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Vocabulary Builder Reference from...

Erika Hamden: What it takes to launch a telescope |

TED Talk

https://www.ted.com/talks/erika_hamden_what_it_takes_to_launch_a_telescope

All Words

IMPORTANT

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Session 1: Word List

astronomer

n. a physicist who studies astronomy

synonym: stargazer, cosmologist, astrophysicist

(1) amateur **astronomer**, (2) solar **astronomer**

This question has fascinated solar **astronomers** for decades.

telescope

n. 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.

awesome

adj. inspiring fear, admiration, or respect; very good, nice, fun, etc.

synonym: miraculous, marvelous, astounding

(1) **awesome** mental faculty, (2) have an **awesome** birthday

There is a lot of **awesome** nature and food in Hawaii.

discovery

n. the act or process of finding information, a place, or an object, or learning about something that was previously not known

synonym: finding, uncovering, detection

(1) a scientific **discovery**, (2) the great **discovery** of the century

Her research team made an important **discovery**.

universe

n. 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.

astronomy

n. 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.

lens

n. a transparent optical device with curved sides, used in an optical instrument that makes objects seem larger, smaller, clearer, etc.; (metaphor) the basic thoughts or mindsets through which someone sees or understands the environment or situation

synonym : glass

(1) a convex **lens**, (2) a **lens** with a wide angle

The photographer took this photo using a telephoto **lens**.

photograph

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

synonym : photo, picture, snapshot

(1) **photograph** album, (2) **photograph** memories

I found an old **photograph** of my grandparents from their wedding day.

orbit

n. 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**.

tolerance

n. the willingness to accept or tolerate something, especially something that is different or unpleasant
synonym: acceptance, patience, forbearance

(1) religious **tolerance**, (2) **tolerance** for risk
The school's diversity program aimed to promote **tolerance** and understanding among the students.

individual

n. a single person or thing, as distinct from a group
synonym: person, being, self

(1) a private **individual**, (2) **individual** freedom
As an **individual**, he had the right to make his own decisions and live his life as he saw fit.

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.

intergalactic

adj. existing or occurring between different galaxies (= an independent group of stars)
synonym: extragalactic, cosmic, interstellar

(1) **intergalactic** travel, (2) **intergalactic** matter
The **intergalactic** spaceship traveled to distant planets.

medium

adj. of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information

synonym: average, intermediate, (noun) channel
(1) **medium** color, (2) an advertising **medium**
The **medium** size shirt fits him perfectly.

redshift

n. a concept in physics, particularly in the field of cosmology, that describes how light or other electromagnetic radiation from an object increases in

wavelength, or shifts to the red end of the spectrum, as it moves away from an observer, which is a key principle behind the Big Bang Theory and the expansion of the universe

synonym : doppler shift

(1) **redshift** effect, (2) Doppler **redshift**

The **redshift** in the galaxy's light suggested it was moving away from us.

emission

n. the act of production or sending out gas, heat, light, etc.

synonym : emanation, radiation, discharge

(1) global **emissions** of greenhouse gases, (2) the **emission** of light

There are five distinct **emissions** at five unique wavelengths.

balloon

n. a small bag made of thin rubber or other light material that can be inflated with air or gas, used as a toy or as a decoration; (verb) to become inflated

synonym : aerostat, blimp, (verb) billow out

(1) **balloon** ride, (2) **balloon** into a severe political problem

The satellite **balloon** slowly ascended into the sky.

explode

v. to burst or break open violently and noisily; to cause something to burst or break open

synonym : detonate, blast, rupture

(1) **explode** in anger, (2) **explode** in popularity

The old building **exploded** in a fiery inferno.

incredible

adj. unbelievable; enormous

synonym : unbelievable, fantastical, inconceivable

(1) **incredible** amount, (2) at **incredible** speed

Her response revealed **incredible** idiocy.

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.

structure

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

synonym : construction, architecture, establishment

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

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

hydrogen

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

(1) **hydrogen** gas, (2) heavy **hydrogen**

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

giant

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

synonym : big, gigantic, huge

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

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

galaxy

n. an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity

synonym : star cluster, nebula, star system

(1) elliptic **galaxy**, (2) a **galaxy** of famous actors

The Milky Way **galaxy** has numerous water-bearing planets.

atom

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

synonym : particle, element, fraction

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

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

crucial

adj. extremely vital or necessary

synonym : essential, pivotal, vital

(1) **crucial** information, (2) a **crucial** issue for women

The revitalization of technology companies is **crucial** to the country's growth.

develop

v. to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created

synonym : evolve, progress, advance

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

We must **develop** a new system to streamline our workflow and increase efficiency.

jet

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

synonym : plane, aircraft, flier

(1) private **jet**, (2) commercial **jet**

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

propulsion

n. the act or process of propelling or driving something forward, often using a motor, engine, or other mechanical means

synonym : propelling, driving, actuation

(1) **propulsion** technology, (2) nuclear **propulsion**

The spacecraft's **propulsion** system helped it travel through space.

laboratory

n. 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**.

detect

v. to find or recognize something, especially something difficult to see, hear, etc.

synonym : catch, observe, notice

(1) **detect** a bad event, (2) **detect** smuggling across borders

The security camera has **detected** four intruders.

destroy

v. to ruin or damage severely or completely; to eradicate or eliminate completely

synonym : demolish, ruin, obliterate

(1) **destroy** the ecosystem, (2) **destroyed** evidence

The building was **destroyed** in the fire and had to be rebuilt.

plasma

n. (biology) the yellow-colored liquid component of blood, in which blood cells are suspended; (physics) one of the four fundamental states of matter consisting of positive ions and free electrons

(1) **plasma** membrane, (2) high-temperature **plasma**

Blood **plasma** makes up about half of the volume of blood.

electrical

adj. relating to electricity

(1) an **electrical** storm, (2) degree in **electrical** engineering

Actuators convert **electrical** pulses into motion.

glorious

adj. having or deserving great admiration, praise, and honor; having great beauty and splendor

synonym : exquisite, magnificent, majestic

(1) a **glorious** victory, (2) photo in **glorious** color

I choose a **glorious** death rather than a shameful life.

weird

adj. extraordinary, unexpected, or difficult to explain

synonym : bizarre, creepy, peculiar

(1) a **weird** dress, (2) the state of being **weird**

My computer has been acting **weird** recently.

cable

n. a set of wires covered by plastic or rubber that carries electricity, phone signals, etc.; a solid thick rope made of twisted hemp or steel wire

synonym: wire, cord, rope

(1) **cable** television, (2) coaxial **cable**

This system uses submarine **cables** to exchange information between continents.

stratosphere

n. the second layer of the Earth's atmosphere, extending from about 7 to 50 kilometers above the Earth's surface, containing the ozone layer

synonym: upper atmosphere, ozone layer

(1) **stratosphere** layer, (2) **stratosphere** ozone

The ozone layer, which protects us from harmful UV radiation, is in the **stratosphere**.

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.

remake

v. to create a new version of a work of art, such as a film, song, or play, using the same or similar material as the original; to adapt or update something for a new audience or purpose; (noun) a new version or adaptation of a previously existing movie, song, TV show, or other creative work

synonym: revamp, redo, reproduce

(1) video game **remake**, (2) **remake** song

The director plans to **remake** the classic movie with a modern twist.

calibration

n. the process of ensuring that an instrument, machine, or process is accurate and functioning correctly, often involving comparison to a standard or reference

synonym : adjustment, tuning, standardization

(1) **calibration** error, (2) **calibration** settings

The **calibration** of the equipment was vital to ensure accurate measurements.

falcon

n. a bird of prey characterized by its sharp talons and hooked beak; typically having a long tail and wingspan and known for its swift and agile flight

synonym : hawk, eagle, kestrel

(1) **falcon** feathers, (2) peregrine **falcon**

The **falcon's** keen eyesight makes it an excellent hunter.

spectrograph

n. an instrument that separates light into its component wavelengths and records the distribution of intensities as a graph, used for chemical analysis or to determine the properties of stars and galaxies

synonym : spectrometer, spectroscope, instrument

(1) **spectrograph** analysis, (2) acoustic **spectrograph**

The **spectrograph** data showed that the element was composed of multiple spectral lines.

damage

v. to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity

synonym : harm, impair, injure

(1) **damage** a relationship, (2) **damage** assessment

During the surgery, the doctor had to be extremely cautious not to **damage** a blood vessel.

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.

attempt

n. an act or effort of trying to do something, especially something difficult

synonym: endeavor, effort, try

(1) the **attempt** to rescue the hostages, (2) a reckless **attempt**

The third **attempt** was far more successful.

continuous

adj. occurring or existing without a pause or interruption

synonym: ceaseless, regular, repeated

(1) **continuous** improvement, (2) a **continuous** row of warehouses

The heavy snow has been **continuous** since last morning.

desert

n. arid land with little or no vegetation often covered with sand or rocks

(1) **desert** basin, (2) oasis in the **desert**

This region is predominantly **desert**.

spirit

n. the part of a person which is the seat of their mind, feelings, and character rather than their physical body; the general atmosphere of a place or situation and the effect that it has on people

synonym: soul, attitude, enthusiasm

(1) **spirit** and the letter of the law, (2) an indomitable **spirit**

Despite their tragic loss, the family is showing great **spirit**.

dampen

v. to make something wet or moist; to reduce the intensity or impact of something, such as a feeling, sound, or movement

synonym: drench, moisten, saturate

(1) **dampen** the sound, (2) **dampen** the enthusiasm

The rain helped **dampen** the flames of the campfire.

sunset

n. the time in the evening at which the sun begins to fall below the horizon; (verb) to expire or be terminated automatically at the end of a fixed period

synonym : evening, sundown, dusk

(1) **sunset** this function, (2) spectacular **sunset** views
He is in the **sunset** of his life.

inflated

adj. swollen or blown up, especially with air or gas; excessively or unreasonably high

synonym : enlarged, swollen, distended

(1) **inflated** prices, (2) an **inflated** balloon
The athlete's ego became **inflated** by their success.

spherical

adj. having the shape of a sphere; round, spherical, or ball-shaped in appearance

synonym : round, orbicular, spherical

(1) **spherical** shape, (2) **spherical** object
The Earth is a nearly **spherical** planet.

teardrop

n. anything shaped like a falling drop as a pendant gem on an earring; a single tear that falls from the eye

synonym : tear

(1) **teardrop** balloon, (2) **teardrop** earring
Teardrop rubies and diamonds were set in white gold.

landing

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

synonym : touchdown, arrival, descent

(1) **landing** gear, (2) emergency **landing**
The plane made a rough **landing**, and everyone clapped once we came to a stop.

countless

adj. too numerous to be counted or very many

synonym : innumerable, myriad, numerous

(1) **countless** hours, (2) answer **countless** questions

There are **countless** methods for dealing with stress.

heartbreak

n. a feeling of great sadness or disappointment

synonym : grief, sorrow, bitterness

(1) ease her **heartbreak**, (2) go through **heartbreak**

They had experienced the **heartbreak** of losing two children due to premature births.

process

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

synonym : procedure, method, system

(1) **process** improvement, (2) decision-making **process**

The **process** for applying for a visa can be lengthy and complicated.

inevitable

adj. certain to happen and unavoidable

synonym : inescapable, unavoidable, sure

(1) **inevitable** changes of the seasons, (2) **inevitable** result

In times of recession, an increase in unemployment is **inevitable**.

Session 2: Spelling

1. sc____h my signature *v.* to cut or damage the surface of something or the skin with a sharp or pointed object
2. elliptic ga____y *n.* an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
3. re____e song *v.* to create a new version of a work of art, such as a film, song, or play, using the same or similar material as the original; to adapt or update something for a new audience or purpose; (noun) a new version or adaptation of a previously existing movie, song, TV show, or other creative work
4. ind_____al freedom *n.* a single person or thing, as distinct from a group
5. anthropology lab_____ry *n.* a workplace for doing scientific research or teaching science; a lab
6. pr_____s 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
7. gi__t tech company *adj.* enormous; much bigger or more important than similar items usually are

ANSWERS: 1. scratch, 2. galaxy, 3. remake, 4. individual, 5. laboratory, 6. process, 7. giant

8. have an aw_____e birthday *adj.* inspiring fear, admiration, or respect; very good, nice, fun, etc.
9. degree in ele_____al engineering *adj.* relating to electricity
10. an ele_____al storm *adj.* relating to electricity
11. co_____ss hours *adj.* too numerous to be counted or very many
12. a branch of as_____my *n.* the scientific study of objects and matter outside the Earth's atmosphere, especially the positions, motions, and evolution of celestial bodies
13. an indomitable sp____t *n.* the part of a person which is the seat of their mind, feelings, and character rather than their physical body; the general atmosphere of a place or situation and the effect that it has on people
14. fa____n feathers *n.* a bird of prey characterized by its sharp talons and hooked beak; typically having a long tail and wingspan and known for its swift and agile flight
15. at inc_____le speed *adj.* unbelievable; enormous
16. da____n the sound *v.* to make something wet or moist; to reduce the intensity or impact of something, such as a feeling, sound, or movement
17. coaxial ca__e *n.* a set of wires covered by plastic or rubber that carries electricity, phone signals, etc.; a solid thick rope made of twisted hemp or steel wire

ANSWERS: 8. awesome, 9. electrical, 10. electrical, 11. countless, 12. astronomy, 13. spirit, 14. falcon, 15. incredible, 16. dampen, 17. cable

18. str_____ere ozone *n.* the second layer of the Earth's atmosphere, extending from about 7 to 50 kilometers above the Earth's surface, containing the ozone layer
19. sp___t and the letter of the law *n.* the part of a person which is the seat of their mind, feelings, and character rather than their physical body; the general atmosphere of a place or situation and the effect that it has on people
20. su___t this function *n.* the time in the evening at which the sun begins to fall below the horizon; (verb) to expire or be terminated automatically at the end of a fixed period
21. str_____ere layer *n.* the second layer of the Earth's atmosphere, extending from about 7 to 50 kilometers above the Earth's surface, containing the ozone layer
22. to_____ce for risk *n.* the willingness to accept or tolerate something, especially something that is different or unpleasant
23. de___t smuggling across borders *v.* to find or recognize something, especially something difficult to see, hear, etc.
24. pho_____ph memories *n.* a picture or image that is produced by a camera; a visual representation or record of a person, object, or scene that has been captured electronically or on film
25. neutral hydrogen a__ms *n.* the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus

ANSWERS: 18. stratosphere, 19. spirit, 20. sunset, 21. stratosphere, 22. tolerance, 23. detect, 24. photograph, 25. atom

26. de____y the ecosystem *v.* to ruin or damage severely or completely; to eradicate or eliminate completely
27. sp_____al shape *adj.* having the shape of a sphere; round, spherical, or ball-shaped in appearance
28. la___h a big attack *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
29. a planetary or__t *n.* the path of an object around a celestial body, especially a planet, star, or moon, under the influence of gravity.
30. expansion of the un_____se *n.* everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy
31. pho_____ph album *n.* a picture or image that is produced by a camera; a visual representation or record of a person, object, or scene that has been captured electronically or on film
32. oasis in the de____t *n.* arid land with little or no vegetation often covered with sand or rocks
33. cal_____on error *n.* the process of ensuring that an instrument, machine, or process is accurate and functioning correctly, often involving comparison to a standard or reference
34. a reckless at____t *n.* an act or effort of trying to do something, especially something difficult

ANSWERS: 26. destroy, 27. spherical, 28. launch, 29. orbit, 30. universe, 31. photograph, 32. desert, 33. calibration, 34. attempt

35. as_____my science *n.* the scientific study of objects and matter outside the Earth's atmosphere, especially the positions, motions, and evolution of celestial bodies
36. a private ind_____al *n.* a single person or thing, as distinct from a group
37. solar ast_____er *n.* a physicist who studies astronomy
38. look through a te_____pe *n.* a device like a tube in shape containing lenses used to magnify and observe distant objects
39. go through hea_____ak *n.* a feeling of great sadness or disappointment
40. de_____p a skill *v.* to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
41. the state of being we__d *adj.* extraordinary, unexpected, or difficult to explain
42. emergency la_____g *n.* the act of coming to rest on the ground or another surface after being in flight or jumping; a platform or area of ground where a plane or spacecraft can come to rest
43. a cr_____l issue for women *adj.* extremely vital or necessary
44. a ga_____y of famous actors *n.* an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity

ANSWERS: 35. astronomy, 36. individual, 37. astronomer, 38. telescope, 39. heartbreak, 40. develop, 41. weird, 42. landing, 43. crucial, 44. galaxy

45. ex_____e in anger *v.* to burst or break open violently and noisily; to cause something to burst or break open
46. gi__t trees *adj.* enormous; much bigger or more important than similar items usually are
47. heavy hy_____en *n.* the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water
48. the st_____re of a machine *n.* the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
49. ine_____le changes of the seasons *adj.* certain to happen and unavoidable
50. cal_____on settings *n.* the process of ensuring that an instrument, machine, or process is accurate and functioning correctly, often involving comparison to a standard or reference
51. Doppler re_____ft *n.* a concept in physics, particularly in the field of cosmology, that describes how light or other electromagnetic radiation from an object increases in wavelength, or shifts to the red end of the spectrum, as it moves away from an observer, which is a key principle behind the Big Bang Theory and the expansion of the universe
52. a we__d dress *adj.* extraordinary, unexpected, or difficult to explain

ANSWERS: 45. explode, 46. giant, 47. hydrogen, 48. structure, 49. inevitable, 50. calibration, 51. redshift, 52. weird

53. ob____e a tradition *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
54. te____op balloon *n.* anything shaped like a falling drop as a pendant gem on an earring; a single tear that falls from the eye
55. in____ed prices *adj.* swollen or blown up, especially with air or gas; excessively or unreasonably high
56. fa__t memory *adj.* not strong, clear, or vigorous; slight or weak
57. a scientific di____ry *n.* the act or process of finding information, a place, or an object, or learning about something that was previously not known
58. de____yed evidence *v.* to ruin or damage severely or completely; to eradicate or eliminate completely
59. st____re and function of the brain *n.* the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
60. int____tic matter *adj.* existing or occurring between different galaxies (= an independent group of stars)
61. a l__s with a wide angle *n.* a transparent optical device with curved sides, used in an optical instrument that makes objects seem larger, smaller, clearer, etc.; (metaphor) the basic thoughts or mindsets through which someone sees or understands the environment or situation

ANSWERS: 53. observe, 54. teardrop, 55. inflated, 56. faint, 57. discovery, 58. destroy, 59. structure, 60. intergalactic, 61. lens

62. la___h 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
63. private j_t *n.* a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances
64. spe_____aph analysis *n.* an instrument that separates light into its component wavelengths and records the distribution of intensities as a graph, used for chemical analysis or to determine the properties of stars and galaxies
65. ca___e television *n.* a set of wires covered by plastic or rubber that carries electricity, phone signals, etc.; a solid thick rope made of twisted hemp or steel wire
66. ba_____n ride *n.* a small bag made of thin rubber or other light material that can be inflated with air or gas, used as a toy or as a decoration; (verb) to become inflated
67. spectacular su___t views *n.* the time in the evening at which the sun begins to fall below the horizon; (verb) to expire or be terminated automatically at the end of a fixed period
68. sc_____h off a name *v.* to cut or damage the surface of something or the skin with a sharp or pointed object
69. lab_____ry accident *n.* a workplace for doing scientific research or teaching science; a lab

ANSWERS: 62. launch, 63. jet, 64. spectrograph, 65. cable, 66. balloon, 67. sunset, 68. scratch, 69. laboratory

70. ex_____e in popularity *v.* to burst or break open violently and noisily; to cause something to burst or break open
71. amateur ast_____er *n.* a physicist who studies astronomy
72. int_____tic travel *adj.* existing or occurring between different galaxies (= an independent group of stars)
73. a con_____us row of warehouses *adj.* occurring or existing without a pause or interruption
74. ob_____e wildlife *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
75. la_____g gear *n.* the act of coming to rest on the ground or another surface after being in flight or jumping; a platform or area of ground where a plane or spacecraft can come to rest
76. a convex l____s *n.* a transparent optical device with curved sides, used in an optical instrument that makes objects seem larger, smaller, clearer, etc.; (metaphor) the basic thoughts or mindsets through which someone sees or understands the environment or situation
77. fa__t aroma of roses *adj.* not strong, clear, or vigorous; slight or weak
78. theory of the un_____se *n.* everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy

ANSWERS: 70. explode, 71. astronomer, 72. intergalactic, 73. continuous, 74. observe, 75. landing, 76. lens, 77. faint, 78. universe

79. nuclear pro_____on *n.* the act or process of propelling or driving something forward, often using a motor, engine, or other mechanical means
80. photo in gl_____us color *adj.* having or deserving great admiration, praise, and honor; having great beauty and splendor
81. an in_____ed balloon *adj.* swollen or blown up, especially with air or gas; excessively or unreasonably high
82. pl____a membrane *n.* (biology) the yellow-colored liquid component of blood, in which blood cells are suspended; (physics) one of the four fundamental states of matter consisting of positive ions and free electrons
83. acoustic spe_____aph *n.* an instrument that separates light into its component wavelengths and records the distribution of intensities as a graph, used for chemical analysis or to determine the properties of stars and galaxies
84. the at_____t to rescue the hostages *n.* an act or effort of trying to do something, especially something difficult
85. the em_____on of light *n.* the act of production or sending out gas, heat, light, etc.
86. the great di_____ry of the century *n.* the act or process of finding information, a place, or an object, or learning about something that was previously not known

ANSWERS: 79. propulsion, 80. glorious, 81. inflated, 82. plasma, 83. spectrograph, 84. attempt, 85. emission, 86. discovery

87. aw_____e mental faculty *adj.* inspiring fear, admiration, or respect; very good, nice, fun, etc.
88. hy_____en gas *n.* the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water
89. sp_____al object *adj.* having the shape of a sphere; round, spherical, or ball-shaped in appearance
90. ba_____n into a severe political problem *n.* a small bag made of thin rubber or other light material that can be inflated with air or gas, used as a toy or as a decoration; (verb) to become inflated
91. da____n the enthusiasm *v.* to make something wet or moist; to reduce the intensity or impact of something, such as a feeling, sound, or movement
92. high-temperature pl____a *n.* (biology) the yellow-colored liquid component of blood, in which blood cells are suspended; (physics) one of the four fundamental states of matter consisting of positive ions and free electrons
93. religious to_____ce *n.* the willingness to accept or tolerate something, especially something that is different or unpleasant
94. de_____p a strategy *v.* to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created

ANSWERS: 87. awesome, 88. hydrogen, 89. spherical, 90. balloon, 91. dampen, 92. plasma, 93. tolerance, 94. develop

95. an advertising me___m *adj.* of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information
96. da___e assessment *v.* to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity
97. me___m color *adj.* of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information
98. a binocular te_____pe *n.* a device like a tube in shape containing lenses used to magnify and observe distant objects
99. de___t a bad event *v.* to find or recognize something, especially something difficult to see, hear, etc.
100. ine_____le result *adj.* certain to happen and unavoidable
101. answer co_____ss questions *adj.* too numerous to be counted or very many
102. decision-making pr_____s *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

ANSWERS: 95. medium, 96. damage, 97. medium, 98. telescope, 99. detect, 100. inevitable, 101. countless, 102. process

103. inc_____le amount *adj.* unbelievable; enormous
104. a gl_____us victory *adj.* having or deserving great admiration, praise, and honor; having great beauty and splendor
105. pro_____on technology *n.* the act or process of propelling or driving something forward, often using a motor, engine, or other mechanical means
106. te_____op earring *n.* anything shaped like a falling drop as a pendant gem on an earring; a single tear that falls from the eye
107. video game re_____e *v.* to create a new version of a work of art, such as a film, song, or play, using the same or similar material as the original; to adapt or update something for a new audience or purpose; (noun) a new version or adaptation of a previously existing movie, song, TV show, or other creative work
108. oxygen a__m *n.* the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus
109. global em_____ons of greenhouse gases *n.* the act of production or sending out gas, heat, light, etc.
110. con_____us improvement *adj.* occurring or existing without a pause or interruption
111. ease her hea_____ak *n.* a feeling of great sadness or disappointment

ANSWERS: 103. incredible, 104. glorious, 105. propulsion, 106. teardrop, 107. remake, 108. atom, 109. emission, 110. continuous, 111. heartbreak

112. cr____l information *adj.* extremely vital or necessary
113. commercial j_t *n.* a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances
114. re_____ft effect *n.* a concept in physics, particularly in the field of cosmology, that describes how light or other electromagnetic radiation from an object increases in wavelength, or shifts to the red end of the spectrum, as it moves away from an observer, which is a key principle behind the Big Bang Theory and the expansion of the universe
115. peregrine fa____n *n.* a bird of prey characterized by its sharp talons and hooked beak; typically having a long tail and wingspan and known for its swift and agile flight
116. the or__t of the moon *n.* the path of an object around a celestial body, especially a planet, star, or moon, under the influence of gravity.
117. da___e a relationship *v.* to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity
118. de____t basin *n.* arid land with little or no vegetation often covered with sand or rocks

ANSWERS: 112. crucial, 113. jet, 114. redshift, 115. falcon, 116. orbit, 117. damage, 118. desert

Session 3: Fill in the Blanks

1. I choose a _____ death rather than a shameful life.
adj. having or deserving great admiration, praise, and honor; having great beauty and splendor

2. The photographer took this photo using a telephoto _____.
n. a transparent optical device with curved sides, used in an optical instrument that makes objects seem larger, smaller, clearer, etc.; (metaphor) the basic thoughts or mindsets through which someone sees or understands the environment or situation

3. He had a deep passion for extragalactic _____ and spent hours observing the night sky.
n. the scientific study of objects and matter outside the Earth's atmosphere, especially the positions, motions, and evolution of celestial bodies

4. The _____ in the galaxy's light suggested it was moving away from us.
n. a concept in physics, particularly in the field of cosmology, that describes how light or other electromagnetic radiation from an object increases in wavelength, or shifts to the red end of the spectrum, as it moves away from an observer, which is a key principle behind the Big Bang Theory and the expansion of the universe

5. The athlete's ego became _____ by their success.
adj. swollen or blown up, especially with air or gas; excessively or unreasonably high

6. The old building _____ in a fiery inferno.
v. to burst or break open violently and noisily; to cause something to burst or break open

ANSWERS: 1. glorious, 2. lens, 3. astronomy, 4. redshift, 5. inflated, 6. exploded

7. The _____ of the equipment was vital to ensure accurate measurements.
n. the process of ensuring that an instrument, machine, or process is accurate and functioning correctly, often involving comparison to a standard or reference
8. He is in the _____ of his life.
n. the time in the evening at which the sun begins to fall below the horizon; (verb) to expire or be terminated automatically at the end of a fixed period
9. There are five distinct _____ at five unique wavelengths.
n. the act of production or sending out gas, heat, light, etc.
10. There is a lot of _____ nature and food in Hawaii.
adj. inspiring fear, admiration, or respect; very good, nice, fun, etc.
11. Animal protection groups call for an end to animal testing in a _____.
n. a workplace for doing scientific research or teaching science; a lab
12. 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
13. The _____ size shirt fits him perfectly.
adj. of a size, amount, or level that is average or intermediate; (noun) a means or instrumentality for storing or communicating information
14. The revitalization of technology companies is _____ to the country's growth.
adj. extremely vital or necessary

ANSWERS: 7. calibration, 8. sunset, 9. emissions, 10. awesome, 11. laboratory, 12. launch, 13. medium, 14. crucial

15. They had experienced the _____ of losing two children due to premature births.
n. a feeling of great sadness or disappointment
16. This system uses submarine _____ to exchange information between continents.
n. a set of wires covered by plastic or rubber that carries electricity, phone signals, etc.; a solid thick rope made of twisted hemp or steel wire
17. Her response revealed _____ idiocy.
adj. unbelievable; enormous
18. Her research team made an important _____.
n. the act or process of finding information, a place, or an object, or learning about something that was previously not known
19. There are _____ methods for dealing with stress.
adj. too numerous to be counted or very many
20. Blood _____ makes up about half of the volume of blood.
n. (biology) the yellow-colored liquid component of blood, in which blood cells are suspended; (physics) one of the four fundamental states of matter consisting of positive ions and free electrons
21. This facility has the largest astronomical _____ in the country.
n. a device like a tube in shape containing lenses used to magnify and observe distant objects
22. The _____ is about 13.8 billion years old.
n. everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy

ANSWERS: 15. heartbreak, 16. cables, 17. incredible, 18. discovery, 19. countless, 20. plasma, 21. telescope, 22. universe

23. The Milky Way _____ has numerous water-bearing planets.
n. an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
24. The spacecraft's _____ system helped it travel through space.
n. the act or process of propelling or driving something forward, often using a motor, engine, or other mechanical means
25. _____ rubies and diamonds were set in white gold.
n. anything shaped like a falling drop as a pendant gem on an earring; a single tear that falls from the eye
26. The _____ jets gradually dominate the world's airlines.
adj. enormous; much bigger or more important than similar items usually are
27. The ozone layer, which protects us from harmful UV radiation, is in the _____.
n. the second layer of the Earth's atmosphere, extending from about 7 to 50 kilometers above the Earth's surface, containing the ozone layer
28. The _____ flew over the ocean at high speed, reaching its destination in hours.
n. a type of aircraft that is powered by one or more jet engines and can fly at high speeds, typically over long distances
29. The third _____ was far more successful.
n. an act or effort of trying to do something, especially something difficult
30. The organizational _____ of start-ups is often flat and straightforward.
n. the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts

ANSWERS: 23. galaxy, 24. propulsion, 25. Teardrop, 26. giant, 27. stratosphere, 28. jet, 29. attempt, 30. structure

31. Despite their tragic loss, the family is showing great _____.
- n.* the part of a person which is the seat of their mind, feelings, and character rather than their physical body; the general atmosphere of a place or situation and the effect that it has on people
32. 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.
33. I found an old _____ of my grandparents from their wedding day.
- n.* a picture or image that is produced by a camera; a visual representation or record of a person, object, or scene that has been captured electronically or on film
34. The _____ spaceship traveled to distant planets.
- adj.* existing or occurring between different galaxies (= an independent group of stars)
35. The director plans to _____ the classic movie with a modern twist.
- v.* to create a new version of a work of art, such as a film, song, or play, using the same or similar material as the original; to adapt or update something for a new audience or purpose; (noun) a new version or adaptation of a previously existing movie, song, TV show, or other creative work
36. 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

ANSWERS: 31. spirit, 32. orbit, 33. photograph, 34. intergalactic, 35. remake, 36. observe

37. The Earth is a nearly _____ planet.

adj. having the shape of a sphere; round, spherical, or ball-shaped in appearance

38. She heard a _____ nearly invisible scream.

adj. not strong, clear, or vigorous; slight or weak

39. In times of recession, an increase in unemployment is _____.

adj. certain to happen and unavoidable

40. My computer has been acting _____ recently.

adj. extraordinary, unexpected, or difficult to explain

41. Actuators convert _____ pulses into motion.

adj. relating to electricity

42. As an _____ he had the right to make his own decisions and live his life as he saw fit.

n. a single person or thing, as distinct from a group

43. The _____ keen eyesight makes it an excellent hunter.

n. a bird of prey characterized by its sharp talons and hooked beak; typically having a long tail and wingspan and known for its swift and agile flight

44. The security camera has _____ four intruders.

v. to find or recognize something, especially something difficult to see, hear, etc.

45. The _____ for applying for a visa can be lengthy and complicated.

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

ANSWERS: 37. spherical, 38. faint, 39. inevitable, 40. weird, 41. electrical, 42. individual, 43. falcon's, 44. detected, 45. process

46. The rain helped _____ the flames of the campfire.
- v.* to make something wet or moist; to reduce the intensity or impact of something, such as a feeling, sound, or movement
47. The outermost electron shell of an _____ determines its chemical characteristics.
- n.* the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus
48. During the surgery, the doctor had to be extremely cautious not to _____ a blood vessel.
- v.* to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity
49. This region is predominantly _____.
- n.* arid land with little or no vegetation often covered with sand or rocks
50. The _____ and the oxygen react and then form water.
- n.* the chemical element that is the lightest gas is colorless, odorless, tasteless, and combines with oxygen to form water
51. The plane made a rough _____ and everyone clapped once we came to a stop.
- n.* the act of coming to rest on the ground or another surface after being in flight or jumping; a platform or area of ground where a plane or spacecraft can come to rest
52. We must _____ a new system to streamline our workflow and increase efficiency.
- v.* to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created

ANSWERS: 46. dampen, 47. atom, 48. damage, 49. desert, 50. hydrogen, 51. landing, 52. develop

53. The satellite _____ slowly ascended into the sky.

- n.* a small bag made of thin rubber or other light material that can be inflated with air or gas, used as a toy or as a decoration; (verb) to become inflated

54. This question has fascinated solar _____ for decades.

- n.* a physicist who studies astronomy

55. Don't _____ your mosquito bites.

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

56. The school's diversity program aimed to promote _____ and understanding among the students.

- n.* the willingness to accept or tolerate something, especially something that is different or unpleasant

57. The building was _____ in the fire and had to be rebuilt.

- v.* to ruin or damage severely or completely; to eradicate or eliminate completely

58. The _____ data showed that the element was composed of multiple spectral lines.

- n.* an instrument that separates light into its component wavelengths and records the distribution of intensities as a graph, used for chemical analysis or to determine the properties of stars and galaxies

59. The heavy snow has been _____ since last morning.

- adj.* occurring or existing without a pause or interruption

ANSWERS: 53. balloon, 54. astronomers, 55. scratch, 56. tolerance, 57. destroyed, 58. spectrograph, 59. continuous