# **Englist.me**

### Vocabulary Builder Reference from...

Elizabeth "Zibi" Turtle: What Saturn's most mysterious moon could teach us about the origins of life | TED Talk

https://www.ted.com/talks/elizabeth\_zibi\_turtle\_what\_ saturn\_s\_most\_mysterious\_moon\_could\_teach\_us\_a bout\_the\_origins\_of\_life



### **All Words**

#### **IMPORTANT**

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### **Session 1: Word List**

#### dense

adj. containing a large number of people or something with little space between them

synonym: heavy, thick, idiotic

(1) nutrient- **dense** foods, (2) **dense** forests

The entire mountain is covered in **dense** rainforest.

#### 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.

#### sweep

v. to clean something, especially a floor or an area, by using a broom; move swiftly and smoothly

synonym: clean, clear, brush off

(1) **sweep** up dead leaves, (2) **sweep** a room with a glance The politician tried to **sweep** the embarrassing incident under the rug. plain

adj. without being decorated in any way; (Noun) a vast expanse of flat land with few trees

synonym: basic, straight, bare

(1) plain answer, (2) delta plain

The lowest lowland region is mostly flat **plain**.

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.

dun

adj. having a dull brownish-gray color, often used to describe the color of certain animals, such as a dun horse; (verb) to repeatedly and insistently demand payment of a debt or money owed

synonym: dark, gloomy, somber

(1) **dun** horse, (2) **dun** him for the unpaid bills

The spider was camouflaged on the **dun-colored** rock, waiting for its next prey.

crater

 a huge bowl-shaped cavity in the earth or an object in space, usually created by an explosion or the impact of a meteorite

synonym: cavity, hole, pit

(1) crater lake, (2) lunar crater

An enormous **crater** marks the area where the vast volcanic explosion occurred.

titanic

 adj. of or having a great size, power, or influence; of or relating to Titanium (= a light, strong grey, lustrous, corrosion-resistant metallic element)

synonym: colossal, massive, immense

(1) titanic battle, (2) titanic compound

The **titanic** ship sank on its maiden voyage.

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#### voyage

- n. a long journey, especially by sea or in spacesynonym: journey, trip, excursion
- a voyage of discovery, (2) take a voyage
   The astronaut trained for years before embarking on her voyage to the International Space Station.

#### capture

v. to catch a person or an animal and confine them in an area which they cannot escape

synonym: catch, arrest, imprison

(1) **capture** a glimpse, (2) **capture** customers' hearts I was able to **capture** the moment on film.

### geography

- n. a field of science devoted to the study of the lands, features, inhabitants, and phenomena of the Earth synonym: landscape, terrain, topography
- (1) **geography** class, (2) economic **geography** She did well on her **geography** exam.

#### hazy

- adj. not clear due to a lack of recollection, comprehension, or detail; unsure or perplexed about something
- synonym: blurred, clouded, foggy
- (1) **hazy** dream, (2) **hazy** atmosphere My memories of the holiday were **hazy**.

#### stark

- *adj.* empty, simple, or apparent; devoid of any qualifications *synonym*: crude, blunt, desolate
- stark landscape, (2) stark truth
   The scenery of the battlefield was stark and grey.

#### mystery

n. something difficult to understand or explain; a secret or enigmatic quality that adds to the fascination or interest of something; a genre of fiction that involves the solution of a crime or a puzzle

synonym: enigma, puzzle, secret

(1) mystery novel, (2) unsolved mystery

The mystery surrounding the disappearance of the traveler

has yet to be solved by authorities.

#### exponential

- adj. becoming more and more rapid; of or involving mathematical exponents
- (1) **exponential** growth, (2) **exponential** function Since the 1990s, the Internet has continued to experience **exponential** growth.

#### beneath

adv. in or to a lower place than someone or something synonym: down, under, low

(1) the ground **beneath** my feet, (2) **beneath** contempt A great stretch of the lake lay **beneath** them.

### atmospheric

adj. about or located in the earth's atmosphere synonym: atmospherical, climatic

- (1) doubling of atmospheric carbon dioxide,
- (2) atmospheric pressure

The sea surface temperature and **atmospheric** circulation are inextricably linked.

#### blanket

 a large piece of soft material used to cover or wrap a person or thing to keep them warm; (adjective) broad in scope or content

synonym: cover, coverlet, bedspread

(1) blanket authority, (2) blanket scarf

The electric **blanket** keeps me warm on cold nights.

icy

adj. covered with ice or frost; very cold; lacking warmth or friendliness

synonym: frosty, cold, glacial

(1) icy clouds, (2) cast icy eyes

The **icy** surface of the pond was not safe for skating.

#### observe

v. to watch or notice something carefully, often to gather information or insights; to take note of something or someone; to celebrate or commemorate a special event or occasion

synonym: watch, monitor, scrutinize

(1) **observe** a tradition, (2) **observe** wildlife

It is important to **observe** safety procedures in the workplace to prevent accidents.

Jovian

adj. relating to Jupiter or its characteristics synonym: Jupiter, giant planet

(1) Jovian satellites, (2) Jovian planet

The **Jovian** moon Europa is believed to have an ocean beneath its icy surface.

vast

*adj.* enormous in size, number, amount, or quantity *synonym*: expansive, extended, boundless

(1) vast majority, (2) vast desert

A vast audience viewed the broadcast.

liquid

 a substance, such as water or oil that flows freely and is neither a solid nor a gas

synonym: fluid

(1) colorless liquid, (2) hazardous liquid

The sponge takes up the **liquid** well.

methane

- a chemical compound with the chemical formula CH4 with no smell or color, often used as a fuel
- (1) atmospheric **methane**, (2) reduce **methane** emissions. The ignition of **methane** gas in the plant killed five employees.

shroud

 a length of cloth or other material used to cover or wrap a dead body; something that conceals or obscures something else, often used metaphorically

synonym: cover, veil, cloak

(1) shroud of mystery, (2) shroud of suspicion

The protective **shroud** covered the body in the coffin at the funeral.

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adj. not well known to many peoplesynonym: esoteric, vague, unrecognized

(1) **obscure** answer, (2) **obscure** artist

This information was primarily **obscured** in the first release.

#### haze

 atmospheric moisture, dust, or smoke that makes it less clear; a state of mental confusion caused by lack of clarity

synonym: fog, mist, brume

(1) a haze of illusion, (2) haze of tears

We couldn't see him through the **haze** of smoke.

### outstanding

adj. superior to others in excellence; not yet paid, completed, etc.

synonym: distinguished, excellent, unprecedented

(1) an **outstanding** new record, (2) pay **outstanding** debts It's an area of **outstanding** natural beauty.

#### orbit

 the path of an object around a celestial body, especially a planet, star, or moon, under the influence of gravity.

synonym: path, course, trajectory

the orbit of the moon, (2) a planetary orbit
 The rocket engine is used to put the satellite into orbit.

#### launch

v. to send or propel something into the air or space using a device such as a rocket, missile, or spacecraft; to make something available or on sale for the first time

synonym: start, initiate, begin

(1) **launch** a spaceship into orbit, (2) **launch** a big attack The company is set to **launch** its new product line next month.

#### arrival

 the act or situation of coming or being brought to a place; accomplishment of an objective

synonym: reaching, appearance, coming

(1) **arrival** and departure gate, (2) **arrival** at a conclusion Weather forecasters are predicting the **arrival** of a heatwave.

#### determinant

 a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result

synonym: cause, factor, element

(1) environmental **determinant**, (2) a **determinant** of crop yields

One **determinant** of success is having a positive attitude and a strong work ethic.

#### stripe

 a long, narrow band of a different color or texture than the surface on which it appears

synonym: line, band, streak

(1) a white **stripe**, (2) **stripe** texture

The plates have a blue **stripe** around the edge.

### initially

adv. at the beginning; at first synonym: originally, primarily, firstly

(1) **initially** anticipated, (2) diagnosed **initially** as a tumor This train departed later than **initially** scheduled.

### recognizable

adj. easy to become aware of or identify synonym: noticeable, perceptible, definite

(1) to a **recognizable** degree, (2) **recognizable** landmark His car was easily **recognizable** in the parking lot.

refer

v. to direct someone's attention, thoughts, or questions to another source or person; to mention, cite, or allude to something as evidence or support

synonym: cite, allude, mention

(1) refer to a book, (2) refer to a map

Please **refer** to the instruction manual for further assistance.

#### scratch

v. to cut or damage the surface of something or the skin with a sharp or pointed object

synonym: claw, rub, scrape

(1) **scratch** off a name, (2) **scratch** my signature

Don't **scratch** your mosquito bites.

#### 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.

### privilege

 a special right or advantage that only one person or group of people has, usually because they are rich and powerful in a society

synonym: benefit, authorization, advantage

(1) a breach of **privilege**, (2) **privilege** of membership In the Middle Ages, the right to hunt in the wild was the **privilege** of royalty and nobility.

### 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.

hint

n. an indirect suggestion; a slight but appreciable amount of something

*synonym*: clue, indication, suggestion

(1) hint of trouble, (2) helpful hints

There was no **hint** of a problem.

mar

v. to damage or spoil the appearance or surface of something

synonym: damage, deface, disfigure

(1) **mar** a proper relationship, (2) **mar** the reputation The scratches on the car **marred** its otherwise perfect appearance.

#### asteroid

n. a small rocky body orbiting the sun, typically in the region between Mars and Jupiter

synonym: minor planet, planetoid, rocky planetesimal

(1) asteroid mining, (2) asteroid explorer

Scientists are studying the composition and origins of the **asteroid** belt to understand the early solar system better.

#### belt

 to sing loudly and forcefully; to hit someone or something hard; (noun) a strip of leather or other material worn to tie or buckle something around the body

synonym: sing, hit hard, (noun) strap

(1) belt him in the face, (2) leather belt

The band was **belting** out old songs in response to audience requests.

#### immense

adj. extremely large or great

synonym: enormous, giant, huge

(1) **immense** amount, (2) **immense** pressure

He left his wife an immense fortune.

#### interior

 the inside or inner part of something; the space within the walls of a building

synonym: inner, inside, internal

(1) **interior** decoration, (2) plenty of **interior** space

The painter focused on the moody **interiors** of abandoned buildings in his work.

#### combine

- v. to join or merge to form a single thing or group synonym: coalesce, cohere, blend
- (1) **combine** chemically with another substance,
- (2) combine augmented reality

Hydrogen and oxygen **combine** to form water.

#### exotic

 adj. originating from or characteristic of a foreign country or culture; strikingly unusual, uncommon, or intriguing

*synonym*: foreign, alien, unfamiliar

(1) **exotic** species, (2) **exotic** vacation

I love trying **exotic** foods from different cultures.

#### ethane

n. a colorless, odorless hydrocarbon gas with the molecular formula C2H6 that is a basic component of natural gas and is used as a fuel source and in the production of chemicals

synonym: natural gas, methane, propane

(1) ethane production, (2) ethane gas

**Ethane** combustion is an important energy source for heating and electricity generation.

### fascinating

adj. extremely interesting

synonym: alluring, intriguing, captivating

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

### explore

v. to travel to or penetrate an area or a country to learn about it; to thoroughly examine a subject or a possibility to learn more about it

*synonym*: analyze, delve into, examine

(1) **explore** the world, (2) **explore** our options

The management must **explore** strategies to increase office security.

### dragonfly

- a slender-bodied non-stinging insect having two pairs of large transparent wings that are outspread at rest
- (1) **dragonfly** passing over the water, (2) **dragonfly** larva I caught a rare **dragonfly** in the mountains.

### applied

adj. of or relating to a subject of study, especially a science, that is used in a practical way

synonym: practical, practiced, used

(1) applied research, (2) applied physics

Military technology eventually became the foundation for

### applied technology that supported people's lives.

#### physics

- n. the science of matter and energy and their interactions
- (1) nuclear physics,(2) laws of physicsHe studied the physics of radiation.

### **laboratory**

- a workplace for doing scientific research or teaching science; a lab
- synonym: lab, workshop, testing room
- (1) **laboratory** accident, (2) anthropology **laboratory**Animal protection groups call for an end to animal testing in a **laboratory**.

#### schedule

- a list of planned activities, tasks, or things that must be completed showing when they are intended to happen or be done
- *synonym*: agenda, program, itinerary
- (1) a heavy **schedule**, (2) arrange my **schedule**So far, the meeting is going according to **schedule**.

#### rotorcraft

- n. an aircraft or vehicle that uses one or more rotors for lift, propulsion, and directional control, including helicopters, gyroplanes, and tilt rotors
- synonym: helicopter, gyroplane, autogyro
- (1) lithium-powered **rotorcraft**, (2) **rotorcraft** technology The company specializes in the design and manufacturing of high-performance **rotorcraft**.

#### rover

- a vehicle designed to travel over rough terrain, especially on the surface of a planet or moon
- synonym: vehicle, robot, explorer
- (1) rover mission, (2) lunar rover

The **rover** on Mars is gathering data on the planet's surface and sending it back to Earth.

#### gravity

 the force that attracts a body towards the center of the earth or towards any other physical body having mass; a

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#### manner that is solemn

synonym: heaviness, attraction, weight

(1) the attraction of **gravity**, (2) preserve my **gravity**The astronaut felt weightless in space due to the absence of **gravity**.

#### technique

a particular way or art of doing something that needs skill

*synonym*: approach, procedure, strategy

(1) a **technique** in martial arts, (2) the **technique** applied to construction

Jockey's superior **technique** brought him victory.

#### octocopter

n. a type of uncrewed, remote-controlled aerial vehicle or drone that is powered by eight electric motors and uses rotors to achieve vertical takeoff and landing, as well as maneuvering in various directions

synonym: drone, multicopter, UAV

(1) aerial **octocopter**, (2) six-rotor **octocopter**The **octocopter** drone can hover and shoot stable aerial footage.

#### instrument

 an object used to make musical sounds, such as a piano, guitar, or drum; a tool or device used for a specific activity, particularly in specialist or scientific work

synonym: apparatus, tool, device

(1) musical **instruments**, (2) surgical **instruments**This electronic **instrument** is required to undergo periodic inspections to ensure precision.

### investigate

v. to conduct a systematic or formal inquiry to identify and evaluate the facts of a crime, problem, statement, etc. to establish the truth

synonym: examine, analyze, look into

(1) investigate the matter, (2) investigate a data leak

The committee i	investigated	several apparent
inconsistencies.		

#### chemistry

- the branch of the natural sciences dealing with the composition of substances and their properties and reactions
- (1) professor of **chemistry**, (2) the **chemistry** of soil He is familiar with **chemistry** and biology.

#### interact

- v. to communicate or react with somebody synonym: cooperate, combine, collaborate
- (1) **interact** directly with customers, (2) **interact** with one another

He should interact more with his colleagues.

### earthquake

- n. a sudden and violent shaking of the ground caused by the movement of rock beneath the earth's surface
   synonym: seismic activity, tremor, temblor
- (1) an **earthquake** zone, (2) an **earthquake-proof**The violent **earthquake** caused widespread damage and injuries throughout the region.

#### quake

- v. to shake or vibrate violently and for a short time synonym: shake, trembler, tremor
- (1) **quake** in his boots, (2) **quake** with cold The earth began to **quake**, and he knew he had to leave the building immediately.

#### crust

 a hard outer layer that forms on the surface of a liquid as it cools or on a solid as a result of exposure to air or moisture

synonym: layer, coating, shell

(1) **crust** formation, (2) the earth's **crust** 

The bread's **crust** was golden brown and crispy.

### develop

 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.

#### autonomous

*adj.* capable of governing or controlling its affairs *synonym*: independent, self-governing, self-reliant

(1) development of **autonomous** vehicles, (2) an **autonomous** judiciary

Five of the six provinces will become **autonomous** regions under the new federal system of government.

### navigation

 n. the act of directing a ship or airplane from place to place; advice or information intended to resolve a problem or challenge, especially as given by someone in authority

synonym: sailing, seafaring, pilotage

(1) **navigation** system, (2) visual **navigation**The plane's **navigation** system had problems, which mechanics found.

### exploration

 the activity of searching and finding out about something through a place

synonym: inquiry, quest, investigation

(1) future of space **exploration**, (2) an Arctic **exploration** He called for a careful **exploration** of the consequences.

### possibility

- n. a chance that something may happen or be truesynonym: chance, prospect, likelihood
- (1) **possibility** for growth, (2) **possibility** of a major earthquake

The **possibility** of getting the disease will drastically increase.

#### descend

v. to move downward and lower; to come from, or to be connected by a relationship of blood

synonym: dip, drop, come down

(1) **descend** a steep hill, (2) **descend** by elevator She was **descended** from an old Italian noble family.

veil

n. a piece of fine cloth worn by women to cover or conceal the face; (verb) to cover, conceal, or obscure

synonym: cover, mask, (verb) conceal

(1) **veil** of mystery, (2) **veil** her face

He lifted her **veil** with both hands.

#### environment

 the natural world such as air, water, and land in which humans, animals, and plants live

synonym: atmosphere, surroundings, climate

(1) **environment** affairs, (2) chaotic **environment**Every human is responsible for taking care of the Earth's **environment**.

### probe

 a tool used for testing or examining, especially for medical or scientific purposes, or an exploratory mission to a planet or other celestial body; (verb) to investigate, examine, or search into something

synonym: investigation, inquiry, examination

a lunar probe,
 probe for inside information
 NASA sent a probe to study the atmosphere of Jupiter.

#### analog

- adj. relating to or using signals or information represented by a continuous physical quantity such as spatial position, voltage, etc.
- (1) an **analog** watch, (2) digitization of **analog** sounds Mercury thermometers are a type of **analog** sensor.

### ingredient

n. 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.

#### immerse

v. to become fully involved in a particular activity; to dip or submerge in a liquid, especially so that they or it are entirely covered

*synonym*: dip, inundate, submerge

(1) **immerse** the cloth in the dye, (2) completely **immerse** the ingredient

He **immersed** himself in his research.

#### alien

 a person who comes from a different country, race, or group; a form of life assumed to exist outside the Earth or its atmosphere

*synonym*: foreigner, unfamiliar, unknown

(1) alien fungi, (2) resident aliens

**Alien** species have drastically altered the ecosystem in this area.

### compound

 an item composed of two or more distinct elements combined; a chemical formed by the combination of two or more elements

synonym: combination, mixture, blend

(1) aquatic **compound**, (2) harmful **compound**. Common salt is a sodium and chlorine **compound**.

#### habitable

adj. able to be lived in, suitable or fit for living in, providing sufficient conditions for survival and well-being

synonym: inhabitable, livable, viable

(1) habitable planet, (2) habitable space

The astronauts discovered a potentially **habitable** planet in the neighboring galaxy.

#### concept

- n. an idea or principle associated with something abstractsynonym: idea, notion, vision
- (1) learn new concepts, (2) concept car

One such rapidly growing **concept** is quantum cryptography.

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adj. fit or appropriate; proper; adaptedsynonym: appropriate, fitting, proper

(1) **suitable** amount, (2) date **suitable** to both groups The dress was **suitable** for the formal occasion.

### inspire

 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.

### imaginary

adj. existing only in someone's mind synonym: fictional, ideal, fantastical

(1) **imaginary** number, (2) **imaginary** pregnancy Little children tend to have **imaginary** friends.

#### grand

adj. important and large in size, scope, or extent synonym: impressive, great, ambitious

a grand meal, (2) grand bargain
 This year's grand gathering will be held in Canada.

### 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.

#### chemical

adj. relating to or connected with chemistry;synonym: chemic, synthetic

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

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

### process

 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.

#### 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.

#### opportune

adj. suitable or happening at a time that is suitable or convenient for a particular purpose

*synonym*: suitable, timely, practical

(1) **opportune** occasion, (2) an **opportune** remark The phone rang at the most **opportune** time.

### synthesis

 the combination of components or elements to form a more complex whole; the creation of something new through combining parts or elements

synonym: combination, integration, compound

(1) **synthesis** of ammonia, (2) protein **synthesis** inhibitor The chemical **synthesis** of the new drug was a breakthrough in medical research.

### progression

 the act or process of changing to the next stage or phase or moving forward

synonym: advancement, development, evolution

(1) **progression** of civilization, (2) **progression** of disease The company has made great strides in its **progression** toward sustainability.

#### fundamental

adj. forming an essential base or core from which everything else develops or is affected

synonym: basic, essential, entire

(1) fundamental education, (2) fundamental rights Human behavior has **fundamental** characteristics.

#### endeavor

to make an earnest attempt or effort; to strive or work ν. hard towards a goal or objective

synonym: attempt, strive, undertake

(1) endeavor to succeed, (2) endeavor as much as possible

We will **endeavor** to find a solution to the problem as quickly as possible.

#### tantalize

to tease or torment by presenting something desirable but out of reach or unattainable; to tempt or lure with the promise of something desirable

synonym: tease, tempt, torment

(1) tantalize taste buds, (2) tantalize with promises The smell of freshly baked cookies in the kitchen tantalized me.

#### ultimate

adj. furthest or highest in degree or order synonym: highest, maximum, foremost

(1) the **ultimate** goal in life, (2) the **ultimate** luxury Management must take ultimate responsibility for the accident.

#### manna

a sweet-tasting and nutritious substance that, according to the Bible, was provided by God to the Israelites during their journey through the wilderness; any unexpected or miraculous source of sustenance or benefit

synonym: sustenance, nourishment

- (1) manna from heaven, (2) manna in the desert In the desert, the travelers survived by eating manna, a miraculous food on the ground.
- (of various religious and mythological traditions) a place heaven 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.

largely

adv. virtually entirely; to a large degree

synonym: mainly, chiefly, broadly

(1) **largely** accepted, (2) **largely** mitigate the issue

Nevada is **largely** a desert state.

alter

to cause to change or make different

synonym: change, vary, adjust

(1) alter a decision, (2) alter data in a file

The design of the webpage has altered slightly.

origin

the first existence or beginning of something

synonym: root, source, ancestor

(1) **origin** of information, (2) racial **origin** 

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

## **Session 2: Spelling**

1. lab\_\_\_\_ry accident

2. laws of ph\_\_\_s

3. as\_\_\_\_id explorer

4. ob e artist

5. d n horse

6. the ul\_\_\_\_te luxury

7. an aut\_\_\_\_us judiciary

8. hazardous li d

9. an ear\_\_\_\_ke-proof

10. plenty of in or space

11. a h\_\_e of illusion

- a workplace for doing scientific research or teaching science; a lab
- *n.* the science of matter and energy and their interactions
- a small rocky body orbiting the sun, typically in the region between Mars and Jupiter

adj. not well known to many people

- adj. having a dull brownish-gray color, often used to describe the color of certain animals, such as a dun horse; (verb) to repeatedly and insistently demand payment of a debt or money owed
- adj. furthest or highest in degree or order
- adj. capable of governing or controlling its affairs
- a substance, such as water or oil that flows freely and is neither a solid nor a gas
- a sudden and violent shaking of the ground caused by the movement of rock beneath the earth's surface
- n. the inside or inner part of something;the space within the walls of a building
- atmospheric moisture, dust, or smoke that makes it less clear; a state of mental confusion caused by lack of clarity

ANSWERS: 1. laboratory, 2. physics, 3. asteroid, 4. obscure, 5. dun, 6. ultimate, 7. autonomous, 8. liquid, 9. earthquake, 10. interior, 11. haze

12. ex e the world to travel to or penetrate an area or a ν. country to learn about it; to thoroughly examine a subject or a possibility to learn more about it 13. professor of ch\_\_\_\_ry the branch of the natural sciences n. dealing with the composition of substances and their properties and reactions 14. ti\_\_\_\_c compound adj. of or having a great size, power, or influence; of or relating to Titanium (= a light, strong grey, lustrous, corrosion-resistant metallic element) adj. relating to Jupiter or its characteristics 15. Jo n satellites a hard outer layer that forms on the 16. the earth's cr\_\_t n. surface of a liquid as it cools or on a solid as a result of exposure to air or moisture 17. pro\_\_\_\_on of disease the act or process of changing to the n. next stage or phase or moving forward 18. co\_\_\_t car an idea or principle associated with n. something abstract adj. extremely large or great 19. im\_\_\_\_e amount 20. exp\_\_\_\_al growth adj. becoming more and more rapid; of or involving mathematical exponents 21. h e of tears atmospheric moisture, dust, or smoke n. that makes it less clear: a state of mental confusion caused by lack of

ANSWERS: 12. explore, 13. chemistry, 14. titanic, 15. Jovian, 16. crust, 17. progression, 18. concept, 19. immense, 20. exponential, 21. haze

clarity

Builder Ref from "Elizabeth "Zibi" Turtle: What Saturn's most mysterious moon could teach us about the origins of life | TED Talk" (104

32.	the chry of soil	n.	the branch of the natural sciences dealing with the composition of substances and their properties and reactions
33.	stk truth	adj.	empty, simple, or apparent; devoid of any qualifications
34.	funal education	adj.	forming an essential base or core from which everything else develops or is affected
35.	fasng story	adj.	extremely interesting
36.	future of space expon	n.	the activity of searching and finding out about something through a place
37.	posty of a major earthquake	n.	a chance that something may happen or be true
38.	an opne remark	adj.	suitable or happening at a time that is suitable or convenient for a particular purpose
39.	lunar crr	n.	a huge bowl-shaped cavity in the earth or an object in space, usually created by an explosion or the impact of a meteorite
40.	crr lake	n.	a huge bowl-shaped cavity in the earth or an object in space, usually created by an explosion or the impact of a meteorite
41.	obe answer	adj.	not well known to many people
42.	ste texture	n.	a long, narrow band of a different color or texture than the surface on which it appears

ANSWERS: 32. chemistry, 33. stark, 34. fundamental, 35. fascinating, 36. exploration, 37. possibility, 38. opportune, 39. crater, 40. crater, 41. obscure, 42. stripe

- 43. et\_\_\_e production
- 44. cr t formation
- 45. an an\_\_\_g watch
- 46. the ul\_\_\_\_te goal in life
- 47. ob e wildlife
- 48. a gr d meal
- 49. surgical ins nts
- 50. la\_\_\_h a big attack

- n. a colorless, odorless hydrocarbon gas with the molecular formula C2H6 that is a basic component of natural gas and is used as a fuel source and in the production of chemicals
- a hard outer layer that forms on the surface of a liquid as it cools or on a solid as a result of exposure to air or moisture
- adj. relating to or using signals or information represented by a continuous physical quantity such as spatial position, voltage, etc.
- adj. furthest or highest in degree or order
- v. to watch or notice something carefully, often to gather information or insights; to take note of something or someone; to celebrate or commemorate a special event or occasion
- adj. important and large in size, scope, or extent
- an object used to make musical sounds, such as a piano, guitar, or drum; a tool or device used for a specific activity, particularly in specialist or scientific work
- v. to send or propel something into the air or space using a device such as a rocket, missile, or spacecraft; to make something available or on sale for the first time

ANSWERS: 43. ethane, 44. crust, 45. analog, 46. ultimate, 47. observe, 48. grand, 49. instrument, 50. launch

51.	prge of membership	n.	a special right or advantage that only one person or group of people has, usually because they are rich and powerful in a society
52.	an earke zone	n.	a sudden and violent shaking of the ground caused by the movement of rock beneath the earth's surface
53.	orc soils	adj.	of or derived from biological substance; producing plants and animals for food and other items without the use of synthetic chemicals
54.	swp a room with a glance	v.	to clean something, especially a floor or an area, by using a broom; move swiftly and smoothly
55.	compound the ingnts	n.	one of the things used to make something, especially one of the foods used to make a particular dish
56.	coe augmented reality	v.	to join or merge to form a single thing or group
57.	sd dunes	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
58.	evolutionary biy	n.	the scientific study of life and the natural processes of living things
59.	shd of mystery	n.	a length of cloth or other material used to cover or wrap a dead body; something that conceals or obscures something else, often used metaphorically

ANSWERS: 51. privilege, 52. earthquake, 53. organic, 54. sweep, 55. ingredient, 56. combine, 57. sand, 58. biology, 59. shroud

Builder Ref from "Elizabeth "Zibi" Turtle: What Saturn's most mysterious moon could teach us about the origins of life | TED Talk" (104

Builder Ref from "Elizabeth "Zibi" Turtle: What Saturn's most mysterious moon could teach us about the origins of life | TED Talk" (104

77.	a detnt of crop yields	n.	a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result
78.	ded a steep hill	ν.	to move downward and lower; to come from, or to be connected by a relationship of blood
79.	pay outng debts	adj.	superior to others in excellence; not yet paid, completed, etc.
80.	exc vacation	adj.	originating from or characteristic of a foreign country or culture; strikingly unusual, uncommon, or intriguing
81.	obe a tradition	<i>v</i> .	to watch or notice something carefully, often to gather information or insights; to take note of something or someone; to celebrate or commemorate a special event or occasion
82.	enor as much as possible	<i>v</i> .	to make an earnest attempt or effort; to strive or work hard towards a goal or objective
83.	drly passing over the water	n.	a slender-bodied non-stinging insect having two pairs of large transparent wings that are outspread at rest
84.	lunar ror	n.	a vehicle designed to travel over rough terrain, especially on the surface of a planet or moon
85.	harmful cond	n.	an item composed of two or more distinct elements combined; a chemical formed by the combination of two or more elements

ANSWERS: 77. determinant, 78. descend, 79. outstanding, 80. exotic, 81. observe, 82. endeavor, 83. dragonfly, 84. rover, 85. compound

ANSWERS: 86. launch, 87. belt, 88. mystery, 89. molecule, 90. recognizable, 91. alien, 92. suitable, 93. beneath, 94. origin, 95. immerse

96. diagnosed inly as a tumor	adv.	at the beginning; at first
97. rer to a map	<i>v</i> .	to direct someone's attention, thoughts, or questions to another source or person; to mention, cite, or allude to something as evidence or support
98. ime pressure	adj.	extremely large or great
99. inor decoration	n.	the inside or inner part of something; the space within the walls of a building
100. dee forests	adj.	containing a large number of people or something with little space between them
101. tic battle	adj.	of or having a great size, power, or influence; of or relating to Titanium (= a light, strong grey, lustrous, corrosion-resistant metallic element)
102. helpful hts	<i>n</i> .	an indirect suggestion; a slight but appreciable amount of something
103. que in his boots	v.	to shake or vibrate violently and for a short time
104. 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
105. vl of mystery	n.	a piece of fine cloth worn by women to cover or conceal the face; (verb) to cover, conceal, or obscure
106. exc species	adj.	originating from or characteristic of a foreign country or culture; strikingly unusual, uncommon, or intriguing

ANSWERS: 96. initially, 97. refer, 98. immense, 99. interior, 100. dense, 101. titanic, 102. hint, 103. quake, 104. atmosphere, 105. veil, 106. exotic

adj. without being decorated in any way; 107. pl n answer (Noun) a vast expanse of flat land with few trees 108. in\_\_\_\_ct directly with customers to communicate or react with somebody ν. 109. sh\_\_\_d of suspicion a length of cloth or other material used n. to cover or wrap a dead body; something that conceals or obscures something else, often used metaphorically 110. sc h my signature to cut or damage the surface of something or the skin with a sharp or pointed object an idea or principle associated with 111. learn new co\_\_\_\_ts n. something abstract to cause to change or make different 112. al\_\_r a decision ν. 113. inv\_\_\_\_te a data leak to conduct a systematic or formal ν. inquiry to identify and evaluate the facts of a crime, problem, statement, etc. to establish the truth 114. la y mitigate the issue adv. virtually entirely; to a large degree 115. cast i y eyes adj. covered with ice or frost; very cold; lacking warmth or friendliness a long journey, especially by sea or in 116. a vo\_\_\_e of discovery space 117. aquatic co nd an item composed of two or more distinct elements combined; a chemical formed by the combination of two or more elements

ANSWERS: 107. plain, 108. interact, 109. shroud, 110. scratch, 111. concept, 112. alter, 113. investigate, 114. largely, 115. icy, 116. voyage, 117. compound

119. the te\_\_\_\_ue applied to construction

120. an Arctic exp\_\_\_\_on

121. ma\_\_a in the desert

122. local ge\_\_\_\_y

123. ro r mission

124. bl\_\_\_t authority

125. nutrient-de\_\_e foods

126. toxic ch als

127. cell and molecular bi\_\_\_\_y

v. to travel to or penetrate an area or a country to learn about it; to thoroughly examine a subject or a possibility to learn more about it

n. a particular way or art of doing something that needs skill

n. the activity of searching and finding out about something through a place

n. a sweet-tasting and nutritious substance that, according to the Bible, was provided by God to the Israelites during their journey through the wilderness; any unexpected or miraculous source of sustenance or benefit

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

 a vehicle designed to travel over rough terrain, especially on the surface of a planet or moon

 a large piece of soft material used to cover or wrap a person or thing to keep them warm; (adjective) broad in scope or content

adj. containing a large number of people or something with little space between them

adj. relating to or connected with chemistry;

n. the scientific study of life and the natural processes of living things

ANSWERS: 118. explore, 119. technique, 120. exploration, 121. manna, 122. geology, 123. rover, 124. blanket, 125. dense, 126. chemical, 127. biology

128. exp\_\_\_\_al function adj. becoming more and more rapid; of or involving mathematical exponents 129. pro\_\_\_\_\_on of civilization the act or process of changing to the next stage or phase or moving forward 130. ha\_\_\_\_le planet adj. able to be lived in, suitable or fit for living in, providing sufficient conditions for survival and well-being adj. empty, simple, or apparent; devoid of 131. st k landscape any qualifications to sing loudly and forcefully; to hit 132. leather b t someone or something hard; (noun) a strip of leather or other material worn to tie or buckle something around the body 133. ge\_\_\_\_hy class a field of science devoted to the study n. of the lands, features, inhabitants, and phenomena of the Earth 134. ca e customers' hearts to catch a person or an animal and confine them in an area which they cannot escape 135. sw\_\_p up dead leaves to clean something, especially a floor or ν. an area, by using a broom; move swiftly and smoothly a factor, circumstance, or condition that 136. environmental det nt contributes to the shaping, influencing, or determining of a particular outcome or result 137. v I her face a piece of fine cloth worn by women to n. cover or conceal the face; (verb) to cover, conceal, or obscure

ANSWERS: 128. exponential, 129. progression, 130. habitable, 131. stark, 132. belt, 133. geography, 134. capture, 135. sweep, 136. determinant, 137. veil

138. d_n him for the unpaid bills	adj.	having a dull brownish-gray color, often used to describe the color of certain animals, such as a dun horse; (verb) to repeatedly and insistently demand payment of a debt or money owed
139. cae a glimpse	<i>v</i> .	to catch a person or an animal and confine them in an area which they cannot escape
140. recble landmark	adj.	easy to become aware of or identify
141. posty for growth	n.	a chance that something may happen or be true
142. imry number	adj.	existing only in someone's mind
143. a chal compound	adj.	relating to or connected with chemistry;
144. Jon planet	adj.	relating to Jupiter or its characteristics
145. aerial octer	n.	a type of uncrewed, remote-controlled aerial vehicle or drone that is powered by eight electric motors and uses rotors to achieve vertical takeoff and landing, as well as maneuvering in various directions
146. a lunar pre	n.	a tool used for testing or examining, especially for medical or scientific purposes, or an exploratory mission to a planet or other celestial body; (verb) to investigate, examine, or search into something
147. a heavy scle	n.	a list of planned activities, tasks, or things that must be completed showing when they are intended to happen or be done

а

ANSWERS: 138. dun, 139. capture, 140. recognizable, 141. possibility, 142. imaginary, 143. chemical, 144. Jovian, 145. octocopter, 146. probe, 147. schedule

148. date sule to both groups	adj.	fit or appropriate; proper; adapted
149. atmic pressure	adj.	about or located in the earth's atmosphere
150. apd physics	adj.	of or relating to a subject of study, especially a science, that is used in a practical way
151. lay accepted	adv.	virtually entirely; to a large degree
152. myy novel	n.	something difficult to understand or explain; a secret or enigmatic quality that adds to the fascination or interest of something; a genre of fiction that involves the solution of a crime or a puzzle
153. 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
154. six-rotor octer	n.	a type of uncrewed, remote-controlled aerial vehicle or drone that is powered by eight electric motors and uses rotors to achieve vertical takeoff and landing, as well as maneuvering in various directions
155. inly anticipated	adv.	at the beginning; at first
156. a white ste	n.	a long, narrow band of a different color or texture than the surface on which it appears

ANSWERS: 148. suitable, 149. atmospheric, 150. applied, 151. largely, 152. mystery, 153. heaven, 154. octocopter, 155. initially, 156. stripe

157. que with cold	ν.	to shake or vibrate violently and for a short time
158. visual navon	n.	the act of directing a ship or airplane from place to place; advice or information intended to resolve a problem or challenge, especially as given by someone in authority
159. ht of trouble	n.	an indirect suggestion; a slight but appreciable amount of something
160. development of autus vehicles	adj.	capable of governing or controlling its affairs
161. resident alns	n.	a person who comes from a different country, race, or group; a form of life assumed to exist outside the Earth or its atmosphere
162. completely fasng to me	adj.	extremely interesting
163. opne occasion	adj.	suitable or happening at a time that is suitable or convenient for a particular purpose
164. a teue in martial arts	n.	a particular way or art of doing something that needs skill
165. hy atmosphere	adj.	not clear due to a lack of recollection, comprehension, or detail; unsure or perplexed about something
166. rotft technology	n.	an aircraft or vehicle that uses one or more rotors for lift, propulsion, and directional control, including helicopters, gyroplanes, and tilt rotors

ANSWERS: 157. quake, 158. navigation, 159. hint, 160. autonomous, 161. alien, 162. fascinating, 163. opportune, 164. technique, 165. hazy, 166. rotorcraft

167. the attraction of gr\_\_\_y the force that attracts a body towards n. the center of the earth or towards any other physical body having mass; a manner that is solemn to direct someone's attention, thoughts, 168. re r to a book ν. or questions to another source or person; to mention, cite, or allude to something as evidence or support to make somebody fill with the desire, 169. in \_\_\_\_e a feeling of curiosity confidence, or enthusiasm, especially to do something creative the combination of components or 170. protein sy\_\_\_\_is inhibitor n. elements to form a more complex whole; the creation of something new through combining parts or elements adj. not clear due to a lack of recollection, 171. h y dream comprehension, or detail; unsure or perplexed about something an aircraft or vehicle that uses one or 172. lithium-powered rot ft n. more rotors for lift, propulsion, and directional control, including helicopters, gyroplanes, and tilt rotors 173. colorless li\_\_\_d a substance, such as water or oil that flows freely and is neither a solid nor a gas 174. al r data in a file to cause to change or make different 175. de\_\_\_\_p a skill to grow or expand; to improve or refine ν. 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

ANSWERS: 167. gravity, 168. refer, 169. inspire, 170. synthesis, 171. hazy, 172. rotorcraft, 173. liquid, 174. alter, 175. develop

176. a breach of prge	n.	a special right or advantage that only one person or group of people has, usually because they are rich and powerful in a society
177. 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
178. ded by elevator	ν.	to move downward and lower; to come from, or to be connected by a relationship of blood
179. ime the cloth in the dye	v.	to become fully involved in a particular activity; to dip or submerge in a liquid, especially so that they or it are entirely covered
180. economic gehy	n.	a field of science devoted to the study of the lands, features, inhabitants, and phenomena of the Earth
181. ete gas	n.	a colorless, odorless hydrocarbon gas with the molecular formula C2H6 that is a basic component of natural gas and is used as a fuel source and in the production of chemicals
182. navon system	n.	the act of directing a ship or airplane from place to place; advice or information intended to resolve a problem or challenge, especially as given by someone in authority
ANSWERS: 176. privilege, 177. heaver	n, 178. (	descend, 179. immerse, 180.

geography, 181. ethane, 182. navigation

the path of an object around a celestial 183. the or t of the moon n. body, especially a planet, star, or moon, under the influence of gravity. 184. eat or\_\_\_c food adj. of or derived from biological substance; producing plants and animals for food and other items without the use of synthetic chemicals a science that deals with the history of 185. bureau of ge\_\_\_y the earth as recorded in rocks 186. v\_\_t desert adj. enormous in size, number, amount, or quantity the act or situation of coming or being 187. ar\_\_\_l at a conclusion brought to a place; accomplishment of an objective adj. without being decorated in any way; 188. delta pl n (Noun) a vast expanse of flat land with few trees one of the things used to make 189. secret ing\_\_\_nts n. something, especially one of the foods used to make a particular dish 190. nuclear ph\_\_\_s the science of matter and energy and n. their interactions 191. ta ze taste buds to tease or torment by presenting something desirable but out of reach or unattainable; to tempt or lure with the promise of something desirable 192. inv\_\_\_\_te the matter to conduct a systematic or formal ν. inquiry to identify and evaluate the facts of a crime, problem, statement, etc. to establish the truth

ANSWERS: 183. orbit, 184. organic, 185. geology, 186. vast, 187. arrival, 188. plain, 189. ingredient, 190. physics, 191. tantalize, 192. investigate

193. envnt affairs	n.	the natural world such as air, water, and land in which humans, animals, and plants live
194. vt majority	adj.	enormous in size, number, amount, or quantity
195. preserve my gry	n.	the force that attracts a body towards the center of the earth or towards any other physical body having mass; a manner that is solemn
196. orn of information	n.	the first existence or beginning of something
197. i_y clouds	adj.	covered with ice or frost; very cold; lacking warmth or friendliness
198. take a voe	n.	a long journey, especially by sea or in space
199. taze with promises	v.	to tease or torment by presenting something desirable but out of reach or unattainable; to tempt or lure with the promise of something desirable
200. 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
201. reduce mee emissions	n.	a chemical compound with the chemical formula CH4 with no smell or color, often used as a fuel

ANSWERS: 193. environment, 194. vast, 195. gravity, 196. origin, 197. icy, 198. voyage, 199. tantalize, 200. process, 201. methane

202. anthropology labry	n.	a workplace for doing scientific research or teaching science; a lab
203. a convivial atmre	n.	the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work
204. hale space	adj.	able to be lived in, suitable or fit for living in, providing sufficient conditions for survival and well-being
205. mole behavior	n.	a group of two or more atoms held together by attractive forces known as chemical bonds
206. grd bargain	adj.	important and large in size, scope, or extent
207. maa from heaven	n.	a sweet-tasting and nutritious substance that, according to the Bible, was provided by God to the Israelites during their journey through the wilderness; any unexpected or miraculous source of sustenance or benefit
208. sch off a name	v.	to cut or damage the surface of something or the skin with a sharp or pointed object

ANSWERS: 202. laboratory, 203. atmosphere, 204. habitable, 205. molecule, 206. grand, 207. manna, 208. scratch

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

1. n.	Greed is the primary in the making of criminals.  one of the things used to make something, especially one of the foods used to make a particular dish
	The dress was for the formal occasion.  i. fit or appropriate; proper; adapted
3.	The on Mars is gathering data on the planet's surface and sending it back to Earth.
n.	a vehicle designed to travel over rough terrain, especially on the surface of a planet or moon
4.	Mercury thermometers are a type of sensor.
adj	relating to or using signals or information represented by a continuous physical quantity such as spatial position, voltage, etc.
5.	The band was out old songs in response to audience requests.
ν.	to sing loudly and forcefully; to hit someone or something hard; (noun) a strip of leather or other material worn to tie or buckle something around the body
6.	His car was easily in the parking lot.
adj	easy to become aware of or identify
7.	combustion is an important energy source for heating and electricity generation.
n.	a colorless, odorless hydrocarbon gas with the molecular formula C2H6 that is a basic component of natural gas and is used as a fuel source and in the production of chemicals
	SWERS: 1. ingredient, 2. suitable, 3. rover, 4. analog, 5. belting, 6. recognizable, Ethane

55.	ethic.	of success is having a positive attitude and	d a strong work	
n.				
56.	There are various	hypotheses concerning the of life.		
n.	the first existence	e or beginning of something		
57.	In the Middle Ages nobility.	s, the right to hunt in the wild was the	of royalty and	
n.		advantage that only one person or group o they are rich and powerful in a society	f people has,	
58.	The earth began to immediately.	o and he knew he had to leave the l	building	
ν.	to shake or vibra	te violently and for a short time		
59.	The painter focuse work.	ed on the moody of abandoned	buildings in his	
n.	the inside or inne	er part of something; the space within the wa	alls of a building	
		Europa is believed to have an ocean benear or its characteristics	ath its icy surface.	
61.	The plates have a	blue around the edge.		
n.	a long, narrow ba appears	and of a different color or texture than the su	urface on which it	
62.	The phone rang at	t the most time.		
adj	suitable or happe purpose	ening at a time that is suitable or convenient	t for a particular	
	SWERS: 55. deterr rian, 61. stripe, 62. (	minant, 56. origin, 57. privilege, 58. quake, 5 opportune	59. interiors, 60.	

103. It is important to	safety procedures in the workplace to prevent
accidents.	

v. to watch or notice something carefully, often to gather information or insights; to take note of something or someone; to celebrate or commemorate a special event or occasion

104. The company is set to \_\_\_\_\_ its new product line next month.

v. to send or propel something into the air or space using a device such as a rocket, missile, or spacecraft; to make something available or on sale for the first time

ANSWERS: 103. observe, 104. launch