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Vocabulary Builder Reference from...

Li Wei Tan: The fascinating science of bubbles, from soap to champagne | TED Talk https://www.ted.com/talks/li_wei_tan_the_fascinating _science_of_bubbles_from_soap_to_champagne



All Words

IMPORTANT

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Session 1: Word List

seine

n. a large fishing net that hangs vertically in the water with floats at the top and weights at the bottom used to enclose and catch fish

synonym: net, fishing net, trawl

(1) haul a seine, (2) beach seine

The fishermen used a purse seine to catch fish in the river.

giant

adj. enormous; much bigger or more important than similar items usually are

synonym: big, gigantic, huge

(1) giant trees, (2) giant tech company

The **giant** jets gradually dominate the world's airlines.

bubble

n. a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses

synonym: blob, balloon, mania

(1) **bubble** in the champagne glass, (2) economic **bubble** Many people worry that the current real estate market is a **bubble** that could burst soon.

riverbank

the land along the edge of a river, often used for recreation or agricultural purposes

synonym: riverside, embankment

(1) riverbank erosion, (2) walk along the riverbank We enjoyed a picnic on the **riverbank** and watched the boats go by.

surround

- to be all around something or somebody *synonym*: encircle, encompass, envelop
- (1) **surround** a town, (2) a stone wall **surrounds** the palace On three sides, mountains **surround** the settlement.

visible

adj. capable of being seen; or open to easy view synonym: clear, observable, seeable

(1) **visible** stars, (2) **visible** by X-ray My home is easily **visible** from the shore.

donation

- a voluntary gift of money, service, or ideas that are given to a person or an organization, or the act of giving them *synonym*: contribution, gift, subsidy
- (1) make a **donation**, (2) political **donation** He made a generous **donation** to the charity.

stick

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

synonym: pierce, adhere, stay

(1) stick a key in a lock, (2) fire stick You **stick** a bill in the change machine, and the coins pop

long, thin material used for tying things together, composed of several twisted threads

synonym: line, wire, rope

out.

(1) retie the **string** and make it strong, (2) tense piano strings

string

She wore a **string** of pearls around her neck.

euro

- n. the official currency of most European Union countries
- (1) the value of the **Euro**, (2) **Euro** crises Some countries may leave the **Euro**.

mixture

 a combination of different elements, substances, or entities, usually in non-uniform proportions, resulting in a homogeneous or heterogeneous blend of physical or chemical properties

synonym: blend, amalgam, concoction

(1) mixture of emotions, (2) perfect mixture

The paint was a **mixture** of different pigments to achieve the desired color.

stunning

- adj. causing a strong emotional reaction of admiration,surprise, or shock due to its beauty, rarity, or excellencesynonym: beautiful, breathtaking, magnificent
- (1) stunning beauty, (2) stunning disclosureThe stunning sunset took everyone's breath away.

fascinating

adj. extremely interestingsynonym: alluring, intriguing, captivating

(1) **fascinating** story, (2) completely **fascinating** to me The museum houses a **fascinating** collection of Celtic artifacts.

eliminate

- v. to remove or get rid of someone or something synonym: wipe out, destroy, eradicate
- (1) **eliminate** contestants, (2) **eliminate** sexual barriers We can **eliminate** this possibility from those consumptions.

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.

substance

 the real physical material of which a thing or person consist; the most important or main part of some idea or experience; an illegal drug

synonym: essence, core, material

(1) an explosive **substance**, (2) **substance** abuse problem The **substance** of the argument was well-presented.

constantly

adv. all the time

synonym: continuously, always, frequently

(1) a **constantly** innovative enterprise, (2) a **constantly** varying mind

The mobile application industry is **constantly** changing.

interaction

the act of connecting with someone, mainly when working, playing, or spending time with them

synonym: dealings, exchange, relations

- (1) the interaction between man and his environment,
- (2) interaction among human beings

The interaction of the two groups is good for brainstorming.

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.

atom

 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.

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.

oxygen

- n. the chemical element with the symbol O that is present in air and water and is necessary for people, animals, and plants to live
- (1) the hydrogen binds the **oxygen**, (2) lack of **oxygen** The passenger grabbed for the **oxygen** mask.

droplet

n. a small drop of liquid

synonym: bead, drip, dewdrop

(1) droplet size, (2) droplet formation

A single **droplet** of water can reflect the entire world upside down.

curve

 a bend or angle in a line or surface that deviates from a straight or flat path; a gradual or smooth change in direction or shape

synonym: bend, arc, turn

(1) learning curve, (2) yield curve

The **curve** in the road was so sharp that I had to slow down to navigate it safely.

inward

adj. directed or facing towards the inside; inside or inward-looking

synonym: internal, introspective, interior

(1) inward peace, (2) inward cargo

The **inward** motion of the tide was gradually slowing down.

hemisphere

- n. half of the terrestrial globe; half of a sphere
- northern hemisphere,
 cerebral hemisphere
 this weather pattern is unique to the southern hemisphere.

elastic

adj. flexible, resilient, or adaptable; (noun) a stretchy material or band that can be stretched and then returned to its original shape; something that is flexible and adaptable

synonym: stretchy, flexible, resilient

(1) elastic body, (2) elastic waistband

The skin of a snake is remarkably **elastic**, allowing it to slither through tight spaces.

elasticity

 the ability of a material to return to its original shape after being stretched or compressed; flexibility; adaptability to change

synonym: flexibility, pliability, suppleness

(1) elasticity coefficient, (2) skin elasticity

The **elasticity** of the rubber band allowed it to stretch without breaking.

mathematics

n. the science dealing with the logic of quantities, shapes, spaces, and arrangement

synonym: arithmetic, calculation, calculus

(1) a good grounding in **mathematics**, (2) **mathematics** competition

He has a flair for mathematics.

relentless

adj. persistent and determined; continuing despite difficulties or setbacks

synonym: unyielding, tireless, unremitting

(1) **relentless** attack, (2) face **relentless** pressure The athlete's **relentless** training paid off in the end.

achieve

v. to successfully complete a task or goal, often through hard work, perseverance, and dedication; to attain or accomplish something that one has set out to do

synonym: accomplish, attain, reach

achieve success, (2) achieve milestones
 will work hard to achieve my goals and realize my dreams.

geometry

- *n.* the area of pure mathematics that deals with the points, lines, curves, and surfaces
- (1) Euclidean **geometry**, (2) spherical **geometry**. The mathematician pioneered fractal **geometry**.

instance

- n. a particular example or single occurrence of somethingsynonym: example, sample, illustration
- (1) for **instance**, (2) notable **instance**These articles cite five **instances** of climate change.

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.

volume

- n. the amount of space occupied by an object or substance; the magnitude of soundsynonym: capacity, amount, intensity
- (1) **volume** of work, (2) high **volume**This container has a **volume** of 10 cubic meters.

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.

cube

 a three-dimensional shape with six square faces that are all equal in size; (of mathematics) the result of multiplying the number by itself three times

synonym: block, square, cell

(1) cube root, (2) ice cube

I cut the cheese into small **cubes** for the salad.

arrangement

 a plan or preparation for the future event; the action or process of placing things in a particular order

synonym: placement, configuration, account

(1) **arrangement** of the furniture, (2) **arrangement** committee

As a first **arrangement**, we agreed to meet the following Friday.

prop

n. a piece of wood, metal, etc., placed beneath or against something to support it or keep it in position; a system, institution, or person that gives help or support to someone or something

synonym: support, buttress, column

(1) emotional prop, (2) prop stick

We have finally lost our last prop.

represent

v. to speak, act, or be present on behalf of another person or group; to form or constitute

synonym: depict, express, describe

(1) **represent** by a diagram, (2) the characters that **represent** numbers

We elected him to **represent** us at the international conference.

dip

v. to put something into a liquid for a short time and take it out again

synonym: dunk, dive, plunge

(1) **dip** a pen in ink, (2) **dip** a chip in the sauce

Please **dip** up a bucketful of water from the well.

minimize

 to make something, especially something bad, small or less serious

synonym: diminish, mitigate, belittle

(1) **minimize** a loss, (2) way to **minimize** conflict I bought a gadget before my trip to help **minimize** stress during the flight.

distance

n. the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance

synonym: space, gap, span

(1) driving distance, (2) social distance

The marathon runner covered a long **distance** in a short amount of time.

perspective

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

synonym: viewpoint, standpoint, outlook

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

spot

- a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
 synonym: dot, mark, place
- (1) beauty **spot**, (2) a **spot** on his honor This remote **spot** is rarely visited.

penguin

- a flightless sea bird that is found in the Southern
 Hemisphere and is known for its distinctive black and white coloring and its upright, waddling gait
- (1) Adelie **penguin**, (2) **penguin** habitat We took a boat tour to witness the magnificent **penguin** colony along the rugged coastline.

cove

- a small sheltered bay or inlet, typically rocky and steep-sided; a small strip of land jutting into the sea
 synonym: inlet, bay, indentation
- (1) cove beach, (2) rocky cove

The kayakers paddled into the little **cove** to explore its hidden beauty.

trail

n. a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular

purpose; (verb) to lag or linger behind

synonym: footpath, track, course

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

The storm left a trail of destruction behind it.

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.

ingenious

adj. showing inventiveness and ability or skill

synonym: creative, innovative, inventive

(1) ingenious device, (2) ingenious idea

I always look forward to reading his stories since they're so **ingenious**.

utilize

 to use something for a practical purpose in an effective way

synonym: employ, use, operate

(1) **utilize** a different approach, (2) **utilize** a catheter

The cook **utilized** the leftover oxtail to make soup.

density

n. the quality of compactness of a substance

synonym: tightness, viscosity

(1) population **density**, (2) higher pixel **density**

Do you know the **density** of the population in Hong Kong?

emperor

n. the male ruler of an empire

synonym: ruler, king, dictator

(1) **emperor** of Rome, (2) former **emperor**

The **Emperor** once lived in the vast palace.

dive

v. to jump into the water with your head and arms going in first, or to move down to a deeper level underwater

synonym: dip, leap, plunge

(1) **dive** into anime communities, (2) **dive** off a cliff The sperm whale can **dive** to 1,000 meters.

progressive

adj. relating to or supporting development or advancement, especially social or political one

synonym: advanced, forward-thinking, modern

(1) **progressive** taxation, (2) **progressive** development The **progressive** approach to education emphasizes hands-on learning and student-centered classrooms.

release

- v. to set free or allow to escape from confinement synonym: free, let go, discharge
- (1) **release** a prisoner, (2) **release** CO2 into the air
 The animal rights group worked to **release** the dolphins back into the wild.

surrounding

adj. that is near or around, or closely encircling something *synonym*: circumferent, encircling, neighboring

(1) **surrounding** areas, (2) a fence **surrounding** a castle The **surrounding** mountains make the city difficult to be invaded.

feat

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

synonym: achievement, accomplishment, exploit

(1) intellectual **feat**, (2) **feat** accomplishment It is an incredible **feat** to climb Mount Everest, the highest mountain in the world.

manufacture

to make goods in large numbers, usually in a factory using machines

synonym: create, fabricate, assemble

(1) **manufacture** an enzyme, (2) **manufacture** a product The majority of synthetic vitamins are **manufactured** from oil.

transport

- n. a system for moving people or products from one location to another using automobiles, roads, and so on synonym: shipment, transit, conveyance
- (1) **transport** facilities, (2) access to public **transport** Enhanced rail **transportation** is crucial for our business.

recreation

n. the activity that renews your health and spirits by enjoyment and relaxation; the act or process of making something that existed in the past exists or seems to exist again in a different time or place

synonym: amusement, entertainment, refreshment

(1) outdoor **recreation**, (2) **recreation** of the homeland Basketball is their usual **recreation** after school.

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.

lubricate

v. to apply a substance, such as oil or grease, to reduce friction or wear on a surface

synonym: grease, oil, make slippery

(1) **lubricate** the economy, (2) **lubricate** the hinges with oil The mechanic **lubricated** the gears to prevent them from grinding.

inspire

- v. to make somebody fill with the desire, confidence, or enthusiasm, especially to do something creative
 synonym: boost, encourage, enlighten
- (1) **inspire** a feeling of curiosity, (2) **inspire** him to write a novel

The unique style of this martial arts inspired many action film

producers.

redistribute

- v. to share something among people in a different way synonym: rearrange, readjust, reconstruct
- (1) **redistribute** income fairly, (2) **redistribute** data

 The general **redistributed** the troops more strategically.

resistance

- the act of defending oneself from an aggressor or refusing to accept something
- synonym: opposition, antagonism, defiance
- (1) **resistance** movement, (2) **resistance** to insulin The bill to increase the consumption tax had passed despite much **resistance** from the public.

consumption

- n. the amount used or eaten; the act of using up a resource such as energy, food, or materialssynonym: usage, uptake, utilization
- (1) average fuel **consumption**, (2) the **consumption** of food

In our country, water **consumption** usually decreases during the winter.

medicinal

- adj. of or relating to the treatment or cure of diseasesynonym: curative, therapeutic, healing
- (1) **medicinal** chemistry, (2) traditional **medicinal**The **medicinal** properties of this herb have been known to help with various ailments.

invasive

- adj. spreading very quickly, and often aggressively, and difficult to stop
- synonym: aggressive, rampant, spreading
- (1) **invasive** breast cancer, (2) **invasive** species

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

delivery

n. the act of taking or sending something to a destination; the bringing of a baby during childbirth

synonym: sending, transporting, bringing

(1) an easy delivery, (2) special delivery

The **delivery** truck arrived with the packages.

specific

adj. clearly defined or particular to a certain thing or situation; distinct, explicit, and precise

synonym: particular, definite, distinct

(1) **specific** instructions, (2) industry- **specific** regulations
The scientist conducted a study that provided **specific** details about the species' behavior.

magnetic

 adj. having the properties of attracting or repelling certain materials containing iron or steel

synonym: attractive, drawing, hypnotic

(1) magnetic field, (2) a magnetic tape

The **magnetic** force of the earth keeps our planet spinning.

inject

v. to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube)

synonym: shoot, infiltrate, insinuate

(1) **inject** under the skin, (2) **inject** a personal opinion into a debate

Let's try to inject a bit of enthusiasm into your performance.

bloodstream

- n. the blood flowing through the body
- (1) **bloodstream** in an artery, (2) **bloodstream** to the brain Cancer cells are often carried throughout the body by the **bloodstream**.

magnet

 an object or substance that can attract certain materials, such as iron or steel

synonym: magnetite, lodestone, attracting substance

(1) magnet attraction, (2) permanent magnet

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The MRI machine uses **magnets** to produce images of the body's internal organs.

ultrasound

- n. higher frequency sound than humans can hear
- (1) ultrasound meter, (2) ultrasound scanAn ultrasound scan showed that the baby was a girl.

mention

- v. to speak or write about something or someone briefly synonym: reference, allude, cite
- (1) **mention** name, (2) **mention** in a report I **mentioned** to him that I had seen his sister at the grocery store earlier that day.

organic

adj. of or derived from biological substance; producing plants and animals for food and other items without the use of synthetic chemicals

synonym: biological

(1) **organic** soils, (2) eat **organic** food

The kidney is an **organic** component of the body.

photovoltaics

 a branch of technology that involves the conversion of sunlight into electricity using solar cells or other photoelectric devices; the generation of electricity directly from sunlight, typically using solar panels

synonym: solar cells, solar power

(1) **photovoltaics** recycling initiatives, (2) **photovoltaics** system

The development of thin-film **photovoltaics** has allowed for a wider range of applications in building design.

emit

v. to give off or send out something such as light, heat, sound, gas, etc.

synonym: give off, radiate, expel

(1) **emit** a gamma ray, (2) **emit** air pollution

During the unloading, the container box **emits** a clicking sound.

diode

an electronic component that conducts current primarily in one direction and typically has two electrodes or terminals

synonym: rectifier, valve, semiconductor

(1) light-emitting **diode**, (2) semiconductor **diode** The **diode** in the circuit prevented the current from flowing in the wrong direction.

formulate

- to create or develop a plan, system, theory, or formula; to express an idea or concept in a clear, precise manner synonym: devise, develop, articulate
- (1) formulate a response, (2) formulate idea The scientists worked together to **formulate** a plan for their research project.

process

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

synonym: procedure, method, system

(1) process improvement, (2) decision-making process The **process** for applying for a visa can be lengthy and complicated.

preparation

the activity of getting ready for something or making something ready

synonym: practice, trial, rehearsal

(1) a **preparation** program, (2) the **preparation** of meals He helped me with the **preparation** of this book.

ingredient

- one of the things used to make something, especially one of the foods used to make a particular dish synonym: element, component
- (1) secret **ingredients**, (2) compound the **ingredients** Greed is the primary ingredient in the making of criminals.

solvent

 adj. capable of dissolving other substances; having sufficient money to pay all outstanding debts; (noun) a liquid substance capable of dissolving other substances

synonym: (noun) solution, (noun) dissolver

(1) a solvent liquid, (2) chemical solvents

The company was able to remain **solvent** throughout the economic downturn.

additive

 a substance added to something in small amounts, especially food, to improve or preserve it

synonym: preservative, supplement

(1) food **additive**, (2) deleterious chemical **additives**The gasoline **additive** had leaked from the container.

unavoidable

adj. impossible to avoid or evade; inevitable *synonym*: inevitable, inescapable, certain

(1) an **unavoidable** accident, (2) under **unavoidable** circumstances

There are now fears that war is unavoidable.

trap

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

synonym: catch, snare, pinfall

(1) set a **trap**, (2) **trap** an animal The enemy fell right into the **trap**.

vary

v. to become different in terms of size, shape, etc.

synonym: alter, contrast, differ

(1) **vary** according to the age, (2) **vary** directly with the price Maximum heart rates **vary** a lot for each individual.

micron

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

synonym: micrometer

(1) micron measurements, (2) micron imaging

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The width of a single human hair is around 100 microns.

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.

moisture

- small amounts of liquid, especially water, that are present in or absorbed by a substance
- synonym: dampness, humidity, wetness
- (1) moisture level, (2) lot of moisture

My hair looks greasy because there is too much **moisture** in the air.

display

v. to exhibit or show something to others, often to attract attention or demonstrate its features, properties, or value

synonym: show, exhibit, present

(1) **display** merchandise, (2) **display** artwork
We need to **display** our products in an attractive way to attract customers.

smartphone

- a mobile phone that functions as a computer and connects to the Internet
- (1) **smartphone** app developer, (2) **smartphone** addict Internet traffic volumes have increased significantly with the advent of **smartphones**.

suppose

- v. to think that something is likely to be actual or possible synonym: guess, assume, presume
- (1) **suppose** you're right, (2) **suppose** beforehand What do you **suppose** the culprit's motive was?

absorb

v. to take in a fluid or other substance gradually synonym: consume, soak, ingest

(1) absorb energy, (2) absorb a shock

The sponge **absorbs** water well.

pixel

n. the smallest unit of an image that can be displayed or manipulated electronically, typically a point of light on a computer screen or in a digital image

synonym: dot, point, picture element

(1) pixel density, (2) color pixels

The computer screen comprises thousands of tiny **pixels** that create the overall picture.

cooperative

adj. involving doing something jointly or working with others to achieve a common goal

synonym: harmonious, collegial, helpful

(1) **cooperative** savings, (2) fishing **cooperative**

We appreciate your **cooperative** efforts.

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.

vacuum

 a space empty of matter; a device or tool used for cleaning or removing debris by creating suction

synonym: void, emptiness, gap

(1) vacuum cleaner, (2) vacuum packing

Please use the **vacuum** to clean up the mess on the floor.

chamber

 a large room used for a formal, public, or particular purpose; one of the parts of a parliament

synonym: association, cabin, legislature

(1) a gas chamber, (2) the lower chamber

The surgeon made an incision in the **chambers** of the patient's heart.

squeeze

v. to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness

synonym: compress, crush, clamp

(1) **squeeze** a lemon, (2) **squeeze** a confession She **squeezed** the toothpaste tube from the middle to get the last bit out.

celebrate

v. to acknowledge a memorable or good day or event with a social gathering or enjoyable activity

synonym: praise, glorify, honor

(1) **celebrate** his election, (2) **celebrate** Christmas He **celebrated** the 10th anniversary of his tenure.

champagne

 a type of sparkling wine produced in the Champagne region of France, or any similar wine produced elsewhere

synonym: sparkling wine, prosecco, cava

(1) **champagne** toast, (2) **champagne** celebration They opened a bottle of **champagne** to celebrate their success.

carbon

- a chemical element that can be found in pure form as diamond or graphite, and it is also an essential part of coal and oil and is found in all plants and animals
- carbon dioxide, (2) carbon emission
 Trees absorb carbon dioxide and give off oxygen.

oxide

- a chemical compound that contains at least one oxygen atom and one other element
- (1) silver oxide, (2) combined oxideThe blood's red coloring comes from iron oxide.

iet

 a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances

synonym: plane, aircraft, flier

(1) private jet, (2) commercial jet

The **jet** flew over the ocean at high speed, reaching its destination in hours.

aroma

 a distinctive, usually pleasant smell, often of a specific food, plant, or object

synonym: fragrance, scent, smell

(1) aroma therapy, (2) coffee aroma

The **aroma** of freshly baked bread filled the kitchen.

intensify

v. to increase or make something increase in extent or strength

synonym: amplify, boost, strengthen

(1) **intensify** diplomatic efforts, (2) **intensify** a good relationship

Rebels have pledged to **intensify** the armed struggle against the dictatorship.

flavor

the taste sensation produced by a substance in the mouth

synonym: taste, savor, essence

(1) a delicate flavor, (2) flavor enhancer

The **flavor** of the coffee was rich and full-bodied.

Session 2: Spelling

1. in e him to write a novel

v. to make somebody fill with the desire, confidence, or enthusiasm, especially to do something creative

2. el___c body

adj. flexible, resilient, or adaptable; (noun) a stretchy material or band that can be stretched and then returned to its original shape; something that is flexible and adaptable

3. perfect mi___e

 a combination of different elements, substances, or entities, usually in non-uniform proportions, resulting in a homogeneous or heterogeneous blend of physical or chemical properties

4. driving di____ce

n. the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance

5. vo___e of work

n. the amount of space occupied by an object or substance; the magnitude of sound

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adj. impossible to avoid or evade; inevitable

7. ce____te his election

v. to acknowledge a memorable or good day or event with a social gathering or enjoyable activity

8. e__t air pollution

v. to give off or send out something such as light, heat, sound, gas, etc.

ANSWERS: 1. inspire, 2. elastic, 3. mixture, 4. distance, 5. volume, 6. unavoidable, 7. celebrate, 8. emit

9.	d_p a pen in ink	<i>v</i> .	to put something into a liquid for a short time and take it out again
10.	beauty st	n.	a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
11.	access to public trrt	n.	a system for moving people or products from one location to another using automobiles, roads, and so on
12.	spherical gery	n.	the area of pure mathematics that deals with the points, lines, curves, and surfaces
13.	combined oxe	n.	a chemical compound that contains at least one oxygen atom and one other element
14.	manre a product	<i>v</i> .	to make goods in large numbers, usually in a factory using machines
15.	micic analysis	adj.	tiny; exceedingly precise and detail-oriented; of or used in microscopy
16.	inve breast cancer	adj.	spreading very quickly, and often aggressively, and difficult to stop
17.	micic inquiry	adj.	tiny; exceedingly precise and detail-oriented; of or used in microscopy
18.	int under the skin	<i>v</i> .	to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube)
19.	follow the trI	n.	a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular purpose; (verb) to lag or linger behind

ANSWERS: 9. dip, 10. spot, 11. transport, 12. geometry, 13. oxide, 14. manufacture, 15. microscopic, 16. invasive, 17. microscopic, 18. inject, 19. trail

ANSWERS: 20. magical, 21. cooperative, 22. ingredient, 23. volume, 24. delivery, 25. euro, 26. recreation, 27. visible, 28. cube, 29. ultrasound

n.

can hear

29. ult nd meter

higher frequency sound than humans

ANSWERS: 30. preparation, 31. cove, 32. oxygen, 33. celebrate, 34. suppose, 35. relentless, 36. distance, 37. develop, 38. donation

45. or____c soils

46. in____us device

47. me___n name

48. ev___e

important than similar items usually are

adj. of or derived from biological substance; producing plants and animals for food and other items without the use of synthetic chemicals

adj. showing inventiveness and ability or skill

to speak or write about something or someone briefly

to develop gradually, or to cause the development of something or someone gradually

ANSWERS: 39. trap, 40. nanoscale, 41. cove, 42. nanoscale, 43. tube, 44. giant, 45. organic, 46. ingenious, 47. mention, 48. evolve

ANSWERS: 49. relentless, 50. bubble, 51. represent, 52. droplet, 53. evolve, 54. redistribute, 55. visible, 56. smartphone, 57. solvent, 58. stunning, 59. aroma

n.

59. coffee ar a

a distinctive, usually pleasant smell,

often of a specific food, plant, or object

ANSWERS: 60. represent, 61. feat, 62. mathematics, 63. emperor, 64. vacuum, 65. magical, 66. specific, 67. atom, 68. sphere, 69. hemisphere, 70. instance

ANSWERS: 71. string, 72. trap, 73. droplet, 74. cooperative, 75. surround, 76. ingredient, 77. curve, 78. display, 79. redistribute, 80. ultrasound, 81. intensify

82.	min measurements	n.	a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms
83.	emr of Rome	n.	the male ruler of an empire
84.	sqe a confession	<i>v</i> .	to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness
85.	the perve of the battle	n.	a confident attitude toward something; a particular style of thinking about something
86.	ace success	<i>v</i> .	to successfully complete a task or goal, often through hard work, perseverance, and dedication; to attain or accomplish something that one has set out to do
87.	ree a prisoner	<i>v</i> .	to set free or allow to escape from confinement
88.	rink erosion	n.	the land along the edge of a river, often used for recreation or agricultural purposes
89.	de off a cliff	<i>v</i> .	to jump into the water with your head and arms going in first, or to move down to a deeper level underwater
90.	et a gamma ray	<i>v</i> .	to give off or send out something such as light, heat, sound, gas, etc.
91.	an explosive suce	n.	the real physical material of which a thing or person consist; the most important or main part of some idea or experience; an illegal drug

ANSWERS: 82. micron, 83. emperor, 84. squeeze, 85. perspective, 86. achieve, 87. release, 88. riverbank, 89. dive, 90. emit, 91. substance

- 92. fire st__k

 93. beach se__e

 94. fl___r enhancer

 95. a warm tr__l
 - 96. st__k a key in a lock
 - 97. eat or___c food
 - 98. permanent ma___t
 - 99. lack of ox___n

- v. to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
- n. a large fishing net that hangs vertically in the water with floats at the top and weights at the bottom used to enclose and catch fish
- *n.* the taste sensation produced by a substance in the mouth
- a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular purpose; (verb) to lag or linger behind
- v. to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
- adj. of or derived from biological substance; producing plants and animals for food and other items without the use of synthetic chemicals
- *n.* an object or substance that can attract certain materials, such as iron or steel
- n. the chemical element with the symbol O that is present in air and water and is necessary for people, animals, and plants to live

ANSWERS: 92. stick, 93. seine, 94. flavor, 95. trail, 96. stick, 97. organic, 98. magnet, 99. oxygen

ANSWERS: 100. medicinal, 101. prop, 102. geometry, 103. photovoltaics, 104. mathematics, 105. constantly, 106. interaction, 107. aroma, 108. inward, 109. resistance

110. the lower chr	n.	a large room used for a formal, public, or particular purpose; one of the parts of a parliament
111. for ince	n.	a particular example or single occurrence of something
112. the preon of meals	n.	the activity of getting ready for something or making something ready
113. abb a shock	<i>v</i> .	to take in a fluid or other substance gradually
114. elaty coefficient	n.	the ability of a material to return to its original shape after being stretched or compressed; flexibility; adaptability to change
115. fote a response	<i>v</i> .	to create or develop a plan, system, theory, or formula; to express an idea or concept in a clear, precise manner
116. an easy dery	n.	the act of taking or sending something to a destination; the bringing of a baby during childbirth
117. smane app developer	n.	a mobile phone that functions as a computer and connects to the Internet
118. spic instructions	adj.	clearly defined or particular to a certain thing or situation; distinct, explicit, and precise
119. bloam in an artery	n.	the blood flowing through the body
120. lute the economy	ν.	to apply a substance, such as oil or grease, to reduce friction or wear on a surface

ANSWERS: 110. chamber, 111. instance, 112. preparation, 113. absorb, 114. elasticity, 115. formulate, 116. delivery, 117. smartphone, 118. specific, 119. bloodstream, 120. lubricate

121. private j_t	n.	a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances
122. prove taxation	adj.	relating to or supporting development or advancement, especially social or political one
123. heavy hyen	n.	the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water
124. outdoor recon	n.	the activity that renews your health and spirits by enjoyment and relaxation; the act or process of making something that existed in the past exists or seems to exist again in a different time or place
125. sue you're right	<i>v</i> .	to think that something is likely to be actual or possible
126. de into anime communities	<i>v</i> .	to jump into the water with your head and arms going in first, or to move down to a deeper level underwater
127. 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
128. the conon of food	n.	the amount used or eaten; the act of using up a resource such as energy, food, or materials
129. a glass te	n.	a cylindrical container of metal, plastic, glass, etc., usually sealed and used as a means of preserving food or chemicals; a hollow cylindrical shape

ANSWERS: 121. jet, 122. progressive, 123. hydrogen, 124. recreation, 125. suppose, 126. dive, 127. atom, 128. consumption, 129. tube

Vocab-Builder Ref from "Li Wei Tan: The fascinating science of bubbles, from soap to champagne | TED Talk" (111 words)

riverbank, 135. inject, 136. invasive, 137. achieve, 138. solvent

- 145. ab___b energy
- 146. va___m cleaner
- 147. tr____rt facilities

- a piece of wood, metal, etc., placed beneath or against something to support it or keep it in position; a system, institution, or person that gives help or support to someone or something
- v. to take in a fluid or other substance gradually
- a space empty of matter; a device or tool used for cleaning or removing debris by creating suction
- a system for moving people or products from one location to another using automobiles, roads, and so on

ANSWERS: 139. carbon, 140. carbon, 141. surrounding, 142. champagne, 143. medicinal, 144. prop, 145. absorb, 146. vacuum, 147. transport

ANSWERS: 148. resistance, 149. stunning, 150. additive, 151. hemisphere, 152. intensify, 153. sphere, 154. constantly, 155. develop, 156. ingenious, 157. chamber

158. 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
159. elc waistband	adj.	flexible, resilient, or adaptable; (noun) a stretchy material or band that can be stretched and then returned to its original shape; something that is flexible and adaptable
160. skin elaty	n.	the ability of a material to return to its original shape after being stretched or compressed; flexibility; adaptability to change
161. haul a see	n.	a large fishing net that hangs vertically in the water with floats at the top and weights at the bottom used to enclose and catch fish
162. under unale circumstances	adj.	impossible to avoid or evade; inevitable
163. elte sexual barriers	v.	to remove or get rid of someone or something
164. ice ce	n.	a three-dimensional shape with six square faces that are all equal in size; (of mathematics) the result of multiplying the number by itself three times
165. economic bue	n.	a thin, round, and often transparent mass of gas that is surrounded by a thir layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses

ANSWERS: 158. process, 159. elastic, 160. elasticity, 161. seine, 162. unavoidable, 163. eliminate, 164. cube, 165. bubble

ANSWERS: 166. minimize, 167. perspective, 168. formulate, 169. fascinating, 170. curve, 171. arrangement, 172. oxide, 173. magnetic, 174. penguin, 175. display

176. manre an enzyme	<i>v</i> .	to make goods in large numbers, usually in a factory using machines
177. d_p a chip in the sauce	<i>v</i> .	to put something into a liquid for a short time and take it out again
178. sqe a lemon	ν.	to apply pressure from two or more sides; to hold someone or something tightly in your arms, usually with fondness
179. food adve	n.	a substance added to something in small amounts, especially food, to improve or preserve it
180. f_t accomplishment	n.	a notable or impressive achievement, especially one that requires great skill or bravery
181. hyen gas	n.	the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water
182. small moles	n.	a group of two or more atoms held together by attractive forces known as chemical bonds
183. mat attraction	n.	an object or substance that can attract certain materials, such as iron or steel
184. the inton between man and his environment	n.	the act of connecting with someone, mainly when working, playing, or spending time with them
185. pen habitat	n.	a flightless sea bird that is found in the Southern Hemisphere and is known for its distinctive black and white coloring and its upright, waddling gait

ANSWERS: 176. manufacture, 177. dip, 178. squeeze, 179. additive, 180. feat, 181. hydrogen, 182. molecule, 183. magnet, 184. interaction, 185. penguin

186. light-emitting die	n.	an electronic component that conducts current primarily in one direction and typically has two electrodes or terminals
187. chne celebration	n.	a type of sparkling wine produced in the Champagne region of France, or any similar wine produced elsewhere
188. ine a feeling of curiosity	v.	to make somebody fill with the desire, confidence, or enthusiasm, especially to do something creative
189. a st on his honor	n.	a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
190. a delicate flr	n.	the taste sensation produced by a substance in the mouth
191. a stone wall sunds the palace	ν.	to be all around something or somebody
192. commercial j_t	n.	a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances
193. more level	n.	small amounts of liquid, especially water, that are present in or absorbed by a substance
194. political doon	n.	a voluntary gift of money, service, or ideas that are given to a person or an organization, or the act of giving them
195. min imaging	n.	a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms

ANSWERS: 186. diode, 187. champagne, 188. inspire, 189. spot, 190. flavor, 191. surround, 192. jet, 193. moisture, 194. donation, 195. micron

196. ree CO2 into the air	<i>v</i> .	to set free or allow to escape from confinement
197. ute a catheter	<i>v</i> .	to use something for a practical purpose in an effective way
198. a maic tape	adj.	having the properties of attracting or repelling certain materials containing iron or steel
199. suce abuse problem	n.	the real physical material of which a thing or person consist; the most important or main part of some idea or experience; an illegal drug
200. lute the hinges with oil	ν.	to apply a substance, such as oil or grease, to reduce friction or wear on a surface
201. mize a loss	<i>v</i> .	to make something, especially something bad, small or less serious
202. a fence surng a castle	adj.	that is near or around, or closely encircling something
203. vy directly with the price	<i>v</i> .	to become different in terms of size, shape, etc.
204. higher pixel dey	n.	the quality of compactness of a substance
205. arrnt of the furniture	n.	a plan or preparation for the future event; the action or process of placing things in a particular order
206. ute a different approach	<i>v</i> .	to use something for a practical purpose in an effective way
207. git trees	adj.	enormous; much bigger or more important than similar items usually are

ANSWERS: 196. release, 197. utilize, 198. magnetic, 199. substance, 200. lubricate, 201. minimize, 202. surrounding, 203. vary, 204. density, 205. arrangement, 206. utilize, 207. giant

the smallest unit of an image that can 208. color pi ls n. be displayed or manipulated electronically, typically a point of light on a computer screen or in a digital image to become different in terms of size, 209. v y according to the age ν. shape, etc. the quality of compactness of a 210. population de____y n. substance to speak or write about something or 211. me n in a report someone briefly adj. relating to or supporting development or 212. pro_____ve development advancement, especially social or political one an electronic component that conducts 213. semiconductor di__e current primarily in one direction and typically has two electrodes or terminals the smallest unit of an image that can 214. pi I density be displayed or manipulated electronically, typically a point of light on a computer screen or in a digital image small amounts of liquid, especially 215. lot of mo____re n. water, that are present in or absorbed by a substance a series of actions or operations 216. decision-making pr s n. 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

ANSWERS: 208. pixel, 209. vary, 210. density, 211. mention, 212. progressive, 213. diode, 214. pixel, 215. moisture, 216. process

suitable for consumption or use in other

dairy products

217. average fuel conon	n.	the amount used or eaten; the act of using up a resource such as energy, food, or materials
218. fasng story	adj.	extremely interesting
219. mie of emotions	n.	a combination of different elements, substances, or entities, usually in non-uniform proportions, resulting in a homogeneous or heterogeneous blend of physical or chemical properties
220. elte contestants	v.	to remove or get rid of someone or something
221. retie the stg and make it strong	n.	long, thin material used for tying things together, composed of several twisted threads
222. Eo crises	n.	the official currency of most European Union countries

ANSWERS: 217. consumption, 218. fascinating, 219. mixture, 220. eliminate, 221. string, 222. euro

Session 3: Fill in the Blanks

1	The once lived in the vast palace.
n.	the male ruler of an empire
2. ł	He has a flair for
n.	the science dealing with the logic of quantities, shapes, spaces, and arrangement
3. \	We need to our products in an attractive way to attract customers.
ν.	to exhibit or show something to others, often to attract attention or demonstrate its features, properties, or value
4. ľ	Maximum heart rates a lot for each individual.
v.	to become different in terms of size, shape, etc.
5. l	will work hard to my goals and realize my dreams.
v.	to successfully complete a task or goal, often through hard work, perseverance and dedication; to attain or accomplish something that one has set out to do
6. ⁻	The jets gradually dominate the world's airlines.
adj.	enormous; much bigger or more important than similar items usually are
7. \	We enjoyed a picnic on the and watched the boats go by.
n.	the land along the edge of a river, often used for recreation or agricultural purposes
8. (Cancer cells are often carried throughout the body by the
n.	the blood flowing through the body
	WERS: 1. Emperor, 2. mathematics, 3. display, 4. vary, 5. achieve, 6. giant, 7. bank, 8. bloodstream

ANSWERS: 48. nanoscale, 49. smartphones, 50. carbon, 51. medicinal, 52. surround, 53. mentioned, 54. perspective, 55. vacuum

56. The storm left a of destruction behind it.	
 a path or track roughly through a countryside, mountain, or forest area, often made or used for a particular purpose; (verb) to lag or linger behind 	
57. The general the troops more strategically.	
v. to share something among people in a different way	
58. Inspectors noticed cracks in the submarine's hull.	
adj. tiny; exceedingly precise and detail-oriented; of or used in microscopy	
59. The sponge water well.	
v. to take in a fluid or other substance gradually	
60. Many people worry that the current real estate market is a that could burst soon.	
 a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable a eventually collapses 	nd
61. The shape of the DNA is a double helix.	
 a group of two or more atoms held together by attractive forces known as chemical bonds 	
62. I bought a gadget before my trip to help stress during the flight.	
v. to make something, especially something bad, small or less serious	
63. The of the argument was well-presented.	
n. the real physical material of which a thing or person consist; the most importation or main part of some idea or experience; an illegal drug	ant
ANSWERS: 56. trail, 57. redistributed, 58. microscopic, 59. absorbs, 60. bubble, 69. molecule, 62. minimize, 63. substance	1.

64. We a	appreciate your efforts.
adj. invo goa	olving doing something jointly or working with others to achieve a common
65. Eyele	ess fish in dark caves.
	develop gradually, or to cause the development of something or someone dually
66. The a	athlete's training paid off in the end.
adj. per	sistent and determined; continuing despite difficulties or setbacks
67. The _	force of the earth keeps our planet spinning.
	ving the properties of attracting or repelling certain materials containing iron steel
68. I alwa	ays look forward to reading his stories since they're so
adj. sho	owing inventiveness and ability or skill
69. He h	elped me with the of this book.
n. the	activity of getting ready for something or making something ready
70. Durir	ng the unloading, the container box a clicking sound.
v. to g	give off or send out something such as light, heat, sound, gas, etc.
71. The I	kidney is an component of the body.
	or derived from biological substance; producing plants and animals for food dother items without the use of synthetic chemicals
72. They	opened a bottle of to celebrate their success.
-	pe of sparkling wine produced in the Champagne region of France, or any nilar wine produced elsewhere
	RS: 64. cooperative, 65. evolved, 66. relentless, 67. magnetic, 68. ingenious, aration, 70. emits, 71. organic, 72. champagne

81.	The mountains make the city difficult to be invaded.
adj	that is near or around, or closely encircling something
82.	The MRI machine uses to produce images of the body's internal organs.
n.	an object or substance that can attract certain materials, such as iron or steel
83.	He the 10th anniversary of his tenure.
v.	to acknowledge a memorable or good day or event with a social gathering or enjoyable activity
84.	My hair looks greasy because there is too much in the air.
n.	small amounts of liquid, especially water, that are present in or absorbed by a substance
85.	We have finally lost our last
n.	a piece of wood, metal, etc., placed beneath or against something to support it or keep it in position; a system, institution, or person that gives help or support to someone or something
86.	The gasoline had leaked from the container.
n.	a substance added to something in small amounts, especially food, to improve or preserve it
87.	We can this possibility from those consumptions.
ν.	to remove or get rid of someone or something
88.	Enhanced rail is crucial for our business.
n.	a system for moving people or products from one location to another using automobiles, roads, and so on
	SWERS: 81. surrounding, 82. magnets, 83. celebrated, 84. moisture, 85. prop, 86. litive, 87. eliminate, 88. transportation

ed
r
rall
า
ive,

Vocab-Builder Ref from	"Li Wei Tan: The fascinating science of bubbles, from soap to champagne TED Talk" (111 words)
111. As a first	we agreed to meet the following Friday.
	reparation for the future event; the action or process of placing particular order
ANSWERS: 111	. arrangement,