeh of success	n.	the highest point or peak; the point in the sky directly above the observer; the culmination or apex of something

ANSWERS: 42. disaster, 43. experimental, 44. pulse, 45. discrete, 46. brain, 47. equip, 48. geography, 49. spherical, 50. inertia, 51. zenith

52.	vertical as	n.	a real or imaginary straight line through a body or figure around which the object turns; a group of countries in special alliance
53.	historical pheon	n.	something that exists and can be perceptible, especially one that is not fully understood
54.	ene a new employee	v.	to attract and keep someone's attention and interest; to participate in or obtain services of something
55.	muly 5 and 6	<i>v</i> .	to add a number to itself a specified number of times; to increase or cause to increase very much in number or quantity
56.	academic lian	n.	a person who works in a library and is responsible for organizing and managing the collection of books and other materials
57.	estimate pre costs	adj.	sharply exact or accurate or delimited
58.	laws of phs	n.	the science of matter and energy and their interactions
59.	interstate coce	n.	the activity of buying and selling things, especially on a large scale
60.	dey a flight three hours	ν.	to cause something to happen at a later time than originally intended or expected
61.	indnce ceremony	n.	freedom from another's or others' control or influence
62.	cate his credit score	<i>v</i> .	to judge or find out the amount or number of something by using mathematics

ANSWERS: 52. axis, 53. phenomenon, 54. engage, 55. multiply, 56. librarian, 57. precise, 58. physics, 59. commerce, 60. delay, 61. independence, 62. calculate

63. di e the cake into two pieces to separate or cause to separate into ν. parts or groups 64. the chief li an a person who works in a library and is n. responsible for organizing and managing the collection of books and other materials a male bovine animal; an investor who 65. b I market n. has a positive outlook on the market or a particular investment and buys with the expectation of prices increasing the act of giving something, especially 66. make a positive con ion n. money, to a particular cause or organization; a voluntary gift as of money or service or ideas made to some worthwhile cause to judge or find out the amount or 67. ca te the distance ν. number of something by using mathematics 68. oc e the ureteral orifice to obstruct or block something, usually ν. a passage or opening, in a way that prevents normal flow or access adv. approximately but not precisely; with a 69. ro____y explain my idea violent manner the quality or state of being inactive, 70. Newton's law of in___a n. sluggish, or slow to move or act 71. en e in environmental protection to attract and keep someone's attention ν. activities and interest; to participate in or obtain services of something to put something, usually a sharp 72. st kakey in a lock object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material

ANSWERS: 63. divide, 64. librarian, 65. bull, 66. contribution, 67. calculate, 68. occlude, 69. roughly, 70. inertia, 71. engage, 72. stick

73. dey the new project	ν.	to cause something to happen at a later time than originally intended or expected
74. zeh of popularity	n.	the highest point or peak; the point in the sky directly above the observer; the culmination or apex of something
75. 3D dim	n.	a simplified illustration of the appearance, structure, or workings of something
76. a circular mont	n.	a group of people working together to achieve a shared goal, especially a political, social, or artistic one; the process of moving or being moved, physically or figuratively
77. ciar economy	adj.	shaped like a circle; having a round form
78. corte evidence	<i>v</i> .	to confirm or support something that has already been suggested, particularly by providing evidence or witness testimony
79. oce a blood vessel	v.	to obstruct or block something, usually a passage or opening, in a way that prevents normal flow or access
80. a dit memory	adj.	far away in space, time, or where you are; far apart in relevance, relationship, or kinship
81. a stht line	adj.	extending or moving in one direction without bending or curving; having no deviations

ANSWERS: 73. delay, 74. zenith, 75. diagram, 76. movement, 77. circular, 78. corroborate, 79. occlude, 80. distant, 81. straight

deviations adj. of little value or importance adj. of little value or importance a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment a strong desire to know or learn about something a factor, circumstance, or condition the contributes to the shaping, influencing or determining of a particular outcome or result a person or thing that challenges or competes with someone or something else; a contestant in a competition or challenge an idea or principle associated with something abstract adj. sharply exact or accurate or delimited of the cause to move up or away after hitting a surface; to spring back adv. all the time	82.	sn a top	ν.	to cause something to rotate rapidly; to cause someone to feel dizzy or disoriented
85. bachelor's dee n. a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment 86. boundless cuty n. a strong desire to know or learn abour something 87. a detnt of crop yields n. a factor, circumstance, or condition the contributes to the shaping, influencing or determining of a particular outcome or result 88. chaer brand n. a person or thing that challenges or competes with someone or something else; a contestant in a competition or challenge 89. learn new cots n. an idea or principle associated with something abstract 90. pre analyses adj. sharply exact or accurate or delimited something a surface; to spring back 91. boe across the floor v. to cause to move up or away after hitting a surface; to spring back 92. a conly varying mind adv. all the time 93. global dier n. an unexpected event or series of event that cause widespread damage,	83.	stht for two months	adj.	without bending or curving; having no
temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment 86. boundless cuty n. a strong desire to know or learn abour something 87. a detnt of crop yields n. a factor, circumstance, or condition the contributes to the shaping, influencing or determining of a particular outcome or result 88. chaer brand n. a person or thing that challenges or competes with someone or something else; a contestant in a competition or challenge 89. learn new cots n. an idea or principle associated with something abstract 90. pre analyses adj. sharply exact or accurate or delimited sharply exact or accurate or delimited hitting a surface; to spring back 92. a conly varying mind adv. all the time 93. global dier n. an unexpected event or series of even that cause widespread damage,	84.	for trI reasons	adj.	of little value or importance
something 87. a detnt of crop yields n. a factor, circumstance, or condition the contributes to the shaping, influencing or determining of a particular outcome or result 88. chaer brand n. a person or thing that challenges or competes with someone or something else; a contestant in a competition or challenge 89. learn new cots n. an idea or principle associated with something abstract 90. pre analyses adj. sharply exact or accurate or delimited 91. boe across the floor v. to cause to move up or away after hitting a surface; to spring back 92. a conly varying mind adv. all the time 93. global dier n. an unexpected event or series of ever that cause widespread damage,	85.	bachelor's dee	n.	temperature, or level of proficiency or achievement; a rank or level of
contributes to the shaping, influencing or determining of a particular outcome or result 88. chaer brand n. a person or thing that challenges or competes with someone or something else; a contestant in a competition or challenge 89. learn new cots n. an idea or principle associated with something abstract 90. pre analyses adj. sharply exact or accurate or delimited 91. boe across the floor v. to cause to move up or away after hitting a surface; to spring back 92. a conly varying mind adv. all the time n. an unexpected event or series of even that cause widespread damage,	86.	boundless cuty	n.	a strong desire to know or learn about something
competes with someone or something else; a contestant in a competition or challenge 89. learn new cots n. an idea or principle associated with something abstract 90. pre analyses 91. boe across the floor v. to cause to move up or away after hitting a surface; to spring back 92. a conly varying mind adv. all the time 93. global dier n. an unexpected event or series of ever that cause widespread damage,	87.	a detnt of crop yields	n.	a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result
something abstract 90. pre analyses 91. boe across the floor 92. a conly varying mind 93. global dier 94. sharply exact or accurate or delimited to cause to move up or away after hitting a surface; to spring back 94. all the time 95. n. an unexpected event or series of even that cause widespread damage,	88.	chaer brand	n.	competes with someone or something else; a contestant in a competition or
91. boe across the floor v. to cause to move up or away after hitting a surface; to spring back 92. a conly varying mind adv. all the time 93. global dier n. an unexpected event or series of even that cause widespread damage,	89.	learn new cots	n.	
hitting a surface; to spring back 92. a conly varying mind adv. all the time 93. global dier n. an unexpected event or series of even that cause widespread damage,	90.	pre analyses	adj.	sharply exact or accurate or delimited
93. global dier n. an unexpected event or series of even that cause widespread damage,	91.	boe across the floor	ν.	· · · · · · · · · · · · · · · · · · ·
that cause widespread damage,	92.	a conly varying mind	adv.	all the time
	93.	global dier	n.	

ANSWERS: 82. spin, 83. straight, 84. trivial, 85. degree, 86. curiosity, 87. determinant, 88. challenger, 89. concept, 90. precise, 91. bounce, 92. constantly, 93. disaster

94. extte animal dose	ν.	to guess or think about what might happen or estimate something using the facts that you have now
95. a trI man	adj.	of little value or importance
96. a brh pipe	n.	a division of a tree or woody shrub that grows out from the trunk or a main stem; a division of some larger or more complex organization
97. an unwilling asnt	n.	someone who helps or supports someone else to do a job
98. a windy hip	n.	the top of a hill, rather than its sloping sides
99. imt goods	ν.	to bring goods or services into a country from another country; to transfer electronic data into a database or document;
100. the made of the disaster	n.	the extent, level, importance, or amount of something
101. a friendly conion	n.	an informal talk between two or more people to exchange their views, ideas, information, etc.
102. com a transaction	v.	to support or establish the truth or certainty of something previously believed or suspected to be the case
103. shw cast	n.	a dark area or shape cast by an object blocking the passage of light; an area in darkness or shade; a reflected image or copy of something; a person, activity, or influence that follows or accompanies someone or something closely and persistently, often in a secretive or ominous manner

ANSWERS: 94. extrapolate, 95. trivial, 96. branch, 97. assistant, 98. hilltop, 99. import, 100. magnitude, 101. conversation, 102. confirm, 103. shadow

104. natural pheon	n.	something that exists and can be perceptible, especially one that is not fully understood
105. financial indnce	n.	freedom from another's or others' control or influence
106. reve factors	adj.	considered and evaluated through comparison with something else
107. driving dice	n.	the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance
108. chest cirnce	n.	the distance around the outside of a circular or curved object or area
109. a coordinate as	n.	a real or imaginary straight line through a body or figure around which the object turns; a group of countries in special alliance
110. official stacs	n.	the discipline that concerns the collection, organization, analysis, interpretation, and presentation of data
111. the local chamber of coce	n.	the activity of buying and selling things, especially on a large scale
112. a buh of schoolgirls	<i>n</i> .	a grouping of several similar things which are growing or fastened together
113. a star of the first made	n.	the extent, level, importance, or amount of something
114. in a dim	n.	a simplified illustration of the appearance, structure, or workings of something

ANSWERS: 104. phenomenon, 105. independence, 106. relative, 107. distance, 108. circumference, 109. axis, 110. statistics, 111. commerce, 112. bunch, 113. magnitude, 114. diagram

- 115. bo___e back from failure
- 116. a polar ex____er
- 117. di____te metric space
- 118. ed____ed speech
- 119. station wa__n

- 120. c__t a ballot
- 121. co____t car
- 122. b m of light
- 123. ref____on question

- v. to cause to move up or away after hitting a surface; to spring back
- a person who travels to places where no one or few people have been before to find out what is there
- *adj.* separate and distinct; not continuous; individually distinguishable
- adj. having received a high standard of education
- n. a four-wheeled vehicle used for transporting goods or people, often pulled by horses, oxen, or other animals; a compartment or container used for storage or transportation, such as a shopping cart or trolley
- to cause light or shadow to appear on a surface; to assing or choose someone such as an actor or representative, especially by selection process
- n. an idea or principle associated with something abstract
- a long, sturdy piece of timber, metal, or other material used to support a structure or span a distance; a ray or stream of light emitted by a source
- the act of thinking deeply about something, or the ability to think deeply; the image of something that is seen in a mirror or other reflective surface

ANSWERS: 115. bounce, 116. explorer, 117. discrete, 118. educated, 119. wagon, 120. cast, 121. concept, 122. beam, 123. reflection

124. class obson day	n.	the act or activity of carefully examining or monitoring something or someone
125. conion to society	n.	the act of giving something, especially money, to a particular cause or organization; a voluntary gift as of money or service or ideas made to some worthwhile cause
126. talented phst	n.	a scientist who specializes in the field o physics
127. the cror's claims	n.	a person, company, etc. to whom a debtor owes money
128. com the diagnosis	ν.	to support or establish the truth or certainty of something previously believed or suspected to be the case
129. ase a lousy attitude to his boss	v.	to think or accept something to be true without having proof of it; to take or begin to have power; to begin to exhibit a specific quality or appearance
130. a conly innovative enterprise	adv.	all the time
131. lack of disle progress	adj.	able to be perceived or recognized; clear or distinguishable
132. sports alan	n.	a candidate, competitor, or participant in a race, competition, or contest who finishes outside of the top positions and is not significantly successful or recognized
133. a buh of trees	n.	a grouping of several similar things which are growing or fastened together
134. weak bon	n.	a type of subatomic particle that follows Bose-Einstein statistics, which determine how identical particles with integer spins behave

ANSWERS: 124. observation, 125. contribution, 126. physicist, 127. creditor, 128. confirm, 129. assume, 130. constantly, 131. discernible, 132. also-ran, 133. bunch, 134. boson

135. imt a style sheet	v.	to bring goods or services into a country from another country; to transfer electronic data into a database or document;
136. Higgs bon	n.	a type of subatomic particle that follows Bose-Einstein statistics, which determine how identical particles with integer spins behave
137. inactive mary	n.	a group of large machines or the components of a machine that make it work; social institution functions or structure for doing something
138. regional spty	n.	an area or field in which a person or thing excels or specializes; a particular branch of study, occupation, or expertise; a special or unique skill or talent
139. dit ancestors	adj.	far away in space, time, or where you are; far apart in relevance, relationship, or kinship
140. heavy mary	n.	a group of large machines or the components of a machine that make it work; social institution functions or structure for doing something
141. a remote reve	adj.	considered and evaluated through comparison with something else
142. score a noh	n.	a V-shaped cut or indentation made in a surface or edge; a level of achievement or success; a point or degree of measurement or comparison

ANSWERS: 135. import, 136. boson, 137. machinery, 138. specialty, 139. distant, 140. machinery, 141. relative, 142. notch

143. obson instrument	n.	the act or activity of carefully examining or monitoring something or someone
144. bl fighter	n.	a male bovine animal; an investor who has a positive outlook on the market or a particular investment and buys with the expectation of prices increasing
145. spal object	adj.	having the shape of a sphere; round, spherical, or ball-shaped in appearance
146. muly about hundredfold	v.	to add a number to itself a specified number of times; to increase or cause to increase very much in number or quantity
147. gehy class	n.	a field of science devoted to the study of the lands, features, inhabitants, and phenomena of the Earth
148. expnt design	n.	the scientific test conducted to observe what happens and gain new knowledge
149. hip residence	n.	the top of a hill, rather than its sloping sides
150. roy speaking	adv.	approximately but not precisely; with a violent manner
151. common inon	n.	the creation of a new device or process resulting from study and experimentation; the act of inventing
152. bankrupt cror	n.	a person, company, etc. to whom a debtor owes money
153. angle of cirnce	n.	the distance around the outside of a circular or curved object or area
154. conion in English	n.	an informal talk between two or more people to exchange their views, ideas, information, etc.

ANSWERS: 143. observation, 144. bull, 145. spherical, 146. multiply, 147. geography, 148. experiment, 149. hilltop, 150. roughly, 151. invention, 152. creditor, 153. circumference, 154. conversation

155. asnt professor	n.	someone who helps or supports someone else to do a job
156. photon refon	n.	the act of thinking deeply about something, or the ability to think deeply the image of something that is seen in a mirror or other reflective surface
157. business spe	n.	a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity
158. ree oil	v.	to make something more pure, polished, cultured, or effective; to improve, perfect, or enhance through a process of purification or development
159. on a qut for happiness	n.	a long or challenging search for something
160. a scientific diry	n.	the act or process of finding information a place, or an object, or learning about something that was previously not known
161. basic brn function	n.	the organ inside the head that is responsible for one's movement, thought, memory, and feeling
162. the inon of new techniques	n.	the creation of a new device or process resulting from study and experimentation; the act of inventing
163. exptal design	adj.	relating to or based on new ideas, forms, methods, etc. that have not beer tried before, usually to find out what effect they have

ANSWERS: 155. assistant, 156. reflection, 157. sphere, 158. refine, 159. quest, 160. discovery, 161. brain, 162. invention, 163. experimental

164. sta____cs for cancer the discipline that concerns the n. collection, organization, analysis, interpretation, and presentation of data 165. report sus____us activity adj. making you feel that someone has done something wrong, illegal, or dishonest without any evidence 166. eq__p our children with some to provide a person or a place with the ν. things that are needed for a particular special skills purpose or activity 167. sh___w puppetry a dark area or shape cast by an object blocking the passage of light; an area in darkness or shade; a reflected image or copy of something; a person, activity, or influence that follows or accompanies someone or something closely and persistently, often in a secretive or ominous manner 168. di___e money equally to separate or cause to separate into ν. parts or groups

ANSWERS: 164. statistics, 165. suspicious, 166. equip, 167. shadow, 168. divide

Session 3: Fill in the Blanks

1. The earth's of rotation is tilted 66.5 degrees to the ecliptic plane.
 a real or imaginary straight line through a body or figure around which the object turns; a group of countries in special alliance
2. The cake was decorated with a to represent the birthday boy's age.
 a V-shaped cut or indentation made in a surface or edge; a level of achievement or success; a point or degree of measurement or comparison
3. The of the earthquake was measured at 7.8 on the Richter scale.
n. the extent, level, importance, or amount of something
4. He was sick for five days.
adj. extending or moving in one direction without bending or curving; having no deviations
5. He is drawing a illustrating how the equipment operates.
n. a simplified illustration of the appearance, structure, or workings of something
6. The of audit formally issued a business improvement order.
n. a group of large machines or the components of a machine that make it work; social institution functions or structure for doing something
7. There is nothing more valuable than and freedom.
n. freedom from another's or others' control or influence
3. The Earth is a nearly planet.
adj. having the shape of a sphere; round, spherical, or ball-shaped in appearance
ANSWERS: 1. axis, 2. notch, 3. magnitude, 4. straight, 5. diagram, 6. machinery, 7 independence, 8. spherical

ANSWERS: 9. spinning, 10. delayed, 11. wagon, 12. roughly, 13. experimental, 14. calculate, 15. atomic, 16. assumes

32.	The company was once a frontrunner but is now considered an in the industry.
n.	a candidate, competitor, or participant in a race, competition, or contest who finishes outside of the top positions and is not significantly successful or recognized
33.	Necessity is the mother of
n.	the creation of a new device or process resulting from study and experimentation; the act of inventing
34.	We can calculate the position of the statistically.
n.	a small piece of something; a word or piece of a term with grammatical function but little or no significance
35.	An executive director administers each branch.
n.	someone who helps or supports someone else to do a job
36.	Aboriginal people killed the who entered the sacred land for them.
n.	a person who travels to places where no one or few people have been before to find out what is there
37.	A rainbow is a natural
n.	something that exists and can be perceptible, especially one that is not fully understood
38.	The shape of the planet makes it difficult to determine which direction is north.
adj	shaped like a circle; having a round form
39.	The tree cast a over the picnic area, providing relief from the sun.
n.	a dark area or shape cast by an object blocking the passage of light; an area in darkness or shade; a reflected image or copy of something; a person, activity, or influence that follows or accompanies someone or something closely and persistently, often in a secretive or ominous manner
AN	SWERS: 32. also-ran, 33. invention, 34. particles, 35. assistant, 36. explorer, 37.

40. Most countries prohibit sexual activity between certain close adj. considered and evaluated through comparison with something else
41. This predictive model mechanically past trends into the future. v. to guess or think about what might happen or estimate something using the facts that you have now
42. Einstein was an outstanding and famous of the 20th century. n. a scientist who specializes in the field of physics
43. The problem seemed initially, but it became a significant issue. adj. of little value or importance
 44. Reaching the of his career was a long and difficult climb, but it was worth it. n. the highest point or peak; the point in the sky directly above the observer; the culmination or apex of something
45. The sun set over the crest of hills. adj. far away in space, time, or where you are; far apart in relevance, relationship, or kinship
46. There was a change in the atmosphere when the boss walked into the room.
adj. able to be perceived or recognized; clear or distinguishable
47. We are motivated by rather than necessity. n. a strong desire to know or learn about something
ANSWERS: 40. relatives, 41. extrapolates, 42. physicist, 43. trivial, 44. zenith, 45. distant, 46. discernible, 47. curiosity

<i>v</i> .	to support or establish the truth or certainty of something previously believed or suspected to be the case
	WERS: 71. bunch, 72. beam, 73. discrete, 74. experiments, 75. movement, 76. ce, 77. observation, 78. hilltop, 79. confirm

78. We looked down on the large wetland from the _____.

the top of a hill, rather than its sloping sides

79. Please write to _____ your reservation.

n.

ANSWERS: 80. quest, 81. diameter, 82. divide, 83. commerce, 84. librarian's