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Vocabulary Builder Reference from...

Greg Gage: *Electrical experiments with plants that count and communicate* | TED Talk

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

All Words

IMPORTANT

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Session 1: Word List

neuroscience

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

(1) the branch of **neuroscience**, (2) a theoretical concept in **neuroscience**

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

cofounder

n. one of several people who establishes an organization or starts a business

(1) **cofounder** of the university, (2) late **cofounder**

He is the **cofounder** and chairman of this tech company.

backyard

n. a whole space behind and belonging to a house
synonym: courtyard, garden

(1) play in the **backyard**, (2) **backyard** barbecue

He grows vegetables in his **backyard**.

graduate

n. a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree

synonym: alumna, alum, grad

(1) **graduate** degree program, (2) honor **graduate**

Many employers hire **graduate** trainees to train as managers.

equip

v. 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.

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**.

complexity

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

synonym: intricacy, sophistication, elaboration

(1) cognitive **complexity**, (2) **complexity** theory

The project's **complexity** made it difficult for the team to complete it on time.

instantly

adv. immediately

synonym: immediately, right away, directly

(1) **instantly** cope with, (2) be killed **instantly**

I remembered that person **instantly** and never forgot.

insect

n. any small creature that has six legs and a body divided into three sections

(1) **insect** antenna, (2) **insect** biology

These **insects** are more prevalent above a certain latitude.

shrub

n. a woody plant that is smaller than a tree and has several main stems emerging from the soil

synonym: bush, hedge, fern

(1) tree and **shrubs**, (2) small **shrub**

These are **shrubs** with no trunks that rarely grow taller than 3

meters.

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**.

absolutely

adv. without restriction or limitation; completely or utterly

synonym: completely, utterly, definitely

(1) **absolutely** against, (2) **absolutely** obsessed with the girl

I am **absolutely** opposed to his idea because of morality.

nervous

adj. worried and anxious about something; relating to the nerves

synonym: neural, anxious, uneasy

(1) development of the **nervous** system, (2) get **nervous**

He suffers from **nervous** breakdowns.

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.

electrical

adj. relating to electricity

(1) an **electrical** storm, (2) degree in **electrical** engineering

Actuators convert **electrical** pulses into motion.

stimulus

n. something that causes growth or arouses action

synonym: incitement, inspiration, motivation

(1) a response to a **stimulus**, (2) economic **stimulus**

This book provides children with ideas and a **stimulus** for outside recreation.

movement

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

synonym : motion, progression, action

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

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

chemical

adj. relating to or connected with chemistry;

synonym : chemic, synthetic

(1) toxic **chemicals**, (2) a **chemical** compound

The firm has grown into a large **chemical** manufacturing.

process

n. a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products

synonym : procedure, method, system

(1) **process** improvement, (2) decision-making **process**

The **process** for applying for a visa can be lengthy and complicated.

moving

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

synonym : emotional, poignant, touching

(1) **moving** experience, (2) **moving** ceremony

His **moving** speech about his struggles with addiction brought tears to the audience's eyes.

Arthurian

adj. relating to king Arthur and the tales and legends associated with him

(1) the **Arthurian** cycle, (2) **Arthurian** romances

The **Arthurian** legends of King Arthur and the knights of the Round Table are popular literary motifs.

royal

adj. relating to or belonging to the king or queen or a member of their family

synonym: imperial, noble, aristocratic

(1) a **royal** palace, (2) prince **royal**

She is willing to give up her position in the **royal** family to marry him.

governor

n. the person who holds the highest executive office in a state or province

synonym: administrator, executive, leader

(1) **governor** general, (2) a prefectural **governor**

The state **governor** visited the affected areas and promised to aid the victims.

fascinating

adj. extremely interesting

synonym: alluring, intriguing, captivating

(1) **fascinating** story, (2) completely **fascinating** to me

The museum houses a **fascinating** collection of Celtic artifacts.

discovery

n. 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**.

swamp

n. an area of low-lying land that is flooded or saturated with water, often having a growth of natural vegetation

synonym: marsh, mire, bog

(1) muddy **swamp**, (2) **swamp** tour

The lowland **swamp** was full of dangerous animals and poisonous plants.

bug *n.* any tiny insect; a fault or defect in a computer program, system, or machine
synonym: insect, bacterium, microbe
(1) **bug** bites, (2) number of **bug** fixes
I found a stink **bug** crawling across the ceiling.

trap *n.* a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping
synonym: catch, snare, pinfall
(1) set a **trap**, (2) **trap** an animal
The enemy fell right into the **trap**.

eventually *adv.* finally, particularly after a long time or a lot of struggle, complications, and so on
synonym: finally, someday, ultimately
(1) **eventually** become obsolete, (2) **eventually** succeed
The corporation **eventually** dominated the entire tobacco business.

evolutionary *adj.* relating to or denoting how living things develop or change from earlier forms
synonym: developmental, mutative, transformative
(1) ecology and **evolutionary** biology, (2) the **evolutionary** process
Evolutionary algorithms can find ways to optimize that humans do not anticipate.

carnivorous *adj.* feeding on the flesh of other animals
synonym: meat-eating, predatory, flesh-eating
(1) **carnivorous** cell, (2) aquatic **carnivorous** mammal
The **carnivorous** dinosaur preyed on other animals.

vocabulary

n. the words used by a language, group, or individual; the knowledge and understanding of words and their meanings that a person possesses

synonym : lexicon, glossary, dictionary

(1) **vocabulary** list, (2) academic **vocabulary**

Using proper **vocabulary** is essential for writing a good essay.

experiment

n. 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.

physiology

n. the branch of the biological sciences dealing with the functioning of organisms

(1) human **physiology**, (2) **physiology** research

Physiology is the science of how living things work.

neuron

n. a cell that is specialized to carry information within the brain and between the brain and other parts of the body

synonym : nerve cell

(1) excite the **neurons**, (2) **neuron** cell body

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

electrode

n. either of two points or ends of a conductor at which electricity enters or leaves an object, substance, or region

(1) platinum **electrodes**, (2) **electrode** corrosion

It is important to place the **electrodes** in the correct position for accurate electro-cardiogram recording.

wrist

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

synonym : carpus

(1) **wrist** bones, (2) glance at my **wrist** watch

He sprained his **wrist** while playing basketball.

hook

n. a curved device used for suspending, holding, or pulling something, especially one attached to a surface for hanging things on; a sharp curve or crook

synonym: buckle, pin, curve

(1) a hat **hook**, (2) the curved shape of a **hook**

Please hang your towel on a **hook**.

electrocardiogram

n. a test that uses electrodes placed on the chest, arms, and legs to record the electrical signals of the heart and create a graph that shows the heart's rhythm and activity

synonym: ECG, heart monitor, cardiac monitor

(1) **electrocardiogram** technician, (2) abnormal **electrocardiogram**

The hospital invested in state-of-the-art **electrocardiogram** machines to improve patient care.

voltage

n. the difference in the force of an electric current between two points

(1) the **voltage** spiked, (2) low **voltage**

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

encode

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

synonym: transcribe, convert

(1) **encode** data, (2) **encode** information

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

introductory

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

synonym: beginning, preliminary, initial

(1) **introductory** biology text, (2) product **introductory** sale

The **introductory** class was designed to give students a basic understanding of the subject.

mimosa

n. a cocktail typically made with champagne and orange juice; a plant with delicate, fern-like leaves and fluffy pink or yellow flowers

synonym : cocktail, drink

(1) **mimosa** tree, (2) **mimosa** cocktail

The wedding reception was decorated with delicate white roses and yellow **mimosa** arrangements.

curl

v. to form or make something form into a curved or spiral shape; (noun) a round shape formed by a series of concentric circles

synonym : coil, curve, spiral

(1) **curl** around street corners, (2) a **curl** of smoke

The cat **curled** into a ball and went to sleep.

tap

v. to hit someone or something quickly, gently, and often repeatedly; to use existing resources, such as energy, knowledge, etc.

synonym : knock, exploit, use

(1) **tap** a new market, (2) **tap** keyboard with an index finger

To expand the company, we must **tap** new human resources.

branch

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

synonym : limb, twig, bough

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

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

scare

v. to frighten a person or animal, or to become frightened

synonym : frighten, spook, intimidate

(1) **scare** off her attacker by screaming, (2) **scare** the birds away

We hit the ground to **scare** out the rabbits.

appealing

adj. attractive or exciting; evoking a positive response or desire; having qualities that are likely to encourage

someone to like or enjoy something

synonym: attractive, alluring, captivating

(1) **appealing** design, (2) an **appealing** offer

The well-crafted plot and interesting characters made the book very **appealing** to readers

herbivore

n. an animal that eats only plants, such as a cow or a deer

synonym: plant-eater, browser, graminivore

(1) **herbivore** diet, (2) **herbivore** animals

A giraffe is an **herbivore** that primarily eats leaves and twigs.

wrap

v. to cover or enclose something entirely with paper, cloth, or other material

synonym: surround, cover, bandage

(1) **wrap** a fish in foil, (2) **wrap** up a meeting

Wrap the bandage tightly around the injured arm.

stem

n. the central part of something from which other parts can develop or grow; the part of a word common to all its inflected variants; (verb) to grow out of, have roots in, or originate in

synonym: branch, limb, (verb) come from

(1) **stem** from a belief, (2) the **stem** of a matchstick

A rose has thorns on its **stem**.

engineer

n. a person whose job is designing, building, or maintaining something such as machines, structures, or software

synonym: architect, creator, builder

(1) a civil **engineer**, (2) **engineer** shortage

The **engineer** will repair my telephone tomorrow morning.

receptor

n. an organ having nerve endings that respond to stimulation such as heat or cold and makes the body react in a particular way

(1) cellular **receptor**, (2) **receptor** for HIV in humans

Hay fever occurs when a substance called histamine binds to

receptors in the nose and eyes.

release

v. to set free or allow to escape from confinement

synonym: free, let go, discharge

(1) **release** a prisoner, (2) **release** CO2 into the air

The animal rights group worked to **release** the dolphins back into the wild.

Venus

n. the planet second in order from the sun

(1) **Venus** orbiter, (2) surface of **Venus**

They launched a rocket toward **Venus**.

pretension

n. the act of claiming or asserting something, especially without good reason or without evidence; an unfounded or excessive claim or ambition

synonym: presumption, pretense, affectation

(1) **pretension** to authority, (2) baseless **pretension**

His **pretensions** of being a gourmet were quickly exposed when he could not identify basic herbs and spices.

trigger

v. to make something happen suddenly; to cause something such as a device, machine, etc. to function

synonym: activate, spark, drive

(1) **trigger** a biochemical response, (2) **trigger** inflation

The incident **triggered** a political controversy.

replace

v. to take the place of something

synonym: substitute, supersede, displace

(1) **replace** one word with another, (2) **replace** a phone

Eventually, the new design will **replace** all older models.

nutrient

n. any substance that is essential for the maintenance and growth of living things

synonym: food, vitamin

(1) **nutrient** medicine, (2) a **nutrient** for hair

They used fast-acting **nutrients** on the flowers in the flower

beds.

darn

v. to mend a piece of clothing by sewing over a hole or tear with small, tight stitches

synonym: mend, repair, patch

(1) **darn** stockings, (2) **darn** hole

I have to **darn** these socks before they become unwearable.

snap

v. to record on photographic film; to make a sudden, sharp sound; (noun) the act of catching an object with the hands

synonym: break, crack, fracture

(1) **snap** a whip, (2) **snap** judgment

She **snapped** a quick picture of the beautiful sunset before it disappeared.

probabilistic

adj. characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks

synonym: probable, statistical, likely

(1) **probabilistic** model, (2) **probabilistic** approach

In a **probabilistic** system, the outcome is uncertain and can vary based on chance.

immediately

adv. now or without delay

synonym: directly, instantly, promptly

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

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

computation

n. the act or process of calculating something, especially an answer or amount, by using a machine or calculator

synonym: calculation, estimation, arithmetic

(1) parallel **computation**, (2) theory of **computation**

The researcher demonstrated the superiority of quantum **computation** in several mathematical tasks.

determinant

n. 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.

axon

n. a long and slender projection of a nerve cell, or neuron, that sends out signals away from the nerve cell

(1) an **axon** of a nerve cell, (2) the **axon** terminals

We are developing a technology to promote the elongation and regeneration of sensory nerve **axons**.

depressed

adj. sad and without any hope

synonym: despondent, despairing, sad

(1) **depressed** feeling, (2) the market is **depressed**

After his mother died, he got **depressed**.

actualize

v. to make real or concrete; to bring into existence or implementation; to fulfill or realize a potential or intention

synonym: realize, accomplish, effectuate

(1) **actualize** your ideas, (2) **actualize** the company's vision

I need to **actualize** my plan to make it a reality.

communicate

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

synonym: convey, share, transmit

(1) **communicate** his anxieties to the psychiatrist,

(2) **communicate** well with my advisor

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

electrify

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

synonym : wire, amaze, astonish

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

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

slightly

adv. in a small degree or extent; a little

synonym : barely, narrowly, scarcely

(1) increase **slightly**, (2) **slightly** alkaline soils

He moved his body **slightly** to the left.

ion

n. an atom or molecule that has a positive or negative electrical charge caused by its losing or gained one or more electrons

(1) **ion** channel, (2) rechargeable lithium- **ion** battery

The increased concentration of **ion** of hydrogen ions in an aqueous solution makes it more acidic.

ubiquitous

adj. being or existing everywhere at once

synonym : universal, omnipresent, everywhere

(1) **ubiquitous** computing, (2) **ubiquitous** across ecosystems

Sugar is **ubiquitous** in food.

euro

n. the official currency of most European Union countries

(1) the value of the **Euro**, (2) **Euro** crises

Some countries may leave the **Euro**.

interspecies

adj. occurring between or involving different species; pertaining to interactions between different species

synonym : interbreeding, crossbreeding, mixed

(1) **interspecies** interaction, (2) **interspecies** communication

There are many cases of **interspecies** cooperation in the animal kingdom.

brand

n. a type of product, service, etc., made by a particular company and sold under a specific name; identification mark on the skin of livestock, criminals, etc., made by burning

synonym: trademark, label, symbol

(1) create a **brand** logo, (2) the **brand** of the new car

There's a new **brand** of hero in the movies now.

sensitive

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

synonym: exposed, susceptible, keen

(1) **sensitive** documents, (2) baby with **sensitive** skin

The teacher is very **sensitive** to children's feelings.

recall

v. to remember something

synonym: remember, retrieve, recollect

(1) **recall** the incident, (2) **recall** his name

She vividly **recalls** getting laid off several years ago.

revolution

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

synonym: coup, innovation, rebellion

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

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

Session 2: Spelling

1. development of the ne_____s system *adj.* worried and anxious about something; relating to the nerves
2. ac_____ze the company's vision *v.* to make real or concrete; to bring into existence or implementation; to fulfill or realize a potential or intention
3. glance at my wr__t watch *n.* the joint between the hand and the forearm; the narrow part of the hand near this joint
4. the great di_____ry of the century *n.* the act or process of finding information, a place, or an object, or learning about something that was previously not known
5. br___h 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
6. honor gr_____te *n.* a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree
7. pro_____tic model *adj.* characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks
8. el_____de corrosion *n.* either of two points or ends of a conductor at which electricity enters or leaves an object, substance, or region

ANSWERS: 1. nervous, 2. actualize, 3. wrist, 4. discovery, 5. branch, 6. graduate, 7. probabilistic, 8. electrode

9. a political rev_____on *n.* a large-scale attempt to overthrow the government of a country, often using violence or war;
10. se_____ve documents *adj.* able to notice slight changes, signals, or influences; able to feel or perceive other's feelings; susceptible to the things people say or do
11. be killed in_____ly *adv.* immediately
12. the branch of neu_____nce *n.* the scientific study of the function, structure, and disorder of the brain and the nervous system
13. ev___e over the past decade *v.* to develop gradually, or to cause the development of something or someone gradually
14. wr__t bones *n.* the joint between the hand and the forearm; the narrow part of the hand near this joint
15. el_____fy a manufacturing process *v.* to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something
16. com_____te his anxieties to the psychiatrist *v.* to share or exchange information with others by speaking, writing, moving your body, or using other signals
17. beginning of the industrial rev_____on *n.* a large-scale attempt to overthrow the government of a country, often using violence or war;
18. re_____e CO2 into the air *v.* to set free or allow to escape from confinement

ANSWERS: 9. revolution, 10. sensitive, 11. instantly, 12. neuroscience, 13. evolve, 14. wrist, 15. electrify, 16. communicate, 17. revolution, 18. release

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|---|--|
| 19. eve_____ly become obsolete | <i>adv.</i> finally, particularly after a long time or a lot of struggle, complications, and so on |
| 20. w__p up a meeting | <i>v.</i> to cover or enclose something entirely with paper, cloth, or other material |
| 21. E__o crises | <i>n.</i> the official currency of most European Union countries |
| 22. Ar_____an romances | <i>adj.</i> relating to king Arthur and the tales and legends associated with him |
| 23. sw__p tour | <i>n.</i> an area of low-lying land that is flooded or saturated with water, often having a growth of natural vegetation |
| 24. mo____g experience | <i>adj.</i> causing strong emotions or feelings, especially sadness or sympathy |
| 25. the curved shape of a h__k | <i>n.</i> a curved device used for suspending, holding, or pulling something, especially one attached to a surface for hanging things on; a sharp curve or crook |
| 26. cellular re_____or | <i>n.</i> an organ having nerve endings that respond to stimulation such as heat or cold and makes the body react in a particular way |
| 27. co_____er of the university | <i>n.</i> one of several people who establishes an organization or starts a business |
| 28. mi____a tree | <i>n.</i> a cocktail typically made with champagne and orange juice; a plant with delicate, fern-like leaves and fluffy pink or yellow flowers |
| 29. eq__p our children with some special skills | <i>v.</i> to provide a person or a place with the things that are needed for a particular purpose or activity |

ANSWERS: 19. eventually, 20. wrap, 21. euro, 22. Arthurian, 23. swamp, 24. moving, 25. hook, 26. receptor, 27. cofounder, 28. mimosa, 29. equip

30. w__p a fish in foil *v.* to cover or enclose something entirely with paper, cloth, or other material
31. degree in ele_____al engineering *adj.* relating to electricity
32. abs_____ly obsessed with the girl *adv.* without restriction or limitation; completely or utterly
33. in___t antenna *n.* any small creature that has six legs and a body divided into three sections
34. re_____e a prisoner *v.* to set free or allow to escape from confinement
35. a circular mo_____nt *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
36. in_____ly cope with *adv.* immediately
37. a det_____nt of crop yields *n.* a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result
38. b_g bites *n.* any tiny insect; a fault or defect in a computer program, system, or machine
39. the br__d of the new car *n.* a type of product, service, etc., made by a particular company and sold under a specific name; identification mark on the skin of livestock, criminals, etc., made by burning
40. int_____ies communication *adj.* occurring between or involving different species; pertaining to interactions between different species

ANSWERS: 30. wrap, 31. electrical, 32. absolutely, 33. insect, 34. release, 35. movement, 36. instantly, 37. determinant, 38. bug, 39. brand, 40. interspecies

41. t_p a new market *v.* to hit someone or something quickly, gently, and often repeatedly; to use existing resources, such as energy, knowledge, etc.
42. de_____ed feeling *adj.* sad and without any hope
43. sc__e off her attacker by screaming *v.* to frighten a person or animal, or to become frightened
44. the evo_____ary process *adj.* relating to or denoting how living things develop or change from earlier forms
45. re_____e a phone *v.* to take the place of something
46. a theoretical concept in neu_____nce *n.* the scientific study of the function, structure, and disorder of the brain and the nervous system
47. he_____re animals *n.* an animal that eats only plants, such as a cow or a deer
48. economic st_____us *n.* something that causes growth or arouses action
49. ac_____ze your ideas *v.* to make real or concrete; to bring into existence or implementation; to fulfill or realize a potential or intention
50. increase sl_____ly *adv.* in a small degree or extent; a little
51. re_____e one word with another *v.* to take the place of something
52. re___l his name *v.* to remember something
53. abs_____ly against *adv.* without restriction or limitation; completely or utterly
54. late co_____er *n.* one of several people who establishes an organization or starts a business

ANSWERS: 41. tap, 42. depressed, 43. scare, 44. evolutionary, 45. replace, 46. neuroscience, 47. herbivore, 48. stimulus, 49. actualize, 50. slightly, 51. replace, 52. recall, 53. absolutely, 54. cofounder

55. theory of com_____on *n.* the act or process of calculating something, especially an answer or amount, by using a machine or calculator
56. aquatic car_____us mammal *adj.* feeding on the flesh of other animals
57. d__n hole *v.* to mend a piece of clothing by sewing over a hole or tear with small, tight stitches
58. mo_____nt of troops *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
59. play in the ba_____rd *n.* a whole space behind and belonging to a house
60. en_____e information *v.* to convert information into a code or format suitable for storage or transmission
61. the value of the E__o *n.* the official currency of most European Union countries
62. gr_____te degree program *n.* a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree
63. baseless pre_____on *n.* the act of claiming or asserting something, especially without good reason or without evidence; an unfounded or excessive claim or ambition

ANSWERS: 55. computation, 56. carnivorous, 57. darn, 58. movement, 59. backyard, 60. encode, 61. euro, 62. graduate, 63. pretension

64. toxic ch____als *adj.* relating to or connected with chemistry;
65. an a__n of a nerve cell *n.* a long and slender projection of a nerve cell, or neuron, that sends out signals away from the nerve cell
66. re____or for HIV in humans *n.* an organ having nerve endings that respond to stimulation such as heat or cold and makes the body react in a particular way
67. eve_____ly succeed *adv.* finally, particularly after a long time or a lot of struggle, complications, and so on
68. an ele_____al storm *adj.* relating to electricity
69. ecology and evo_____ary biology *adj.* relating to or denoting how living things develop or change from earlier forms
70. excite the ne____ns *n.* a cell that is specialized to carry information within the brain and between the brain and other parts of the body
71. completely fas_____ng to me *adj.* extremely interesting
72. c__l around street corners *v.* to form or make something form into a curved or spiral shape; (noun) a round shape formed by a series of concentric circles
73. a scientific di_____ry *n.* the act or process of finding information, a place, or an object, or learning about something that was previously not known
74. mo____g ceremony *adj.* causing strong emotions or feelings, especially sadness or sympathy

ANSWERS: 64. chemical, 65. axon, 66. receptor, 67. eventually, 68. electrical, 69. evolutionary, 70. neuron, 71. fascinating, 72. curl, 73. discovery, 74. moving

75. a nu_____nt for hair *n.* any substance that is essential for the maintenance and growth of living things
76. go_____or general *n.* the person who holds the highest executive office in a state or province
77. create a br__d logo *n.* a type of product, service, etc., made by a particular company and sold under a specific name; identification mark on the skin of livestock, criminals, etc., made by burning
78. an ap_____ng offer *adj.* attractive or exciting; evoking a positive response or desire; having qualities that are likely to encourage someone to like or enjoy something
79. com_____ty theory *n.* the state or quality of being complicated or intricate and difficult to understand
80. phy_____gy research *n.* the branch of the biological sciences dealing with the functioning of organisms
81. t__p an animal *n.* a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping
82. low vo_____e *n.* the difference in the force of an electric current between two points
83. voc_____ry list *n.* the words used by a language, group, or individual; the knowledge and understanding of words and their meanings that a person possesses
84. in___t biology *n.* any small creature that has six legs and a body divided into three sections

ANSWERS: 75. nutrient, 76. governor, 77. brand, 78. appealing, 79. complexity, 80. physiology, 81. trap, 82. voltage, 83. vocabulary, 84. insect

85. s__m from a belief *n.* the central part of something from which other parts can develop or grow; the part of a word common to all its inflected variants; (verb) to grow out of, have roots in, or originate in
86. set a t__p *n.* a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping
87. t_p keyboard with an index finger *v.* to hit someone or something quickly, gently, and often repeatedly; to use existing resources, such as energy, knowledge, etc.
88. int_____ory biology text *adj.* intended as an introduction or preliminary; serving as a base or starting point
89. a civil en_____er *n.* a person whose job is designing, building, or maintaining something such as machines, structures, or software
90. the a__n terminals *n.* a long and slender projection of a nerve cell, or neuron, that sends out signals away from the nerve cell
91. a response to a st_____us *n.* something that causes growth or arouses action
92. human phy_____gy *n.* the branch of the biological sciences dealing with the functioning of organisms
93. car_____us cell *adj.* feeding on the flesh of other animals
94. series of exp_____nts *n.* the scientific test conducted to observe what happens and gain new knowledge

ANSWERS: 85. stem, 86. trap, 87. tap, 88. introductory, 89. engineer, 90. axon, 91. stimulus, 92. physiology, 93. carnivorous, 94. experiment

95. the vo_____e spiked *n.* the difference in the force of an electric current between two points
96. environmental det_____nt *n.* a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result
97. rechargeable lithium-i_n battery *n.* an atom or molecule that has a positive or negative electrical charge caused by its losing or gained one or more electrons
98. i_n channel *n.* an atom or molecule that has a positive or negative electrical charge caused by its losing or gained one or more electrons
99. write him an answer imm_____ly *adv.* now or without delay
100. pre_____on to authority *n.* the act of claiming or asserting something, especially without good reason or without evidence; an unfounded or excessive claim or ambition
101. the Ar_____an cycle *adj.* relating to king Arthur and the tales and legends associated with him
102. a br___h 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
103. fu_____on 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: 95. voltage, 96. determinant, 97. ion, 98. ion, 99. immediately, 100. pretension, 101. Arthurian, 102. branch, 103. function

104. re___l the incident *v.* to remember something
105. prince ro__l *adj.* relating to or belonging to the king or queen or a member of their family
106. ubi_____us computing *adj.* being or existing everywhere at once
107. small sh__b *n.* a woody plant that is smaller than a tree and has several main stems emerging from the soil
108. ele_____ram technician *n.* a test that uses electrodes placed on the chest, arms, and legs to record the electrical signals of the heart and create a graph that shows the heart's rhythm and activity
109. product int_____ory sale *adj.* intended as an introduction or preliminary; serving as a base or starting point
110. permanent br__n damage *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
111. pr_____s improvement *n.* a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
112. d__n stockings *v.* to mend a piece of clothing by sewing over a hole or tear with small, tight stitches

ANSWERS: 104. recall, 105. royal, 106. ubiquitous, 107. shrub, 108. electrocardiogram, 109. introductory, 110. brain, 111. process, 112. darn

113. tree and sh__bs *n.* a woody plant that is smaller than a tree and has several main stems emerging from the soil
114. cognitive com_____ty *n.* the state or quality of being complicated or intricate and difficult to understand
115. ubi_____us across ecosystems *adj.* being or existing everywhere at once
116. surface of Ve__s *n.* the planet second in order from the sun
117. s__p a whip *v.* to record on photographic film; to make a sudden, sharp sound; (noun) the act of catching an object with the hands
118. sc__e the birds away *v.* to frighten a person or animal, or to become frightened
119. fas_____ng story *adj.* extremely interesting
120. ap_____ng design *adj.* attractive or exciting; evoking a positive response or desire; having qualities that are likely to encourage someone to like or enjoy something
121. tr_____r a biochemical response *v.* to make something happen suddenly; to cause something such as a device, machine, etc. to function
122. parallel com_____on *n.* the act or process of calculating something, especially an answer or amount, by using a machine or calculator
123. a hat h__k *n.* a curved device used for suspending, holding, or pulling something, especially one attached to a surface for hanging things on; a sharp curve or crook

ANSWERS: 113. shrub, 114. complexity, 115. ubiquitous, 116. Venus, 117. snap, 118. scare, 119. fascinating, 120. appealing, 121. trigger, 122. computation, 123. hook

124. ev___e *v.* to develop gradually, or to cause the development of something or someone gradually
125. pro_____tic approach *adj.* characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks
126. en_____er shortage *n.* a person whose job is designing, building, or maintaining something such as machines, structures, or software
127. ba_____rd barbecue *n.* a whole space behind and belonging to a house
128. the market is de_____ed *adj.* sad and without any hope
129. a c__l of smoke *v.* to form or make something form into a curved or spiral shape; (noun) a round shape formed by a series of concentric circles
130. abnormal ele_____ram *n.* a test that uses electrodes placed on the chest, arms, and legs to record the electrical signals of the heart and create a graph that shows the heart's rhythm and activity
131. tr_____r inflation *v.* to make something happen suddenly; to cause something such as a device, machine, etc. to function
132. mi___a cocktail *n.* a cocktail typically made with champagne and orange juice; a plant with delicate, fern-like leaves and fluffy pink or yellow flowers

ANSWERS: 124. evolve, 125. probabilistic, 126. engineer, 127. backyard, 128. depressed, 129. curl, 130. electrocardiogram, 131. trigger, 132. mimosa

133. el_____fy the audience *v.* to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something
134. nu_____nt medicine *n.* any substance that is essential for the maintenance and growth of living things
135. sl_____ly alkaline soils *adv.* in a small degree or extent; a little
136. the s__m of a matchstick *n.* the central part of something from which other parts can develop or grow; the part of a word common to all its inflected variants; (verb) to grow out of, have roots in, or originate in
137. com_____te well with my advisor *v.* to share or exchange information with others by speaking, writing, moving your body, or using other signals
138. en___e data *v.* to convert information into a code or format suitable for storage or transmission
139. he_____re diet *n.* an animal that eats only plants, such as a cow or a deer
140. s__p judgment *v.* to record on photographic film; to make a sudden, sharp sound; (noun) the act of catching an object with the hands
141. basic br__n function *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
142. imm_____ly recall a product *adv.* now or without delay
143. a ch_____al compound *adj.* relating to or connected with chemistry;

ANSWERS: 133. electrify, 134. nutrient, 135. slightly, 136. stem, 137. communicate, 138. encode, 139. herbivore, 140. snap, 141. brain, 142. immediately, 143. chemical

144. a ro__l palace *adj.* relating to or belonging to the king or queen or a member of their family
145. number of b_g fixes *n.* any tiny insect; a fault or defect in a computer program, system, or machine
146. int_____ies interaction *adj.* occurring between or involving different species; pertaining to interactions between different species
147. a prefectural go____or *n.* the person who holds the highest executive office in a state or province
148. decision-making pr____s *n.* a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
149. baby with se_____ve skin *adj.* able to notice slight changes, signals, or influences; able to feel or perceive other's feelings; susceptible to the things people say or do
150. ne___n cell body *n.* a cell that is specialized to carry information within the brain and between the brain and other parts of the body
151. eq__p an army *v.* to provide a person or a place with the things that are needed for a particular purpose or activity
152. platinum el_____des *n.* either of two points or ends of a conductor at which electricity enters or leaves an object, substance, or region

ANSWERS: 144. royal, 145. bug, 146. interspecies, 147. governor, 148. process, 149. sensitive, 150. neuron, 151. equip, 152. electrode

153. Ve__s orbiter *n.* the planet second in order from the sun
154. muddy sw__p *n.* an area of low-lying land that is flooded or saturated with water, often having a growth of natural vegetation
155. get ne____s *adj.* worried and anxious about something; relating to the nerves
156. immune fu____on *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
157. exp_____nt design *n.* the scientific test conducted to observe what happens and gain new knowledge
158. academic voc____ry *n.* the words used by a language, group, or individual; the knowledge and understanding of words and their meanings that a person possesses

ANSWERS: 153. Venus, 154. swamp, 155. nervous, 156. function, 157. experiment, 158. vocabulary

Session 3: Fill in the Blanks

1. Many employers hire _____ trainees to train as managers.
n. a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree
2. _____ is the science of how living things work.
n. the branch of the biological sciences dealing with the functioning of organisms
3. He grows vegetables in his _____.
n. a whole space behind and belonging to a house
4. I am _____ opposed to his idea because of morality.
adv. without restriction or limitation; completely or utterly
5. The _____ for applying for a visa can be lengthy and complicated.
n. a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
6. We hit the ground to _____ out the rabbits.
v. to frighten a person or animal, or to become frightened
7. They used fast-acting _____ on the flowers in the flower beds.
n. any substance that is essential for the maintenance and growth of living things
8. They launched a rocket toward _____.
n. the planet second in order from the sun

ANSWERS: 1. graduate, 2. Physiology, 3. backyard, 4. absolutely, 5. process, 6. scare, 7. nutrients, 8. Venus

9. We are developing a technology to promote the elongation and regeneration of sensory nerve _____.
- n.* a long and slender projection of a nerve cell, or neuron, that sends out signals away from the nerve cell
10. To expand the company, we must ____ new human resources.
- v.* to hit someone or something quickly, gently, and often repeatedly; to use existing resources, such as energy, knowledge, etc.
11. I have to ____ these socks before they become unwearable.
- v.* to mend a piece of clothing by sewing over a hole or tear with small, tight stitches
12. The _____ of the tree had fallen and blocked the road.
- 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
13. I found a stink ____ crawling across the ceiling.
- n.* any tiny insect; a fault or defect in a computer program, system, or machine
14. The _____ legends of King Arthur and the knights of the Round Table are popular literary motifs.
- adj.* relating to king Arthur and the tales and legends associated with him
15. The museum houses a _____ collection of Celtic artifacts.
- adj.* extremely interesting
16. X-rays revealed a small tumor in his _____.
- n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling

ANSWERS: 9. axons, 10. tap, 11. darn, 12. branch, 13. bug, 14. Arthurian, 15. fascinating, 16. brain

17. The incident _____ a political controversy.

- v.* to make something happen suddenly; to cause something such as a device, machine, etc. to function

18. The cat _____ into a ball and went to sleep.

- v.* to form or make something form into a curved or spiral shape; (noun) a round shape formed by a series of concentric circles

19. The animal rights group worked to _____ the dolphins back into the wild.

- v.* to set free or allow to escape from confinement

20. The wedding reception was decorated with delicate white roses and yellow _____ arrangements.

- n.* a cocktail typically made with champagne and orange juice; a plant with delicate, fern-like leaves and fluffy pink or yellow flowers

21. A suspension order from the court is effective _____.

- adv.* now or without delay

22. Eyeless fish _____ in dark caves.

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

23. He is the _____ and chairman of this tech company.

- n.* one of several people who establishes an organization or starts a business

24. I remembered that person _____ and never forgot.

- adv.* immediately

ANSWERS: 17. triggered, 18. curled, 19. release, 20. mimosa, 21. immediately, 22. evolved, 23. cofounder, 24. instantly

25. The _____ of the dancers on stage was graceful and elegant.
- 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
26. She vividly _____ getting laid off several years ago.
- v.* to remember something
27. Her research team made an important _____.
- n.* the act or process of finding information, a place, or an object, or learning about something that was previously not known
28. These _____ are more prevalent above a certain latitude.
- n.* any small creature that has six legs and a body divided into three sections
29. Dolphins use sound to _____ with each other.
- v.* to share or exchange information with others by speaking, writing, moving your body, or using other signals
30. Hay fever occurs when a substance called histamine binds to _____ in the nose and eyes.
- n.* an organ having nerve endings that respond to stimulation such as heat or cold and makes the body react in a particular way
31. Connecting batteries in series increase the _____ of the circuit.
- n.* the difference in the force of an electric current between two points
32. The lowland _____ was full of dangerous animals and poisonous plants.
- n.* an area of low-lying land that is flooded or saturated with water, often having a growth of natural vegetation

ANSWERS: 25. movement, 26. recalls, 27. discovery, 28. insects, 29. communicate, 30. receptors, 31. voltage, 32. swamp

33. The _____ by the citizen resulted in a redistribution of wealth.
- n.* a large-scale attempt to overthrow the government of a country, often using violence or war;
34. The construction company _____ the building with an earthquake-resistant device.
- v.* to provide a person or a place with the things that are needed for a particular purpose or activity
35. He sprained his _____ while playing basketball.
- n.* the joint between the hand and the forearm; the narrow part of the hand near this joint
36. The _____ will repair my telephone tomorrow morning.
- n.* a person whose job is designing, building, or maintaining something such as machines, structures, or software
37. It is important to place the _____ in the correct position for accurate electro-cardiogram recording.
- n.* either of two points or ends of a conductor at which electricity enters or leaves an object, substance, or region
38. _____ the bandage tightly around the injured arm.
- v.* to cover or enclose something entirely with paper, cloth, or other material
39. There are many cases of _____ cooperation in the animal kingdom.
- adj.* occurring between or involving different species; pertaining to interactions between different species
40. Using proper _____ is essential for writing a good essay.
- n.* the words used by a language, group, or individual; the knowledge and understanding of words and their meanings that a person possesses

ANSWERS: 33. revolution, 34. equipped, 35. wrist, 36. engineer, 37. electrodes, 38. Wrap, 39. interspecies, 40. vocabulary

41. Our body transfers information along each _____ using an electrical impulse.
n. a cell that is specialized to carry information within the brain and between the brain and other parts of the body
42. _____ algorithms can find ways to optimize that humans do not anticipate.
adj. relating to or denoting how living things develop or change from earlier forms
43. The well-crafted plot and interesting characters made the book very _____ to readers
adj. attractive or exciting; evoking a positive response or desire; having qualities that are likely to encourage someone to like or enjoy something
44. Our university is famous for its professors, who are well-versed in behavioral _____.
n. the scientific study of the function, structure, and disorder of the brain and the nervous system
45. The _____ class was designed to give students a basic understanding of the subject.
adj. intended as an introduction or preliminary; serving as a base or starting point
46. A giraffe is an _____ that primarily eats leaves and twigs.
n. an animal that eats only plants, such as a cow or a deer
47. The firm has grown into a large _____ manufacturing.
adj. relating to or connected with chemistry;
48. The enemy fell right into the _____.
n. a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping

ANSWERS: 41. neuron, 42. Evolutionary, 43. appealing, 44. neuroscience, 45. introductory, 46. herbivore, 47. chemical, 48. trap

49. He moved his body _____ to the left.

adv. in a small degree or extent; a little

50. Some countries may leave the _____.

n. the official currency of most European Union countries

51. The state _____ visited the affected areas and promised to aid the victims.

n. the person who holds the highest executive office in a state or province

52. His _____ of being a gourmet were quickly exposed when he could not identify basic herbs and spices.

n. the act of claiming or asserting something, especially without good reason or without evidence; an unfounded or excessive claim or ambition

53. The increased concentrat____ of hydrogen ions in an aqueous solution makes it more acidic.

n. an atom or molecule that has a positive or negative electrical charge caused by its losing or gained one or more electrons

54. His _____ speech about his struggles with addiction brought tears to the audience's eyes.

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

55. These are _____ with no trunks that rarely grow taller than 3 meters.

n. a woody plant that is smaller than a tree and has several main stems emerging from the soil

56. His _____ showed highly positive results.

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

ANSWERS: 49. slightly, 50. Euro, 51. governor, 52. pretensions, 53. ion, 54. moving, 55. shrubs, 56. experiments

57. One _____ of success is having a positive attitude and a strong work ethic.
- n.* a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result
58. The teacher is very _____ to children's feelings.
- adj.* able to notice slight changes, signals, or influences; able to feel or perceive other's feelings; susceptible to the things people say or do
59. The _____ dinosaur preyed on other animals.
- adj.* feeding on the flesh of other animals
60. Actuators convert _____ pulses into motion.
- adj.* relating to electricity
61. The software can _____ and decode encrypted messages.
- v.* to convert information into a code or format suitable for storage or transmission
62. Sugar is _____ in food.
- adj.* being or existing everywhere at once
63. He suffers from _____ breakdowns.
- adj.* worried and anxious about something; relating to the nerves
64. The product developed through years of research continues to _____ the market.
- v.* to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something

ANSWERS: 57. determinant, 58. sensitive, 59. carnivorous, 60. electrical, 61. encode, 62. ubiquitous, 63. nervous, 64. electrify

65. After his mother died, he got _____.

adj. sad and without any hope

66. A rose has thorns on its _____.

n. the central part of something from which other parts can develop or grow; the part of a word common to all its inflected variants; (verb) to grow out of, have roots in, or originate in

67. The corporation _____ dominated the entire tobacco business.

adv. finally, particularly after a long time or a lot of struggle, complications, and so on

68. Eventually, the new design will _____ all older models.

v. to take the place of something

69. I need to _____ my plan to make it a reality.

v. to make real or concrete; to bring into existence or implementation; to fulfill or realize a potential or intention

70. In a _____ system, the outcome is uncertain and can vary based on chance.

adj. characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks

71. This book provides children with ideas and a _____ for outside recreation.

n. something that causes growth or arouses action

72. She _____ a quick picture of the beautiful sunset before it disappeared.

v. to record on photographic film; to make a sudden, sharp sound; (noun) the act of catching an object with the hands

ANSWERS: 65. depressed, 66. stem, 67. eventually, 68. replace, 69. actualize, 70. probabilistic, 71. stimulus, 72. snapped

73. Please hang your towel on a _____.

- n.* a curved device used for suspending, holding, or pulling something, especially one attached to a surface for hanging things on; a sharp curve or crook

74. The hospital invested in state-of-the-art _____ machines to improve patient care.

- n.* a test that uses electrodes placed on the chest, arms, and legs to record the electrical signals of the heart and create a graph that shows the heart's rhythm and activity

75. She is willing to give up her position in the _____ family to marry him.

- adj.* relating to or belonging to the king or queen or a member of their family

76. The project's _____ made it difficult for the team to complete it on time.

- n.* the state or quality of being complicated or intricate and difficult to understand

77. 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

78. The brain is an incredibly complex organ that controls the body's _____.

- 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

79. There's a new _____ of hero in the movies now.

- n.* a type of product, service, etc., made by a particular company and sold under a specific name; identification mark on the skin of livestock, criminals, etc., made by burning

ANSWERS: 73. hook, 74. electrocardiogram, 75. royal, 76. complexity, 77. computation, 78. function, 79. brand

ANSWERS: