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Vocabulary Builder Reference from...

Jennifer Heldmann: SpaceX's supersized Starship rocket -- and the future of galactic exploration | TED Talk

https://www.ted.com/talks/jennifer_heldmann_spacex _s_supersized_starship_rocket_and_the_future_of_g alactic_exploration



All Words

IMPORTANT

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Session 1: Word List

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.

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.

supersized

adj. enlarged or increased beyond the usual or ordinary size; larger than normal; often used to describe food or drink excessively large portions

synonym: gigantic, colossal, oversized

(1) supersized sandwich, (2) supersized soda

I ordered a **supersized** meal at the fast food restaurant.

spacecraft

n. a vehicle designed to travel through space, typically carrying astronauts or scientific instrumentssynonym: spaceship, satellite, probe

(1) spacecraft launch, (2) alien spacecraft

The human-crewed **spacecraft** successfully landed on the moon, fulfilling its mission.

starship

- n. a spacecraft designed for long-distance travel between stars; a fictional spacecraft used in science fictionsynonym: interstellar vessel, spaceship, galactic craft
- (1) **starship** captain, (2) futuristic **starship** design
 The **starship** crew encountered an alien race they had never seen before.

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.

mass

- a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together
- synonym: abundance, crowd, mob
- (1) a **mass** of molten rock, (2) critical **mass**The **mass** of people who do not own property is politically impotent.

payload

- n. the amount of cargo or goods that a vehicle or equipment is designed to carry or transport; in computing, the amount of data that can be transmitted over a communication system
- synonym: cargo, freight, shipment
- payload capacity, (2) satellite payload
 The payload for the rocket launch included several satellites

and scientific instruments.

booster

 something or someone that supports, promotes, or enhances; a device or substance that improves the performance or effectiveness of something

synonym: promoter, supporter, advocate

(1) metabolism **booster**, (2) morale **booster**The energy drink is marketed as a **booster** to help athletes perform better.

reuse

- v. to use something again or more than once synonym: reprocess, recycle, rehash
- (1) **reuse** the materials, (2) **reuse** existing knowledge The supermarket encourages shoppers to **reuse** plastic bags.

transport

- 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.

flee

v. to leave by running away, especially out of fear or danger

synonym: exit, escape, run away

(1) flee their homes, (2) flee abroadIt is a basic instinct to flee from a dangerous situation.

historic

- adj. famous or significant in history, or potentially sosynonym: memorable, momentous, historical
- (1) **historic** accomplishment, (2) achieve the **historic** feat The Chinese people have accomplished several **historic** feats.

rocket

 a large tube-shaped object that moves very first by a stream of gases let out behind it, used for space travel or as a weapon synonym: projectile, missile

(1) **rocket** attack against the enemy, (2) **rocket** fuel The **rocket** launch platform is visible from this hill.

ridiculous

adj. very silly or unreasonable and deserving to be laughed at

synonym: absurd, fatuous, foolish

(1) a **ridiculous** amount of money, (2) a **ridiculous** suggestion

Everyone regarded the theory he advocated as **ridiculous** but was later proven correct.

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.

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.

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.

amazing

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

synonym: exceptional, extraordinary, wonderful

(1) amazing advances, (2) the most amazing feeling

The golfer recorded an amazing distance.

pound

- n. the standard unit of money in the UK; the standard unit of weight equal to 16 ounces
- (1) three-fourths of a **pound**, (2) thousands of **pounds**. The car's front bumper cost fifteen hundred **pounds**.

aim

- v. to try or plan to get or achieve something synonym: aspire, direct, target
- (1) **aim** at a specific target, (2) **aim** to be a nurse We **aim** for an overseas expansion.

incredible

- adj. unbelievable; enormous
- synonym: unbelievable, fantastical, inconceivable
- (1) **incredible** amount, (2) at **incredible** speed Her response revealed **incredible** idiocy.

commerce

- the activity of buying and selling things, especially on a large scale
- synonym: trade, transaction, dealings
- (1) interstate **commerce**, (2) the local chamber of **commerce**

This company has invested heavily in Internet **commerce**.

mighty

- adj. very large, powerful, or strong
 synonym: potent, powerful, robust
- (1) **mighty** works, (2) struck a **mighty** blow Only the **mighty** God has the power to brighten this dark land.

astronaut

- a person trained by a space agency to travel outside the Earth's atmosphere
- synonym: spaceman, cosmonaut
- astronaut mission, (2) astronaut in training
 The shuttle astronaut trained for months before embarking on the space mission.

disclose

v. to make something, such as secret or new information, known publicly

synonym: declare, reveal, uncover

(1) **disclose** a secret, (2) **disclose** a vulnerability The curtain rose to **disclose** a fantastic set.

incredibly

 adv. in a way that is very difficult to believe; exceedingly or extremely

synonym: enormously, exceptionally, extraordinarily

(1) **incredibly** cheerful character, (2) get **incredibly** insecure

Several cities are experiencing **incredibly** high unemployment rates.

unfair

- adj. not giving equal treatment or opportunities to people involved; marked by injustice, partiality, or deceptionsynonym: wrongful, biased, dishonest
- (1) **unfair** employment practices, (2) have an **unfair** advantage

In a democracy, it is necessary to monitor the judiciary to see if it is making **unfair** decisions.

emphasize

- v. to give or show particular importance to something synonym: highlight, accentuate, stress
- (1) **emphasize** her words, (2) **emphasize** a direct relationship

Use italics or capitals to **emphasize** a word in a piece of writing.

increment

 a regular increase in the amount of something, such as money; a process of becoming larger, longer, or more important

synonym: increase, expansion, addendum

(1) steady **incremental** growth, (2) small **increments**The bid **increment** for this auction is \$100.

advance

- v. to go or move forward; to develop in a positive way synonym: progress, boost, come along
- (1) **advance** the technology, (2) **advance** a cooperative relationship

Scientific knowledge will **advance** significantly with the power of AI.

transform

v. to change in outward structure or looks;

synonym: alter, convert, change

(1) **transform** an education system, (2) **transform** heat into power

My father's death transformed my life completely.

paradigm

 a standard or typical example of something; a pattern or model

synonym: example, standard, epitome

(1) major **paradigm** shift, (2) cultural **paradigm**He postulated a completely different **paradigm** to explain all these phenomena.

boutique

 a small, stylish shop, often specializing in unique or specialized items

synonym: shop, store, emporium

(1) designer **boutique**, (2) jewelry **boutique**

I love shopping at the **boutique** for unique clothing pieces.

large-scale

adj. involving many people or things and involving a lot of change or activity

synonym: big, massive, grand

(1) large-scale project, (2) large-scale agriculture

The company is planning to make a **large-scale** expansion of its factory.

operate

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

machine

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

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.

tradition

 a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society

synonym: custom, practice, ritual

(1) a **tradition** of a culture, (2) against **tradition**It is a **tradition** in many families to have a big Thanksgiving dinner with all their relatives.

severe

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

synonym: harsh, relentless, powerful

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

restraint

 a measure taken to prevent someone or something from acting freely or excessively; self-control or moderation; a physical device used to restrict or limit movement

synonym: constraint, limitation, control

(1) physical **restraint**, (2) self- **restraint**It's important to practice **restraint** when it comes to spending money.

aerospace

adj. pertaining to the design, engineering, science, and technology related to the Earth's atmosphere and the exploration or use of space beyond it

synonym: aeronautical, space, aviation

(1) **aerospace** engineering, (2) **aerospace** and defense industry

NASA is an **aerospace** organization that explores space and improves aviation technology.

industrious

adj. hardworking, diligent, and persistent in effort synonym: diligent, hardworking, assiduous

(1) **industrious** worker, (2) **industrious** student He was known to be very **industrious** and would often work late into the night.

conversation

n. an informal talk between two or more people to exchange their views, ideas, information, etc.

synonym: chat, discussion, dialogue

(1) **conversation** in English, (2) a friendly **conversation** Your **conversation** reflects your thoughts.

regard

v. to think about or consider somebody or something in a specified way

synonym: consider, see, reckon

(1) **regard** him as an enemy, (2) **regard** the situation as unfortunate

Frugality and industry are still regarded as virtues.

architecture

the art and science of designing and constructing buildings

synonym: design, structure, layout

(1) **architecture** design, (2) classic **architecture**The city is known for its impressive **architecture** and beautiful old buildings.

metric

 adj. using or relating to the meter as a unit of length; a system of related measures that facilitates the quantification of some particular characteristic

synonym: metrical, measured

(1) **metric** units, (2) key performance **metrics**In the **metric** system, measurements are made in meters and liters.

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

(1) the **orbit** of the moon, (2) a planetary **orbit**

The rocket engine is used to put the satellite into **orbit**.

crazy

adj. stupid or not sensible; very angry

synonym: insane, absurd, bizarre

(1) **crazy** about cars and racing, (2) a **crazy** scheme

The rain and thunder are **crazy** today.

spaceflight

n. the act of traveling into space, either by means of crewed or uncrewed spacecraft; the technology and infrastructure required to support space travel

synonym: space travel, orbital flight

(1) private **spaceflight**, (2) **spaceflight** industry

Spaceflight technology has advanced significantly since the first man landed on the moon in 1969.

miniature

adj. being on a very small scale

synonym: mini, scaled-down, pint-sized

(1) miniature camera, (2) miniature version

He did complicated pen-and-ink drawings like medieval miniatures.

component

 one of several parts that combines with others to form something bigger

synonym: element, part, factor

(1) key component, (2) spare components for carsThe researchers try to discover a common component in all

types of successful organizations.

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.

lightweight

- adj. composed of thinner and lighter material than average; not severe or impressive
- (1) **lightweight** aircraft, (2) **lightweight** structure Powder coating protects the **lightweight** aluminum alloy components.

constraint

 a limit or restriction on something, such as an action, behavior, or thought

synonym: limitation, restriction, bound

constraint on business activity, (2) strict time
 constraints

The budget **constraint** forced them to make difficult decisions.

opposition

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

synonym: resistance, hostility, antagonism

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

convenient

- adj. useful, helpful, or quick to do synonym: timely, fortunate, suitable
- convenient way, (2) convenient location
 The airport offers five convenient access routes.

refill

 to replenish a container with a substance that it previously held; to top up a supply or amount of something

synonym: replenish, top up, recharge

(1) refill with oil, (2) refill ink cartridge

Please **refill** my water glass when you have a chance.

propellant

 a substance that provides the force to propel (= to cause something to move forwards) something, such as a rocket or spray can

synonym: fuel, driving force, impelling agent

(1) **propellant** mixture, (2) **propellant** tank

The **propellant** in the rocket provided the force needed to reach outer space.

methane

- n. 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.

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.

dock

n. a structure or platform that extends from the shoreline into a body of water, used for loading and unloading ships or boats; an enclosed area of water used as a basin for shipping or pleasure boats; a place where a ship can be repaired or maintained

synonym: harbor, pier, quay

(1) fishing dock, (2) loading dock

The ship pulled to the **dock**, and we disembarked to start our adventure.

essentially

adv. relating to the essential features or concepts of anything synonym: fundamentally, basically, virtually

(1) **essentially** correct, (2) become **essentially** same **Essentially**, a society is an organism.

gravity

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

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.

a substance that is typically burned to generate heat or energy

synonym: energy, power, gas

(1) biomass fuel, (2) smokeless fuel

The **fuel** scarcity most severely impacted the manufacturing sector

reset

fuel

v. to set again or differently; to return to a previous state or condition

synonym: restart, reinitialize, set anew

(1) reset password, (2) reset my brain

She **reset** the computer to fix the problem.

equation

- the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign
- (1) the **equation** of poverty with ignorance, (2) a chemical **equation**

In this class, you will learn how to solve quadratic equations.

fantastic

adj. extremely good; excellent

synonym: incredible, unbelievable, marvelous

(1) a fantastic dress, (2) absolutely fantastic event

The new amusement park ride was **fantastic**, with twists, turns, and drops that left riders screaming with excitement.

exciting

adj. causing a lot of interest or excitement *synonym*: exhilarating, stimulating, thrilling

(1) exciting football player, (2) exciting news

The findings of the experiment were both **exciting** and

unexpected.

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.

subsurface

adj. situated or located beneath the surface of something; existing or occurring within the deeper layers of a material or object, often referring to areas below the Earth's surface

synonym: beneath the surface, underground, subterranean

(1) **subsurface** mining, (2) **subsurface** oil reserves
The **subsurface** layers of the ocean are still largely unexplored.

saltiness

- n. the quality or state of being salty
- (1) the taste of **saltiness**, (2) enhance the **saltiness**. She tasted the dish and detected a slight **saltiness**.

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.

strategy

 a detailed plan of action designed to achieve a long-term or overall goal.

synonym: approach, procedure, scenario

(1) military **strategy**, (2) develop a **strategy**

Our plan includes a comprehensive marketing **strategy**.

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.

flyby

a close approach to a celestial body, especially a planet,
 by a spacecraft without landing or entering orbit

synonym: passby, flyover, whizz by

(1) flyby mission, (2) a five-plane flyby

The spacecraft will conduct a **flyby** of the moon to gather data.

remotely

adv. at a distance; not directly or easily accessiblesynonym: distantly, remotely, slightly

(1) remotely operate, (2) control remotely

The company can **remotely** access its employees' computers for troubleshooting purposes.

envision

v. to imagine or expect what a situation will be like in the future

synonym: anticipate, foresee, picture

(1) **envision** the future, (2) **envision** the project's success We cannot **envision** her as President.

submarine

 a type of underwater vehicle or vessel that can operate beneath the surface of the water; (adjective) beneath the surface of the sea

synonym: sub, underwater vessel, sea-craft

(1) a **submarine** volcano, (2) **submarine** cable The military **submarine** disappeared without a trace.

submersible

adj. able to be operated or used underwater; capable of being submerged in water or other liquid

synonym: submarine, underwater, submerged

(1) **submersible** pump, (2) **submersible** cable The **submersible** vehicle can explore the depths of the ocean.

geyser

 a natural hot spring that periodically ejects a column of boiling water and steam into the air; a device that produces a similar effect for decorative or practical purposes

synonym: hot spring, fumarole

(1) erupting **geyser**, (2) Yellowstone **geyser**

The **geyser's** hot water generates electricity for nearby towns and cities.

polar

adj. relating to, or close to, the North or South Pole; characterized by complete opposites

synonym: opposing, contrary, contrasting

(1) polar bears, (2) polar regions

Polar animals are graceful and efficient swimmers.

survive

- v. to live or exist despite a dangerous event or period synonym: endure, persist, stay
- (1) **survive** a blizzard, (2) **survive** a plane crash These birds can only **survive** in temperate climates.

astronomy

 the scientific study of objects and matter outside the Earth's atmosphere, especially the positions, motions, and evolution of celestial bodies

synonym: astrophysics, stargazing, cosmology

(1) **astronomy** science, (2) a branch of **astronomy** He had a deep passion for extragalactic **astronomy** and spent hours observing the night sky.

astrophysics

- n. the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe
- (1) **astrophysics** research, (2) neutrino **astrophysics**He was studying **astrophysics** in an attempt to understand the origins of the universe.

telescope

- a device like a tube in shape containing lenses used to magnify and observe distant objects
- (1) a binocular **telescope**, (2) look through a **telescope** This facility has the largest astronomical **telescope** in the country.

constellation

 a group of stars that form a recognizable pattern and have a name; a group of related or similar ideas, things, or people

synonym: asterism, array, pattern

(1) the stars of the Scorpion **constellation**, (2) northern **constellation**

Navigators still use the Little Bear constellation at sea.

nebula

 a cloud of gas and dust in space, visible in the night sky, typically as a diffuse light source

synonym: cloud, mist, stardust

(1) a spiral **nebula**, (2) emission **nebula**The galactic **nebula** was a beautiful sight through the telescope, with its vibrant colors and swirling clouds.

universe

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

synonym: cosmos, macrocosm

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

diameter

 the length of a straight line passing through the center of a circle and connecting two points on the circumference

synonym: diam, width

(1) **diameter** of an oval, (2) a particle **diameter** Draw a circle five centimeters in **diameter**.

bucket

 an open container with a handle made of metal or plastic, often used for carrying liquids

synonym: pail, tub, can

(1) bucket list, (2) bucket of golf balls
She filled a bucket with water and carried it back to the house.

photon

 a unit or quantum of electromagnetic energy, typically regarded as a particle that is the basic constituent of all light and other forms of electromagnetic radiation

synonym: particle, quantum, light

(1) **photon** emission, (2) **photon** energy

Infrared cameras detect **photons** in the infrared range of the electromagnetic spectrum.

faint

adj. not strong, clear, or vigorous; slight or weak synonym: slight, vague, soft

(1) **faint** memory, (2) **faint** aroma of roses She heard a **faint**, nearly invisible scream.

finite

adj. having a limit or restriction of size, time, etc. *synonym*: delimited, defined, limited

(1) finite resources, (2) finite decimal

Human beings have a **finite** lifespan, so we yearn for the idea of immortality.

eyeball

- n. the round part of the eye of a vertebrate that is usually inside the head and, therefore, cannot be seen
- (1) **eyeball** motion, (2) redness of the **eyeball** Increased **eyeball** pressure leads to the development of glaucoma.

exoplanet

n. a planet that orbits a star outside of the solar system
 (1) the closest exoplanet to Earth, (2) exoplanet mission
 The exoplanet Kepler-186f is located 500 light-years from Earth and is believed to be habitable.

planet

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

star

synonym: earth, world, globe

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

cosmic

adj. relating to the universe or cosmos; vast or limitless synonym: astronomical, celestial, outer-space

(1) second **cosmic** velocity, (2) **cosmic** background radiation

Cosmic rays are high-energy particles that originate from outside the solar system.

dawn

 the time of day when the sun's light starts to show in the sky

synonym: daybreak, sunrise, advent

the wan light of dawn,
 crack of dawn
 dawn
 missile assaults on the capital continued around dawn

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.

origami

 the Japanese art or practice of folding paper into decorative shapes and figures

synonym: paper folding, paper art

(1) origami paper, (2) origami art

I love making origami cranes during my free time.

assemble

- v. to collect in one place as a single group synonym: gather, congregate, collect
- (1) **assemble** your colleagues, (2) **assemble** a jigsaw puzzle

The president began to assemble an army.

deploy

- v. to move troops or weapons into a position or military action; to bring into something in an effective waysynonym: set up, expand, launch
- (1) **deploy** troops for battle, (2) **deploy** safety measures This country **deployed** its weapons in the east region.

cusp

- n. a pointed end, especially the pointed end of a crescent moon or the part of a curve that is most curvedsynonym: point, apex, tip
- (1) **cusp** of change, (2) a single **cusp**The project was on the **cusp** of success and needed a little more funding.

uncrewed

- adj. operated or functioning without the presence or support of a crew or human operator; unmannedsynonym: unmanned, autonomous, robotic
- (1) **uncrewed** vehicle, (2) **uncrewed** aerial drone
 An **uncrewed** spacecraft was sent to Mars to explore the red planet.

sustained

- adj. lasting for a long time or continuing for a long time without becoming weaker or less intensesynonym: prolonged, extended, continual
- (1) **sustained** economic growth, (2) **sustained** release medication

The company experienced **sustained** growth over the past decade.

presence

n. the fact or state that someone or something exists, occurs, or is present

synonym: existence, actuality, fact

(1) the evidence of the **presence**, (2) his majestic **presence**The path to a solid online **presence** necessitates a high technical ability.

utilization

 the act or process of using something effectively or productively; the extent to which something is used synonym: use, application, implementation

(1) resource utilization, (2) technology utilization

The **utilization** of renewable energy sources is crucial for the future of our planet.

sustain

v. to supply enough of what somebody or something needs to survive or exist; to accept as valid

synonym: maintain, nurture, support

(1) **sustain** a good relationship with him, (2) **sustain** a wellness lifestyle

She struggled to **sustain** the children's reading habits.

ferry

 a boat or ship used to transport people, vehicles, or goods across a body of water, especially on a regular schedule

synonym: ferryboat, water taxi, barge

(1) **ferry** service, (2) **ferry** terminal

The **ferry** across the river offers a convenient transportation option for commuters.

survival

 the state of continuing to exist or live, frequently in the face of difficulty or danger

synonym: endurance, continuity

(1) survival ability, (2) survival food

He evaluated his chances for survival rather pessimistically.

ancestor

- n. a person from whom one is descended; a forefathersynonym: forebear, forefather, progenitor
- (1) **ancestor** language, (2) earliest human **ancestor**My remote **ancestor** immigrated to the United States from Ireland in the 1800s.

millennium

- n. a span of 1000 years, or the 1000th anniversary (plural: millennia)
- (1) past **millennium**, (2) **millennium** bottle of wine Our world is in the third **millennium**.

generate

v. to produce or create something; to make offspring by reproduction

synonym: create, yield, produce

(1) **generate** more electricity, (2) **generate** \$100 a month The economic stimulation program would **generate** a lot of new jobs.

cushy

adj. comfortable, easy, and lacking hardship or effort; undemanding; luxurious

synonym: easy, soft, comfortable

(1) cushy seat, (2) cushy lifestyle

Her job was **cushy** and comfortable, with little pressure or stress.

unforgiving

adj. not willing to forgive or show mercy; not able to be repaired or restored

synonym: relentless, uncompromising, merciless

(1) **unforgiving** blow, (2) **unforgiving** terrain

The **unforgiving** sun scorched the desert, making it uninhabitable.

glacier

- a slowly moving mass of ice formed from snow on mountains or near the North Pole or the South Pole
- synonym: iceberg, ice floe
- (1) **glacier** retreat, (2) **glaciers** move tardily

The **glaciers** of the ice age have shaped Fjord.

traditionally

adv. in accordance with tradition; typically or commonly done in a particular way

synonym: conventionally, commonly, generally

(1) **traditionally** accepted concept, (2) **traditionally** sung at a banquet

Traditionally, the ceremony was held outdoors.

heavy-duty

adj. designed to withstand or endure rough, harsh, or intense use; made for heavy or strenuous work

synonym: tough, sturdy, durable

(1) **heavy-duty** equipment, (2) **heavy-duty** cleaning The **heavy-duty** truck towed the broken-down car to the garage.

construct

v. to build or create something; to assemble or combine different parts to form something whole

synonym: build, assemble, create

(1) **construct** a 3D image, (2) **construct** a dam

He **constructs** hypotheses that no mathematician has ever imagined before.

machinery

 a group of large machines or the components of a machine that make it work; social institution functions or structure for doing something

synonym: apparatus, appliance, equipment

(1) heavy **machinery**, (2) inactive **machinery**The **machinery** of audit formally issued a business improvement order.

infrastructure

 the basic systems, services, or features that are necessary for an organization or country, such as transport and power supplies

synonym: foundation, framework

(1) IT **infrastructure**, (2) **infrastructure** cost Aging societies tend to require huge costs for **infrastructure** maintenance.

dump

v. to deposit or dispose of something, such as trash, waste, etc., carelessly or hurriedly

synonym: throw away, dispose

(1) **dump** the gravel on the road, (2) **dump** hazardous waste

The company **dumped** him after several years of service.

backhoe

 a large mechanical digging machine with a shovel-like scoop on the front and a digging arm on the back, used for excavating and moving large amounts of soil and

debris

synonym: excavator, digger, shovel

(1) backhoe operator, (2) backhoe attachment

The construction crew used a **backhoe** to dig the foundation for the new building.

drill

 a tool or machine used for making round holes or driving fasteners; a training or practice

synonym: exercise, routine, training

(1) the **drill** hit the well, (2) fire **drill**

Several military **drill** programs have become popular methods of exercise.

rig

v. to prepare or set up something in a certain way, typically in a carefully planned or fraudulent manner; to equip with sails or masts

synonym: set up, prepare, arrange

(1) rig an election, (2) rig a ship with new sails

He **rigged** the game so he could win the prize.

indigenous

adj. someone or something that is native to or occurring naturally in a particular place

synonym: domestic, endemic, primitive

(1) indigenous crop, (2) indigenous peoples

The **indigenous** plants need to be pollinated by local insects.

Martian

adj. of or relating to Mars or its imaginary inhabitants

(1) Martian geography, (2) Martian surface

There is very little water in the **Martian** atmosphere.

priority

 something that is more important than other things and should be dealt with first

synonym: importance, precedence, primacy

(1) **priority** call, (2) **priority** seating for elderly

Her **priority** is to be a mother.

diligence

- n. careful and persistent effort or work; conscientiousness in performing one's duties or responsibilitiessynonym: assiduity, industry, perseverance
- (1) **diligence** in work, (2) **diligence** in time management The doctor's **diligence** in monitoring patients' progress contributed to their speedy recovery.

robotic

- adj. of or relating to mechanical robots; (robotics) the interdisciplinary branch of computer science and engineering with the practical use of robots
- synonym: automated, mechanical, laborsaving
- (1) **robotic** arm, (2) **robotic** guide operation

 The surgeon removed the tumor using **robotic** video assistance.

precursor

- a person or thing that comes before another of the same kind and that contributes to or influences its growth
 synonym: antecedent, forerunner, herald
- (1) **precursor** cell, (2) **precursor** to serotonin Sulfur dioxide and nitrogen oxides are the primary **precursors** of acid rain.

thrive

- v. to grow vigorously; to make steady progresssynonym: bloom, flourish, prosper
- (1) **thrive** in a society, (2) **thrive** on pressure Without investment, a business cannot **thrive**.

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.

afford

- v. to have enough money or time to be able to buy or do something
- (1) **afford** to buy a new car, (2) **afford** a high travel cost

He cannot **afford** a holiday.

unprecedented

adj. never having been seen, done, or known before synonym: novel, outstanding, unparalleled

(1) **unprecedented** boom, (2) **unprecedented** business opportunity

Unprecedented amounts of heckling and slogan-shouting took place throughout the event.

seize

v. to catch or take hold of someone or something suddenly and forcibly; to capture the attention or imagination of something

synonym: grab, grasp, capture

seize a person's property, (2) seize the day
 has the superpower to seize a business opportunity.

expand

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

synonym: extend, grow, boost

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

cosmos

 another name for the universe, mainly used when it is thought of as an ordered system

synonym: universe, macrocosm

(1) exploration of **cosmos**, (2) origin of the **cosmos**Supercomputers enable scientists to create computational models of the **cosmos**.

Session 2: Spelling

1. op___e 24 hours a day v. to work in a particular way; to supervise something

2. pr____or to serotonin

n. a person or thing that comes before another of the same kind and that contributes to or influences its growth

adj. of or relating to mechanical robots;
 (robotics) the interdisciplinary branch of computer science and engineering with the practical use of robots

n. the art and science of designing and constructing buildings

 a group of stars that form a recognizable pattern and have a name; a group of related or similar ideas, things, or people

 a group of stars that form a recognizable pattern and have a name; a group of related or similar ideas, things, or people

adv. virtually entirely; to a large degree

v. to prepare or set up something in a certain way, typically in a carefully planned or fraudulent manner; to equip with sails or masts

 an open container with a handle made of metal or plastic, often used for carrying liquids

3. ro____c arm

4. arc____ure design

5. northern con____ion

6. the stars of the Scorpion con____ion

7. la___y mitigate the issue

8. r_g a ship with new sails

9. bu___t of golf balls

ANSWERS: 1. operate, 2. precursor, 3. robotic, 4. architecture, 5. constellation, 6. constellation, 7. largely, 8. rig, 9. bucket

ANSWERS: 10. dawn, 11. machinery, 12. unforgiving, 13. industrious, 14. submarine, 15. drill, 16. geyser, 17. faint, 18. expand, 19. robotic

ANSWERS: 31. advance, 32. fundamental, 33. instrument, 34. presence, 35. historic, 36. faint, 37. machinery, 38. diligence, 39. construct, 40. mar, 41. cushy

42.	manually ope a machine	v.	to work in a particular way; to supervise something	
43.	the perve of the battle	n.	a confident attitude toward something; a particular style of thinking about something	
44.	expansion of the unse	n.	everything that exists, especially all physical matter, including planets, stars galaxies, and all other forms of matter and energy	
45.	prty seating for elderly	n.	something that is more important than other things and should be dealt with first	
46.	a faic dress	adj.	extremely good; excellent	
47.	dise a secret	ν.	to make something, such as secret or new information, known publicly	
48.	neutrino astics	n.	the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe	
49.	miy works	adj.	very large, powerful, or strong	
50.	sue a plane crash	v.	to live or exist despite a dangerous event or period	
51.	red him as an enemy	v.	to think about or consider somebody or something in a specified way	
52.	a binocular tepe	n.	a device like a tube in shape containing lenses used to magnify and observe distant objects	
ANSWERS: 42. operate, 43. perspective, 44. universe, 45. priority, 46. fantastic, 47. disclose, 48. astrophysics, 49. mighty, 50. survive, 51. regard, 52. telescope				

53. aece engineering	adj.	pertaining to the design, engineering, science, and technology related to the Earth's atmosphere and the exploration or use of space beyond it		
54. incly cheerful character	adv.	in a way that is very difficult to believe; exceedingly or extremely		
55. afd a high travel cost	v.	to have enough money or time to be able to buy or do something		
56. smokeless fl	n.	a substance that is typically burned to generate heat or energy		
57. a five-plane fly	n.	a close approach to a celestial body, especially a planet, by a spacecraft without landing or entering orbit		
58. stip captain	n.	a spacecraft designed for long-distance travel between stars; a fictional spacecraft used in science fiction		
59. resource ution	n.	the act or process of using something effectively or productively; the extent to which something is used		
60. sued economic growth	adj.	lasting for a long time or continuing for a long time without becoming weaker or less intense		
61. oppon campaign	n.	the act of disagreeing or resisting; the state of strong disagreement		
62. connt way	adj.	useful, helpful, or quick to do		
63. glr retreat	<i>n</i> .	a slowly moving mass of ice formed from snow on mountains or near the North Pole or the South Pole		
ANSWERS: 53. aerospace, 54. incredibly, 55. afford, 56. fuel, 57. flyby, 58. starship, 59. utilization, 60. sustained, 61. opposition, 62. convenient, 63. glacier				

74. p	osty of a major earthquake	<i>n</i> .	a chance that something may happen or be true	
75. m	nire version	adj.	being on a very small scale	
76. s	ued release medication	adj.	lasting for a long time or continuing for a long time without becoming weaker or less intense	
77. h	eaty equipment	adj.	designed to withstand or endure rough, harsh, or intense use; made for heavy or strenuous work	
78. o	ri paper	n.	the Japanese art or practice of folding paper into decorative shapes and figures	
79. c	oct a 3D image	<i>v</i> .	to build or create something; to assemble or combine different parts to form something whole	
80. e	essly correct	adv.	relating to the essential features or concepts of anything	
81. ir	nfure cost	n.	the basic systems, services, or features that are necessary for an organization or country, such as transport and power supplies	
82. a	planetary ort	n.	the path of an object around a celestial body, especially a planet, star, or moon, under the influence of gravity.	
83. p	hn emission	n.	a unit or quantum of electromagnetic energy, typically regarded as a particle that is the basic constituent of all light and other forms of electromagnetic radiation	
ANSWERS: 74. possibility, 75. miniature, 76. sustained, 77. heavy-duty, 78. origami, 79. construct, 80. essentially, 81. infrastructure, 82. orbit, 83. photon				

84. classic arcure	n.	the art and science of designing and constructing buildings		
85. uned vehicle	adj.	operated or functioning without the presence or support of a crew or human operator; unmanned		
86. plt like the Earth	n.	any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star		
87. rot fuel	n.	a large tube-shaped object that moves very first by a stream of gases let out behind it, used for space travel or as a weapon		
88. astics research	n.	the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe		
89. an Arctic expon	n.	the activity of searching and finding out about something through a place		
90. a see case of pneumonia	adj.	extremely serious or bad in feeling, manner, or strict and harsh; extremely strong or vigorous		
91. fly mission	n.	a close approach to a celestial body, especially a planet, by a spacecraft without landing or entering orbit		
92. the eqon of poverty with ignorance	n.	the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign		
ANSWERS: 84. architecture, 85. uncrewed, 86. planet, 87. rocket, 88. astrophysics, 89. exploration, 90. severe, 91. flyby, 92. equation				

93. a friendly conion	n.	an informal talk between two or more people to exchange their views, ideas, information, etc.		
94. a particle dier	n.	the length of a straight line passing through the center of a circle and connecting two points on the circumference		
95. biomass fI	n.	a substance that is typically burned to generate heat or energy		
96. spare conts for cars	n.	one of several parts that combines with others to form something bigger		
97. futuristic stip design	n.	a spacecraft designed for long-distance travel between stars; a fictional spacecraft used in science fiction		
98. military stgy	n.	a detailed plan of action designed to achieve a long-term or overall goal.		
99. the ort of the moon	n.	the path of an object around a celestial body, especially a planet, star, or moon under the influence of gravity.		
100. designer boue	n.	a small, stylish shop, often specializing in unique or specialized items		
101. trrt facilities	n.	a system for moving people or products from one location to another using automobiles, roads, and so on		
102. connt location	adj.	useful, helpful, or quick to do		
103. opne occasion	adj.	suitable or happening at a time that is suitable or convenient for a particular purpose		
ANSWERS: 93. conversation, 94. diameter, 95. fuel, 96. component, 97. starship, 98. strategy, 99. orbit, 100. boutique, 101. transport, 102. convenient, 103. opportune				

104. rel ink cartridge	ν.	to replenish a container with a substance that it previously held; to top up a supply or amount of something
105. Man surface	adj.	of or relating to Mars or its imaginary inhabitants
106. hazardous lid	n.	a substance, such as water or oil that flows freely and is neither a solid nor a gas
107. exe the world	ν.	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
108. self-rent	n.	a measure taken to prevent someone something from acting freely or excessively; self-control or moderation a physical device used to restrict or limmovement
109. the evidence of the prce	n.	the fact or state that someone or something exists, occurs, or is present
110. a sune volcano	n.	a type of underwater vehicle or vessel that can operate beneath the surface of the water; (adjective) beneath the surface of the sea
111. Jon planet	adj.	relating to Jupiter or its characteristics
112. dice in time management	n.	careful and persistent effort or work; conscientiousness in performing one's duties or responsibilities
113. por bears	adj.	relating to, or close to, the North or South Pole; characterized by complete opposites

presence, 110. submarine, 111. Jovian, 112. diligence, 113. polar

114. uned aerial drone	adj.	operated or functioning without the presence or support of a crew or human operator; unmanned
115. fey service	n.	a boat or ship used to transport people, vehicles, or goods across a body of water, especially on a regular schedule
116. suble pump	adj.	able to be operated or used underwater; capable of being submerged in water or other liquid
117. a_m to be a nurse	v.	to try or plan to get or achieve something
118. access to public trrt	n.	a system for moving people or products from one location to another using automobiles, roads, and so on
119. gete \$100 a month	v.	to produce or create something; to make offspring by reproduction
120. cry about cars and racing	adj.	stupid or not sensible; very angry
121. asut mission	n.	a person trained by a space agency to travel outside the Earth's atmosphere
122. a ms of molten rock	n.	a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together
123. spaft launch	n.	a vehicle designed to travel through space, typically carrying astronauts or scientific instruments
124. larle project	adj.	involving many people or things and involving a lot of change or activity
ANSWERS: 114. uncrewed, 115. ferry, 110 119. generate, 120. crazy, 121. astronaut, large-scale		•

ANSWERS: 125. ridiculous, 126. constraint, 127. opposition, 128. astronaut, 129. metric, 130. paradigm, 131. pound, 132. methane, 133. envision, 134. lightweight, 135. generate, 136. ridiculous

147. the local chamber of coce	n.	the activity of buying and selling things, especially on a large scale
148. rely operate	adv.	at a distance; not directly or easily accessible
149. exet mission	n.	a planet that orbits a star outside of the solar system
150. cuy lifestyle	adj.	comfortable, easy, and lacking hardship or effort; undemanding; luxurious
151. ret my brain	<i>v</i> .	to set again or differently; to return to a previous state or condition
152. pront mixture	n.	a substance that provides the force to propel (= to cause something to move forwards) something, such as a rocket or spray can
153. an opne remark	adj.	suitable or happening at a time that is suitable or convenient for a particular purpose
154. 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
155. trrm an education system	ν.	to change in outward structure or looks;
156. sun a wellness lifestyle	<i>v</i> .	to supply enough of what somebody or something needs to survive or exist; to accept as valid
157. a perve view	n.	a confident attitude toward something; a particular style of thinking about something
ANSWERS: 147. commerce, 148. remotely 152. propellant, 153. opportune, 154. gravi perspective		•

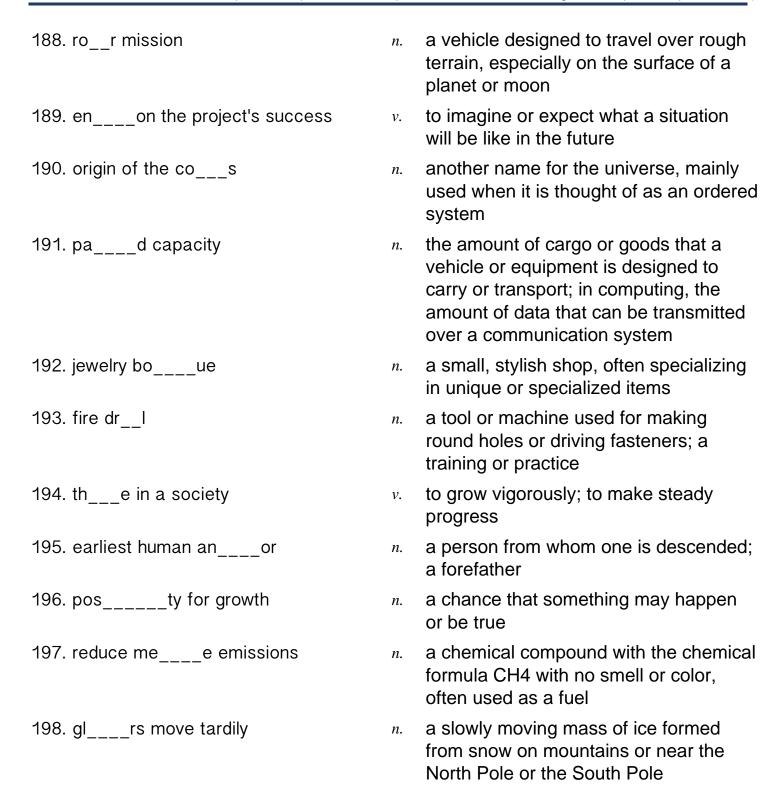
158. pront tank	n.	a substance that provides the force to propel (= to cause something to move forwards) something, such as a rocket or spray can
159. indus crop	adj.	someone or something that is native to or occurring naturally in a particular place
160. against tron	n.	a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society
161. ori art	n.	the Japanese art or practice of folding paper into decorative shapes and figures
162. suped sandwich	adj.	enlarged or increased beyond the usual or ordinary size; larger than normal; often used to describe food or drink excessively large portions
163. develop a stgy	n.	a detailed plan of action designed to achieve a long-term or overall goal.
164. dey troops for battle	v.	to move troops or weapons into a position or military action; to bring into something in an effective way
165. absolutely faic event	adj.	extremely good; excellent
166. subce mining	adj.	situated or located beneath the surface of something; existing or occurring within the deeper layers of a material or object, often referring to areas below the Earth's surface
ANSWERS: 158. propellant, 159. indigeno supersized, 163. strategy, 164. deploy, 165		

to think about or consider somebody or 167. re d the situation as unfortunate ν. something in a specified way 168. Yellowstone ge___r a natural hot spring that periodically n. ejects a column of boiling water and steam into the air; a device that produces a similar effect for decorative or practical purposes a vehicle designed to travel over rough 169. lunar ro__r terrain, especially on the surface of a planet or moon a span of 1000 years, or the 1000th 170. past mil um n. anniversary (plural: millennia) any of the nine large celestial bodies 171. save the pl t n. that circle in the solar system; any celestial body that revolves around a star 172. ad___e a cooperative relationship to go or move forward; to develop in a ν . positive way adj. involving many people or things and 173. lar____le agriculture involving a lot of change or activity 174. co___c background radiation adj. relating to the universe or cosmos; vast or limitless 175. la y accepted adv. virtually entirely; to a large degree 176. major pa gm shift a standard or typical example of n. something; a pattern or model everything that exists, especially all 177. theory of the un se n. physical matter, including planets, stars,

ANSWERS: 167. regard, 168. geyser, 169. rover, 170. millennium, 171. planet, 172. advance, 173. large-scale, 174. cosmic, 175. largely, 176. paradigm, 177. universe

and energy

galaxies, and all other forms of matter



ANSWERS: 188. rover, 189. envision, 190. cosmos, 191. payload, 192. boutique, 193. drill, 194. thrive, 195. ancestor, 196. possibility, 197. methane, 198. glacier

ANSWERS: 199. transform, 200. exciting, 201. mar, 202. survival, 203. millennium, 204. oxygen, 205. assemble, 206. finite, 207. utilization, 208. gravity, 209. disclose, 210. increment

etc. 220. ex___d agricultural output to increase or to make something ν.

greater in size, number, or importance

adj. having a limit or restriction of size, time,

ANSWERS: 211. increment, 212. saltiness, 213. precursor, 214. astronomy, 215. nebula, 216. unfair, 217. conversation, 218. polar, 219. finite, 220. expand

219. fi___e resources

that is usually inside the head and, therefore, cannot be seen 230. ex____ng news

231. second co___c velocity

232. a cr y scheme

adj. causing a lot of interest or excitement

adj. relating to the universe or cosmos; vast or limitless

adj. stupid or not sensible; very angry

ANSWERS: 221. sustain, 222. exploration, 223. saltiness, 224. constraint, 225. unfair, 226. component, 227. fundamental, 228. deploy, 229. eyeball, 230. exciting, 231. cosmic, 232. crazy

237. traditionally, 238. tradition, 239. cusp, 240. lightweight, 241. incredible, 242. equation

252. suble cable	adj.	able to be operated or used underwater capable of being submerged in water or
		other liquid
253. emze a direct relationship	<i>v</i> .	to give or show particular importance to something
254. see heat	adj.	extremely serious or bad in feeling, manner, or strict and harsh; extremely strong or vigorous
255. asle a jigsaw puzzle	<i>v</i> .	to collect in one place as a single group
256. indus peoples	adj.	someone or something that is native to or occurring naturally in a particular place
257. IT infure	n.	the basic systems, services, or features that are necessary for an organization or country, such as transport and power supplies
258. lah a spaceship into orbit	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
259. thousands of pods	n.	the standard unit of money in the UK; the standard unit of weight equal to 16 ounces
260. sue a blizzard	ν.	to live or exist despite a dangerous event or period
261. eyI motion	n.	the round part of the eye of a vertebrate that is usually inside the head and, therefore, cannot be seen

ANSWERS: 252. submersible, 253. emphasize, 254. severe, 255. assemble, 256. indigenous, 257. infrastructure, 258. launch, 259. pound, 260. survive, 261. eyeball

ler Ref from "Jennifer Heldmann: SpaceX's supersi.	zed Starship ro	ocket and the future of galactic exploration TED Talk" (
262. ree existing knowledge	v.	to use something again or more than once
263. satellite pad	n.	the amount of cargo or goods that a vehicle or equipment is designed to carry or transport; in computing, the amount of data that can be transmitted over a communication system
264. see a person's property	ν.	to catch or take hold of someone or something suddenly and forcibly; to capture the attention or imagination of something
265. afd to buy a new car	v.	to have enough money or time to be able to buy or do something
266. Man geography	adj.	of or relating to Mars or its imaginary inhabitants
267. asmy science	n.	the scientific study of objects and matte outside the Earth's atmosphere, especially the positions, motions, and evolution of celestial bodies
268. metabolism bor	n.	something or someone that supports, promotes, or enhances; a device or substance that improves the performance or effectiveness of something
269. a spiral nea	n.	a cloud of gas and dust in space, visible in the night sky, typically as a diffuse light source
270. bae operator	n.	a large mechanical digging machine with a shovel-like scoop on the front and a digging arm on the back, used for excavating and moving large amounts

ANSWERS: 262. reuse, 263. payload, 264. seize, 265. afford, 266. Martian, 267. astronomy, 268. booster, 269. nebula, 270. backhoe

of soil and debris

271. anor language	n.	a person from whom one is descended; a forefather
272. fishing dk	n.	a structure or platform that extends from the shoreline into a body of water, used for loading and unloading ships or boats; an enclosed area of water used as a basin for shipping or pleasure boats; a place where a ship can be repaired or maintained
273. the closest exet to Earth	n.	a planet that orbits a star outside of the solar system
274. unfng terrain	adj.	not willing to forgive or show mercy; not able to be repaired or restored
75. dier of an oval	n.	the length of a straight line passing through the center of a circle and connecting two points on the circumference
276. subce oil reserves	adj.	situated or located beneath the surface of something; existing or occurring within the deeper layers of a material or object, often referring to areas below the Earth's surface

Session 3: Fill in the Blanks

	making cranes during my free time. Japanese art or practice of folding paper into decorative shapes and figures
	supermarket encourages shoppers to plastic bags. se something again or more than once
adj. desi	truck towed the broken-down car to the garage. igned to withstand or endure rough, harsh, or intense use; made for heavy strenuous work
	is to be a mother. nething that is more important than other things and should be dealt with
	vorld is in the third ban of 1000 years, or the 1000th anniversary (plural: millennia)
adj. form	an behavior has characteristics. ning an essential base or core from which everything else develops or is ected
	sponge takes up the well. ubstance, such as water or oil that flows freely and is neither a solid nor a
n. a gr	of audit formally issued a business improvement order. roup of large machines or the components of a machine that make it work; ial institution functions or structure for doing something
	RS: 1. origami, 2. reuse, 3. heavy-duty, 4. priority, 5. millennium, 6. ntal, 7. liquid, 8. machinery

 17. My father's death my life completely. v. to change in outward structure or looks; 18. Without investment, a business cannot v. to grow vigorously; to make steady progress 19. Increased pressure leads to the development of glaucoma. n. the round part of the eye of a vertebrate that is usually inside the head and, therefore, cannot be seen 20. The of renewable energy sources is crucial for the future of our planet. n. the act or process of using something effectively or productively; the extent the which something is used 21. She tasted the dish and detected a slight n. the quality or state of being salty 22. She the computer to fix the problem. v. to set again or differently; to return to a previous state or condition 23. He did complicated pen-and-ink drawings like medieval 	
 18. Without investment, a business cannot v. to grow vigorously; to make steady progress 19. Increased pressure leads to the development of glaucoma. n. the round part of the eye of a vertebrate that is usually inside the head and, therefore, cannot be seen 20. The of renewable energy sources is crucial for the future of our planet. n. the act or process of using something effectively or productively; the extent the which something is used 21. She tasted the dish and detected a slight n. the quality or state of being salty 22. She the computer to fix the problem. v. to set again or differently; to return to a previous state or condition 	
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 n. the quality or state of being salty 22. She the computer to fix the problem. v. to set again or differently; to return to a previous state or condition)
 22. She the computer to fix the problem. ν. to set again or differently; to return to a previous state or condition 	
v. to set again or differently; to return to a previous state or condition	
23 He did complicated pen-and-ink drawings like medieval	
20. The did complicated peri and link drawings like medieval	
adj. being on a very small scale	
24. The passenger grabbed for the mask.	
n. the chemical element with the symbol O that is present in air and water and necessary for people, animals, and plants to live	S
25. The sun scorched the desert, making it uninhabitable.	
adj. not willing to forgive or show mercy; not able to be repaired or restored	

26. The company him after several years of service.
v. to deposit or dispose of something, such as trash, waste, etc., carelessly or hurriedly
27. Everyone regarded the theory he advocated as but was later proven correct.
adj. very silly or unreasonable and deserving to be laughed at
28. Enhanced rail is crucial for our business.
 a system for moving people or products from one location to another using automobiles, roads, and so on
29. This company has invested heavily in Internet
n. the activity of buying and selling things, especially on a large scale
30. The president began to an army.
v. to collect in one place as a single group
31. The spacecraft will conduct a of the moon to gather data.
 a close approach to a celestial body, especially a planet, by a spacecraft without landing or entering orbit
32. The golfer recorded an distance.
adj. extremely surprising, especially in a way that you like or admire
33 rays are high-energy particles that originate from outside the solar system.
adj. relating to the universe or cosmos; vast or limitless
ANSWERS: 26. dumped, 27. ridiculous, 28. transportation, 29. commerce, 30. assemble, 31. flyby, 32. amazing, 33. Cosmic

34. He was known to be very and would often work late into the night. adj. hardworking, diligent, and persistent in effort
35. The airport offers five access routes. adj. useful, helpful, or quick to do
36. The galactic was a beautiful sight through the telescope, with its vibrant colors and swirling clouds.
 a cloud of gas and dust in space, visible in the night sky, typically as a diffuse light source
37. In this class, you will learn how to solve quadratic
n. the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign
38. The ignition of gas in the plant killed five employees.
 a chemical compound with the chemical formula CH4 with no smell or color, often used as a fuel
39. This machine is too difficult to for me.
v. to work in a particular way; to supervise something
40. They hope to their business worldwide.
v. to increase or to make something greater in size, number, or importance
41. The budget forced them to make difficult decisions.
n. a limit or restriction on something, such as an action, behavior, or thought
42. The bid for this auction is \$100.
 a regular increase in the amount of something, such as money; a process of becoming larger, longer, or more important
ANSWERS: 34. industrious, 35. convenient, 36. nebula, 37. equations, 38. methane, 39. operate, 40. expand, 41. constraint, 42. increment

59. There is very little water in the atmosphere.
adj. of or relating to Mars or its imaginary inhabitants
60. In a democracy, it is necessary to monitor the judiciary to see if it is making decisions.
adj. not giving equal treatment or opportunities to people involved; marked by injustice, partiality, or deception
61. The company experienced growth over the past decade.
adj. lasting for a long time or continuing for a long time without becoming weaker or less intense
62. Your reflects your thoughts.
 an informal talk between two or more people to exchange their views, ideas, information, etc.
63. NASA is an organization that explores space and improves aviation technology.
adj. pertaining to the design, engineering, science, and technology related to the Earth's atmosphere and the exploration or use of space beyond it
64. The rain and thunder are today.
adj. stupid or not sensible; very angry
65. Sulfur dioxide and nitrogen oxides are the primary of acid rain.
n. a person or thing that comes before another of the same kind and that contributes to or influences its growth
66. The company can access its employees' computers for troubleshooting purposes.
adv. at a distance; not directly or easily accessible
ANSWERS: 59. Martian, 60. unfair, 61. sustained, 62. conversation, 63. aerospace, 64. crazy, 65. precursors, 66. remotely

83. Several military programs have become popular methods of exercise.n. a tool or machine used for making round holes or driving fasteners; a training or practice
 84. He has the superpower to a business opportunity. ν. to catch or take hold of someone or something suddenly and forcibly; to capture the attention or imagination of something
85. Draw a circle five centimeters in
n. the length of a straight line passing through the center of a circle and connecting two points on the circumference
86. The of people who do not own property is politically impotent.
 a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together
87. In the system, measurements are made in meters and liters.
adj. using or relating to the meter as a unit of length; a system of related measures that facilitates the quantification of some particular characteristic
88. His father's death changed his whole on life.
 n. a confident attitude toward something; a particular style of thinking about something
89. The project was on the of success and needed a little more funding.
 a pointed end, especially the pointed end of a crescent moon or the part of a curve that is most curved
90. The hot water generates electricity for nearby towns and cities.
 a natural hot spring that periodically ejects a column of boiling water and steam into the air; a device that produces a similar effect for decorative or practical purposes
ANSWERS: 83. drill, 84. seize, 85. diameter, 86. mass, 87. metric, 88. perspective, 89. cusp, 90. geyser's

91. These birds can only in temperate climates.
v. to live or exist despite a dangerous event or period
v. to live of exist despite a dangerous event of period
92. The launch platform is visible from this hill.
 a large tube-shaped object that moves very first by a stream of gases let out behind it, used for space travel or as a weapon
93. The rocket engine is used to put the satellite into
n. the path of an object around a celestial body, especially a planet, star, or moon, under the influence of gravity.
94. The findings of the experiment were both and unexpected.
adj. causing a lot of interest or excitement
OF It is a basic instinct to from a dangerous situation
95. It is a basic instinct to from a dangerous situation.
v. to leave by running away, especially out of fear or danger
96. The ship pulled to the and we disembarked to start our adventure.
n. a structure or platform that extends from the shoreline into a body of water, used for loading and unloading ships or boats; an enclosed area of water used as a basin for shipping or pleasure boats; a place where a ship can be repaired or maintained
97. This electronic is required to undergo periodic inspections to ensure precision.
n. 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
98. He cannot a holiday.
v. to have enough money or time to be able to buy or do something
ANSWERS: 91. survive, 92. rocket, 93. orbit, 94. exciting, 95. flee, 96. dock, 97. instrument, 98. afford

99. Mercury is the closest to the sun.
 any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star
100. He hypotheses that no mathematician has ever imagined before.
v. to build or create something; to assemble or combine different parts to form something whole
101. The party strongly disagreed with the government's proposed legislation.
n. the act of disagreeing or resisting; the state of strong disagreement
102. Several cities are experiencing high unemployment rates.
adv. in a way that is very difficult to believe; exceedingly or extremely
103. Aging societies tend to require huge costs for maintenance.
 the basic systems, services, or features that are necessary for an organization or country, such as transport and power supplies
104. Her job was and comfortable, with little pressure or stress.
adj. comfortable, easy, and lacking hardship or effort; undemanding; luxurious
105. Please my water glass when you have a chance.
v. to replenish a container with a substance that it previously held; to top up a supply or amount of something
106. The shuttle trained for months before embarking on the space mission.
n. a person trained by a space agency to travel outside the Earth's atmosphere
ANSWERS: 99. planet, 100. constructs, 101. opposition, 102. incredibly, 103. infrastructure, 104. cushy, 105. refill, 106. astronaut

107.	The company is planning to make a	expansion of its factory.
	involving many people or things and involving a lo	
108.	The for the rocket launch included several instruments.	
n.	the amount of cargo or goods that a vehicle or equor transport; in computing, the amount of data that communication system	
109.	The senator received criticism from his opp	ponent.
adj.	extremely serious or bad in feeling, manner, or str strong or vigorous	ict and harsh; extremely
110.	Frugality and industry are still as virtues	
ν.	to think about or consider somebody or something	in a specified way
111.	The human-crewed successfully land mission.	ed on the moon, fulfilling its
n.	a vehicle designed to travel through space, typical scientific instruments	lly carrying astronauts or
112.	The doctor's in monitoring patients' prospeedy recovery.	gress contributed to their
n.	careful and persistent effort or work; conscientious duties or responsibilities	sness in performing one's
113.	The astronaut felt weightless in space due to the a	bsence of
n.	the force that attracts a body towards the center o other physical body having mass; a manner that is	
	WERS: 107. large-scale, 108. payload, 109. severe cecraft, 112. diligence, 113. gravity	e, 110. regarded, 111.

114. It's important to practice when it comes to spending money.	
 a measure taken to prevent someone or something from acting freely or excessively; self-control or moderation; a physical device used to restrict or limit movement 	
115. The across the river offers a convenient transportation option for commuters.	
 a boat or ship used to transport people, vehicles, or goods across a body of water, especially on a regular schedule 	
116. The curtain rose to a fantastic set.	
v. to make something, such as secret or new information, known publicly	
117. She filled a with water and carried it back to the house.	
 an open container with a handle made of metal or plastic, often used for carrying liquids 	
118. The new amusement park ride was with twists, turns, and drops that left riders screaming with excitement.	
adj. extremely good; excellent	
119. The phone rang at the most time.	
adj. suitable or happening at a time that is suitable or convenient for a particular purpose	
120. We for an overseas expansion.	
v. to try or plan to get or achieve something	
121. The car's front bumper cost fifteen hundred	
n. the standard unit of money in the UK; the standard unit of weight equal to 16 ounces	
ANSWERS: 114. restraint, 115. ferry, 116. disclose, 117. bucket, 118. fantastic, 119 opportune, 120. aim, 121. pounds	Э.

er Ref from '	'Jennifer Heldn	nann: SpaceX's s	supersized Sta	arship rocket	and the future	of galactic ex	ploration TE	ED Talk"
ANSWEI	RS:							