# **Englist.me**

# Vocabulary Builder Reference from...

Gary Greenberg: The beautiful nano details of our world | TED Talk https://www.ted.com/talks/gary\_greenberg\_the\_beaut iful nano details of our world



# All Words

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# **Session 1: Word List**

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*adj.* being the only one of its kind; unlike anything else *synonym*: one-of-a-kind, unparalleled, incomparable

(1) a **unique** teacher, (2) **unique** design

The painting is unique, and there is no other like it.

#### micro

- n. extremely small in scale or scope; one millionth
- (1) **micro** bubble, (2) **micro** force sensor

This approach employs both **micro** and macro analysis methods.

# magical

*adj.* produced by or containing supernatural powers *synonym*: enchanting, occult, supernatural

(1) magical place, (2) magical powers

When I was a child, my mother often cast **magical** spells to ease my pain whenever I was injured.

# microscope

- n. an instrument used to see objects or substances that are too small to be seen with the naked eyesynonym: lens, magnifier, eyepiece
- (1) **microscope** slide, (2) electron **microscope**I used an optical **microscope** to observe the small organisms in the water sample.

#### centimeter

- *n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
- (1) **centimeter** measurement, (2) thirty **centimeters** tall The room was only one **centimeter** wider than the piano, making it a tight fit.

# appreciate

- v. to value and acknowledge the worth of someone or something; to be grateful for something or someonesynonym: acknowledge, admire, enjoy
- (1) **appreciate** her feedback, (2) **appreciate** the value We would **appreciate** an early reply.

### 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.

#### sensory

adj. of or relating to the physical sensessynonym: receptive, sensuous, neural

(1) a **sensory** organ, (2) a child with **sensory** issues Sharks have highly developed **sensory** systems and are extremely sensitive creatures.

#### diameter

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

#### involve

- v. to include or affect someone or something as a necessary part of something elsesynonym: implicate, include, engage
- (1) **involve** a lot of paperwork, (2) **involve** a high degree of risk

The investigation involves several government agencies and

is expected to take several months.

# biology

- 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.

# absolutely

adv. without restriction or limitation; completely or utterlysynonym: completely, utterly, definitely

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

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

#### enthrall

v. to capture or hold someone's attention or interest completely; to captivate or fascinate

synonym: captivate, charm, fascinate

(1) **enthrall** with beauty, (2) **enthrall** the reader The magician's illusions always managed to **enthrall** the audience.

#### amaze

- v. to fill with wonder, surprise, or admiration synonym: astound, surprise, stagger
- (1) **amaze** and entertain visitors, (2) **amaze** everyone The magician's tricks **amazed** the audience.

#### immune

adj. protected against a particular disease or toxin due to the presence of specific antibodies or sensitized white blood cells

synonym: resistant, unsusceptible, unaffected

(1) **immune** from criminal prosecution, (2) the cell of the **immune** system

The vaccination does not necessarily make you completely **immune**.

## moving

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

synonym: emotional, poignant, touching

(1) **moving** experience, (2) **moving** ceremony His **moving** speech about his struggles with addiction brought tears to the audience's eyes.

#### 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.

# recognize

v. to acknowledge or realize something or someone; to identify, remember, or become aware of something that was previously known or encountered

synonym: acknowledge, identify, admit

(1) recognize talent, (2) recognize achievementIt's important to recognize your strengths and weaknesses.

# engulf

- v. to swallow up; to surround and cover completely synonym: swallow, submerge, inundate
- (1) **engulf** the politician, (2) **engulf** in water The fire quickly **engulfed** the entire building.

#### nervous

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

*synonym*: neural, anxious, uneasy

(1) development of the **nervous** system, (2) get **nervous** He suffers from **nervous** breakdowns.

brain

 the organ inside the head that is responsible for one's movement, thought, memory, and feeling

synonym: intellect, mind, encephalon

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

#### static

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

synonym: immobile, unchanging, fixed

(1) static electricity, (2) static website

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

#### micron

 a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms

synonym: micrometer

micron measurements, (2) micron imaging
 width of a single human hair is around 100 microns.

#### micrometer

 a tool for measuring small distances or dimensions, typically accurate to within one-thousandth of a millimeter

synonym: caliper, measuring gauge

(1) micrometer gauge, (2) vernier micrometer

The scientist used a digital **micrometer** to measure the exact thickness of the material.

#### nanoscale

- adj. on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
- (1) **nanoscale** device, (2) things at the **nanoscale**This process improves the strength of the metal by controlling the **nanoscale** lattice structure of the metal.

#### angstrom

- n. (symbolized by the letter "Å") a unit of length used to measure wavelengths of light, equal to one ten-billionth of a meter (10^(-10) meters)
- angstrom resolution, (2) angstrom scale
   When discussing atomic radii, it's common to use the angstrom unit for better relatability.

### hydrogen

- the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water
- (1) hydrogen gas, (2) heavy hydrogen

The **hydrogen** and the oxygen react and then form water.

atom

 n. the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus

*synonym*: particle, element, fraction

(1) oxygen atom, (2) neutral hydrogen atoms

The outermost electron shell of an **atom** determines its chemical characteristics.

bump

v. to hit or knock against something hard, often with a dull sound; to meet with by accident

*synonym*: collide, hit, jolt

(1) **bump** against a wall, (2) **bump** up prices

She accidentally **bumped** into him in the crowded room.

cobalt

n. a lustrous, hard, silver-white element with the symbol Co that is often used in alloys, batteries, and pigments and is essential for certain biological processes in humans and other organisms

*synonym* : Co

(1) cobalt steel, (2) cobalt blue

The blades of gas turbine engines are often coated with a **cobalt** layer to improve their durability.

wrap

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

synonym: surround, cover, bandage

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

**Wrap** the bandage tightly around the injured arm.

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.

bug

any tiny insect; a fault or defect in a computer program, system, or machine

synonym: insect, bacterium, microbe

(1) bug bites, (2) number of bug fixes

I found a stink **bug** crawling across the ceiling.

terrain

 the physical features of a piece of land, including hills, valleys, rivers, and forests

synonym: land, geography, topography

(1) terrain map, (2) permafrost terrain

The mountainous **terrain** was rough and rocky.

petal

 one of the separate, usually colored, segments of a flower that produce its shape and are often found arranged in a circle around the reproductive parts

synonym: blossom, flower, bloom

(1) **petal** shape, (2) rose **petal** 

The botany field is concerned with studying the structure of plant **petals**.

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.

crawl

v. to move forward slowly, as people or animals with their bodies near the ground

synonym: creep, drag

(1) **crawl** across the floor, (2) **crawl** away from a car Along the gravel roads, sizeable yellow school buses **crawl**.

#### stigma

 a mark of shame or disgrace associated with a particular circumstance, quality, or person

synonym: mark, blemish, disgrace

(1) social **stigma**, (2) **stigma** against obesity

The mental health **stigma** often prevents people from seeking treatment.

#### stamen

n. the male reproductive organ of a flower, usually consisting of a filament and an anther, which supports the anther, which contains the pollen grains necessary for fertilization

synonym: pollen, filament, reproductive organ

(1) flower stamen, (2) stamen tip

Students sketched the **stamen** arrangement of the lily during their botany class.

### spur

 a thing that encourages someone to do something; any sharply pointed projection; (verb) to incite or stimulate someone or something

synonym: encouragement, motivation, stimulus

(1) **spur** of the moment, (2) **spur** a momentum of economic growth

The threat of losing his job was the **spur** he needed to work harder.

#### nectar

 a sweet liquid produced by flowers that attracts and provides food for bees and other insects; any sweet liquid that is enjoyed as a drink or used as a flavoring

synonym: honey, ambrosia, syrup

(1) **nectar** of the gods, (2) fruit **nectar** 

The **nectar** of the flowers attracted many bees to the garden.

#### grain

 wheat or any other small hard seeds used as a food; a relatively small granular particle of a substance

synonym: seed, piece, cereal

(1) a **grain** of sand, (2) flour made from **grain** 

Ordinary air purifiers cannot adequately remove pollen

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# •

### grains.

# pollen

 a fine powder substance consisting of microscopic grains produced by plants that facilitate their reproductive process through the process of pollination

synonym: dust, spores, allergen

- (1) **pollen** allergy symptoms, (2) high **pollen** count My allergies flare up during **pollen** season, making it difficult to breathe.
- n. a very small circular mark, especially one that is printed synonym: drop, dab, fleck
- (1) connecting the **dots**, (2) **dot** blot method

  The wallpaper had a pattern of pink **dots** on a white surface.
- a structure for the reception and habitation of bees, either built by people or made by the bees themselves; a place swarming people

synonym: apiary, swarm, pack

- honeybees in hives, (2) a hive of activity
   Bees were buzzing around the hive
- a structure or container where bees live and store their honey

synonym: hive, apiary, honeycomb

- (1) disturb a **beehive**, (2) get rid of a **beehive**The beekeeper checked the **beehive** for any signs of disease.
- a substance that is solid at room temperature but becomes softer and more pliable when heated, often used in the production of candles, polishes, and cosmetics; (verb) to become large
- (1) wax finish, (2) wax and wane He sealed the letter with a wax seal.

dot

hive

beehive

wax

# hyacinth

 n. (also "jacinth") a fragrant flowering plant with clustered flowers that grow on a tall, spiky stem, typically in shades of blue, purple, or pink

synonym: jacinth

(1) hyacinth flower, (2) blue hyacinth

The beautiful purple **hyacinth** flowers bloomed every spring in the garden.

#### vision

pistil

 the ability to think about or see the future with imagination and intelligence; the faculty of being able to see

synonym: sight, image, concept

- (1) a prodigious vision,(2) telescopic visionDriving is difficult for me because of my poor vision.
- n. the female reproductive organ of a flower, typically located in the center and composed of the stigma, style, and ovary, which receives pollen and facilitates fertilization

synonym: carpel, ovary, gynoecium

(1) flower pistil, (2) fragrant pistil

Some orchids' **pistil** structure mimics certain insects' appearance, facilitating pollination.

#### trichome

n. a small outgrowth or hair-like structure that can be found on various plants, algae, and lichens, which can have various functions such as protection against predators, secretion of substances, or aiding in capturing moisture from the environment

synonym: hair, filament

(1) glandular **trichome**, (2) **trichome** development Under the microscope, the **trichome** structure reveals a complex architecture that helps protect plants from various environmental stressors.

#### fragrance

n. a pleasant or sweet smell, especially one that is natural to a particular substance

synonym:

aroma, scent, perfume

(1) fragrance oil, (2) lavender fragrance

The **fragrance** of the roses filled the air and brought a smile to my face.

#### communicate

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

*synonym*: convey, share, transmit

- (1) **communicate** his anxieties to the psychiatrist,
- (2) communicate well with my advisor

Dolphins use sound to communicate with each other.

### 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.

#### sand

n. finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action

synonym: grit, dust, powder

(1) sand dunes, (2) sand castle

The **sand** on the beach was warm and golden.

### 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.

shell

 hard outer covering or case of eggs, nuts, some seeds, and some animals

*synonym*: ammunition, armor, cover

(1) an egg shell, (2) a mollusk shell

The outermost electron **shell** determines the chemical properties of an atom.

coral

- a rock-like substance created in the sea by groupings of specific types of small animals, commonly used in jewelry
- (1) **coral** island, (2) **coral** ornament She is wearing a **coral** necklace.

### fragment

- n. a small piece or part broken off or detachedsynonym: piece, shard, segment
- (1) **fragment** of a text, (2) a broken **fragment**The archaeologist carefully pieced together the tiny **fragments** of pottery found at the dig site.

#### olivine

 a mineral consisting of a silicate of magnesium, iron, and other metals, typically green in color, and found in igneous and metamorphic rocks

synonym: peridot, chrysolite, yellow-green gemstone

(1) **olivine-rich** rocks, (2) **olivine** composition

The geology students discovered an abundance of **olivine** crystals in the volcanic rock.

### volcano

 a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.

synonym: mount, peak, crater

(1) volcano alert level, (2) active volcano

The island was formed by a **volcano** millions of years ago.

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.

#### worm

- a long, thin creature with a soft and long cylindrical tube-like body, no limbs, and a lack of eyes
- (1) wiggly worms, (2) can of worms

**Worms** help dispose of the food waste produced by humans.

### array

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

synonym: collection, display, batch

(1) a two-dimensional **array**, (2) an **array** of troops The customer on the Internet has to choose one from a formidable **array** of products.

#### incredible

adj. unbelievable; enormous

synonym: unbelievable, fantastical, inconceivable

(1) **incredible** amount, (2) at **incredible** speed Her response revealed **incredible** idiocy.

#### reef

- a long chain or range of rocks or sand near the ocean's surface
- (1) barrier reef,(2) coral reefsThe vessel ran aground on a reef.

# microscopic

adj. tiny; exceedingly precise and detail-oriented; of or used in microscopy

synonym: infinitesimal, tiny, atomic

(1) **microscopic** inquiry, (2) **microscopic** analysis Inspectors noticed **microscopic** cracks in the submarine's hull.

# macroscopic

adj. visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools

synonym: large, visible, apparent

(1) **macroscopic** observation, (2) **macroscopic** anatomy The **macroscopic** view of the galaxy is simply breathtaking.

forth

adv. forward, outward, or onward in location, direction, or progress; into view or consideration; with confidence, boldness, or in the open

synonym: forward, onwards, ahead

(1) bring **forth** a beautiful vase, (2) call **forth** demand I pushed **forth** with my new project, even though it would take much hard work.

geology

 a science that deals with the history of the earth as recorded in rocks

synonym: earth science

(1) bureau of **geology**, (2) local **geology**He was a visiting **geology** professor at the University of Tokyo.

ecology

- n. the study of the relationships between living organisms, including humans, and their physical environment
- (1) science of **ecology**, (2) the **ecology** of the island Many companies are now enthusiastically embracing the knowledge of **ecology** for sustainable development.

sponge

- a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning
- (1) sea **sponge**, (2) metallic **sponge**The tiny marine **sponge** has existed for more than 500 million years.

spike

 n. a narrow, thin, pointed piece of metal, wood, etc.; a sudden large increase in the magnitude or concentration of something

*synonym*: end, spindle, point

(1) to spike, (2) to prevent blood sugar spikes
The recent spike in grain prices is partly due to the war in the producing countries.

#### urchin

 a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines

*synonym*: mischief, waif, guttersnipe

(1) urchin child, (2) street urchin

The young boy was an **urchin** wandering the streets without a home.

# spine

 the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column

synonym: backbone, vertebra, column

(1) the **spine** of a book, (2) a cervical **spine** injury
She has a minor curved **spine** due to desk work for many years.

#### treasure

 a valuable or desirable possession; something that is cherished or held dear; a collection of valuable objects or money that is hidden or protected

synonym: hoard, fortune, gem

(1) treasure hunt, (2) treasure island

The pirates searched for buried **treasure** in the dunes.

#### trove

 a valuable collection of rare or interesting things, usually on the earth

*synonym*: hoard, collection, assemblage

(1) **trove** of information, (2) stumble on a **trove** 

The treasure **trove** of ancient artifacts was a museum's dream come true.

#### dissect

v. to cut into pieces to study the structure of something in detail

*synonym*: analyze, examine, study

(1) **dissect** the data, (2) **dissect** a personality

The scientist dissected the frog to study its internal organs.

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# photograph

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

synonym: photo, picture, snapshot

- (1) **photograph** album, (2) **photograph** memories I found an old **photograph** of my grandparents from their wedding day.
- n. a hard, mineral compound consisting of silicon dioxide, often occurring as colorless or white crystals but also found in various colors, and commonly used in jewelry and watches, as well as in the production of glass and other industrial applications

synonym: crystal, mineral, rock

(1) quartz rock, (2) rose quartz

The crystal pendant was made of clear quartz.

### crystal

quartz

n. a solid material with many even sides that is formed naturally when the substance becomes solid and has a highly regular atomic structure; clear and colorless glass made of almost pure silica

*synonym*: quartz

(1) liquid crystal, (2) crystal analyses

A vast crystal chandelier glittered brightly above us.

# feldspar

 a group of minerals that are abundant in the Earth's crust and have a wide range of chemical compositions, often used in the manufacture of ceramics and glass

synonym: mineral, rock, crystal

(1) igneous **feldspar**, (2) sodium **feldspar** 

The chemical composition of **feldspar** minerals varies between different geological environments.

erosion

the wearing away of rock, soil, or land by natural processes such as wind or water

*synonym*: corrosion, weathering, decay

(1) erosion control, (2) wind erosion

The **erosion** of the coastline has accelerated due to rising sea levels.

#### granite

 a tough, durable, and coarse-grained igneous rock often used in construction for buildings, monuments, and sculptures

*synonym*: stone, rock, boulder

(1) black granite, (2) solid granite

The countertop was polished **granite**, giving it a sleek and modern look.

#### erode

v. to gradually wear away or break down (rock, soil, or other material) through the action of wind, water, or other natural agents; to gradually weaken or undermine (something) over time

synonym: wear away, deteriorate, corrode

(1) **erode** coast, (2) **erode** trust

The ongoing budget cuts have **eroded** the quality of education in many schools.

#### mineral

- a solid inorganic substance occurring in nature having a definite chemical composition
- (1) vitamin and **minerals**, (2) **mineral** rights

The robust economy of the country is based on its **mineral** resources.

# garnet

 a precious stone typically red in color, consisting of a group of silicate minerals; a dark red color resembling that of garnet

synonym: ruby, precious stone

(1) garnet stone, (2) deep red garnet

She wore a beautiful necklace adorned with a delicate **garnet** pendant.

# epidote

 a green to brown or black mineral belonging to the silicate group, typically occurring in metamorphic and igneous rocks, and often possessing a prismatic or tabular crystal structure

synonym: pistacite

(1) **epidote** crystal, (2) **epidote** formation

The geologist found a beautiful specimen of **epidote** embedded in the rock formation.

jewel

a precious stone that is cut and polished for use in jewelry

synonym: gem, precious stone, treasure

(1) **jewel** of the crown, (2) gleaming **jewel** 

She treasured the small **jewel** that her grandmother had given her.

literally

adv. in the real or original meaning of a word or phrase; in a literal sense or way; not figuratively

synonym: actually, truly, verily

(1) translate **literally**, (2) bite his tongue **literally** 

He **literally** jumped out of his chair when he heard the news.

alike

adv. similar or identical in nature or appearance

synonym: similar, identical, comparable

(1) young and old alike, (2) alike in nature

The two paintings looked **alike** as if the same artist had done them.

snapshot

n. an informal photograph, especially one taken quickly

synonym: photo, picture, print

(1) take a **snapshot**, (2) developed **snapshot** 

There were framed **snapshots** of family and friends in her room.

ubiquitous

adj. being or existing everywhere at once

synonym: universal, omnipresent, everywhere

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

ecosystems

Sugar is **ubiquitous** in food.

#### universe

planet

 everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy

synonym: cosmos, macrocosm

- (1) theory of the **universe**, (2) expansion of the **universe** The **universe** is about 13.8 billion years old.
- 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.

#### meteorite

 a solid object originating in outer space that reaches the Earth's surface without completely vaporizing in the atmosphere; a rock that has fallen from space

synonym: meteor, shooting star, asteroid

meteorite impact, (2) meteorite shower
 meteorite fragments were collected and sent to a

one of two antipodal points where the Earth's axis of rotation intersects the Earth's surface; a long, slender, rounded rod, typically of wood or metal, used as a support or to hang something

synonym: rod, staff, shaft

laboratory for analysis.

(1) a fishing pole, (2) the plus pole

The North **Pole** is the northernmost point on Earth.

#### constituent

 one of the parts of the whole; a person represented by an elected official

synonym: member, element, part

(1) **constituent** assembly, (2) the solid **constituent** of blood cells

Each **constituent** member of the council has the right to vote on important decisions.

pole

# landing

n. the act of coming to rest on the ground or another surface after being in flight or jumping; a platform or area of ground where a plane or spacecraft can come to rest

synonym: touchdown, arrival, descent

(1) landing gear, (2) emergency landing

The plane made a rough **landing**, and everyone clapped once we came to a stop.

#### dimension

 a measurable extent of a particular kind, such as width, height, or length

synonym: extent, measurement, size

(1) new **dimension**, (2) the crosswise **dimension**Overall **dimensions** are approximately 400x200mm.

# normally

adv. usually; under normal conditionssynonym: commonly, generally, naturally

(1) complete **normally**, (2) not **normally** drink much I don't **normally** take a vacation in the middle of summer.

# atmosphere

- n. the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative worksynonym: air, ambiance, circumstances
- (1) carbon dioxide in the **atmosphere**, (2) a convivial **atmosphere**

The spaceship began to burn up as it approached the Earth's **atmosphere**.

# continuously

adv. without being interrupted or paused; repeatedly synonym: constantly, frequently, always

(1) use one thing **continuously**, (2) **continuously** removed The country's domestic coal consumption has been **continuously** declining for decades.

# powder

 a dry and fine substance that consists of very small, loose particles

synonym: dust, crumb, grain

# (1) **powder** additive, (2) curry **powder**

She used a **powder** brush to apply her foundation evenly.

#### bombard

v. to attack a place with bombs or gunshots continuously; to address with continuously or persistently, as if with a barrage

synonym: bomb, shoot, blitz

(1) **bombard** him with questions, (2) **bombard** a fort with heavy shells

Overprotective parents often **bombard** their children with messages reinforcing their lack of mastery.

### vaporize

 to convert a substance into vapor or gas, often by heating or applying intense pressure; to disappear or become dispersed as if by evaporating; to destroy or eliminate completely

synonym: evaporate, disappear, vanish

(1) **vaporize** nicotine, (2) **vaporize** into thin air The heat caused the water to **vaporize** into steam.

vapor

- n. a mass of tiny liquid drops in the airsynonym: condensation, dew, fog
- (1) alcohol **vapor**, (2) water **vapor** in the atmosphere Clouds form when water **vapor** rises to the upper atmosphere.

# clump

- n. a small group of bushes, trees, flowers, people, etc.synonym: cluster, bunch, bundle
- (1) **clump** of bacteria, (2) a **clump** of trees I heard the **clump** of his boots in the hallway.

# agglutinate

v. to join or stick together, especially when referring to the merging or combining of different things or components; (of linguistics) to form words through the addition of affixes or suffixes

synonym: adhere, bond, cling

(1) agglutinate blood cells, (2) agglutinate bacteria

The research team **agglutinated** different substances together to form a new compound.

lava

 molten rock that has been extruded from a volcano and solidified; a highly fluid, highly heated substance or material

synonym: molten rock, magma, volcanic rock

(1) lava flow, (2) molten lava

The volcano's eruption caused a **lava** river to flow down the mountainside.

basalt

 a dark, fine-grained volcanic rock that forms from the solidification of lava

synonym: volcanic rock, lava, igneous rock

(1) basalt rock, (2) basalt glass

The hiking trail was lined with towering basalt columns.

fountain

 a structure usually consisting of a basin and a jet of water that is sprayed into the air, often used for decoration or as a source of drinking water

synonym: spring, well, spout

(1) fountain plaza, (2) decorative fountain

The **fountain** in the park provided a relaxing atmosphere.

bead

 a small, usually round object made of glass, wood, or plastic that is used for decoration or as part of jewelry

synonym: pearl, droplet, marble

(1) a beautiful **bead**, (2) **bead** curtain

She threaded the **beads** onto the string to make a necklace.

instantly

adv. immediately

synonym: immediately, right away, directly

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

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

harden

v. to make something firm, solid, or resistant; to toughen or strengthen physically or emotionally; to become more

rigid or less flexible

*synonym*: strengthen, solidify, fortify

(1) harden your heart, (2) harden clay

She had to **harden** her stance on the issue to gain support from her colleagues.

### sphere

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

synonym: ball, globe, scope

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

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

#### structure

 the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts

synonym: construction, architecture, establishment

(1) the **structure** of a machine, (2) **structure** and function of the brain

The organizational **structure** of start-ups is often flat and straightforward.

# probable

adj. likely to happen or likely to be true

*synonym*: likely, possible, potential

(1) **probable** outcome, (2) **probable** cause of a fire It seems **probable** that he has forgotten our scheduled meeting.

#### tumble

v. to fall suddenly, often uncontrollably; to topple or turn over; to decline sharply and quickly in value, quality, or performance

synonym: fall, stumble, plummet

(1) **tumble** down the hill, (2) confidence **tumbles** as unemployment rates rose

The value of the currency tumbled against major

international currencies.

#### solar

adj. of, from, or relating to the sun

(1) the **solar** system, (2) a **solar** eclipse

**Solar** panels have greatly improved not only in performance but also in durability.

#### 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.

# extraordinary

adj. 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.

#### heaven

n. (of various religious and mythological traditions) a place or state of existence considered to be the abode of the divine, the afterlife, or a higher realm of being; a state of great happiness, contentment, or beauty

synonym: paradise, nirvana, utopia

(1) ascend to **heaven**, (2) **heaven** on earth

He felt like **heaven** when he tasted the delicious chocolate cake.

### infinity

the state or quality of having no end or limit;
 (mathematics) a number greater than any natural number

synonym: endlessness, boundlessness, continuity

the infinity of the universe, (2) negative infinity
 That investor saw an infinity of possibilities in this company.

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# palm

n. the inner surface of the hand from the wrist to the base of the fingers; any plant of the family Palmae having an unbranched trunk crowned by large pinnate or palmate leaves

*synonym*: hand, fist

(1) the **palm** side of the forearm, (2) coconut **palm** trees

This high-performance camera is compact enough to fit in the **palm** of your hand.

#### eternal

- adj. being without beginning or end; lasting forever synonym: endless, everlasting, undying
- (1) the hope of **eternal** life, (2) **eternal** quarreling In every civilization, rulers have tried everything possible to obtain **eternal** life.

# **Session 2: Spelling**

1. a\_t bite

2. w\_\_p a fish in foil

3. et\_\_\_\_I quarreling

4. an om resolution

5. a two-dimensional ar\_\_y

6. mi\_\_\_n measurements

7. pr\_\_\_le outcome

8. po radditive

9. st\_\_\_c website

10. fo\_\_\_\_in plaza

- a very small insect that lives under the ground or in a mound in highly organized groups
- v. to cover or enclose something entirely with paper, cloth, or other material
- adj. being without beginning or end; lasting forever
- n. (symbolized by the letter "Å") a unit of length used to measure wavelengths of light, equal to one ten-billionth of a meter (10^(-10) meters)
- a large group or collection of things or people, especially one that is impressive or attractive
- a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms
- adj. likely to happen or likely to be true
- a dry and fine substance that consists of very small, loose particles
- adj. not moving or not capable of moving, not changing or not capable of changing
- a structure usually consisting of a basin and a jet of water that is sprayed into the air, often used for decoration or as a source of drinking water

ANSWERS: 1. ant, 2. wrap, 3. eternal, 4. angstrom, 5. array, 6. micron, 7. probable, 8. powder, 9. static, 10. fountain

11. glandular trme	n.	a small outgrowth or hair-like structure that can be found on various plants, algae, and lichens, which can have various functions such as protection against predators, secretion of substances, or aiding in capturing moisture from the environment
12. get nes	adj.	worried and anxious about something; relating to the nerves
13. permanent br_n damage	n.	the organ inside the head that is responsible for one's movement, thought, memory, and feeling
14. crl away from a car	<i>v</i> .	to move forward slowly, as people or animals with their bodies near the ground
15. barrier rf	n.	a long chain or range of rocks or sand near the ocean's surface
16. fragrant piI	n.	the female reproductive organ of a flower, typically located in the center and composed of the stigma, style, and ovary, which receives pollen and facilitates fertilization
17. macic anatomy	adj.	visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools
18. 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
ANSWERS: 11 trichome 12 pervous 13	hrai	in 14 crawl 15 reef 16 nistil 17

ANSWERS: 11. trichome, 12. nervous, 13. brain, 14. crawl, 15. reef, 16. pistil, 17. macroscopic, 18. planet

19.	b_p up prices	<i>v</i> .	to hit or knock against something hard, often with a dull sound; to meet with by accident
20.	aggte bacteria	v.	to join or stick together, especially when referring to the merging or combining of different things or components; (of linguistics) to form words through the addition of affixes or suffixes
21.	cener measurement	n.	a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
22.	micer gauge	n.	a tool for measuring small distances or dimensions, typically accurate to within one-thousandth of a millimeter
23.	confidence tues as unemployment rates rose	v.	to fall suddenly, often uncontrollably; to topple or turn over; to decline sharply and quickly in value, quality, or performance
24.	min imaging	n.	a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms
25.	ole-rich rocks	n.	a mineral consisting of a silicate of magnesium, iron, and other metals, typically green in color, and found in igneous and metamorphic rocks
26.	dit the data	<i>v</i> .	to cut into pieces to study the structure of something in detail
27.	rose quz	n.	a hard, mineral compound consisting of silicon dioxide, often occurring as colorless or white crystals but also found in various colors, and commonly used in jewelry and watches, as well as in the production of glass and other industrial applications

ANSWERS: 19. bump, 20. agglutinate, 21. centimeter, 22. micrometer, 23. tumble, 24. micron, 25. olivine, 26. dissect, 27. quartz

a cylindrical container of metal, plastic, 28. a glass t e n. glass, etc., usually sealed and used as a means of preserving food or chemicals; a hollow cylindrical shape 29. sodium fe\_\_\_\_ar a group of minerals that are abundant in n. the Earth's crust and have a wide range of chemical compositions, often used in the manufacture of ceramics and glass one of two antipodal points where the 30. the plus p\_\_e Earth's axis of rotation intersects the Earth's surface; a long, slender, rounded rod, typically of wood or metal, used as a support or to hang something to gradually wear away or break down 31. er\_\_e trust (rock, soil, or other material) through the action of wind, water, or other natural agents; to gradually weaken or undermine (something) over time the smallest unit of ordinary matter that 32. oxygen a m forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus a unit of measurement of length in the 33. thirty cen\_\_\_\_ers tall metric system, equivalent to one-hundredth of a meter 34. st a against obesity a mark of shame or disgrace associated with a particular circumstance, quality, or person a narrow, thin, pointed piece of metal, 35. to prevent blood sugar sp es n. wood, etc.; a sudden large increase in the magnitude or concentration of something

ANSWERS: 28. tube, 29. feldspar, 30. pole, 31. erode, 32. atom, 33. centimeter, 34. stigma, 35. spike

36. vaze into thin air	v.	to convert a substance into vapor or gas, often by heating or applying intense pressure; to disappear or become dispersed as if by evaporating; to destroy or eliminate completely
37. hen on earth	n.	(of various religious and mythological traditions) a place or state of existence considered to be the abode of the divine, the afterlife, or a higher realm of being; a state of great happiness, contentment, or beauty
38. aggte blood cells	ν.	to join or stick together, especially when referring to the merging or combining of different things or components; (of linguistics) to form words through the addition of affixes or suffixes
39. deep red gat	n.	a precious stone typically red in color, consisting of a group of silicate minerals; a dark red color resembling that of garnet
40. ern control	n.	the wearing away of rock, soil, or land by natural processes such as wind or water
41. pel shape	n.	one of the separate, usually colored, segments of a flower that produce its shape and are often found arranged in a circle around the reproductive parts
42. reze talent	v.	to acknowledge or realize something or someone; to identify, remember, or become aware of something that was previously known or encountered

ANSWERS: 36. vaporize, 37. heaven, 38. agglutinate, 39. garnet, 40. erosion, 41. petal, 42. recognize

43.	orry annual revenue	adj.	not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree
44.	connt assembly	n.	one of the parts of the whole; a person represented by an elected official
45.	decorative foin	n.	a structure usually consisting of a basin and a jet of water that is sprayed into the air, often used for decoration or as a source of drinking water
46.	b_g bites	n.	any tiny insect; a fault or defect in a computer program, system, or machine
47.	micic inquiry	adj.	tiny; exceedingly precise and detail-oriented; of or used in microscopy
48.	a beautiful bd	n.	a small, usually round object made of glass, wood, or plastic that is used for decoration or as part of jewelry
49.	the ecy of the island	n.	the study of the relationships between living organisms, including humans, and their physical environment
50.	clp of bacteria	n.	a small group of bushes, trees, flowers, people, etc.
51.	an egg shI	n.	hard outer covering or case of eggs, nuts, some seeds, and some animals
52.	water var in the atmosphere	n.	a mass of tiny liquid drops in the air
53.	local gey	n.	a science that deals with the history of the earth as recorded in rocks
54.	ale in nature	adv.	similar or identical in nature or appearance

ANSWERS: 43. ordinary, 44. constituent, 45. fountain, 46. bug, 47. microscopic, 48. bead, 49. ecology, 50. clump, 51. shell, 52. vapor, 53. geology, 54. alike

55.	S	d	du	nes

- 56. ol\_\_\_\_e composition
- 57. wiggly w\_\_ms
- 58. mi\_\_o bubble
- 59. the hope of et I life
- 60. b\_\_d curtain
- 61. qu z rock

62. a h e of activity

- n. finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action
- a mineral consisting of a silicate of magnesium, iron, and other metals, typically green in color, and found in igneous and metamorphic rocks
- a long, thin creature with a soft and long cylindrical tube-like body, no limbs, and a lack of eyes
- extremely small in scale or scope; one millionth
- adj. being without beginning or end; lasting forever
- a small, usually round object made of glass, wood, or plastic that is used for decoration or as part of jewelry
- a hard, mineral compound consisting of silicon dioxide, often occurring as colorless or white crystals but also found in various colors, and commonly used in jewelry and watches, as well as in the production of glass and other industrial applications
- a structure for the reception and habitation of bees, either built by people or made by the bees themselves; a place swarming people

ANSWERS: 55. sand, 56. olivine, 57. worm, 58. micro, 59. eternal, 60. bead, 61. quartz, 62. hive

63.	enf in water	<i>v</i> .	to swallow up; to surround and cover completely
64.	extary ability	adj.	exceptional, unexpected, very unusual; surpassing the ordinary or usual
65.	small moles	n.	a group of two or more atoms held together by attractive forces known as chemical bonds
66.	new dion	n.	a measurable extent of a particular kind, such as width, height, or length
67.	prle cause of a fire	adj.	likely to happen or likely to be true
68.	pon allergy symptoms	n.	a fine powder substance consisting of microscopic grains produced by plants that facilitate their reproductive process through the process of pollination
69.	bring foh a beautiful vase	adv.	forward, outward, or onward in location, direction, or progress; into view or consideration; with confidence, boldness, or in the open
70.	vernier micer	n.	a tool for measuring small distances or dimensions, typically accurate to within one-thousandth of a millimeter
71.	active voo	n.	a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.
72.	high pon count	n.	a fine powder substance consisting of microscopic grains produced by plants that facilitate their reproductive process through the process of pollination

ANSWERS: 63. engulf, 64. extraordinary, 65. molecule, 66. dimension, 67. probable, 68. pollen, 69. forth, 70. micrometer, 71. volcano, 72. pollen

73.	solid gre	n.	a tough, durable, and coarse-grained igneous rock often used in construction for buildings, monuments, and sculptures
74.	absly obsessed with the girl	adv.	without restriction or limitation; completely or utterly
75.	ten map	n.	the physical features of a piece of land, including hills, valleys, rivers, and forests
76.	telescopic vin	n.	the ability to think about or see the future with imagination and intelligence; the faculty of being able to see
77.	a sey organ	adj.	of or relating to the physical senses
78.	liquid crI	n.	a solid material with many even sides that is formed naturally when the substance becomes solid and has a highly regular atomic structure; clear and colorless glass made of almost pure silica
79.	bod him with questions	<i>v</i> .	to attack a place with bombs or gunshots continuously; to address with continuously or persistently, as if with a barrage
80.	amg advances	adj.	extremely surprising, especially in a way that you like or admire
81.	w_p up a meeting	<i>v</i> .	to cover or enclose something entirely with paper, cloth, or other material
82.	b_p against a wall	v.	to hit or knock against something hard, often with a dull sound; to meet with by accident

ANSWERS: 73. granite, 74. absolutely, 75. terrain, 76. vision, 77. sensory, 78. crystal, 79. bombard, 80. amazing, 81. wrap, 82. bump

83. ha	n clay
84. tr	re hunt

- v. to make something firm, solid, or resistant; to toughen or strengthen physically or emotionally; to become more rigid or less flexible
- a valuable or desirable possession;
   something that is cherished or held
   dear; a collection of valuable objects or
   money that is hidden or protected
- a long chain or range of rocks or sand near the ocean's surface
- *n*. a single person or thing, as distinct from a group
- n. the inner surface of the hand from the wrist to the base of the fingers; any plant of the family Palmae having an unbranched trunk crowned by large pinnate or palmate leaves
- n. a small piece or part broken off or detached
- a very small insect that lives under the ground or in a mound in highly organized groups
- n. the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water
- adj. causing strong emotions or feelings, especially sadness or sympathy
- *n.* a very small circular mark, especially one that is printed

ANSWERS: 83. harden, 84. treasure, 85. reef, 86. individual, 87. palm, 88. fragment, 89. ant, 90. hydrogen, 91. moving, 92. dot

93.	number of b_g fixes	n.	any tiny insect; a fault or defect in a computer program, system, or machine
94.	street urn	n.	a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines
95.	spe of influence	n.	a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity
96.	at incle speed	adj.	unbelievable; enormous
97.	bite his tongue lily	adv.	in the real or original meaning of a word or phrase; in a literal sense or way; not figuratively
98.	the solid connt of blood cells	n.	one of the parts of the whole; a person represented by an elected official
99.	sd castle	n.	finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action
100	trme development	n.	a small outgrowth or hair-like structure that can be found on various plants, algae, and lichens, which can have various functions such as protection against predators, secretion of substances, or aiding in capturing moisture from the environment
ANSWERS: 93. bug, 94. urchin, 95. sphere, 96. incredible, 97. literally, 98.			

ANSWERS: 93. bug, 94. urchin, 95. sphere, 96. incredible, 97. literally, 98 constituent, 99. sand, 100. trichome

101. metallic spe	n.	a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning
102. voo alert level	n.	a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.
103. bureau of gey	n.	a science that deals with the history of the earth as recorded in rocks
104. vaze nicotine	<i>v</i> .	to convert a substance into vapor or gas, often by heating or applying intense pressure; to disappear or become dispersed as if by evaporating; to destroy or eliminate completely
105. crl across the floor	<i>v</i> .	to move forward slowly, as people or animals with their bodies near the ground
106. absly against	adv.	without restriction or limitation; completely or utterly
107. igneous fear	n.	a group of minerals that are abundant in the Earth's crust and have a wide range of chemical compositions, often used in the manufacture of ceramics and glass
108. mete impact	n.	a solid object originating in outer space that reaches the Earth's surface without completely vaporizing in the atmosphere; a rock that has fallen from space

ANSWERS: 101. sponge, 102. volcano, 103. geology, 104. vaporize, 105. crawl, 106. absolutely, 107. feldspar, 108. meteorite

109. frce oil	n.	a pleasant or sweet smell, especially one that is natural to a particular substance
110. rose peI	n.	one of the separate, usually colored, segments of a flower that produce its shape and are often found arranged in a circle around the reproductive parts
111. anom scale	n.	(symbolized by the letter "Å") a unit of length used to measure wavelengths of light, equal to one ten-billionth of a meter (10^(-10) meters)
112. neutral hydrogen ams	n.	the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus
113. sr a momentum of economic growth	n.	a thing that encourages someone to do something; any sharply pointed projection; (verb) to incite or stimulate someone or something
114. ubius computing	adj.	being or existing everywhere at once
115. w_x finish	n.	a substance that is solid at room temperature but becomes softer and more pliable when heated, often used in the production of candles, polishes, and cosmetics; (verb) to become large
116. consly removed	adv.	without being interrupted or paused; repeatedly
117. the crosswise dion	n.	a measurable extent of a particular kind, such as width, height, or length

ANSWERS: 109. fragrance, 110. petal, 111. angstrom, 112. atom, 113. spur, 114. ubiquitous, 115. wax, 116. continuously, 117. dimension

118. stn tip	n.	the male reproductive organ of a flower, usually consisting of a filament and an anther, which supports the anther, which contains the pollen grains necessary for fertilization
119. science of ecy	n.	the study of the relationships between living organisms, including humans, and their physical environment
120. be killed inly	adv.	immediately
121. fruit ner	n.	a sweet liquid produced by flowers that attracts and provides food for bees and other insects; any sweet liquid that is enjoyed as a drink or used as a flavoring
122. a mollusk shl	n.	hard outer covering or case of eggs, nuts, some seeds, and some animals
123. gleaming jel	n.	a precious stone that is cut and polished for use in jewelry
124. honeybees in hes	n.	a structure for the reception and habitation of bees, either built by people or made by the bees themselves; a place swarming people
125. miI rights	n.	a solid inorganic substance occurring in nature having a definite chemical composition
126. d_t blot method	n.	a very small circular mark, especially one that is printed
127. cot steel	n.	a lustrous, hard, silver-white element with the symbol Co that is often used in alloys, batteries, and pigments and is essential for certain biological processes in humans and other organisms

ANSWERS: 118. stamen, 119. ecology, 120. instantly, 121. nectar, 122. shell, 123. jewel, 124. hive, 125. mineral, 126. dot, 127. cobalt

128. the cell of the ime system	adj.	protected against a particular disease or toxin due to the presence of specific antibodies or sensitized white blood cells
129. translate lily	adv.	in the real or original meaning of a word or phrase; in a literal sense or way; not figuratively
130. a particle dier	n.	the length of a straight line passing through the center of a circle and connecting two points on the circumference
131. enII the reader	v.	to capture or hold someone's attention or interest completely; to captivate or fascinate
132. use one thing consly	adv.	without being interrupted or paused; repeatedly
133. stumble on a tre	n.	a valuable collection of rare or interesting things, usually on the earth
134. flower pil	n.	the female reproductive organ of a flower, typically located in the center and composed of the stigma, style, and ovary, which receives pollen and facilitates fertilization
135. curry por	n.	a dry and fine substance that consists of very small, loose particles
136. theory of the unse	n.	everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy

ANSWERS: 128. immune, 129. literally, 130. diameter, 131. enthrall, 132. continuously, 133. trove, 134. pistil, 135. powder, 136. universe

137. 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
138. urn child	n.	a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines
139. col island	n.	a rock-like substance created in the sea by groupings of specific types of small animals, commonly used in jewelry
140. han your heart	ν.	to make something firm, solid, or resistant; to toughen or strengthen physically or emotionally; to become more rigid or less flexible
141. dit a personality	<i>v</i> .	to cut into pieces to study the structure of something in detail
142. mole behavior	n.	a group of two or more atoms held together by attractive forces known as chemical bonds
143. ubius across ecosystems	adj.	being or existing everywhere at once
144. appte her feedback	ν.	to value and acknowledge the worth of someone or something; to be grateful for something or someone
145. 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: 137. bacteria, 138. urchin, 139. coral, 140. harden, 141. dissect, 142. molecule, 143. ubiquitous, 144. appreciate, 145. planet

146. maI powers	adj.	produced by or containing supernatural powers
147. mete shower	n.	a solid object originating in outer space that reaches the Earth's surface without completely vaporizing in the atmosphere; a rock that has fallen from space
148. young and old ale	adv.	similar or identical in nature or appearance
149. can of wms	n.	a long, thin creature with a soft and long cylindrical tube-like body, no limbs, and a lack of eyes
150. coconut p_m trees	n.	the inner surface of the hand from the wrist to the base of the fingers; any plant of the family Palmae having an unbranched trunk crowned by large pinnate or palmate leaves
151. tre of information	n.	a valuable collection of rare or interesting things, usually on the earth
152. comte his anxieties to the psychiatrist	v.	to share or exchange information with others by speaking, writing, moving your body, or using other signals
153. evolutionary biy	n.	the scientific study of life and the natural processes of living things
154. epe formation	n.	a green to brown or black mineral belonging to the silicate group, typically occurring in metamorphic and igneous rocks, and often possessing a prismatic or tabular crystal structure

ANSWERS: 146. magical, 147. meteorite, 148. alike, 149. worm, 150. palm, 151. trove, 152. communicate, 153. biology, 154. epidote

155. inly cope with	adv.	immediately
156. a private indal	n.	a single person or thing, as distinct from a group
157. blue hyth	n.	(also "jacinth") a fragrant flowering plant with clustered flowers that grow on a tall, spiky stem, typically in shades of blue, purple, or pink
158. appte the value	ν.	to value and acknowledge the worth of someone or something; to be grateful for something or someone
159. ame everyone	<i>v</i> .	to fill with wonder, surprise, or admiration
160. stre and function of the brain	n.	the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
161. mio force sensor	n.	extremely small in scale or scope; one millionth
162. developed snot	n.	an informal photograph, especially one taken quickly
163. vitamin and mils	n.	a solid inorganic substance occurring in nature having a definite chemical composition
164. crl analyses	n.	a solid material with many even sides that is formed naturally when the substance becomes solid and has a highly regular atomic structure; clear and colorless glass made of almost pure silica

ANSWERS: 155. instantly, 156. individual, 157. hyacinth, 158. appreciate, 159. amaze, 160. structure, 161. micro, 162. snapshot, 163. mineral, 164. crystal

adj.	on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
n.	a mark of shame or disgrace associated with a particular circumstance, quality, or person
adj.	on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
n.	a dark, fine-grained volcanic rock that forms from the solidification of lava
adj.	visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools
adj.	of, from, or relating to the sun
ν.	to include or affect someone or something as a necessary part of something else
adj.	exceptional, unexpected, very unusual; surpassing the ordinary or usual
n.	a small piece or part broken off or detached
n.	a picture or image that is produced by a camera; a visual representation or record of a person, object, or scene that has been captured electronically or on film
<i>v</i> .	to fill with wonder, surprise, or admiration
	n.  adj.  adj.  v.  adj.  n.

ANSWERS: 165. nanoscale, 166. stigma, 167. nanoscale, 168. basalt, 169. macroscopic, 170. solar, 171. involve, 172. extraordinary, 173. fragment, 174. photograph, 175. amaze

176. maI place	adj.	produced by or containing supernatural powers
177. a grn of sand	n.	wheat or any other small hard seeds used as a food; a relatively small granular particle of a substance
178. sea spe	n.	a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning
179. micpe slide	n.	an instrument used to see objects or substances that are too small to be seen with the naked eye
180. a cervical spe injury	n.	the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column
181. trre island	n.	a valuable or desirable possession; something that is cherished or held dear; a collection of valuable objects or money that is hidden or protected
182. business spe	n.	a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity
183. une design	adj.	being the only one of its kind; unlike anything else
184. 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: 176. magical, 177. grain, 178. sponge, 179. microscope, 180. spine, 181. treasure, 182. sphere, 183. unique, 184. radiation

185. flour made from grn	n.	wheat or any other small hard seeds used as a food; a relatively small granular particle of a substance
186. basic brn function	n.	the organ inside the head that is responsible for one's movement, thought, memory, and feeling
187. a fishing pe	n.	one of two antipodal points where the Earth's axis of rotation intersects the Earth's surface; a long, slender, rounded rod, typically of wood or metal, used as a support or to hang something
188. ine a lot of paperwork	ν.	to include or affect someone or something as a necessary part of something else
189. electron micpe	n.	an instrument used to see objects or substances that are too small to be seen with the naked eye
190. dier of an oval	n.	the length of a straight line passing through the center of a circle and connecting two points on the circumference
191. emergency lag	n.	the act of coming to rest on the ground or another surface after being in flight or jumping; a platform or area of ground where a plane or spacecraft can come to rest
192. enll with beauty	v.	to capture or hold someone's attention or interest completely; to captivate or fascinate
193. complete noly	adv.	usually; under normal conditions

ANSWERS: 185. grain, 186. brain, 187. pole, 188. involve, 189. microscope, 190. diameter, 191. landing, 192. enthrall, 193. normally

194. call foh demand	adv.	forward, outward, or onward in location, direction, or progress; into view or consideration; with confidence, boldness, or in the open
195. an ary of troops	n.	a large group or collection of things or people, especially one that is impressive or attractive
196. negative inty	n.	the state or quality of having no end or limit; (mathematics) a number greater than any natural number
197. incle amount	adj.	unbelievable; enormous
198. disturb a bee	n.	a structure or container where bees live and store their honey
199. sr of the moment	n.	a thing that encourages someone to do something; any sharply pointed projection; (verb) to incite or stimulate someone or something
200. expansion of the unse	n.	everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy
201. a clp of trees	n.	a small group of bushes, trees, flowers, people, etc.
202. the inty of the universe	n.	the state or quality of having no end or limit; (mathematics) a number greater than any natural number
203. reze achievement	v.	to acknowledge or realize something or someone; to identify, remember, or become aware of something that was previously known or encountered

ANSWERS: 194. forth, 195. array, 196. infinity, 197. incredible, 198. beehive, 199. spur, 200. universe, 201. clump, 202. infinity, 203. recognize

204. a child with se y issues adj. of or relating to the physical senses 205. development of the ne\_\_\_s system adj. worried and anxious about something; relating to the nerves molten rock that has been extruded 206. molten la n. from a volcano and solidified; a highly fluid, highly heated substance or material the male reproductive organ of a flower, 207. flower st\_\_\_n usually consisting of a filament and an anther, which supports the anther, which contains the pollen grains necessary for fertilization a mass of tiny liquid drops in the air 208. alcohol va r n. 209. co\_\_\_t blue a lustrous, hard, silver-white element n. with the symbol Co that is often used in alloys, batteries, and pigments and is essential for certain biological processes in humans and other organisms 210. a capillary t e a cylindrical container of metal, plastic, n. glass, etc., usually sealed and used as a means of preserving food or chemicals; a hollow cylindrical shape 211. an or\_\_\_ry school adj. not different, exceptional, or unexpected in any way, especially in quality, ability, size, or degree the ability to think about or see the 212. a prodigious vi\_\_\_n future with imagination and intelligence; the faculty of being able to see

ANSWERS: 204. sensory, 205. nervous, 206. lava, 207. stamen, 208. vapor, 209. cobalt, 210. tube, 211. ordinary, 212. vision

213. col ornament	n.	a rock-like substance created in the sea by groupings of specific types of small animals, commonly used in jewelry
214. phoph memories	n.	a picture or image that is produced by a camera; a visual representation or record of a person, object, or scene that has been captured electronically or on film
215. epe crystal	n.	a green to brown or black mineral belonging to the silicate group, typically occurring in metamorphic and igneous rocks, and often possessing a prismatic or tabular crystal structure
216. jel of the crown	n.	a precious stone that is cut and polished for use in jewelry
217. not noly drink much	adv.	usually; under normal conditions
218. permafrost ten	n.	the physical features of a piece of land, including hills, valleys, rivers, and forests
219. ere coast	v.	to gradually wear away or break down (rock, soil, or other material) through the action of wind, water, or other natural agents; to gradually weaken or undermine (something) over time
220. get rid of a bee	n.	a structure or container where bees live and store their honey
221. micic analysis	adj.	tiny; exceedingly precise and detail-oriented; of or used in microscopy
222. ascend to hen	n.	(of various religious and mythological traditions) a place or state of existence considered to be the abode of the divine, the afterlife, or a higher realm of being; a state of great happiness, contentment, or beauty

ANSWERS: 213. coral, 214. photograph, 215. epidote, 216. jewel, 217. normally, 218. terrain, 219. erode, 220. beehive, 221. microscopic, 222. heaven

to attack a place with bombs or 223. bo d a fort with heavy shells ν. gunshots continuously; to address with continuously or persistently, as if with a barrage a substance that is solid at room 224. w x and wane n. temperature but becomes softer and more pliable when heated, often used in the production of candles, polishes, and cosmetics; (verb) to become large 225. im\_\_\_e from criminal prosecution adj. protected against a particular disease or toxin due to the presence of specific antibodies or sensitized white blood cells 226. tu\_\_\_e down the hill to fall suddenly, often uncontrollably; to topple or turn over; to decline sharply and quickly in value, quality, or performance adj. causing strong emotions or feelings, 227. mo\_\_\_g experience especially sadness or sympathy the scientific study of life and the natural 228. cell and molecular bi n. processes of living things 229. ne\_\_\_r of the gods a sweet liquid produced by flowers that n. attracts and provides food for bees and other insects; any sweet liquid that is enjoyed as a drink or used as a

ANSWERS: 223. bombard, 224. wax, 225. immune, 226. tumble, 227. moving, 228. biology, 229. nectar, 230. spike

230. to sp e

flavoring

something

a narrow, thin, pointed piece of metal,

wood, etc.; a sudden large increase in

the magnitude or concentration of

231. the stre of a machine	n.	the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
232. stc electricity	adj.	not moving or not capable of moving, not changing or not capable of changing
233. take a snot	n.	an informal photograph, especially one taken quickly
234. bat glass	n.	a dark, fine-grained volcanic rock that forms from the solidification of lava
235. carbon dioxide in the atmre	n.	the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work
236. black gre	n.	a tough, durable, and coarse-grained igneous rock often used in construction for buildings, monuments, and sculptures
237. 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
238. 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
239. a convivial atmre	n.	the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work

ANSWERS: 231. structure, 232. static, 233. snapshot, 234. basalt, 235. atmosphere, 236. granite, 237. radiation, 238. bacteria, 239. atmosphere

240. hyth flower	n.	(also "jacinth") a fragrant flowering plant with clustered flowers that grow on a tall, spiky stem, typically in shades of blue, purple, or pink
241. a une teacher	adj.	being the only one of its kind; unlike anything else
242. enf the politician	<i>v</i> .	to swallow up; to surround and cover completely
243. lavender frce	n.	a pleasant or sweet smell, especially one that is natural to a particular substance
244. Ia flow	n.	molten rock that has been extruded from a volcano and solidified; a highly fluid, highly heated substance or material
245. gat stone	n.	a precious stone typically red in color, consisting of a group of silicate minerals; a dark red color resembling that of garnet
246. wind ern	n.	the wearing away of rock, soil, or land by natural processes such as wind or water
247. the most amg feeling	adj.	extremely surprising, especially in a way that you like or admire
248. the spe of a book	n.	the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column
249. lag gear	n.	the act of coming to rest on the ground or another surface after being in flight or

ANSWERS: 240. hyacinth, 241. unique, 242. engulf, 243. fragrance, 244. lava, 245. garnet, 246. erosion, 247. amazing, 248. spine, 249. landing

to rest

jumping; a platform or area of ground where a plane or spacecraft can come

250. heavy hy\_\_\_en

 n. the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water

251. com\_\_\_\_te well with my advisor

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

252. the so\_\_r system

adj. of, from, or relating to the sun

ANSWERS: 250. hydrogen, 251. communicate, 252. solar

## **Session 3: Fill in the Blanks**

1.	Overprotective parents often their children with messages reinforcing their lack of mastery.
v.	to attack a place with bombs or gunshots continuously; to address with continuously or persistently, as if with a barrage
2.	The value of the currency against major international currencies.
ν.	to fall suddenly, often uncontrollably; to topple or turn over; to decline sharply and quickly in value, quality, or performance
3.	Many companies are now enthusiastically embracing the knowledge of for sustainable development.
n.	the study of the relationships between living organisms, including humans, and their physical environment
4.	This high-performance camera is compact enough to fit in the of your hand
n.	the inner surface of the hand from the wrist to the base of the fingers; any plant of the family Palmae having an unbranched trunk crowned by large pinnate or palmate leaves
5.	Bees were buzzing around the
n.	a structure for the reception and habitation of bees, either built by people or made by the bees themselves; a place swarming people
6.	The hiking trail was lined with towering columns.
n.	a dark, fine-grained volcanic rock that forms from the solidification of lava
7.	The countertop was polished giving it a sleek and modern look.
n.	a tough, durable, and coarse-grained igneous rock often used in construction for buildings, monuments, and sculptures
AN	SWERS: 1. bombard, 2. tumbled, 3. ecology, 4. palm, 5. hive, 6. basalt, 7. granite

ANSWERS: 8. enthrall, 9. hyacinth, 10. heaven, 11. vapor, 12. jewel, 13. radiation,

14. universe, 15. communicate

olivine, 31. dots

32. The botany field is concerned with studying the structure of plant
n. one of the separate, usually colored, segments of a flower that produce its shape and are often found arranged in a circle around the reproductive parts
33. We can find many large mounds in this area.
<ul> <li>a very small insect that lives under the ground or in a mound in highly organized groups</li> </ul>
34. The room was only one wider than the piano, making it a tight fit.
n. a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
35. The magician's tricks the audience.
v. to fill with wonder, surprise, or admiration
36. The two paintings looked as if the same artist had done them.  adv. similar or identical in nature or appearance
37. The train was packed with commuters during rush hour.
<ul> <li>a cylindrical container of metal, plastic, glass, etc., usually sealed and used as a means of preserving food or chemicals; a hollow cylindrical shape</li> </ul>
38. The plane made a rough and everyone clapped once we came to a stop.
n. the act of coming to rest on the ground or another surface after being in flight or jumping; a platform or area of ground where a plane or spacecraft can come to rest
39. The vaccination does not necessarily make you completely
adj. protected against a particular disease or toxin due to the presence of specific antibodies or sensitized white blood cells
ANSWERS: 32. petals, 33. ant, 34. centimeter, 35. amazed, 36. alike, 37. tube, 38. landing, 39. immune

ANSWERS: 47. crystal, 48. Worms, 49. infinity, 50. unique, 51. moving, 52. micro, 53. brain, 54. fragments

Vocab-Builder Ref from "Gary Greenberg: The beautiful nano details of our world | TED Talk" (126 words)

ANSWERS: 63. nervous, 64. fragrance, 65. meteorite, 66. dimensions, 67. sphere, 68. urchin, 69. beads, 70. micrometer

microscope, 77. quartz, 78. reef

ANSWERS: 71. geology, 72. microns, 73. pollen, 74. lava, 75. snapshots, 76.

ANSWERS: 79. atom, 80. trichome, 81. Wrap, 82. planet, 83. agglutinated, 84. beehive, 85. wax

ANSWERS: 86. sensory, 87. absolutely, 88. structure, 89. spine, 90. fountain, 91. eternal, 92. photograph, 93. harden

94. This process improves the strength of the metal by controlling the lattice structure of the metal.
adj. on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
95. Driving is difficult for me because of my poor
n. the ability to think about or see the future with imagination and intelligence; the faculty of being able to see
96. I pushed with my new project, even though it would take much hard work.
adv. forward, outward, or onward in location, direction, or progress; into view or consideration; with confidence, boldness, or in the open
97. Sugar is in food.
adj. being or existing everywhere at once
98. I remembered that person and never forgot.
adv. immediately
99. When discussing atomic radii, it's common to use the unit for better relatability.
<ul> <li>(symbolized by the letter "Å") a unit of length used to measure wavelengths of light, equal to one ten-billionth of a meter (10^(-10) meters)</li> </ul>
100. The ongoing budget cuts have the quality of education in many schools
v. to gradually wear away or break down (rock, soil, or other material) through the action of wind, water, or other natural agents; to gradually weaken or undermine (something) over time
101. The spaceship began to burn up as it approached the Earth's
n. the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work
ANSWERS: 94. nanoscale, 95. vision, 96. forth, 97. ubiquitous, 98. instantly, 99. angstrom, 100. eroded, 101. atmosphere

ANSWERS: 102. spike, 103. clump, 104. probable, 105. appreciate, 106. ordinary, 107. array, 108. grains, 109. bumped

ANSWERS: 110. magical, 111. continuously, 112. incredible, 113. stigma, 114. crawl, 115. sand, 116. volcano, 117. static

118.	The geologist found a beautiful specimen of embedded in the rock formation.
n.	a green to brown or black mineral belonging to the silicate group, typically occurring in metamorphic and igneous rocks, and often possessing a prismatic or tabular crystal structure
119.	The outermost electron determines the chemical properties of an atom.
n.	hard outer covering or case of eggs, nuts, some seeds, and some animals
120.	Some orchids' structure mimics certain insects' appearance, facilitating pollination.
n.	the female reproductive organ of a flower, typically located in the center and composed of the stigma, style, and ovary, which receives pollen and facilitates fertilization
121.	Each member of the council has the right to vote on important decisions.
n.	one of the parts of the whole; a person represented by an elected official
122.	Inspectors noticed cracks in the submarine's hull.
adj.	tiny; exceedingly precise and detail-oriented; of or used in microscopy
123.	The robust economy of the country is based on its resources.
n.	a solid inorganic substance occurring in nature having a definite chemical composition
124.	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
125.	Students sketched the arrangement of the lily during their botany class.
n.	the male reproductive organ of a flower, usually consisting of a filament and an anther, which supports the anther, which contains the pollen grains necessary for fertilization
	WERS: 118. epidote, 119. shell, 120. pistil, 121. constituent, 122. microscopic, mineral, 124. biology, 125. stamen

126. He narrated the \_\_\_\_\_ story of his adventure.

adj. exceptional, unexpected, very unusual; surpassing the ordinary or usual

ANSWERS: 126. extraordinary