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Vocabulary Builder Reference from...

Deborah Gordon: What ants teach us about the brain, cancer and the Internet | TED Talk https://www.ted.com/talks/deborah_gordon_what_ant s_teach_us_about_the_brain_cancer_and_the_internet



All Words

IMPORTANT

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Session 1: Word List

ant

 a very small insect that lives under the ground or in a mound in highly organized groups

synonym: pismire, insect

(1) a white ant, (2) ant bite

We can find many large ant mounds in this area.

desert

- arid land with little or no vegetation often covered with sand or rocks
- (1) **desert** basin, (2) oasis in the **desert** This region is predominantly **desert**.

silicon

- a chemical element with the symbol Si that is a hard, brittle crystalline solid with a blue-grey metallic luster and used for the transistors and integrated circuit chips in computers
- silicon wafer, (2) crystalline silicon
 Silicon is the second most abundant element on earth after oxygen.

valley

 a long depression on the surface of the land, which typically contains a river

synonym: canyon, gorge, dale

(1) valley bottom, (2) basin-shaped valley

The **valley** had received a mild snowfall the previous week.

interaction

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

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

environment

- the natural world such as air, water, and land in which humans, animals, and plants live
- synonym: atmosphere, surroundings, climate
- environment affairs, (2) chaotic environment
 Every human is responsible for taking care of the Earth's environment.

brain

- 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** damageX-rays revealed a small tumor in his **brain**.

engineer

- 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 shortageThe engineer will repair my telephone tomorrow morning.

cancer

- abnormal growth of cells that can invade and destroy surrounding tissues and organs; a disease characterized by the uncontrolled growth and spread of abnormal cells
- synonym: tumor, carcinoma, malignancy
- (1) cancer diagnosis, (2) cancer research

Breast cancer is the most common type of cancer in women.

colony

 a country or an area that is governed by a more powerful country that is often far away

synonym: settlement, territory, plantation

plant a colony, (2) a colony of bacteria
 The colony declared its independence and became a

republic.

consist

v. to be composed or made up of

synonym: lie in, comprise, exist

(1) **consist** mainly of cells, (2) **consist** only in knowing facts This examination **consists** of five problems to solve.

sterile

adj. free from living microorganisms, especially bacteria, fungi, and viruses; incapable of reproducing

synonym: clean, germ-free, hygienic

(1) sterile environment, (2) a sterile man

Surgeons must use **sterile** instruments to prevent infection during an operation.

reproductive

adj. connected with the process of reproduction; relating to reproducing babies, young animals, or plants

synonym: procreative, generative

 reproductive ability, (2) during reproductive period
 This documentary deals with the reproductive biology of the buffalo.

instruction

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

synonym: education, direction, guidance

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

interact

v. to communicate or react with somebody

synonym: cooperate, combine, collaborate

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

another

He should **interact** more with his colleagues.

antenna

 an electrical device that sends or receives radio or television signals; (biology) one of one or more pairs of appendages used for sensing in insects

synonym: feeler, receiver

(1) antenna of insect, (2) extend the TV antenna

He had a special **antenna** for public relations

nest

 a structure in which animals lay their eggs or give birth to their young

synonym: roost, perch, burrow

(1) bird's **nest**, (2) a **nest** of thieves

The female birds build a **nest** and lay their eggs in May.

lab

 a workplace for the conduct of scientific research; a laboratory

synonym: workshop, laboratory, research chamber

(1) **lab** instrument, (2) medical **lab**

The Prime Minister will pay a courtesy visit to the Nobel laureate's **lab**.

arena

 a large, flat area, often circular or oval-shaped, designed to showcase theatre, musical performances, or sporting events

synonym: stadium, theatre, auditorium

(1) indoor arena, (2) political arena

The company is planning to build a 20,000-seat **arena** with a retractable roof.

tube

 a cylindrical container of metal, plastic, glass, etc., usually sealed and used as a means of preserving food or chemicals; a hollow cylindrical shape

synonym: pipe, hose, duct

(1) a capillary tube, (2) a glass tube

The **tube** train was packed with commuters during rush hour.

transmit

v. to send or forward an electronic signal; to pass something from one person or thing to another

synonym: convey, share, dispatch

(1) **transmit** the disease, (2) **transmit** information

Parents often transmit their characteristics to their children.

complicated

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

synonym: complex, convoluted, intricate

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

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

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.

shifting

adj. constantly changing or moving

synonym: unfirm, shifty, fluctuating

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

conceivable

adj. imaginable or possible to understand or believe in the mind

synonym: believable, imaginable, probable

(1) **conceivable** way, (2) **conceivable** emergency It is challenging to defend every **conceivable** target.

scarce

adj. not abundant or plentiful, and therefore not easy to find or obtain

synonym: rare, limited, sparse

(1) scarce resources, (2) capital- scarce country

Fresh water is becoming increasingly **scarce** in many parts of

the world.

seed

 a small, hard, often round, a reproductive structure that contains a plant's genetic material and is capable of growing into a new plant

synonym: germ, kernel, ovule

(1) a **seed** coat, (2) **seed** money

He planted the **seed** in the soil and waited for it to sprout.

metabolism

- *n*. the set of chemical reactions in cells or organisms that are necessary for life-sustaining
- (1) **metabolism** enzyme, (2) hemoglobin **metabolism** Better sleep leads to increased **metabolism**.

outgoing

adj. friendly and energetic in talking to others; tending to go out or away

synonym: extroverted, sociable, friendly

(1) **outgoing** attitude, (2) **outgoing** mail

She was an **outgoing** person and loved meeting new people and trying new things.

tunnel

 an underground or underwater passage, typically for trains or cars

synonym: passageway, underground passage

(1) **tunnel** construction work, (2) **tunnel** disease

The workers had to dig through solid rock to create the vehicular **tunnel** allowing the cars to pass through the mountain.

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**.

evolution

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

variation

- the act or state of changing; a difference or change in the way something is done, made or said
- synonym: fluctuation, change, variation
- (1) **variation** of temperature, (2) gene **variation**There is a lot of **variation** in the colors of flowers in the garden.

trade-off

- a balance achieved between two desirable but incompatible features; an exchange that occurs as a compromise
- *synonym*: compromise, balance, exchange
- (1) **trade-off** problem, (2) environmental **trade-off**There was a **trade-off** between speed and accuracy in the task.

neuron

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

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

neuroscience

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

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

stimulation

n. the act of arousing interest or activity in something; the action of providing a stimulus

synonym: activation, arousal, excitation

(1) **stimulation** of the economy, (2) **stimulation** of the senses

The **stimulation** of certain chemicals activates the brain's reward system.

decide

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

analogous

adj. similar or equivalent in some respects, typically as a result of functioning in a similar waysynonym: similar, comparable, equivalent

(1) **analogous** fashion, (2) entirely **analogous**The human heart is **analogous** to a pump in a plumbing system.

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.

individual

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

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 actionsynonym: incitement, inspiration, motivation
- (1) a response to a **stimulus**, (2) economic **stimulus**This book provides children with ideas and a **stimulus** for outside recreation.

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.

harvest

 yields of plants in a single growing season; the period of the year when gathering occurs on a farm

synonym: crop, reaping, yield

(1) a scanty **harvest**, (2) reap a **harvest**During **harvest**, farmers are incredibly busy.

symbol

something visible that is used to represent something else

synonym: mark, character, insignia

(1) **symbol** color, (2) **symbol** for happiness The dragon is considered a **symbol** of bravery.

offspring

- n. descendant; any immature animal or plantsynonym: children, descendants, heirs
- (1) female offspring, (2) produce offspringHow many offspring does the average lion have?

genetic

adj. of or relating to genes (= parts of the DNA in cells) or the science of genes

synonym: hereditary, genetical, inborn

(1) have **genetic** testing, (2) a **genetic** disorder Understanding protein folding is a vital step in deciphering the

genetic code.

amazing

adj. extremely surprising, especially in a way that you like or admire

synonym: exceptional, extraordinary, wonderful

(1) **amazing** advances, (2) the most **amazing** feeling The golfer recorded an **amazing** distance.

grandchild

- a child of someone's son or daughtersynonym: offspring, descendant, progeny
- (1) **grandchild-grandparent** relationship, (2) **grandchild** development

The grandparents take care of their **grandchild** while the parents are at work.

resemble

- v. to look like or be similar to someone or somethingsynonym: look like, be similar to
- (1) **resemble** each other, (2) **resemble** her mother The brothers **resemble** each other in the hobby.

decision

 the act or process of making up someone's mind about something; a choice or judgment reached after considering options

synonym: choice, determination, judgment

(1) decision authority, (2) a selfish decision
She was struggling to make a decision between two job offers.

underlying

 adj. significant as a cause or basis of something but not immediately apparent or stated clearly

synonym: fundamental, latent, basic

(1) an **underlying** motive, (2) an **underlying** cause of an accident

The **underlying** principle of every business was identical.

resemblance

- n. similarity in appearance or exterior or superficial detailssynonym: closeness, likeness, similarity
- (1) striking **resemblance**, (2) faint **resemblance**The **resemblance** between Anna and her mother was astonishing.

severe

 adj. extremely serious or bad in feeling, manner, or strict and harsh; extremely strong or vigorous

synonym: harsh, relentless, powerful

severe heat, (2) a severe case of pneumonia
 The senator received severe criticism from his opponent.

drought

 a long period of time during which there is very little or no rain, leading to a shortage of water and often causing damage to crops and other vegetation

synonym: dryness, aridity, water shortage

(1) periods of **drought**, (2) **drought** conditions

The region has been experiencing a severe **drought**, leading to water shortages and crop failures.

conserve

- v. to protect something, especially the natural environment or culture, from change, damage, or destruction synonym: preserve, save, maintain
- (1) means to **conserve** energy, (2) **conserve** coal resources

Children must be taught to **conserve** our natural environment.

sacrifice

n. the act of killing an animal or person or surrendering a possession as an offering to a deity; (verb) to give up something important or valuable to help another person or get or do something that seems more important

synonym: forfeit, immolation, gift

(1) small **sacrifice** for a great cause, (2) **sacrifice** anything to get ahead

You cannot accomplish great things without a **sacrifice** of your time or money.

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trickle

v. to flow or drip slowly and in small amounts; to happen or occur gradually or in small quantities

synonym: dribble, flow, seep

(1) **trickle** down my cheek, (2) **trickle** from his eyes Water was beginning to **trickle** into the basement after the heavy rain.

matriarch

 a woman who is the head of a family or social group; a woman who is the founder or dominant member of a group

synonym: leader, head, founder

(1) ruled by a **matriarch**, (2) **matriarch** figure

The **matriarch** of the family was known for her wisdom and guidance.

ongoing

adj. continuing to exist or develop, or currently happening *synonym*: continuous, current, proceeding

(1) still ongoing, (2) ongoing support

The new prime minister has vowed to take measures against the **ongoing** economic crisis.

algorithm

- a set of rules or rigorous instructions typically used to solve a specific problem or to perform a computation
 synonym: logic, method, rule
- (1) the RSA **algorithm**, (2) **algorithm** for image processing We can evaluate the performance of an **algorithm** in terms of computation time.

analogy

 a comparison between similar things that have similar aspects, often used to help explain a principle or concept

synonym: metaphor, comparison, parallel

(1) draw analogy, (2) historical analogy

Some kinds of machine learning models show an **analogy** to how people learn.

bandwidth

n. the amount of data that can be transmitted or processed at one time often used to describe the capacity of electronic communication or computing systems

synonym: capacity, data transfer rate, network speed

(1) **bandwidth** allocation, (2) increase **bandwidth**I don't have the **bandwidth** to take on any new projects, as I'm already working on multiple assignments.

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**.

evolve

 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.

operate

- v. to work in a particular way; to supervise something synonym: work, use, employ
- (1) **operate** 24 hours a day, (2) manually **operate** a machine

This machine is too difficult to **operate** for me.

humid

adj. having a high amount of moisture or water vapor in the air; damp; muggy

synonym: damp, muggy, moist

(1) **humid** climate, (2) uncomfortably **humid**

The air was so **humid** that my clothes felt damp.

abundant

adj. present in great quantity

synonym: ample, plentiful, generative

(1) live an **abundant** life, (2) an **abundant** supply of water The country has **abundant** oil and natural gas resources.

diverse

adj. including numerous categories of individuals or entities; various

synonym: manifold, various, myriad

(1) **diverse** backgrounds, (2) a person of **diverse** talents New York is a city with a **diverse** ethnic population.

competition

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

synonym: contest, match, fight

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

Global **competition** is rising in virtually every industry.

opposition

the act of disagreeing or resisting; the state of strong disagreement

synonym: resistance, hostility, antagonism

(1) **opposition** campaign, (2) meet with **opposition** The **opposition** party strongly disagreed with the government's proposed legislation.

negative

adj. having the quality of something bad or harmful; expressing refusal

synonym: minus, adverse, pessimistic

(1) have a **negative** effect, (2) a **negative** number The movie has received almost universally **negative** criticism.

circuit

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

synonym: route, course, rotation

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

abdomen

n. the part of the body between the chest and pelvis that contains the stomach, intestines, liver, pancreas, and other organs; the posterior part of an insect's body, typically divided into segments

synonym: belly, gut, tummy

(1) abdomen pain, (2) insect abdomen

The weightlifter used his strong **abdomen** muscles to lift the heavy barbell.

threat

 a strong indication or likelihood of harm, danger, or adverse consequences; an expression of intent to inflict harm or injury on someone or something, often made as a means of coercion or intimidation

synonym: menace, danger, hazard

(1) economic threat, (2) environmental threat

The **threat** of severe weather prompted the city to issue an evacuation warning.

temporarily

adv. for a limited time only or not permanently

synonym: for a time

(1) a hut made **temporarily**, (2) **temporarily** suspend the production

Some athletes take anabolic steroids to increase muscle size **temporarily**.

immediate

adj. happening or done without delay or occurring shortly after something else

synonym: prompt, quick, instantaneous

(1) take **immediate** effect, (2) the **immediate** past Both forts were subject to **immediate** attacks.

permanent

adj. lasting for a long time without essential change synonym: lasting, ceaseless, endless

(1) literature of **permanent** value, (2) **permanent** life insurance

She is searching for a **permanent** residence.

firewall

 n. (in computing) a technological barrier designed to stop people from seeing or using the information on a computer without permission but still allow them to receive information that is sent to them

(1) **firewall** protection, (2) **firewall** application Public cloud computing should provide a secure **firewall** against hackers.

fortress

 a large and strongly built structure, typically with high walls and a moat, used as a military defense or for protection against attackers

synonym: castle, citadel, stronghold

(1) fortress wall, (2) military fortress

The ancient **fortress** was built on a hill to give the defenders a strategic advantage.

sophisticated

- adj. having a great deal of worldly experience and knowledge of people's behavior, culture, and fashionsynonym: refined, cultured, worldly
- (1) **sophisticated** look, (2) a **sophisticated** lifestyle Marketing strategies are growing more **sophisticated**.

planet

 any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star

synonym: earth, world, globe

(1) **planet** like the Earth, (2) save the **planet** Mercury is the closest **planet** to the sun.

exchange

to give something and receive something else in return, often with the implication that the items being traded are of equal or comparable value; (noun) the act of giving or taking something in return for something else; a place or system where goods or services can be bought, sold, or traded

synonym: trade, swap, interchange

(1) **exchange** rate, (2) **exchange** a few friendly words My sister and I frequently **exchange** books, as we love reading.

minimal

adj. tiny in amount; the least possible synonym: tiniest, essential, minimum

(1) minimal effort, (2) minimal amount

The process was carried out at **minimal** cost.

invasive

 adj. spreading very quickly, and often aggressively, and difficult to stop

synonym: aggressive, rampant, spreading

(1) **invasive** breast cancer, (2) **invasive** species

The **invasive** disease can spread quickly and potentially cause a global pandemic.

expand

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

synonym: extend, grow, boost

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

thorough

adj. done completely; significantly careful and accurate synonym: complete, comprehensive, meticulous

(1) **thorough** investigation, (2) provide **thorough** analysis A **thorough** brushing helps to keep your mouth fresh.

stretch

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

synonym: lengthen, prolong, extend

(1) **stretch** along the coast, (2) **stretch** a story Some herds have been observed to **stretch** hundreds of kilometers.

density

- n. the quality of compactness of a substancesynonym: tightness, viscosity
- (1) population density, (2) higher pixel density
 Do you know the density of the population in Hong Kong?

extreme

adj. very great in amount or degreesynonym: farthermost, outermost, fierce

extreme sports, (2) extreme weather events
 Solar gravity creates extreme pressures and temperatures.

microgravity

 a condition of feeble gravity, often experienced by objects or organisms in orbit around a planet or other celestial body, such as the International Space Station

synonym: zero gravity, weightlessness, freefall

(1) **microgravity** research, (2) **microgravity** environment Astronauts experience the effects of **microgravity** when they are in space.

mount

 to increase, go up, or advance gradually or continuously; to prepare and supply with the necessary equipment for execution or performance; to ride on something or someone

synonym: climb, increase, get on

mount a hill, (2) mount a counterattack
 They mounted pictures on the paper in preparation for the

birthday card.

vertical

adj. upright or perpendicular to a horizontal surface or line *synonym*: perpendicular, upright, plumb

(1) vertical takeoff, (2) vertical axis

The ladder leaned against the **vertical** surface of the building.

relation

n. the way two persons or groups of people feel and act toward one another

synonym: association, linkage, connection

(1) **relation** between cause and effect, (2) **relation** of inclusion

The industrial **relations** laws were passed with little to no alteration.

mess

- n. a state of confusion, dirtiness, or untidiness; (verb) to fail to do something or to make something dirty or untidy
 synonym: disarray, confusion, predicament
- have a whole mess,
 get into a mess
 made a frightful mess in his room.

analyze

 to think about in-depth and evaluate to discover essential features or meaning

synonym: explore, examine, investigate

(1) **analyze** a chemical compound, (2) **analyze** your real motives

The teacher attempted to **analyze** the root cause of our mistake.

encourage

v. to give someone support, confidence, or hope; to persuade someone to do or continue to do something by making it easier for them and making them believe it is a good thing to do

synonym: facilitate, persuade, stimulate

(1) **encourage** a sense of affinity, (2) **encourage** antisocial behavior

They **encouraged** customers with a premium for loyal patronage.

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.
- n. an outdoor meal or social gathering where food is served and eaten in nature, typically in a park, forest, or other outdoor settings

synonym: outing, barbecue, walkover

(1) picnic basket, (2) picnic table

The family enjoyed a lovely **picnic** in the park on a sunny day.

picnic

cluster

 a group of similar things or people close together, often forming a distinct mass or unit

synonym: group, aggregation, array

(1) live in a cluster, (2) a cluster of stars

A **cluster** of grapes hung from the vine.

recruit

v. to persuade someone to work for a company; to find new members for an organization, the armed forces, etc.

synonym: raise, enroll, enlist

(1) **recruit** a good worker, (2) **recruit** a new hire

The colonial government **recruited** militia support when civil war broke out.

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.

deposit

n. a sum of money or materials placed or kept in a bank, safety deposit box, or other secure places for safekeeping; a layer of rock, sand, or other material left behind by a flowing liquid or eroding force

synonym: bank, installment, sedimentation

(1) deposit money, (2) deposit accumulation

I made a deposit at the bank to add money to my account.

trail

 a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular purpose; (verb) to lag or linger behind

synonym: footpath, track, course

(1) a warm trail, (2) follow the trail

The storm left a **trail** of destruction behind it.

obvious

adj. easy to see, discover or understandsynonym: apparent, conspicuous, evident

(1) obvious reasons, (2) his conclusion was obvious

There are **obvious** differences between the two

wine-producing regions.

toxin

 a poisonous substance produced by a living organism, such as a plant, animal, or microorganism; a chemical compound that can cause harm or illness to a living organism

synonym: poison, venom, contaminant

(1) toxin exposure, (2) toxin production

Mold exposure can release dangerous **toxins** into the air.

promote

 to encourage or persuade people to like, buy, use, do, or support something; to raise someone to a higher position or rank

synonym: boost, raise, advertise

- (1) **promote** a better relationship, (2) **promote** bad behavior The government should do more to **promote** sustainable agribusiness.
- poison

 n. a substance that can cause illness, injury, or death when ingested, inhaled, or absorbed through the skin; something harmful, malicious, or toxic; the act of damaging or ruining a relationship; (verb) to introduce a
 - substance into something or someone harmful and potentially deadly

synonym: toxin, venom, pollutant

(1) poison ivy, (2) poison bilateral relations

The plant's leaves contain a deadly **poison** that can cause hallucinations and seizures.

origin

- the first existence or beginning of something
- synonym: root, source, ancestor
- (1) **origin** of information, (2) racial **origin**

There are various hypotheses concerning the **origin** of life.

metastasize

ν. (of a cancerous tumor or disease) to spread or grow to other parts of the body from its original location

synonym: spread, multiply, disseminate

(1) **metastasize** to the liver, (2) **metastasize** from breast cancer

Cancer cells can **metastasize** and spread to other body parts if left untreated.

tissue

 an ensemble of similar cells of the animal or plant that together carry out a specific function

synonym: structure, texture, anatomy

(1) a facial **tissue**, (2) loss of muscle **tissue**

The researcher separated the nervous **tissue** for microscopic examinations.

perspective

a confident attitude toward something; a particular style of thinking about something

synonym: viewpoint, standpoint, outlook

(1) a **perspective** view, (2) the **perspective** of the battle His father's death changed his whole **perspective** on life.

metastatic

adj. used to describe cancer cells that have spread from the primary site of origin to other parts of the body through the bloodstream or lymphatic system

synonym: spreading, invasive, secondary

(1) **metastatic** disease, (2) **metastatic** spreading **Metastatic** cancer has spread from its original site to other body parts.

trap

 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**.

feat

 a notable or impressive achievement, especially one that requires great skill or bravery

synonym: achievement, accomplishment, exploit

(1) intellectual **feat**, (2) **feat** accomplishment

It is an incredible **feat** to climb Mount Everest, the highest mountain in the world.

Session 2: Spelling

set a t__p

2. sl ly alkaline soils

3. ex e weather events

4. met____ic spreading

5. sop____ted look

6. in____ve breast cancer

7. mi____I effort

8. f_t accomplishment

9. th___gh investigation

10. am___g advances

11. gra____ld development

 a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping

adv. in a small degree or extent; a little

adj. very great in amount or degree

adj. used to describe cancer cells that have spread from the primary site of origin to other parts of the body through the bloodstream or lymphatic system

adj. having a great deal of worldly experience and knowledge of people's behavior, culture, and fashion

adj. spreading very quickly, and often aggressively, and difficult to stop

adj. tiny in amount; the least possible

 a notable or impressive achievement, especially one that requires great skill or bravery

adj. done completely; significantly careful and accurate

adj. extremely surprising, especially in a way that you like or admire

n. a child of someone's son or daughter

ANSWERS: 1. trap, 2. slightly, 3. extreme, 4. metastatic, 5. sophisticated, 6. invasive, 7. minimal, 8. feat, 9. thorough, 10. amazing, 11. grandchild

Vocab-Builder Ref from "Deborah Gordon: What ants teach us about the brain, cancer and the Internet | TED Talk" (116 words)

ANSWERS: 12. expand, 13. analogy, 14. negative, 15. firewall, 16. antenna, 17. humid, 18. trail, 19. extreme, 20. decision, 21. analogous

analogy, 28. evolve, 29. tunnel, 30. conserve, 31. lab, 32. fortress

33. the RSA alhm	n.	a set of rules or rigorous instructions typically used to solve a specific problem or to perform a computation	
34. micity environment	n.	a condition of feeble gravity, often experienced by objects or organisms in orbit around a planet or other celestial body, such as the International Space Station	
35. a glass te	n.	a cylindrical container of metal, plastic, glass, etc., usually sealed and used as a means of preserving food or chemicals; a hollow cylindrical shape	
36. the first round of the comon	n.	a situation in which someone is attempting to beat or outperform another	
37. ane your real motives	<i>v</i> .	to think about in-depth and evaluate to discover essential features or meaning	
38. the imte past	adj.	happening or done without delay or occurring shortly after something else	
39. trit information	v.	to send or forward an electronic signal; to pass something from one person or thing to another	
40. tre from his eyes	v.	to flow or drip slowly and in small amounts; to happen or occur gradually or in small quantities	
41. manually ope a machine	<i>v</i> .	to work in a particular way; to supervise something	
42. inct directly with customers	v.	to communicate or react with somebody	
43. ener shortage	n.	a person whose job is designing, building, or maintaining something such as machines, structures, or software	
ANSWERS: 33. algorithm, 34. microgravity, 35. tube, 36. competition, 37. analyze,			

Vocab-Builder Ref from "Deborah Gordon: What ants teach us about the brain, cancer and the Internet | TED Talk" (116 words)

ANSWERS: 33. algorithm, 34. microgravity, 35. tube, 36. competition, 37. analyze, 38. immediate, 39. transmit, 40. trickle, 41. operate, 42. interact, 43. engineer

√ocab-E	Builder Ref from "Deborah Gordon: What ants teach us	about	the brain, cancer and the Internet TED Talk" (116 words
44.	pent life insurance	adj.	lasting for a long time without essential change
45.	hemoglobin metsm	n.	the set of chemical reactions in cells or organisms that are necessary for life-sustaining
46.	vaon of temperature	n.	the act or state of changing; a difference or change in the way something is done, made or said
47.	reon of inclusion	n.	the way two persons or groups of people feel and act toward one another
48.	a_t bite	n.	a very small insect that lives under the ground or in a mound in highly organized groups
49.	striking resce	n.	similarity in appearance or exterior or superficial details
50.	exge a few friendly words	ν.	to give something and receive something else in return, often with the implication that the items being traded are of equal or comparable value; (noun) the act of giving or taking something in return for something else; a place or system where goods or services can be bought, sold, or traded
51.	still ong	adj.	continuing to exist or develop, or currently happening
52.	loss of muscle tie	n.	an ensemble of similar cells of the animal or plant that together carry out a specific function
53.	grald-grandparent relationship	n.	a child of someone's son or daughter

ANSWERS: 44. permanent, 45. metabolism, 46. variation, 47. relation, 48. ant, 49. resemblance, 50. exchange, 51. ongoing, 52. tissue, 53. grandchild

ANSWERS: 54. stretch, 55. offspring, 56. matriarch, 57. trade-off, 58. consist, 59. reproductive, 60. deposit, 61. perspective, 62. silicon

63. exd agricultural output	ν.	to increase or to make something		
		greater in size, number, or importance		
64. periods of drt	n.	a long period of time during which there is very little or no rain, leading to a shortage of water and often causing damage to crops and other vegetation		
65. plant a coy	n.	a country or an area that is governed by a more powerful country that is often far away		
66. stion of the senses	n.	the act of arousing interest or activity in something; the action of providing a stimulus		
67. enge antisocial behavior	v.	to give someone support, confidence, on hope; to persuade someone to do or continue to do something by making it easier for them and making them believe it is a good thing to do		
68. plt like the Earth	n.	any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star		
69. ane a chemical compound	v.	to think about in-depth and evaluate to discover essential features or meaning		
70. to_n exposure	n.	a poisonous substance produced by a living organism, such as a plant, animal or microorganism; a chemical compound that can cause harm or illness to a living organism		
71. a chal compound	adj.	relating to or connected with chemistry;		
ANSWERS: 63. expand, 64. drought, 65. colony, 66. stimulation, 67. encourage, 68.				

ANSWERS: 63. expand, 64. drought, 65. colony, 66. stimulation, 67. encourage, 68. planet, 69. analyze, 70. toxin, 71. chemical

72. pon ivy	n.	a substance that can cause illness, injury, or death when ingested, inhaled, or absorbed through the skin; something harmful, malicious, or toxic; the act of damaging or ruining a relationship; (verb) to introduce a substance into something or someone harmful and potentially deadly
73. entirely anus	adj.	similar or equivalent in some respects, typically as a result of functioning in a similar way
74. mot a hill	v.	to increase, go up, or advance gradually or continuously; to prepare and supply with the necessary equipment for execution or performance; to ride on something or someone
75. political ar_a	n.	a large, flat area, often circular or oval-shaped, designed to showcase theatre, musical performances, or sporting events
76. human evon	n.	a gradual process of transformation of living things
77. gene vaon	n.	the act or state of changing; a difference or change in the way something is done, made or said
78. det basin	n.	arid land with little or no vegetation often covered with sand or rocks
79. repive ability	adj.	connected with the process of reproduction; relating to reproducing babies, young animals, or plants

ANSWERS: 72. poison, 73. analogous, 74. mount, 75. arena, 76. evolution, 77. variation, 78. desert, 79. reproductive

80. inve species	adj.	spreading very quickly, and often aggressively, and difficult to stop	
81. metic disease	adj.	used to describe cancer cells that have spread from the primary site of origin to other parts of the body through the bloodstream or lymphatic system	
82. federal cit courts	n.	(in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area	
83. fiII application	n.	(in computing) a technological barrier designed to stop people from seeing or using the information on a computer without permission but still allow them to receive information that is sent to them	
84. car research	n.	abnormal growth of cells that can invade and destroy surrounding tissues and organs; a disease characterized by the uncontrolled growth and spread of abnormal cells	
85. syl color	n.	something visible that is used to represent something else	
86. micity research	n.	a condition of feeble gravity, often experienced by objects or organisms in orbit around a planet or other celestial body, such as the International Space Station	
87. oung attitude	adj.	friendly and energetic in talking to others; tending to go out or away	
ANSWERS: 80. invasive, 81. metastatic, 82. circuit, 83. firewall, 84. cancer, 85. symbol, 86. microgravity, 87. outgoing			

Vocab-Builder Ref from "Deborah Gordon: What ants teach us about the brain, cancer and the Internet | TED Talk" (116 words)

Vocab-Builder Ref from "Deborah Gordon: What ants teach us about the brain, cancer and the Internet | TED Talk" (116 words)

- 99. pi___c table
- 100. met____ze from breast cancer
- 101. po___n bilateral relations

- 102. a ge___c disorder
- 103. economic st___us
- 104. basin-shaped va y
- 105. immune fu___on

- an outdoor meal or social gathering where food is served and eaten in nature, typically in a park, forest, or other outdoor settings
- v. (of a cancerous tumor or disease) to spread or grow to other parts of the body from its original location
- n. a substance that can cause illness, injury, or death when ingested, inhaled, or absorbed through the skin; something harmful, malicious, or toxic; the act of damaging or ruining a relationship; (verb) to introduce a substance into something or someone harmful and potentially deadly
- adj. of or relating to genes (= parts of the DNA in cells) or the science of genes
- n. something that causes growth or arouses action
- *n.* a long depression on the surface of the land, which typically contains a river
- 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: 99. picnic, 100. metastasize, 101. poison, 102. genetic, 103. stimulus, 104. valley, 105. function

ANSWERS: 106. perspective, 107. invention, 108. diverse, 109. encourage, 110. thorough, 111. chemical, 112. diverse, 113. drought, 114. tunnel, 115. negative, 116. threat

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

body

v. (of a cancerous tumor or disease) to spread or grow to other parts of the body from its original location

ANSWERS: 117. environment, 118. individual, 119. invention, 120. cluster, 121. operate, 122. tissue, 123. ongoing, 124. competition, 125. consist, 126. neuron, 127. metastasize

127. met____ze to the liver

137. sace anything to get ahead	n.	the act of killing an animal or person or surrendering a possession as an offering to a deity; (verb) to give up something important or valuable to help another person or get or do something that seems more important
138. veal takeoff	adj.	upright or perpendicular to a horizontal surface or line
139. an eleal storm	adj.	relating to electricity
140. metsm enzyme	n.	the set of chemical reactions in cells or organisms that are necessary for life-sustaining
141. inct with one another	ν.	to communicate or react with somebody
142. a sd coat	n.	a small, hard, often round, a reproductive structure that contains a plant's genetic material and is capable of growing into a new plant
143. sd money	n.	a small, hard, often round, a reproductive structure that contains a plant's genetic material and is capable of growing into a new plant
144. environmental tht	n.	a strong indication or likelihood of harm, danger, or adverse consequences; an expression of intent to inflict harm or injury on someone or something, often made as a means of coercion or intimidation
145. follow his insons	n.	detailed direction, order, etc., on how to do or use something

146. expnt design	n.	the scientific test conducted to observe what happens and gain new knowledge
147. a civil ener	n.	a person whose job is designing, building, or maintaining something such as machines, structures, or software
148. indoor ara	n.	a large, flat area, often circular or oval-shaped, designed to showcase theatre, musical performances, or sporting events
149. live in a clr	n.	a group of similar things or people close together, often forming a distinct mass or unit
150. ecology and evoary biology	adj.	relating to or denoting how living things develop or change from earlier forms
151. a scanty hat	n.	yields of plants in a single growing season; the period of the year when gathering occurs on a farm
152. rele her mother	v.	to look like or be similar to someone or something
153. hud climate	adj.	having a high amount of moisture or water vapor in the air; damp; muggy
154. ret a new hire	v.	to persuade someone to work for a company; to find new members for an organization, the armed forces, etc.
155. veal axis	adj.	upright or perpendicular to a horizontal surface or line
156. a conly innovative enterprise	adv.	all the time
157. eve	ν.	to develop gradually, or to cause the development of something or someone gradually

ANSWERS: 146. experiment, 147. engineer, 148. arena, 149. cluster, 150. evolutionary, 151. harvest, 152. resemble, 153. humid, 154. recruit, 155. vertical, 156. constantly, 157. evolve

ANSWERS: 158. temporarily, 159. antenna, 160. trap, 161. abundant, 162. trickle, 163. tube, 164. neuroscience, 165. shifting, 166. neuroscience, 167. conceivable, 168. offspring

n.

plant

descendant; any immature animal or

168. female of____ng

arid land with little or no vegetation often covered with sand or rocks

a poisonous substance produced by a living organism, such as a plant, animal, or microorganism; a chemical compound that can cause harm or illness to a living organism

ANSWERS: 169. harvest, 170. valley, 171. immediate, 172. electrical, 173. neuron, 174. interaction, 175. decide, 176. abundant, 177. stimulation, 178. desert, 179. toxin

179. to n production

ANSWERS: 180. trade-off, 181. resemblance, 182. temporarily, 183. exchange, 184. complicated, 185. outgoing, 186. stimulus, 187. underlying, 188. decide, 189. interaction

spending time with them

198. pi c basket n.

199. insect ab n

- an outdoor meal or social gathering where food is served and eaten in nature, typically in a park, forest, or other outdoor settings
- the part of the body between the chest and pelvis that contains the stomach, intestines, liver, pancreas, and other organs; the posterior part of an insect's body, typically divided into segments

ANSWERS: 190. sophisticated, 191. density, 192. opposition, 193. recruit, 194. feat, 195. permanent, 196. instruction, 197. conserve, 198. picnic, 199. abdomen

200. abn pain	n.	and pelvis that contains the stomach, intestines, liver, pancreas, and other organs; the posterior part of an insect's body, typically divided into segments
201. a private indal	n.	a single person or thing, as distinct from a group
202. his conclusion was obs	adj.	easy to see, discover or understand
203. save the plt	n.	any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star
204. the evoary process	adj.	relating to or denoting how living things develop or change from earlier forms
205. a selfish deon	n.	the act or process of making up someone's mind about something; a choice or judgment reached after considering options
206. meet with oppon	n.	the act of disagreeing or resisting; the state of strong disagreement
207. sce resources	adj.	not abundant or plentiful, and therefore not easy to find or obtain
208. miI amount	adj.	tiny in amount; the least possible
209. conle emergency	adj.	imaginable or possible to understand or believe in the mind
210. increase bath	n.	the amount of data that can be transmitted or processed at one time often used to describe the capacity of electronic communication or computing systems

ANSWERS: 200. abdomen, 201. individual, 202. obvious, 203. planet, 204. evolutionary, 205. decision, 206. opposition, 207. scarce, 208. minimal, 209. conceivable, 210. bandwidth

- 211. ca___r diagnosis
- 212. bird's n__t
- 213. a warm tr__l
- 214. a n t of thieves
- 215. a st e man
- 216. increase sl____ly
- 217. higher pixel de____y
- 218. series of exp____nts
- 219. a co___y of bacteria
- 220. capital-sc___e country
- 221. ma____ch figure

- n. abnormal growth of cells that can invade and destroy surrounding tissues and organs; a disease characterized by the uncontrolled growth and spread of abnormal cells
- a structure in which animals lay their eggs or give birth to their young
- a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular purpose; (verb) to lag or linger behind
- n. a structure in which animals lay their eggs or give birth to their young
- adj. free from living microorganisms,especially bacteria, fungi, and viruses;incapable of reproducing
- adv. in a small degree or extent; a little
- *n.* the quality of compactness of a substance
- n. the scientific test conducted to observe what happens and gain new knowledge
- a country or an area that is governed by a more powerful country that is often far away
- adj. not abundant or plentiful, and therefore not easy to find or obtain
- a woman who is the head of a family or social group; a woman who is the founder or dominant member of a group

ANSWERS: 211. cancer, 212. nest, 213. trail, 214. nest, 215. sterile, 216. slightly, 217. density, 218. experiment, 219. colony, 220. scarce, 221. matriarch

222. a white a_t	n.	a very small insect that lives under the ground or in a mound in highly organized groups
223. see heat	adj.	extremely serious or bad in feeling, manner, or strict and harsh; extremely strong or vigorous
224. small sace for a great cause	n.	the act of killing an animal or person or surrendering a possession as an offering to a deity; (verb) to give up something important or valuable to help another person or get or do something that seems more important
225. a comed process	adj.	involving a lot of different things or part in a way that is difficult to understand of analyze
226. basic brn function	n.	the organ inside the head that is responsible for one's movement, thought, memory, and feeling
227. military foss	n.	a large and strongly built structure, typically with high walls and a moat, used as a military defense or for protection against attackers
228. sin wafer	n.	a chemical element with the symbol Si that is a hard, brittle crystalline solid with a blue-grey metallic luster and used for the transistors and integrated circuit chips in computers
229. chaotic envnt	n.	the natural world such as air, water, an land in which humans, animals, and plants live

230. an und____ng motive

adj. significant as a cause or basis of something but not immediately apparent or stated clearly

231. ci___t breaker

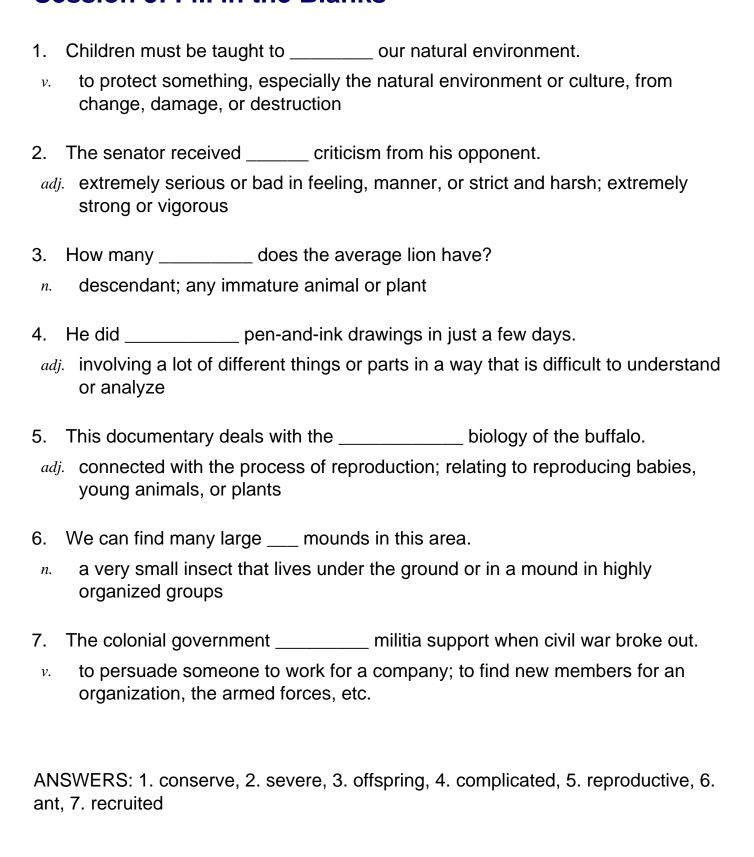
n. (in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area

232. pr___e bad behavior

v. to encourage or persuade people to like, buy, use, do, or support something; to raise someone to a higher position or rank

ANSWERS: 230. underlying, 231. circuit, 232. promote

Session 3: Fill in the Blanks



8.	Both forts were subject to attacks.
adj.	happening or done without delay or occurring shortly after something else
9. <i>n</i> .	Necessity is the mother of the creation of a new device or process resulting from study and experimentation; the act of inventing
	The air was so that my clothes felt damp. having a high amount of moisture or water vapor in the air; damp; muggy
11. <i>n</i> .	This book provides children with ideas and a for outside recreation. something that causes growth or arouses action
12. n.	Every human is responsible for taking care of the Earth's the natural world such as air, water, and land in which humans, animals, and plants live
	The country has oil and natural gas resources. present in great quantity
	She is searching for a residence. lasting for a long time without essential change
	We can evaluate the performance of an in terms of computation time. a set of rules or rigorous instructions typically used to solve a specific problem or to perform a computation
16. n.	He made a frightful in his room. a state of confusion, dirtiness, or untidiness; (verb) to fail to do something or to make something dirty or untidy
	SWERS: 8. immediate, 9. invention, 10. humid, 11. stimulus, 12. environment, 13. ndant, 14. permanent, 15. algorithm, 16. mess

32.	The party strongly disagreed with the government's proposed legislation. the act of disagreeing or resisting; the state of strong disagreement
33.	I made a at the bank to add money to my account.
n.	a sum of money or materials placed or kept in a bank, safety deposit box, or other secure places for safekeeping; a layer of rock, sand, or other material left behind by a flowing liquid or eroding force
34.	The had received a mild snowfall the previous week.
n.	a long depression on the surface of the land, which typically contains a river
35.	Eyeless fish in dark caves.
v.	to develop gradually, or to cause the development of something or someone gradually
36.	The industrial laws were passed with little to no alteration.
n.	the way two persons or groups of people feel and act toward one another
37.	This machine is too difficult to for me.
<i>v</i> .	to work in a particular way; to supervise something
38.	The government should do more to sustainable agribusiness.
v.	to encourage or persuade people to like, buy, use, do, or support something; to raise someone to a higher position or rank
39.	As an he had the right to make his own decisions and live his life as he saw fit.
n.	a single person or thing, as distinct from a group
	SWERS: 32. opposition, 33. deposit, 34. valley, 35. evolved, 36. relations, 37. erate, 38. promote, 39. individual,

48.	This examination of five problems to solve.
<i>v</i> .	to be composed or made up of
49.	His showed highly positive results.
n.	the scientific test conducted to observe what happens and gain new knowledge
50.	Public cloud computing should provide a secure against hackers.
n.	(in computing) a technological barrier designed to stop people from seeing or using the information on a computer without permission but still allow them to receive information that is sent to them
51.	The grandparents take care of their while the parents are at work.
n.	a child of someone's son or daughter
52.	Some kinds of machine learning models show an to how people learn.
n.	a comparison between similar things that have similar aspects, often used to help explain a principle or concept
53.	During farmers are incredibly busy.
n.	yields of plants in a single growing season; the period of the year when gathering occurs on a farm
54.	The new prime minister has vowed to take measures against the economic crisis.
adj	continuing to exist or develop, or currently happening
55.	The dragon is considered a of bravery.
n.	something visible that is used to represent something else
	SWERS: 48. consists, 49. experiments, 50. firewall, 51. grandchild, 52. analogy, harvest, 54. ongoing, 55. symbol

56.	The of certain chemicals activates the brain's reward system.
n.	the act of arousing interest or activity in something; the action of providing a stimulus
57.	The of severe weather prompted the city to issue an evacuation warning.
n.	a strong indication or likelihood of harm, danger, or adverse consequences; an expression of intent to inflict harm or injury on someone or something, often made as a means of coercion or intimidation
58.	My sister and I frequently books, as we love reading.
v.	to give something and receive something else in return, often with the implication that the items being traded are of equal or comparable value; (noun) the act of giving or taking something in return for something else; a place or system where goods or services can be bought, sold, or traded
59.	I don't have the to take on any new projects, as I'm already working on multiple assignments.
n.	the amount of data that can be transmitted or processed at one time often used to describe the capacity of electronic communication or computing systems
60.	Some herds have been observed to hundreds of kilometers.
v.	to make or be capable of making anything longer or broader without hurting or breaking
61.	New York is a city with a ethnic population.
adj	including numerous categories of individuals or entities; various
62.	The plant's leaves contain a deadly that can cause hallucinations and seizures.
n.	a substance that can cause illness, injury, or death when ingested, inhaled, or absorbed through the skin; something harmful, malicious, or toxic; the act of damaging or ruining a relationship; (verb) to introduce a substance into something or someone harmful and potentially deadly
	SWERS: 56. stimulation, 57. threat, 58. exchange, 59. bandwidth, 60. stretch, 61. erse, 62. poison

ab-Bu	ilder Ref from "Deborah Gordon: What ants teach us about the brain, cancer and the Internet TED Talk" (116 wo
112.	Understanding protein folding is a vital step in deciphering the code.
adj.	of or relating to genes (= parts of the DNA in cells) or the science of genes
113.	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
114.	The family enjoyed a lovely in the park on a sunny day.
n.	an outdoor meal or social gathering where food is served and eaten in nature, typically in a park, forest, or other outdoor settings
115.	It is challenging to defend every target.
adj.	imaginable or possible to understand or believe in the mind
116.	There is a lot of in the colors of flowers in the garden.
n.	the act or state of changing; a difference or change in the way something is done, made or said
ANS varia	SWERS: 112. genetic, 113. neuroscience, 114. picnic, 115. conceivable, 116.