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Vocabulary Builder Reference from...

Thomas Boothby: Meet the tardigrade, the toughest animal on Earth | TED Talk https://www.ted.com/talks/thomas_boothby_meet_the _tardigrade_the_toughest_animal_on_earth



All Words

IMPORTANT

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Session 1: Word List

survive	<i>v.</i> to live or exist despite a dangerous event or period <i>synonym</i> : endure, persist, stay
	(1) survive a blizzard, (2) survive a plane crash
	These birds can only survive in temperate climates.
creature	n. a living being, especially an animalsynonym: being, animal, organism
	(1) creature of habit, (2) artificial creature
	The deep sea creature was unlike anything the scientists
	had ever seen before.
resilient	 adj. able to withstand or recover quickly from difficult conditions synonym: robust, sturdy, tough
	(1) a hard and resilient steel, (2) resilient population
	She is a resilient person and has always bounced back from setbacks.
environment	 n. the natural world such as air, water, and land in which humans, animals, and plants live synonym: atmosphere, surroundings, climate (1) environment affairs, (2) chaotic environment

	Every human is responsible for taking care of the Earth's environment.
withstand	v. to resist the effect or impact of something <i>synonym</i> : endure, bear, resist
	 (1) withstand pressure, (2) withstand temptation The new phone is waterproof and can withstand being
	dropped in water.
radiation	 n. the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health
	synonym: dissemination, emission, irradiation
	(1) exposure to radiation, (2) electromagnetic radiation
	He tried every possible treatment, including chemotherapy
	and radiation therapy.
tardigrade	 n. a microscopic, water-dwelling animal that is known for its resilience and ability to survive extreme conditions synonym: water bear, moss piglet
	(1) tiny tardigrade, (2) tardigrade research
	Scientists have studied the resilience of the tardigrade, also
	known as a water bear.
chubby	<i>adj.</i> having a plump or rounded body shape, often used to describe children or pets
	synonym: fat, plump, corpulent
	(1) chubby cheeks, (2) chubby arms
	The chubby toddler waddled around the park, laughing and playing.
gum	<i>n</i> . a soft, sticky substance that is chewed to freshen the breath or to clean the teeth; the flesh that surrounds the teeth in the mouth
	synonym: mucilage, glue, alveolar arch
	(1) bubble gum , (2) chewing gum

I always like having a pack of **gum** to freshen my breath. the set of chemical reactions in cells or organisms that metabolism n. are necessary for life-sustaining (1) metabolism enzyme, (2) hemoglobin metabolism Better sleep leads to increased metabolism. a series of actions or operations performed to achieve a process n. 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. biochemical *adj.* relating to the chemical processes and substances that occur within living organisms synonym: molecular, biological (1) **biochemical** reaction, (2) complex **biochemical Biochemical** research is essential to understanding the complex chemical reactions in living organisms. reaction a response that reveals a person's feelings or attitude; n. (in chemistry) a process in which one or more substances are changed into others synonym: response, reply, answer (1) chemical **reaction**, (2) trigger a **reaction** There was a chemical **reaction** of the lime with the groundwater. a limitation or constraint placed on something, or the act restriction n. of limiting or constraining something synonym: limitation, constraint, control (1) nutritional **restriction**, (2) **restriction** on trade The **restriction** on travel during the pandemic made it difficult for people to see their loved ones.

anhydrobiosis	 n. a state of suspended animation or extreme desiccation in certain organisms where they can withstand prolonged periods of extreme dryness, appearing dead, and then revive when provided with water
	(1) anhydrobiosis organism, (2) anhydrobiosis in plants
	Some bacteria, yeast, and plants can enter a state of
	anhydrobiosis to endure harsh conditions.
extraordinary	<i>adj.</i> exceptional, unexpected, very unusual; surpassing the ordinary or usual
	synonym: exceptional, noteworthy, astonishing
	(1) extraordinary ability, (2) extraordinary weather
	He narrated the extraordinary story of his adventure.
bacteria	 n. single-celled or noncellular spherical or spiral or rod-shaped organisms that exist in large numbers in the air, water, and soil, and also in living and dead creatures and plants, and are often a cause of disease synonym: microorganism, microbe
	(1) pathogenic bacteria , (2) harmless bacteria
	Bacteria prevalent in hospitals are often resistant to antibiotics.
archaea	 n. a group of single-celled microorganisms distinguished from bacteria by their unique cell wall structure and biochemical characteristics, which are found in extreme environments such as hot springs and salt flats synonym: microbe, microorganism
	(1) archaea microorganism, (2) thermophile archaea
	The study of archaea is important for understanding the
	origins of life on Earth
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.
scarce	<i>adj.</i> 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.
synthesize	 v. to combine a substance to make a more complex product or compound synonym: incorporate, amalgamate
	(1) synthesize molecules, (2) synthesize information
	The spider can synthesize multiple different silk proteins.
molecule	 a group of two or more atoms held together by attractive forces known as chemical bonds synonym: particle, element, atom
	(1) small molecules , (2) molecule behavior
	The shape of the DNA molecule is a double helix.
replace	v. to take the place of somethingsynonym: substitute, supersede, displace
	(1) replace one word with another, (2) replace a phone
	Eventually, the new design will replace all older models.
matrix	 n. a rectangular array of numbers, symbols, or expressions, arranged in rows and columns and often enclosed in brackets; an enclosure within which something originates or develops synonym: grid, cast, table
	(1) the matrix of Western civilization, (2) matrix multiplication
	The matrix of numbers on the spreadsheet allowed the

accountant to track the company's profits and losses easily. one of several parts that combines with others to form component n. something bigger synonym: element, part, factor (1) key **component**, (2) spare **components** for cars The researchers try to discover a common **component** in all types of successful organizations. *adj.* able to notice slight changes, signals, or influences; able sensitive 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. a molecule made up of a long chain of amino acids, protein n. which is essential for the structure and function of the body's tissues (1) stress **protein**, (2) **protein** synthesis The body needs a certain amount of **protein** to build and repair tissues. a soft, thin layer that forms animal or vegetable tissue membrane n. synonym: tissue layer (1) cell **membranes**, (2) nuclear **membrane** Loud noises might harm the fragile ear **membrane**. n. a piece of equipment or hole for catching animals or trap 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. to open up or spread out something that is folded or unfold v. rolled up; to reveal or disclose something that was

	previously hidden or unknown synonym: open, spread out, expose
	(1) unfold the story, (2) unfold the stroller
	The mystery unfolded as the detectives gathered more clues.
fuse	<i>n.</i> a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat
	<pre>synonym: (verb) melt, (verb) blend</pre>
	(1) fuse blows, (2) fuse with one another
	He has a short fuse .
hydrate	 v. to add water or moisture to something; to drink enough fluids to maintain proper moisture; (noun) any compound that contains water of crystallization synonym: moisturize, water, rehydrate
	(1) hydrate my skin, (2) acid hydrate
	She drank water to hydrate her body.
dissolve	 v. to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss synonym: disband, disappear, liquefy
	(1) dissolve the sugar, (2) officially dissolved the marriage
	The political party dissolved after much internal fighting.
damage	 v. to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity synonym: harm, impair, injure
	(1) damage a relationship, (2) damage assessment
	During the surgery, the doctor had to be extremely cautious

functional	<i>adj.</i> designed for or capable of a particular activity, purpose, or task; practical or ready for use or service<i>synonym</i>: applicable, practical, usable
	(1) field of functional medicine, (2) functional deafness
	The mobile phone was still functional even after being dropped.
tolerate	 v. to allow something to exist or happen, even if it is disliked or opposed
	synonym: endure, put up with, bear
	(1) tolerate his disrespectful behavior, (2) tolerate ambiguity
	I can't tolerate spicy food, and it always gives me heartburn
extreme	adj. very great in amount or degree
	synonym: farthermost, outermost, fierce
	(1) extreme sports, (2) extreme weather events
	Solar gravity creates extreme pressures and temperatures.
vacuum	 <i>n</i>. a space empty of matter; a device or tool used for cleaning or removing debris by creating suction <i>synonym</i>: void, emptiness, gap
	(1) vacuum cleaner, (2) vacuum packing
	Please use the vacuum to clean up the mess on the floor.
erroneous	<i>adj.</i> containing errors; mistaken or incorrect; based on faulty reasoning or information
	synonym: incorrect, mistaken, fallacious
	(1) erroneous information, (2) erroneous decision
	The report contained several erroneous statements that
	needed to be corrected.
speculate	 v. to form a theory or conjecture or guess about a subject without solid evidence synonym: assume, conjecture, infer
	(1) speculate about the reason, (2) speculate on the
	(1) speculate about the reason, (2) speculate on the

	outcome He speculated that this investment would lead to success.
extraterrestrial	 adj. relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth synonym: alien, outer, otherworldly
	(1) extraterrestrial planet, (2) extraterrestrial intelligence
	Scientists are constantly searching for signs of extraterrestrial life in the universe.
origin	<i>n.</i> the first existence or beginning of something <i>synonym</i> : root, source, ancestor
	(1) origin of information, (2) racial origin
	There are various hypotheses concerning the origin of life.
firm	 adj. resolute or unwavering in decision-making or action; strong or secure in structure, make, or composition; reliable, trustworthy, or dependable; (noun) a business or company
	synonym: stable, secure, steadfast
	(1) firm grip, (2) accounting firm
	The firm deadline for submitting the project is tomorrow, so we need to work efficiently to finish on time.
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.
evolution	<i>n.</i> a gradual process of transformation of living things <i>synonym</i> : elaboration, expansion, transition
	(1) human evolution, (2) evolution theory
	They study the evolution of the universe.

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 .
hardy	 adj. able to withstand harsh conditions or difficult circumstances; robust, sturdy, or resilient synonym: tough, sturdy, resilient
	(1) hardy plants, (2) hardy breed
	The hardy construction workers worked tirelessly in the
	scorching heat to complete the project.
continent	 n. one of the earth's large landmasses; (adjective) abstaining from your feelings, especially your desire to have sex
	synonym: landmass, (adjective) chaste, (adjective) pure
	(1) the inland of a continent , (2) continent urinary diversion
	Flight across the continent was a daring adventure in its day.
diverse	<i>adj.</i> 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.
biome	 n. a major ecological community characterized by particular plant and animal species adapted to a specific climate and geographic region, such as desert, tundra, or rainforest synonym: ecosystem, habitat, biota
	(1) biome conservation, (2) marine biome
	The rainforest is one of the most diverse biomes on the
	planet.

desert	 n. 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 .
rainforest	n. a forest rich in biodiversity that is generally found in tropical settings with heavy annual rainfall
	(1) rainforest destruction, (2) tropical rainforest
	The destruction of the rainforest is a ticking time bomb for
	the Earth.
peak	 n. the point to which something or someone is at its strongest, best, or most successful; the pointed top of a mountain
	synonym: summit, vertex, apex
	(1) at peak hour, (2) the peak current in the circuit
	This measurement aims to reduce traffic at peak periods.
ordinary	 adj. not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree synonym: mundane, prosaic, average
	(1) an ordinary school, (2) ordinary annual revenue
	The ordinary session of the Diet opened.
moss	<i>n.</i> a small, soft plant that grows in a low, compact layer, often on the ground or on rocks
	synonym: plant, foliage, greenery
	(1) green moss , (2) moss garden
	Moss grows in damp, shaded areas and is often found on the forest floor.
lichen	n. a composite organism consisting of a symbiotic relationship between a fungus and an alga or cyanobacterium
	synonym: fungus, plant, symbiotic organism
	(1) lichen fungus, (2) lichen families
	The lichen on the old tree bark was thick and lush, a sign of

a healthy ecosystem.

patience	 n. the ability to remain calm and composed in the face of adversity, delay, or frustration; the capacity to tolerate or endure difficult or unpleasant situations without becoming upset or angry synonym: forbearance, endurance, tolerance
	(1) test my patience , (2) show patience
	Healing a broken heart requires patience, as it takes time to
	heal.
microscope	 <i>n</i>. an instrument used to see objects or substances that are too small to be seen with the naked eye <i>synonym</i>: lens, magnifier, eyepiece
	(1) microscope slide, (2) electron microscope
	I used an optical microscope to observe the small organisms in the water sample.
technique	n. a particular way or art of doing something that needs skill
	synonym: approach, procedure, strategy
	(1) a technique in martial arts, (2) the technique applied to construction
	Jockey's superior technique brought him victory.
stabilize	 v. to become or cause to become steady or unlikely to give way
	synonym: brace, steady, secure
	(1) stabilize prices, (2) stabilize blood sugar levels
	The raising of interest rates stabilizes the inflation rate.
biology	<i>n.</i> the scientific study of life and the natural processes of living things
	(1) evolutionary biology , (2) cell and molecular biology
	In junior high school, we had to dissect a frog in biology class.

vaccine	 n. a substance that is put into the body and protects them from disease by causing them to produce antibodies (= proteins that attack harmful bacteria, viruses, etc.) synonym: Vaccinum
	 (1) development of vaccines, (2) an oral vaccine The mRNA vaccine was approved in less than a year because it did not contain the fragments of the target virus.
develop	 v. to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
	synonym: evolve, progress, advance
	(1) develop a strategy, (2) develop a skill
	We must develop a new system to streamline our workflow
	and increase efficiency.
tolerant	<i>adj.</i> accepting different views, beliefs, or practices without judgment or interference
	synonym: forgiving, lenient, permissive
	(1) a tolerant teacher, (2) tolerant of his failure
	She was known for her tolerant attitude toward different cultures.
crop	<i>n.</i> a plant that is cultivated in large amounts, particularly for food
	synonym: output, produce, product
	(1) crop field, (2) crop herbicide
	Sow early for an early crop .
climate	<i>n.</i> the weather in a particular location averaged over some long period
	synonym: atmosphere, weather, environment
	(1) a cold climate , (2) effects of climate change
	Climate and weather have an impact on every part of our lifestyles.

prolong	 v. to extend the duration or length of something, particularly a period of time or an event synonym: extend, lengthen, stretch
	(1) prolong the agony, (2) measures to prolong the lifespan
	We need to prolong the meeting for another hour to discuss all the issues.
exposure	 n. the state of being in a particular situation or place where there is no protection from or guarantee to something harmful; the disclosure of something secret synonym: vulnerability, disclosure, uncovering
	(1) a southern exposure , (2) the exposure of a fraud
	The long exposure to the air tarnished the antique tableware
clue	 an object, a piece of evidence, or some information that helps someone to find the answer to a problem, question, or mystery synonym: hint, indication, inkling
	(1) a clue about the crime, (2) a clue to the diagnosis
	The police couldn't find a clue to her whereabouts.
safeguard	 v. to protect something or someone from harm, damage, or loss
	synonym: protect, assure, conserve
	(1) safeguard my property, (2) safeguard environmental quality
	This measure will safeguard people against terrorism.
astronaut	 <i>n</i>. a person trained by a space agency to travel outside the Earth's atmosphere <i>synonym</i>: spaceman, cosmonaut
	(1) astronaut mission, (2) astronaut in training
	The shuttle astronaut trained for months before embarking on the space mission.

critic	 n. someone who expresses opinions about the quality of books, music, etc. synonym: pundit, analyst, attacker
	(1) art critic, (2) severe critic
	Advocates for legal reform hear less harsh words from their
	critics.
planet	 <i>n</i>. any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star <i>synonym</i>: earth, world, globe
	(1) planet like the Earth, (2) save the planet
	Mercury is the closest planet to the sun.
	Mercury is the closest planet to the suit.
hospitable	<i>adj.</i> friendly and generous to visitors or guests <i>synonym</i> : benevolent, generous, gracious
	(1) hospitable environment, (2) a hospitable welcome
	He is a good-natured and hospitable man.

Session 2: Spelling

1.	vam cleaner	n.	a space empty of matter; a device or tool used for cleaning or removing debris by creating suction
2.	cell menes	n.	a soft, thin layer that forms animal or vegetable tissue
3.	a cl of smoke	ν.	to form or make something form into a curved or spiral shape; (noun) a round shape formed by a series of concentric circles
4.	dae assessment	v.	to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity
5.	the max of Western civilization	n.	a rectangular array of numbers, symbols, or expressions, arranged in rows and columns and often enclosed in brackets; an enclosure within which something originates or develops
6.	evolutionary biy	n.	the scientific study of life and the natural processes of living things
7.	acid hye	v.	to add water or moisture to something; to drink enough fluids to maintain proper moisture; (noun) any compound that contains water of crystallization

ANSWERS: 1. vacuum, 2. membrane, 3. curl, 4. damage, 5. matrix, 6. biology, 7. hydrate

8.	und the story	v.	to open up or spread out something that is folded or rolled up; to reveal or disclose something that was previously hidden or unknown
9.	hemoglobin metsm	n.	the set of chemical reactions in cells or organisms that are necessary for life-sustaining
10.	lin fungus	n.	a composite organism consisting of a symbiotic relationship between a fungus and an alga or cyanobacterium
11.	vam packing	n.	a space empty of matter; a device or tool used for cleaning or removing debris by creating suction
12.	art crc	n.	someone who expresses opinions about the quality of books, music, etc.
13.	lin families	n.	a composite organism consisting of a symbiotic relationship between a fungus and an alga or cyanobacterium
14.	the exre of a fraud	n.	the state of being in a particular situation or place where there is no protection from or guarantee to something harmful; the disclosure of something secret
15.	a person of die talents	adj.	including numerous categories of individuals or entities; various
16.	sue a blizzard	<i>v</i> .	to live or exist despite a dangerous event or period
17.	hosle environment	adj.	friendly and generous to visitors or guests

ANSWERS: 8. unfold, 9. metabolism, 10. lichen, 11. vacuum, 12. critic, 13. lichen, 14. exposure, 15. diverse, 16. survive, 17. hospitable

18. tiny tarde	n.	a microscopic, water-dwelling animal that is known for its resilience and ability to survive extreme conditions
19. field of funal medicine	adj.	designed for or capable of a particular activity, purpose, or task; practical or ready for use or service
20. ara microorganism	n.	a group of single-celled microorganisms distinguished from bacteria by their unique cell wall structure and biochemical characteristics, which are found in extreme environments such as hot springs and salt flats
21. chaotic envnt	n.	the natural world such as air, water, and land in which humans, animals, and plants live
22. chemical reon	n.	a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others
23. raist destruction	n.	a forest rich in biodiversity that is generally found in tropical settings with heavy annual rainfall
24. the great diry 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
25. 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

ANSWERS: 18. tardigrade, 19. functional, 20. archaea, 21. environment, 22. reaction, 23. rainforest, 24. discovery, 25. planet

26.	dep a skill	v.	to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
27.	wind temptation	v.	to resist the effect or impact of something
28.	metsm enzyme	n.	the set of chemical reactions in cells or organisms that are necessary for life-sustaining
29.	decision-making prs	n.	a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
30.	officially dived the marriage	v.	to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
31.	hay breed	adj.	able to withstand harsh conditions or difficult circumstances; robust, sturdy, or resilient
32.	ree one word with another	<i>v</i> .	to take the place of something
33.	accounting fm	adj.	resolute or unwavering in decision-making or action; strong or secure in structure, make, or composition; reliable, trustworthy, or dependable; (noun) a business or company

ANSWERS: 26. develop, 27. withstand, 28. metabolism, 29. process, 30. dissolve, 31. hardy, 32. replace, 33. firm

34.	max multiplication	n.	a rectangular array of numbers, symbols, or expressions, arranged in rows and columns and often enclosed in brackets; an enclosure within which something originates or develops
35.	thermophile ara	n.	a group of single-celled microorganisms distinguished from bacteria by their unique cell wall structure and biochemical characteristics, which are found in extreme environments such as hot springs and salt flats
36.	marine bie	n.	a major ecological community characterized by particular plant and animal species adapted to a specific climate and geographic region, such as desert, tundra, or rainforest
37.	baby with seve 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
38.	die backgrounds	adj.	including numerous categories of individuals or entities; various
39.	an oral vae	n.	a substance that is put into the body and protects them from disease by causing them to produce antibodies (= proteins that attack harmful bacteria, viruses, etc.)
40.	show pace	n.	the ability to remain calm and composed in the face of adversity, delay, or frustration; the capacity to tolerate or endure difficult or unpleasant situations without becoming upset or angry

ANSWERS: 34. matrix, 35. archaea, 36. biome, 37. sensitive, 38. diverse, 39. vaccine, 40. patience

41. a hard and rent steel	adj.	able to withstand or recover quickly from difficult conditions
42. 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
43. development of vaes	n.	a substance that is put into the body and protects them from disease by causing them to produce antibodies (= proteins that attack harmful bacteria, viruses, etc.)
44. capital-sce country	adj.	not abundant or plentiful, and therefore not easy to find or obtain
45. racial orn	n.	the first existence or beginning of something
46. pathogenic baia	n.	single-celled or noncellular spherical or spiral or rod-shaped organisms that exist in large numbers in the air, water, and soil, and also in living and dead creatures and plants, and are often a cause of disease
47. key cont	n.	one of several parts that combines with others to form something bigger
48. extial intelligence	adj.	relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth
49. trigger a reon	n.	a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others

ANSWERS: 41. resilient, 42. planet, 43. vaccine, 44. scarce, 45. origin, 46. bacteria, 47. component, 48. extraterrestrial, 49. reaction

50. mole behavior	n.	a group of two or more atoms held together by attractive forces known as chemical bonds
51. measures to prg the lifespan	ν.	to extend the duration or length of something, particularly a period of time or an event
52. a hosle welcome	adj.	friendly and generous to visitors or guests
53. micpe slide	n.	an instrument used to see objects or substances that are too small to be seen with the naked eye
54. tarde research	n.	a microscopic, water-dwelling animal that is known for its resilience and ability to survive extreme conditions
55. cp field	n.	a plant that is cultivated in large amounts, particularly for food
56. orry annual revenue	adj.	not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree
57. envnt affairs	n.	the natural world such as air, water, and land in which humans, animals, and plants live
58. cont urinary diversion	n.	one of the earth's large landmasses; (adjective) abstaining from your feelings, especially your desire to have sex
59. a scientific diry	n.	the act or process of finding information, a place, or an object, or learning about something that was previously not known

ANSWERS: 50. molecule, 51. prolong, 52. hospitable, 53. microscope, 54. tardigrade, 55. crop, 56. ordinary, 57. environment, 58. continent, 59. discovery

60. a ce about the crime	n.	an object, a piece of evidence, or some information that helps someone to find the answer to a problem, question, or mystery
61. evon theory	n.	a gradual process of transformation of living things
62. set a tp	n.	a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping
63. asut in training	n.	a person trained by a space agency to travel outside the Earth's atmosphere
64. ms garden	n.	a small, soft plant that grows in a low, compact layer, often on the ground or on rocks
65. eve over the past decade	v.	to develop gradually, or to cause the development of something or someone gradually
66. the teue applied to construction	n.	a particular way or art of doing something that needs skill
67. spare conts for cars	n.	one of several parts that combines with others to form something bigger
68. bie conservation	n.	a major ecological community characterized by particular plant and animal species adapted to a specific climate and geographic region, such as desert, tundra, or rainforest

ANSWERS: 60. clue, 61. evolution, 62. trap, 63. astronaut, 64. moss, 65. evolve, 66. technique, 67. component, 68. biome, 69. extreme

70. tropical raist	n.	a forest rich in biodiversity that is generally found in tropical settings with heavy annual rainfall
71. sce resources	adj.	not abundant or plentiful, and therefore not easy to find or obtain
72. und the stroller	v.	to open up or spread out something that is folded or rolled up; to reveal or disclose something that was previously hidden or unknown
73. a cold cle	n.	the weather in a particular location averaged over some long period
74. det basin	n.	arid land with little or no vegetation often covered with sand or rocks
75. a southern exre	n.	the state of being in a particular situation or place where there is no protection from or guarantee to something harmful; the disclosure of something secret
76. anhsis organism	n.	a state of suspended animation or extreme desiccation in certain organisms where they can withstand prolonged periods of extreme dryness, appearing dead, and then revive when provided with water
77. crre of habit	n.	a living being, especially an animal
78. eve	v.	to develop gradually, or to cause the development of something or someone gradually
79. synze molecules	<i>v</i> .	to combine a substance to make a more complex product or compound

ANSWERS: 70. rainforest, 71. scarce, 72. unfold, 73. climate, 74. desert, 75. exposure, 76. anhydrobiosis, 77. creature, 78. evolve, 79. synthesize

80. stze prices	v.	to become or cause to become steady or unlikely to give way
81. complex bioal	adj.	relating to the chemical processes and substances that occur within living organisms
82. the inland of a cont	n.	one of the earth's large landmasses; (adjective) abstaining from your feelings, especially your desire to have sex
83. extary weather	adj.	exceptional, unexpected, very unusual; surpassing the ordinary or usual
84. cp herbicide	n.	a plant that is cultivated in large amounts, particularly for food
85. oasis in the det	n.	arid land with little or no vegetation often covered with sand or rocks
86. effects of cle change	n.	the weather in a particular location averaged over some long period
87. harmless baia	n.	single-celled or noncellular spherical or spiral or rod-shaped organisms that exist in large numbers in the air, water, and soil, and also in living and dead creatures and plants, and are often a cause of disease
88. human evon	n.	a gradual process of transformation of living things
89. electromagnetic raon	n.	the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health

ANSWERS: 80. stabilize, 81. biochemical, 82. continent, 83. extraordinary, 84. crop, 85. desert, 86. climate, 87. bacteria, 88. evolution, 89. radiation

90.	fe blows	n.	a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat
91.	an orry school	adj.	not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree
92.	a ce to the diagnosis	n.	an object, a piece of evidence, or some information that helps someone to find the answer to a problem, question, or mystery
93.	cl 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
94.	dep a strategy	v.	to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
95.	prg the agony	v.	to extend the duration or length of something, particularly a period of time or an event
96.	exposure to raon	n.	the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health
97.	tont of his failure	adj.	accepting different views, beliefs, or practices without judgment or interference

ANSWERS: 90. fuse, 91. ordinary, 92. clue, 93. curl, 94. develop, 95. prolong, 96. radiation, 97. tolerant

98. stress prn	n.	a molecule made up of a long chain of amino acids, which is essential for the structure and function of the body's tissues
99. prn synthesis	n.	a molecule made up of a long chain of amino acids, which is essential for the structure and function of the body's tissues
100. artificial crre	n.	a living being, especially an animal
101. fm grip	adj.	resolute or unwavering in decision-making or action; strong or secure in structure, make, or composition; reliable, trustworthy, or dependable; (noun) a business or company
102. spte on the outcome	<i>v</i> .	to form a theory or conjecture or guess about a subject without solid evidence
103. tp 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
104. spte about the reason	<i>v</i> .	to form a theory or conjecture or guess about a subject without solid evidence
105. chewing g_m	n.	a soft, sticky substance that is chewed to freshen the breath or to clean the teeth; the flesh that surrounds the teeth in the mouth
106. hye my skin	v.	to add water or moisture to something; to drink enough fluids to maintain proper moisture; (noun) any compound that contains water of crystallization

ANSWERS: 98. protein, 99. protein, 100. creature, 101. firm, 102. speculate, 103. trap, 104. speculate, 105. gum, 106. hydrate

107. wind pressure	v.	to resist the effect or impact of something
108. erus decision	adj.	containing errors; mistaken or incorrect; based on faulty reasoning or information
109. bubble g_m	n.	a soft, sticky substance that is chewed to freshen the breath or to clean the teeth; the flesh that surrounds the teeth in the mouth
110. seve 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
111. sard my property	V.	to protect something or someone from harm, damage, or loss
112. the pk current in the circuit	n.	the point to which something or someone is at its strongest, best, or most successful; the pointed top of a mountain
113. erus information	adj.	containing errors; mistaken or incorrect; based on faulty reasoning or information
114. chy cheeks	adj.	having a plump or rounded body shape, often used to describe children or pets
115. chy arms	adj.	having a plump or rounded body shape, often used to describe children or pets
116. funal deafness	adj.	designed for or capable of a particular activity, purpose, or task; practical or ready for use or service

ANSWERS: 107. withstand, 108. erroneous, 109. gum, 110. sensitive, 111. safeguard, 112. peak, 113. erroneous, 114. chubby, 115. chubby, 116. functional

117. dive the sugar	v.	to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
118. extial planet	adj.	relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth
119. exe sports	adj.	very great in amount or degree
120. a teue in martial arts	n.	a particular way or art of doing something that needs skill
121. anhsis in plants	n.	a state of suspended animation or extreme desiccation in certain organisms where they can withstand prolonged periods of extreme dryness, appearing dead, and then revive when provided with water
122. at pk hour	n.	the point to which something or someone is at its strongest, best, or most successful; the pointed top of a mountain
123. sard environmental quality	v.	to protect something or someone from harm, damage, or loss
124. dae a relationship	v.	to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity

ANSWERS: 117. dissolve, 118. extraterrestrial, 119. extreme, 120. technique, 121. anhydrobiosis, 122. peak, 123. safeguard, 124. damage

125. hay plants	adj.	able to withstand harsh conditions or difficult circumstances; robust, sturdy, or resilient
126. asut mission	n.	a person trained by a space agency to travel outside the Earth's atmosphere
127. cell and molecular biy	n.	the scientific study of life and the natural processes of living things
128. stze blood sugar levels	v.	to become or cause to become steady or unlikely to give way
129. severe crc	n.	someone who expresses opinions about the quality of books, music, etc.
130. green ms	n.	a small, soft plant that grows in a low, compact layer, often on the ground or on rocks
131. rent population	adj.	able to withstand or recover quickly from difficult conditions
132. synze information	v.	to combine a substance to make a more complex product or compound
133. reson on trade	n.	a limitation or constraint placed on something, or the act of limiting or constraining something
134. bioal reaction	adj.	relating to the chemical processes and substances that occur within living organisms
135. nuclear mene	n.	a soft, thin layer that forms animal or vegetable tissue
136. small moles	n.	a group of two or more atoms held together by attractive forces known as chemical bonds

ANSWERS: 125. hardy, 126. astronaut, 127. biology, 128. stabilize, 129. critic, 130. moss, 131. resilient, 132. synthesize, 133. restriction, 134. biochemical, 135. membrane, 136. molecule

137. electron micpe	n.	an instrument used to see objects or substances that are too small to be seen with the naked eye
138. tote ambiguity	v.	to allow something to exist or happen, even if it is disliked or opposed
139. prs 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
140. a tont teacher	adj.	accepting different views, beliefs, or practices without judgment or interference
141. ree a phone	ν.	to take the place of something
142. orn of information	n.	the first existence or beginning of something
143. test my pace	n.	the ability to remain calm and composed in the face of adversity, delay, or frustration; the capacity to tolerate or endure difficult or unpleasant situations without becoming upset or angry
144. nutritional reson	n.	a limitation or constraint placed on something, or the act of limiting or constraining something
145. sue a plane crash	v.	to live or exist despite a dangerous event or period

ANSWERS: 137. microscope, 138. tolerate, 139. process, 140. tolerant, 141. replace, 142. origin, 143. patience, 144. restriction, 145. survive

146. tote his disrespectful behavior	v.	to allow something to exist or happen, even if it is disliked or opposed
147. extary ability	adj.	exceptional, unexpected, very unusual; surpassing the ordinary or usual
148. fe with one another	n.	a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat

ANSWERS: 146. tolerate, 147. extraordinary, 148. fuse

Session 3: Fill in the Blanks

- 1. The _____ on the old tree bark was thick and lush, a sign of a healthy ecosystem.
- *n*. a composite organism consisting of a symbiotic relationship between a fungus and an alga or cyanobacterium
- 2. The shape of the DNA _____ is a double helix.
- *n.* a group of two or more atoms held together by attractive forces known as chemical bonds
- 3. The long ______ to the air tarnished the antique tableware.
- *n.* the state of being in a particular situation or place where there is no protection from or guarantee to something harmful; the disclosure of something secret
- 4. The mobile phone was still ______ even after being dropped.
- *adj.* designed for or capable of a particular activity, purpose, or task; practical or ready for use or service
- 5. The deep sea _____ was unlike anything the scientists had ever seen before.
- *n.* a living being, especially an animal
- 6. _____ and weather have an impact on every part of our lifestyles.
- *n.* the weather in a particular location averaged over some long period
- 7. He has a short _____.
- *n.* a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat

ANSWERS: 1. lichen, 2. molecule, 3. exposure, 4. functional, 5. creature, 6. Climate, 7. fuse

- 8. He ______ that this investment would lead to success.
- *v.* to form a theory or conjecture or guess about a subject without solid evidence
- 9. During the surgery, the doctor had to be extremely cautious not to _____ a blood vessel.
- v. to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity
- 10. The spider can _____ multiple different silk proteins.
- *v.* to combine a substance to make a more complex product or compound
- 11. _____ prevalent in hospitals are often resistant to antibiotics.
- *n.* single-celled or noncellular spherical or spiral or rod-shaped organisms that exist in large numbers in the air, water, and soil, and also in living and dead creatures and plants, and are often a cause of disease
- 12. The study of ______ is important for understanding the origins of life on Earth
- *n.* a group of single-celled microorganisms distinguished from bacteria by their unique cell wall structure and biochemical characteristics, which are found in extreme environments such as hot springs and salt flats
- 13. They study the _____ of the universe.
- *n.* a gradual process of transformation of living things
- 14. The _____ construction workers worked tirelessly in the scorching heat to complete the project.
- *adj.* able to withstand harsh conditions or difficult circumstances; robust, sturdy, or resilient

ANSWERS: 8. speculated, 9. damage, 10. synthesize, 11. Bacteria, 12. archaea, 13. evolution, 14. hardy

- 15. The body needs a certain amount of ______ to build and repair tissues.
- *n.* a molecule made up of a long chain of amino acids, which is essential for the structure and function of the body's tissues
- 16. We must ______ a new system to streamline our workflow and increase efficiency.
- v. to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
- 17. Eventually, the new design will _____ all older models.
- *v*. to take the place of something
- 18. Fresh water is becoming increasingly _____ in many parts of the world.
- adj. not abundant or plentiful, and therefore not easy to find or obtain
- 19. Every human is responsible for taking care of the Earth's _____.
- *n.* the natural world such as air, water, and land in which humans, animals, and plants live
- 20. Scientists are constantly searching for signs of ______ life in the universe.
- *adj.* relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth
- 21. Mercury is the closest _____ to the sun.
 - *n.* any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star

ANSWERS: 15. protein, 16. develop, 17. replace, 18. scarce, 19. environment, 20. extraterrestrial, 21. planet

- 22. 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
- 23. The _____ toddler waddled around the park, laughing and playing.
- *adj.* having a plump or rounded body shape, often used to describe children or pets
- 24. The ______ of numbers on the spreadsheet allowed the accountant to track the company's profits and losses easily.
- *n.* a rectangular array of numbers, symbols, or expressions, arranged in rows and columns and often enclosed in brackets; an enclosure within which something originates or develops
- 25. This region is predominantly _____.
- *n.* arid land with little or no vegetation often covered with sand or rocks
- 26. 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
- 27. The political party ______ after much internal fighting.
 - v. to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
- 28. Jockey's superior _____ brought him victory.
- *n.* a particular way or art of doing something that needs skill
- 29. Sow early for an early _____.
- *n.* a plant that is cultivated in large amounts, particularly for food

ANSWERS: 22. process, 23. chubby, 24. matrix, 25. desert, 26. curled, 27. dissolved, 28. technique, 29. crop

- 30. We need to ______ the meeting for another hour to discuss all the issues.
- v. to extend the duration or length of something, particularly a period of time or an event
- 31. The new phone is waterproof and can ______ being dropped in water.
- v. to resist the effect or impact of something
- 32. I can't ______ spicy food, and it always gives me heartburn
- *v.* to allow something to exist or happen, even if it is disliked or opposed
- 33. New York is a city with a _____ ethnic population.
- adj. including numerous categories of individuals or entities; various
- 34. _____ research is essential to understanding the complex chemical reactions in living organisms.
- *adj.* relating to the chemical processes and substances that occur within living organisms
- 35. Scientists have studied the resilience of the ______ also known as a water bear.
 - *n.* a microscopic, water-dwelling animal that is known for its resilience and ability to survive extreme conditions
- 36. The report contained several ______ statements that needed to be corrected.
- *adj.* containing errors; mistaken or incorrect; based on faulty reasoning or information
- 37. The mystery ______ as the detectives gathered more clues.
 - *v.* to open up or spread out something that is folded or rolled up; to reveal or disclose something that was previously hidden or unknown

ANSWERS: 30. prolong, 31. withstand, 32. tolerate, 33. diverse, 34. Biochemical, 35. tardigrade, 36. erroneous, 37. unfolded

- 38. Some bacteria, yeast, and plants can enter a state of ______ to endure harsh conditions.
- *n.* a state of suspended animation or extreme desiccation in certain organisms where they can withstand prolonged periods of extreme dryness, appearing dead, and then revive when provided with water
- 39. I always like having a pack of ____ to freshen my breath.
- *n.* a soft, sticky substance that is chewed to freshen the breath or to clean the teeth; the flesh that surrounds the teeth in the mouth
- 40. The researchers try to discover a common _____ in all types of successful organizations.
- *n.* one of several parts that combines with others to form something bigger
- 41. 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
- 42. The shuttle ______ trained for months before embarking on the space mission.
- *n.* a person trained by a space agency to travel outside the Earth's atmosphere
- 43. 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
- 44. Eyeless fish _____ in dark caves.
 - *v.* to develop gradually, or to cause the development of something or someone gradually

ANSWERS: 38. anhydrobiosis, 39. gum, 40. component, 41. trap, 42. astronaut, 43. sensitive, 44. evolved

- 45. He narrated the ______ story of his adventure.
- adj. exceptional, unexpected, very unusual; surpassing the ordinary or usual
- 46. This measurement aims to reduce traffic at _____ periods.
- *n.* the point to which something or someone is at its strongest, best, or most successful; the pointed top of a mountain
- 47. The _____ deadline for submitting the project is tomorrow, so we need to work efficiently to finish on time.
- *adj.* resolute or unwavering in decision-making or action; strong or secure in structure, make, or composition; reliable, trustworthy, or dependable; (noun) a business or company
- 48. Advocates for legal reform hear less harsh words from their _____.
- *n.* someone who expresses opinions about the quality of books, music, etc.
- 49. There are various hypotheses concerning the _____ of life.
- *n.* the first existence or beginning of something
- 50. Loud noises might harm the fragile ear _____.
- *n.* a soft, thin layer that forms animal or vegetable tissue
- 51. The ______ session of the Diet opened.
- *adj.* not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree
- 52. The raising of interest rates ______ the inflation rate.
- *v.* to become or cause to become steady or unlikely to give way

ANSWERS: 45. extraordinary, 46. peak, 47. firm, 48. critics, 49. origin, 50. membrane, 51. ordinary, 52. stabilizes

- 53. Flight across the _____ was a daring adventure in its day.
- *n.* one of the earth's large landmasses; (adjective) abstaining from your feelings, especially your desire to have sex
- 54. Better sleep leads to increased _____.
- *n.* the set of chemical reactions in cells or organisms that are necessary for life-sustaining
- 55. He tried every possible treatment, including chemotherapy and ______ therapy.
- *n.* the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health
- 56. The ______ on travel during the pandemic made it difficult for people to see their loved ones.
- *n.* a limitation or constraint placed on something, or the act of limiting or constraining something
- 57. _____ grows in damp, shaded areas and is often found on the forest floor.
- *n.* a small, soft plant that grows in a low, compact layer, often on the ground or on rocks
- 58. He is a good-natured and _____ man.
- adj. friendly and generous to visitors or guests
- 59. Please use the _____ to clean up the mess on the floor.
- *n.* a space empty of matter; a device or tool used for cleaning or removing debris by creating suction
- 60. I used an optical ______ to observe the small organisms in the water sample.
- *n*. an instrument used to see objects or substances that are too small to be seen with the naked eye

ANSWERS: 53. continent, 54. metabolism, 55. radiation, 56. restriction, 57. Moss, 58. hospitable, 59. vacuum, 60. microscope

- 61. Solar gravity creates _____ pressures and temperatures.
- adj. very great in amount or degree
- 62. These birds can only _____ in temperate climates.
- *v.* to live or exist despite a dangerous event or period
- 63. In junior high school, we had to dissect a frog in _____ class.
- *n.* the scientific study of life and the natural processes of living things
- 64. 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
- 65. The destruction of the ______ is a ticking time bomb for the Earth.
 - *n.* a forest rich in biodiversity that is generally found in tropical settings with heavy annual rainfall
- 66. She drank water to _____ her body.
- *v.* to add water or moisture to something; to drink enough fluids to maintain proper moisture; (noun) any compound that contains water of crystallization
- 67. The mRNA ______ was approved in less than a year because it did not contain the fragments of the target virus.
 - *n.* a substance that is put into the body and protects them from disease by causing them to produce antibodies (= proteins that attack harmful bacteria, viruses, etc.)
- 68. The rainforest is one of the most diverse _____ on the planet.
 - *n.* a major ecological community characterized by particular plant and animal species adapted to a specific climate and geographic region, such as desert, tundra, or rainforest

ANSWERS: 61. extreme, 62. survive, 63. biology, 64. discovery, 65. rainforest, 66. hydrate, 67. vaccine, 68. biomes

- 69. She is a ______ person and has always bounced back from setbacks.
- adj. able to withstand or recover quickly from difficult conditions
- 70. She was known for her ______ attitude toward different cultures.
- adj. accepting different views, beliefs, or practices without judgment or interference
- 71. There was a chemical ______ of the lime with the groundwater.
- *n.* a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others
- 72. Healing a broken heart requires _____ as it takes time to heal.
- *n.* the ability to remain calm and composed in the face of adversity, delay, or frustration; the capacity to tolerate or endure difficult or unpleasant situations without becoming upset or angry
- 73. The police couldn't find a _____ to her whereabouts.
- *n.* an object, a piece of evidence, or some information that helps someone to find the answer to a problem, question, or mystery
- 74. This measure will ______ people against terrorism.
- *v.* to protect something or someone from harm, damage, or loss

ANSWERS: 69. resilient, 70. tolerant, 71. reaction, 72. patience, 73. clue, 74. safeguard