

Englist.me



Vocabulary Builder Reference from...

Chris Anderson: How many universes are there? |

TED Talk

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

All Words

IMPORTANT

This material is a commentary and does not contain any copyrighted material of the reference source. We strongly recommend accessing/buying the reference source at the same time.

Session 1: Word List

- flee** v. to leave by running away, especially out of fear or danger
synonym: exit, escape, run away
(1) **flee** their homes, (2) **flee** abroad
It is a basic instinct to **flee** from a dangerous situation.
- gaze** v. to stare at something or someone for an extended time, usually out of surprise or adoration, or because you are thinking about something else
synonym: stare, gawk, look
(1) **gaze** steadily at his face, (2) **gaze** absently out a window
The youngster was **gazed** at by the beast.
- 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**.
- vast** *adj.* enormous in size, number, amount, or quantity
synonym: expansive, extended, boundless
(1) **vast** majority, (2) **vast** desert
A **vast** audience viewed the broadcast.

scheme

n. an organized and often large-scale plan or arrangement for doing something

synonym : strategy, blueprint, plan

(1) a pilot **scheme**, (2) draw out a **scheme**

They carefully executed the well-planned **scheme** they had prepared over the years.

pinprick

n. a very small hole in something, especially made by a pin or needle; a minor annoyance

(1) a tiny **pinprick**, (2) feel a **pinprick** sensation

He felt a **pinprick** of disgust.

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.

pale

adj. having skin that is very light colored; lacking in vitality or interest or effectiveness

synonym : sallow, faint, ashen

(1) a **pale** complexion, (2) **pale** pink

She turned **pale** when she heard the news.

mist

n. a cloud of very small drops of water collecting in the air just above the ground or water

synonym : fog, murk, haze

(1) **mist** in the morning, (2) fine **mist**

The sun has risen, and the **mist** has faded.

stretch

v. to make or be capable of making anything longer or broader without hurting or breaking

synonym : lengthen, prolong, extend

(1) **stretch** along the coast, (2) **stretch** a story

Some herds have been observed to **stretch** hundreds of kilometers.

detectable

adj. capable of being discovered or identified

synonym : perceptible, noticeable, observable

(1) a barely **detectable** change, (2) **detectable** by the human ear

The object is **detectable** at ultraviolet wavelengths.

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.

grain

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

synonym : seed, piece, cereal

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

Ordinary air purifiers cannot adequately remove pollen **grains**.

sand

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

synonym : grit, dust, powder

(1) **sand** dunes, (2) **sand** castle

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

represent

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

synonym : depict, express, describe

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

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

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.

holy

adj. of or related to a god, divine power, or a particular religion

synonym : sacred, religious, divine

(1) a **holy** man, (2) a **holy** shrine

They gathered to hear the **holy** teachings of the guru.

hawk

n. a bird of prey typically having short rounded wings and a long tail; an advocate of an aggressive policy on foreign relations

synonym : militarist, jingo, aggressor

(1) cast off a **hawk**, (2) congressional **hawk**

That team signed a center forward who was a ball- **hawk**.

physicist

n. a scientist who specializes in the field of physics

(1) talented **physicist**, (2) theoretical **physicist**

Einstein was an outstanding and famous **physicist** of the 20th century.

imaginable

adj. capable of being imagined

synonym : conceivable, plausible, possible

(1) easily **imaginable**, (2) worst **imaginable** case

This is the only **imaginable** strategy.

minuscule

adj. extremely small; tiny

synonym : tiny, insignificant, microscopic

(1) **minuscule** amount, (2) **minuscule** letters

This ore emits **minuscule** quantities of radiation

fraction

n. a small part or item forming a piece of a whole; the quotient of two rational numbers

synonym : piece, part, fragment

(1) a **fractional** share of the vote, (2) a numerator in a **fraction**

He spent only a **fraction** of his earnings.

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.

accelerate

v. to make something faster or earlier; to cause to develop or progress more quickly

synonym: speed up, quicken, rev

(1) **accelerate** a chemical reaction, (2) **accelerate** the car

The government tried to **accelerate** the commercialization of this development.

pace

n. the speed at which someone or something moves, or the rate at which something happens or changes

synonym: gait, rate, speed

(1) at your own **pace**, (2) the runner's **pace**

The economy is growing at a supercharged **pace**.

separate

v. to force, take, or pull apart; mark as different

synonym: disunite, isolate, ramify

(1) **separate** video into chapter, (2) **separate** cream from milk

We need to **separate** the aspect of his personality from the part of his competence when making an investment decision.

intimate

adj. having a very close friendship, personal

synonym: close, tight, friendly

(1) my **intimate** affairs, (2) **intimate** relationship

He has an **intimate** knowledge of American history.

distant

adj. far away in space, time, or where you are; far apart in relevance, relationship, or kinship

synonym : far, isolated, remote

(1) a **distant** memory, (2) **distant** ancestors

The sun set over the crest of **distant** hills.

invisible

adj. impossible or nearly impossible to see

synonym : hidden, imperceptible, unseen

(1) an **invisible** asset, (2) **invisible** stars

The phenomenon is **invisible** at optical wavelengths.

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.

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.

electron

n. a tiny particle with the negative electrical charge

synonym : negatron

(1) flow of **electrons**, (2) beam of **electrons**

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

proton

n. a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms

(1) **proton** decay, (2) **proton** conductivity

The solar wind is composed almost entirely of electrons and

protons.

quark

n. a type of elementary particle and a fundamental constituent of matter that make up the heavier elementary particles, such as protons, neutrons, etc.; fresh unripened cheese of a smooth texture made from pasteurized milk, a starter, and rennet

(1) **quark** physics, (2) the antiparticle of a **quark**

The Big Bang theory states that **quark-gluon** plasma filled the entire universe before matter as we know it was created.

neutrino

n. a very small and electrically neutral particle with a very small mass that rarely reacts with other matter

(1) **neutrino** capture, (2) sterile **neutrinos**

This laboratory has a pool consisting of thousands of **neutrino** detectors.

physics

n. the science of matter and energy and their interactions

(1) nuclear **physics**, (2) laws of **physics**

He studied the **physics** of radiation.

string

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

synonym: line, wire, rope

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

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

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.

particle

n. a small piece of something; a word or piece of a term with grammatical function but little or no significance

synonym: atom, grain, bit

(1) charged **particle**, (2) **particle** energy

We can calculate the position of the **particles** statistically.

flash

n. a sudden intense burst of radiant energy; a momentary brightness

synonym: sparkle, gleam, glimmer

(1) a **flash** of lightning, (2) brilliant **flash**

These heavy rains caused **flash** floods on several islands.

nanosecond

n. one thousand millionth or billionth (= 0.000,000,001) of a second

(1) **nanosecond** response, (2) **nanosecond** laser pulse

The processor performs calculations on the **nanosecond** timescale.

nonetheless

adv. in spite of what has just been said or done; nevertheless

synonym: nevertheless, regardless, still

(1) we are **nonetheless** confident, (2) love him

nonetheless

They each choose **nonetheless** to battle.

combine

v. to join or merge to form a single thing or group

synonym: coalesce, cohere, blend

(1) **combine** chemically with another substance,

(2) **combine** augmented reality

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

multiverse

n. a hypothetical space or realm consisting of multiple universes, of which our universe is just one of them

(1) the **multiverse** hypothesis, (2) the concept of the

multiverse

The various universes within the **multiverse** are sometimes called parallel universes.

dimension

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

synonym: extent, measurement, size

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

feat *n.* a notable or impressive achievement, especially one that requires great skill or bravery
synonym: achievement, accomplishment, exploit
(1) intellectual **feat**, (2) **feat** accomplishment
It is an incredible **feat** to climb Mount Everest, the highest mountain in the world.

imaginary *adj.* existing only in someone's mind
synonym: fictional, ideal, fantastical
(1) **imaginary** number, (2) **imaginary** pregnancy
Little children tend to have **imaginary** friends.

predict *v.* to state beforehand that something will happen in the future, mainly based on knowledge or experience
synonym: forecast, anticipate, foresee
(1) **predict** the future, (2) **predict** when she will arrive
It's notoriously challenging to **predict** birth rates.

observable *adj.* that can be noticed or seen
synonym: visible, perceptible, detectable
(1) **observable** change, (2) experimentally **observable**
Any theorem relies on both **observable** fact and assumption.

trillion *n.* the number 1,000,000,000,000; a million million
(1) **trillion** cubic feet, (2) many **trillions** of dollars
One light year is nearly 6 **trillion** miles.

infinity *n.* the state or quality of having no end or limit; (mathematics) a number greater than any natural number
synonym: endlessness, boundlessness, continuity
(1) the **infinity** of the universe, (2) negative **infinity**
That investor saw an **infinity** of possibilities in this company.

continuum

n. a series of similar items in which no part or portion is distinct or distinguishable from adjacent parts

synonym: continuation, continuity

(1) a space-time **continuum**, (2) the **continuum** of events

Our life is a **continuum** of experience in which events pass from the future through the present to the past.

infinite

adj. unlimited or very great; impossible to measure

synonym: boundless, countless, limitless

(1) **infinite** appetite, (2) **infinite** in supply

The battle had an **infinite** impact on the nation.

vary

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

synonym: alter, contrast, differ

(1) **vary** according to the age, (2) **vary** directly with the price

Maximum heart rates **vary** a lot for each individual.

brain

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

synonym: intellect, mind, encephalon

(1) basic **brain** function, (2) permanent **brain** damage

X-rays revealed a small tumor in his **brain**.

quantum

n. the smallest amount or unit of something, especially (electromagnetic) energy

(1) probabilistic **quantum** theory, (2) laws of **quantum** mechanics

Big techs are now eager to develop **quantum** computers.

wrinkle

n. a small line or fold in something, especially fabric or the skin of the face; a minor difficulty

synonym: crinkle, fold, crumple

(1) a fine **wrinkle** on a fabric, (2) a facial **wrinkle**

This suit is made of **wrinkle-proof** material.

doubt

n. a feeling of being uncertain about something, especially about how good or accurate it is

synonym : distrust, suspect, mistrust

(1) dispel **doubts**, (2) no **doubt** about the news

Doubt is the start, not the end, of intelligence.

interpret

v. to explain or assign the meaning of information, actions, etc.

synonym : decode, decipher, analyze

(1) **interpret** a graph, (2) **interpret** the question

Different people might **interpret** this news differently.

baffle

v. to bewilder or perplex someone completely and to be unable to understand or explain something

synonym : perplex, astound, hinder

(1) **baffle** his plan, (2) **baffle** outside noises

The paradox **baffled** most philosophers.

parallel

adj. being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations

synonym : aligned, side-by-side, similar

(1) a **parallel** case, (2) **parallel** processing

He walked a road **parallel** to the railroad.

spawn

v. to lay eggs or to produce offspring; to cause something to develop

synonym : beget, breed, generate

(1) **spawn** in spring, (2) **spawn** a new concept

The salmon swims upstream to **spawn** in the place they were released.

graduate

n. a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree

synonym : alumna, alum, grad

(1) **graduate** degree program, (2) honor **graduate**

Many employers hire **graduate** trainees to train as managers.

hogwash

n. an idea, behavior, argument, etc., that you think is stupid and unacceptable

synonym: nonsense, bunk, ludicrousness

(1) complete **hogwash**, (2) **hogwash** of quiet diplomacy

This media has long been criticized for spreading paranoid **hogwash**.

philosophy

n. the study of general and fundamental questions, such as those about existence, reason, knowledge, values, mind

synonym: doctrine, attitude, creed

(1) **philosophy** of education, (2) western **philosophy**

Ethics is a branch of **philosophy**.

mystic

adj. having spiritual powers or qualities that are beyond ordinary understanding; (noun) someone who believes in the existence of realities beyond human comprehension

synonym: secret, mystical, supernatural

(1) **mystic** teaching, (2) medieval **mystic**

He is interested in the **mystic** rites of that religion.

argue

v. to express differing opinions or points of view, often in a heated or contentious manner; to present a case or reasoning to persuade or convince others

synonym: debate, dispute, quarrel

(1) **argue** a case, (2) **argue** passionately

The couple began to **argue** over which restaurant to go to for dinner.

illusion

n. a false idea or belief, especially about somebody or about a situation

synonym: delusion, fallacy, magic trick

(1) optical **illusion**, (2) the **illusion** of being in the forest

He could no longer tell the difference between **illusion** and reality.

undergo

v. to go through something unpleasant or that involves a change

synonym: experience, suffer, endure

(1) **undergo** surgery, (2) **undergo** a decrease

The train has to **undergo** rigorous safety checks.

paradigm

n. 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.

shift

n. a slight transition in position, direction, or trend

synonym: transition, change, modification

(1) Doppler **shift**, (2) major paradigm **shift**

Could you help me **shift** some furniture?

Session 2: Spelling

- | | |
|-----------------------------------|---|
| 1. acc_____te a chemical reaction | <i>v.</i> to make something faster or earlier; to cause to develop or progress more quickly |
| 2. nan_____nd response | <i>n.</i> one thousand millionth or billionth (= 0.000,000,001) of a second |
| 3. in_____te in supply | <i>adj.</i> unlimited or very great; impossible to measure |
| 4. medieval my____c | <i>adj.</i> having spiritual powers or qualities that are beyond ordinary understanding; (noun) someone who believes in the existence of realities beyond human comprehension |
| 5. feel a pi_____ck sensation | <i>n.</i> a very small hole in something, especially made by a pin or needle; a minor annoyance |
| 6. obs_____le change | <i>adj.</i> that can be noticed or seen |
| 7. we are non_____ss confident | <i>adv.</i> in spite of what has just been said or done; nevertheless |
| 8. f__t accomplishment | <i>n.</i> a notable or impressive achievement, especially one that requires great skill or bravery |
| 9. my____c teaching | <i>adj.</i> having spiritual powers or qualities that are beyond ordinary understanding; (noun) someone who believes in the existence of realities beyond human comprehension |

ANSWERS: 1. accelerate, 2. nanosecond, 3. infinite, 4. mystic, 5. pinprick, 6. observable, 7. nonetheless, 8. feat, 9. mystic

- | | |
|---------------------------------|---|
| 10. laws of ph____s | <i>n.</i> the science of matter and energy and their interactions |
| 11. a tiny pi____ck | <i>n.</i> a very small hole in something, especially made by a pin or needle; a minor annoyance |
| 12. g__e steadily at his face | <i>v.</i> to stare at something or someone for an extended time, usually out of surprise or adoration, or because you are thinking about something else |
| 13. at your own p__e | <i>n.</i> the speed at which someone or something moves, or the rate at which something happens or changes |
| 14. love him non_____ss | <i>adv.</i> in spite of what has just been said or done; nevertheless |
| 15. sp__n in spring | <i>v.</i> to lay eggs or to produce offspring; to cause something to develop |
| 16. det_____le by the human ear | <i>adj.</i> capable of being discovered or identified |
| 17. un_____o a decrease | <i>v.</i> to go through something unpleasant or that involves a change |
| 18. ba___e outside noises | <i>v.</i> to bewilder or perplex someone completely and to be unable to understand or explain something |
| 19. negative in____ty | <i>n.</i> the state or quality of having no end or limit; (mathematics) a number greater than any natural number |
| 20. basic br__n function | <i>n.</i> the organ inside the head that is responsible for one's movement, thought, memory, and feeling |

ANSWERS: 10. physics, 11. pinprick, 12. gaze, 13. pace, 14. nonetheless, 15. spawn, 16. detectable, 17. undergo, 18. baffle, 19. infinity, 20. brain

21. ex___d a lineup *v.* to increase or to make something greater in size, number, or importance
22. talented ph_____st *n.* a scientist who specializes in the field of physics
23. draw out a sc___e *n.* an organized and often large-scale plan or arrangement for doing something
24. 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
25. a gr___n of sand *n.* wheat or any other small hard seeds used as a food; a relatively small granular particle of a substance
26. a fine wr_____e on a fabric *n.* a small line or fold in something, especially fabric or the skin of the face; a minor difficulty
27. permanent br___n damage *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
28. beam of el_____ons *n.* a tiny particle with the negative electrical charge
29. my in_____te affairs *adj.* having a very close friendship, personal
30. tr_____on cubic feet *n.* the number 1,000,000,000,000; a million million
31. di_____t ancestors *adj.* far away in space, time, or where you are; far apart in relevance, relationship, or kinship
32. a numerator in a fr_____on *n.* a small part or item forming a piece of a whole; the quotient of two rational numbers

ANSWERS: 21. expand, 22. physicist, 23. scheme, 24. atom, 25. grain, 26. wrinkle, 27. brain, 28. electron, 29. intimate, 30. trillion, 31. distant, 32. fraction

33. co____e chemically with another substance *v.* to join or merge to form a single thing or group
34. honor gr____te *n.* a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree
35. ho____h of quiet diplomacy *n.* an idea, behavior, argument, etc., that you think is stupid and unacceptable
36. experimentally obs____le *adj.* that can be noticed or seen
37. the crosswise di____on *n.* a measurable extent of a particular kind, such as width, height, or length
38. laws of qu____m mechanics *n.* the smallest amount or unit of something, especially (electromagnetic) energy
39. ar__e passionately *v.* to express differing opinions or points of view, often in a heated or contentious manner; to present a case or reasoning to persuade or convince others
40. co____e augmented reality *v.* to join or merge to form a single thing or group
41. s__d castle *n.* finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action
42. gi__t trees *adj.* enormous; much bigger or more important than similar items usually are

ANSWERS: 33. combine, 34. graduate, 35. hogwash, 36. observable, 37. dimension, 38. quantum, 39. argue, 40. combine, 41. sand, 42. giant

43. Doppler sh__t *n.* a slight transition in position, direction, or trend
44. an in_____le asset *adj.* impossible or nearly impossible to see
45. v__t majority *adj.* enormous in size, number, amount, or quantity
46. oasis in the de____t *n.* arid land with little or no vegetation often covered with sand or rocks
47. in_____le stars *adj.* impossible or nearly impossible to see
48. no do__t about the news *n.* a feeling of being uncertain about something, especially about how good or accurate it is
49. ex____d agricultural output *v.* to increase or to make something greater in size, number, or importance
50. a pa_____el case *adj.* being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations
51. nan_____nd laser pulse *n.* one thousand millionth or billionth (= 0.000,000,001) of a second
52. look through a te_____pe *n.* a device like a tube in shape containing lenses used to magnify and observe distant objects
53. the characters that re_____nt numbers *v.* to speak, act, or be present on behalf of another person or group; to form or constitute
54. theoretical ph_____st *n.* a scientist who specializes in the field of physics
55. brilliant fl__h *n.* a sudden intense burst of radiant energy; a momentary brightness

ANSWERS: 43. shift, 44. invisible, 45. vast, 46. desert, 47. invisible, 48. doubt, 49. expand, 50. parallel, 51. nanosecond, 52. telescope, 53. represent, 54. physicist, 55. flash

56. se____te video into chapter *v.* to force, take, or pull apart; mark as different
57. the co_____um of events *n.* a series of similar items in which no part or portion is distinct or distinguishable from adjacent parts
58. m__t in the morning *n.* a cloud of very small drops of water collecting in the air just above the ground or water
59. ar__e a case *v.* to express differing opinions or points of view, often in a heated or contentious manner; to present a case or reasoning to persuade or convince others
60. a di_____t memory *adj.* far away in space, time, or where you are; far apart in relevance, relationship, or kinship
61. probabilistic qu_____m theory *n.* the smallest amount or unit of something, especially (electromagnetic) energy
62. the concept of the mul_____se *n.* a hypothetical space or realm consisting of multiple universes, of which our universe is just one of them
63. a h__y man *adj.* of or related to a god, divine power, or a particular religion
64. sterile ne_____nos *n.* a very small and electrically neutral particle with a very small mass that rarely reacts with other matter
65. sp__n a new concept *v.* to lay eggs or to produce offspring; to cause something to develop
66. pr_____t when she will arrive *v.* to state beforehand that something will happen in the future, mainly based on knowledge or experience

ANSWERS: 56. separate, 57. continuum, 58. mist, 59. argue, 60. distant, 61. quantum, 62. multiverse, 63. holy, 64. neutrino, 65. spawn, 66. predict

67. a h__y shrine *adj.* of or related to a god, divine power, or a particular religion
68. pr____t the future *v.* to state beforehand that something will happen in the future, mainly based on knowledge or experience
69. v__y according to the age *v.* to become different in terms of size, shape, etc.
70. mi____le amount *adj.* extremely small; tiny
71. v__y directly with the price *v.* to become different in terms of size, shape, etc.
72. f__e abroad *v.* to leave by running away, especially out of fear or danger
73. g__e absently out a window *v.* to stare at something or someone for an extended time, usually out of surprise or adoration, or because you are thinking about something else
74. cultural pa____gm *n.* a standard or typical example of something; a pattern or model
75. dispel do__ts *n.* a feeling of being uncertain about something, especially about how good or accurate it is
76. in____te relationship *adj.* having a very close friendship, personal
77. charged pa____le *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
78. elliptic ga____y *n.* an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity

ANSWERS: 67. holy, 68. predict, 69. vary, 70. minuscule, 71. vary, 72. flee, 73. gaze, 74. paradigm, 75. doubt, 76. intimate, 77. particle, 78. galaxy

79. acc_____te the car *v.* to make something faster or earlier; to cause to develop or progress more quickly
80. gi__t tech company *adj.* enormous; much bigger or more important than similar items usually are
81. st_____h along the coast *v.* to make or be capable of making anything longer or broader without hurting or breaking
82. qu__k physics *n.* a type of elementary particle and a fundamental constituent of matter that make up the heavier elementary particles, such as protons, neutrons, etc.; fresh unripened cheese of a smooth texture made from pasteurized milk, a starter, and rennet
83. major pa_____gm shift *n.* a standard or typical example of something; a pattern or model
84. retie the st____g and make it strong *n.* long, thin material used for tying things together, composed of several twisted threads
85. im_____ry pregnancy *adj.* existing only in someone's mind
86. optical il_____on *n.* a false idea or belief, especially about somebody or about a situation
87. answer co_____ss questions *adj.* too numerous to be counted or very many
88. western phi_____hy *n.* the study of general and fundamental questions, such as those about existence, reason, knowledge, values, mind

ANSWERS: 79. accelerate, 80. giant, 81. stretch, 82. quark, 83. paradigm, 84. string, 85. imaginary, 86. illusion, 87. countless, 88. philosophy

89. congressional h__k *n.* a bird of prey typically having short rounded wings and a long tail; an advocate of an aggressive policy on foreign relations
90. the runner's p__e *n.* the speed at which someone or something moves, or the rate at which something happens or changes
91. tense piano st___gs *n.* long, thin material used for tying things together, composed of several twisted threads
92. a binocular te_____pe *n.* a device like a tube in shape containing lenses used to magnify and observe distant objects
93. easily ima_____le *adj.* capable of being imagined
94. v__t desert *adj.* enormous in size, number, amount, or quantity
95. p__e pink *adj.* having skin that is very light colored; lacking in vitality or interest or effectiveness
96. f__e their homes *v.* to leave by running away, especially out of fear or danger
97. a fl__h of lightning *n.* a sudden intense burst of radiant energy; a momentary brightness
98. pa_____le energy *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
99. flow of el_____ons *n.* a tiny particle with the negative electrical charge

ANSWERS: 89. hawk, 90. pace, 91. string, 92. telescope, 93. imaginable, 94. vast, 95. pale, 96. flee, 97. flash, 98. particle, 99. electron

100. re_____nt by a diagram *v.* to speak, act, or be present on behalf of another person or group; to form or constitute
101. flour made from gr__n *n.* wheat or any other small hard seeds used as a food; a relatively small granular particle of a substance
102. de___t basin *n.* arid land with little or no vegetation often covered with sand or rocks
103. 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
104. a fr____onal share of the vote *n.* a small part or item forming a piece of a whole; the quotient of two rational numbers
105. s__d dunes *n.* finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action
106. worst ima_____le case *adj.* capable of being imagined
107. st____h a story *v.* to make or be capable of making anything longer or broader without hurting or breaking
108. a facial wr_____e *n.* a small line or fold in something, especially fabric or the skin of the face; a minor difficulty
109. se_____te cream from milk *v.* to force, take, or pull apart; mark as different

ANSWERS: 100. represent, 101. grain, 102. desert, 103. atom, 104. fraction, 105. sand, 106. imaginable, 107. stretch, 108. wrinkle, 109. separate

110. 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
111. pr____n conductivity *n.* a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms
112. ba___e his plan *v.* to bewilder or perplex someone completely and to be unable to understand or explain something
113. a space-time co_____um *n.* a series of similar items in which no part or portion is distinct or distinguishable from adjacent parts
114. nuclear ph____s *n.* the science of matter and energy and their interactions
115. mi_____le letters *adj.* extremely small; tiny
116. pr____n decay *n.* a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms
117. gr_____te degree program *n.* a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree
118. the in____ty of the universe *n.* the state or quality of having no end or limit; (mathematics) a number greater than any natural number
119. intellectual f__t *n.* a notable or impressive achievement, especially one that requires great skill or bravery

ANSWERS: 110. universe, 111. proton, 112. baffle, 113. continuum, 114. physics, 115. minuscule, 116. proton, 117. graduate, 118. infinity, 119. feat

120. in_____et a graph *v.* to explain or assign the meaning of information, actions, etc.
121. 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
122. in_____te appetite *adj.* unlimited or very great; impossible to measure
123. complete ho_____h *n.* an idea, behavior, argument, etc., that you think is stupid and unacceptable
124. ne_____no capture *n.* a very small and electrically neutral particle with a very small mass that rarely reacts with other matter
125. a p__e complexion *adj.* having skin that is very light colored; lacking in vitality or interest or effectiveness
126. a pilot sc_____e *n.* an organized and often large-scale plan or arrangement for doing something
127. a ga____y of famous actors *n.* an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
128. major paradigm sh__t *n.* a slight transition in position, direction, or trend
129. the il_____on of being in the forest *n.* a false idea or belief, especially about somebody or about a situation
130. the mul_____se hypothesis *n.* a hypothetical space or realm consisting of multiple universes, of which our universe is just one of them
131. in_____et the question *v.* to explain or assign the meaning of information, actions, etc.

ANSWERS: 120. interpret, 121. universe, 122. infinite, 123. hogwash, 124. neutrino, 125. pale, 126. scheme, 127. galaxy, 128. shift, 129. illusion, 130. multiverse, 131. interpret

132. a barely det_____le change *adj.* capable of being discovered or identified
133. pa_____el processing *adj.* being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations
134. the antiparticle of a qu__k *n.* a type of elementary particle and a fundamental constituent of matter that make up the heavier elementary particles, such as protons, neutrons, etc.; fresh unripened cheese of a smooth texture made from pasteurized milk, a starter, and rennet
135. cast off a h__k *n.* a bird of prey typically having short rounded wings and a long tail; an advocate of an aggressive policy on foreign relations
136. new di_____on *n.* a measurable extent of a particular kind, such as width, height, or length
137. fine m__t *n.* a cloud of very small drops of water collecting in the air just above the ground or water
138. im_____ry number *adj.* existing only in someone's mind
139. many tr_____ons of dollars *n.* the number 1,000,000,000,000; a million million
140. un_____o surgery *v.* to go through something unpleasant or that involves a change
141. phi_____hy of education *n.* the study of general and fundamental questions, such as those about existence, reason, knowledge, values, mind

ANSWERS: 132. detectable, 133. parallel, 134. quark, 135. hawk, 136. dimension, 137. mist, 138. imaginary, 139. trillion, 140. undergo, 141. philosophy

142. co_____ss hours

adj. too numerous to be counted or very many

ANSWERS: 142. countless

Session 3: Fill in the Blanks

1. She wore a _____ of pearls around her neck.
n. long, thin material used for tying things together, composed of several twisted threads

2. Different people might _____ this news differently.
v. to explain or assign the meaning of information, actions, etc.

3. He has an _____ knowledge of American history.
adj. having a very close friendship, personal

4. Some herds have been observed to _____ hundreds of kilometers.
v. to make or be capable of making anything longer or broader without hurting or breaking

5. The train has to _____ rigorous safety checks.
v. to go through something unpleasant or that involves a change

6. They gathered to hear the _____ teachings of the guru.
adj. of or related to a god, divine power, or a particular religion

7. The battle had an _____ impact on the nation.
adj. unlimited or very great; impossible to measure

8. He is interested in the _____ rites of that religion.
adj. having spiritual powers or qualities that are beyond ordinary understanding;
(noun) someone who believes in the existence of realities beyond human comprehension

ANSWERS: 1. string, 2. interpret, 3. intimate, 4. stretch, 5. undergo, 6. holy, 7. infinite, 8. mystic

9. The phenomenon is _____ at optical wavelengths.
adj. impossible or nearly impossible to see
10. 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
11. This suit is made of _____ material.
n. a small line or fold in something, especially fabric or the skin of the face; a minor difficulty
12. He postulated a completely different _____ to explain all these phenomena.
n. a standard or typical example of something; a pattern or model
13. Big techs are now eager to develop _____ computers.
n. the smallest amount or unit of something, especially (electromagnetic) energy
14. Einstein was an outstanding and famous _____ of the 20th century.
n. a scientist who specializes in the field of physics
15. It is a basic instinct to _____ from a dangerous situation.
v. to leave by running away, especially out of fear or danger
16. 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
17. It's notoriously challenging to _____ birth rates.
v. to state beforehand that something will happen in the future, mainly based on knowledge or experience

ANSWERS: 9. invisible, 10. universe, 11. wrinkle-proof, 12. paradigm, 13. quantum, 14. physicist, 15. flee, 16. atom, 17. predict

18. Many employers hire _____ trainees to train as managers.

n. a person who has a first degree from university or college; (verb) to complete the first course of university or college and get a degree

19. This region is predominantly _____.

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

20. He walked a road _____ to the railroad.

adj. being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations

21. Hydrogen and oxygen _____ to form water.

v. to join or merge to form a single thing or group

22. Maximum heart rates _____ a lot for each individual.

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

23. _____ is the start, not the end, of intelligence.

n. a feeling of being uncertain about something, especially about how good or accurate it is

24. Overall _____ are approximately 400x200mm.

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

25. The object is _____ at ultraviolet wavelengths.

adj. capable of being discovered or identified

26. The _____ jets gradually dominate the world's airlines.

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

ANSWERS: 18. graduate, 19. desert, 20. parallel, 21. combine, 22. vary, 23. Doubt, 24. dimensions, 25. detectable, 26. giant

27. 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
28. 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
29. Could you help me _____ some furniture?
n. a slight transition in position, direction, or trend
30. He spent only a _____ of his earnings.
n. a small part or item forming a piece of a whole; the quotient of two rational numbers
31. It is an incredible _____ to climb Mount Everest, the highest mountain in the world.
n. a notable or impressive achievement, especially one that requires great skill or bravery
32. She turned _____ when she heard the news.
adj. having skin that is very light colored; lacking in vitality or interest or effectiveness
33. The outermost _____ shell determines the chemical properties of an atom.
n. a tiny particle with the negative electrical charge
34. That team signed a center forward who was a ball-_____.
n. a bird of prey typically having short rounded wings and a long tail; an advocate of an aggressive policy on foreign relations

ANSWERS: 27. telescope, 28. galaxy, 29. shift, 30. fraction, 31. feat, 32. pale, 33. electron, 34. hawk

35. They hope to _____ their business worldwide.

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

36. The salmon swims upstream to _____ in the place they were released.

v. to lay eggs or to produce offspring; to cause something to develop

37. The economy is growing at a supercharged _____.

n. the speed at which someone or something moves, or the rate at which something happens or changes

38. He studied the _____ of radiation.

n. the science of matter and energy and their interactions

39. These heavy rains caused _____ floods on several islands.

n. a sudden intense burst of radiant energy; a momentary brightness

40. Little children tend to have _____ friends.

adj. existing only in someone's mind

41. The paradox _____ most philosophers.

v. to bewilder or perplex someone completely and to be unable to understand or explain something

42. Any theorem relies on both _____ fact and assumption.

adj. that can be noticed or seen

43. They carefully executed the well-planned _____ they had prepared over the years.

n. an organized and often large-scale plan or arrangement for doing something

ANSWERS: 35. expand, 36. spawn, 37. pace, 38. physics, 39. flash, 40. imaginary, 41. baffled, 42. observable, 43. scheme

44. The _____ on the beach was warm and golden.
- n.* finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action
45. They each choose _____ to battle.
- adv.* in spite of what has just been said or done; nevertheless
46. The government tried to _____ the commercialization of this development.
- v.* to make something faster or earlier; to cause to develop or progress more quickly
47. The solar wind is composed almost entirely of electrons and _____.
- n.* a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms
48. The processor performs calculations on the _____ timescale.
- n.* one thousand millionth or billionth (= 0.000,000,001) of a second
49. We can calculate the position of the _____ statistically.
- n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
50. X-rays revealed a small tumor in his _____.
- n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
51. Our life is a _____ of experience in which events pass from the future through the present to the past.
- n.* a series of similar items in which no part or portion is distinct or distinguishable from adjacent parts

ANSWERS: 44. sand, 45. nonetheless, 46. accelerate, 47. protons, 48. nanosecond, 49. particles, 50. brain, 51. continuum

52. The sun has risen, and the _____ has faded.

- n.* a cloud of very small drops of water collecting in the air just above the ground or water

53. The youngster was _____ at by the beast.

- v.* to stare at something or someone for an extended time, usually out of surprise or adoration, or because you are thinking about something else

54. Ethics is a branch of _____.

- n.* the study of general and fundamental questions, such as those about existence, reason, knowledge, values, mind

55. He could no longer tell the difference between _____ and reality.

- n.* a false idea or belief, especially about somebody or about a situation

56. The couple began to _____ over which restaurant to go to for dinner.

- v.* to express differing opinions or points of view, often in a heated or contentious manner; to present a case or reasoning to persuade or convince others

57. That investor saw an _____ of possibilities in this company.

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

58. This laboratory has a pool consisting of thousands of _____ detectors.

- n.* a very small and electrically neutral particle with a very small mass that rarely reacts with other matter

59. Ordinary air purifiers cannot adequately remove pollen _____.

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

ANSWERS: 52. mist, 53. gazed, 54. philosophy, 55. illusion, 56. argue, 57. infinity, 58. neutrino, 59. grains

60. The sun set over the crest of _____ hills.

adj. far away in space, time, or where you are; far apart in relevance, relationship, or kinship

61. We need to _____ the aspect of his personality from the part of his competence when making an investment decision.

v. to force, take, or pull apart; mark as different

62. One light year is nearly 6 _____ miles.

n. the number 1,000,000,000,000; a million million

63. This is the only _____ strategy.

adj. capable of being imagined

64. The various universes within the _____ are sometimes called parallel universes.

n. a hypothetical space or realm consisting of multiple universes, of which our universe is just one of them

65. There are _____ methods for dealing with stress.

adj. too numerous to be counted or very many

66. The Big Bang theory states that _____ plasma filled the entire universe before matter as we know it was created.

n. a type of elementary particle and a fundamental constituent of matter that make up the heavier elementary particles, such as protons, neutrons, etc.; fresh unripened cheese of a smooth texture made from pasteurized milk, a starter, and rennet

67. We elected him to _____ us at the international conference.

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

ANSWERS: 60. distant, 61. separate, 62. trillion, 63. imaginable, 64. multiverse, 65. countless, 66. quark-gluon, 67. represent

68. This ore emits _____ quantities of radiation

adj. extremely small; tiny

69. This media has long been criticized for spreading paranoid _____.

n. an idea, behavior, argument, etc., that you think is stupid and unacceptable

70. He felt a _____ of disgust.

n. a very small hole in something, especially made by a pin or needle; a minor annoyance

71. A _____ audience viewed the broadcast.

adj. enormous in size, number, amount, or quantity

ANSWERS: 68. minuscule, 69. hogwash, 70. pinprick, 71. vast