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Vocabulary Builder Reference from...

Sajan Saini: What is the universe expanding into? |

TED Talk

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

All Words

IMPORTANT

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Session 1: Word List

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.

cosmic

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

synonym: astronomical, celestial, outer-space

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

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

bang

v. to hit or cause to hit something in a way that makes a loud noise

synonym: crash, hit, smash

(1) **bang** his fist on a desk, (2) **bang** a phone down

My father tried to **bang** mathematics into my head since childhood.

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.

complicated

adj. involving a lot of different things or parts in a way that is difficult to understand or analyze

synonym : complex, convoluted, intricate

(1) a **complicated** process, (2) become increasingly

complicated

He did **complicated** pen-and-ink drawings in just a few days.

equation

n. the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign

(1) the **equation** of poverty with ignorance, (2) a chemical

equation

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

relative

adj. considered and evaluated through comparison with something else

synonym : comparative, proximate, congeneric

(1) a remote **relative**, (2) **relative** factors

Most countries prohibit sexual activity between certain close **relatives**.

inter

v. to bury or place a dead body in a tomb or grave; to temporarily detain or imprison someone; (prefix) between or among

synonym : bury, entomb, inhume

(1) **inter** a dead body, (2) **inter-disciplinary**

The funeral director explained the process of how they **inter** remains after cremation.

fabric

n. cloth or other material produced by weaving wool, cotton, silk, etc., used for making clothes, covering furniture, etc.

synonym : cloth, material, goods

(1) a hand-loomed **fabric**, (2) **fabric** of creation

These synthetic **fabrics** are used in military vests because of their excellent abrasion resistance.

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.

observation

n. the act or activity of carefully examining or monitoring something or someone

synonym: watching, notice, reflection

(1) class **observation** day, (2) **observation** instrument

In the hospital, she will remain under constant **observation**.

definitive

adj. serving to provide a final solution or to end a situation; final and not able to be changed

synonym: conclusive, final, decisive

(1) **definitive** answer, (2) a **definitive** edition

The study provided **definitive** proof of the effectiveness of the new drug.

survey

n. an investigation of the opinions, behavior, etc. of a particular group of people, made by asking people questions

synonym: study, examination, poll

(1) a comprehensive **survey**, (2) recent **survey**

That **survey** shows that people are accepting the tax increase to some extent.

faraway

adj. located at a geographically distant place; remote or separated by distance; distant or not easily accessible

synonym: distant, remote, far-off

(1) **faraway** land, (2) **faraway** dream

The view from the **faraway** hilltop was breathtakingly beautiful.

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.

recede

v. to pull back or move away or backward

synonym : move back, retreat, downsize

(1) **recede** from view, (2) **recede** in the darkness

The king's political power **receded** even further.

moreover

adv. indicating that what follows is an additional or supplementary point; furthermore; in addition to what has been said before

synonym : furthermore, besides, in addition

(1) **moreover**, she decided to go, (2) but **moreover**, they work well together

The company is environmentally conscious, and **moreover**, it uses sustainable materials in its products.

recreation

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

synonym : amusement, entertainment, refreshment

(1) outdoor **recreation**, (2) **recreation** of the homeland

Basketball is their usual **recreation** after school.

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.

- loaf** *n.* a quantity of bread that is shaped and baked in one piece and usually sliced for serving; (verb) to be lazy or idle
synonym : bread, boule, brioche
(1) crusty **loaf**, (2) **loaf** around during the day
On my way home from work, I picked up a **loaf** of bread from the bakery.
- raisin** *n.* a dried grape, typically made from certain varieties of grapes that are specifically grown for this purpose; a popular snack food or baking ingredient
synonym : dried grape, sultana, currant
(1) **raisin** pie, (2) **raisin** oatmeal cookies
The **raisin** bread had a deliciously sweet flavor.
- batter** *v.* to hit something or someone repeatedly with much force; (noun, baseball) a ballplayer who is batting
synonym : beat, pound, strike
(1) **batter** the eggs, (2) the **batter's** box
He got so angry that he **battered** the door down.
- stand-in** *n.* a person or thing that acts as a substitute, replacement, or temporary assistant for someone or something else; a double or understudy for a performer or actor
synonym : substitute, replacement, understudy
(1) **stand-in** teacher, (2) use a **stand-in** in an exam
The company hired a **stand-in** for the CEO for the shareholder meeting.
- 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.

expansion

n. the process of becoming larger or more extensive, or the result of this process

synonym: growth, enlargement, development

(1) industrial **expansion**, (2) **expansion** project

The company is undergoing an **expansion**, opening new locations in several states.

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.

distance

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

synonym: space, gap, span

(1) driving **distance**, (2) social **distance**

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

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.

tug

v. to pull something quickly and hard, often several times

synonym: draw, jerk, pull

(1) **tug** a rope, (2) **tug** at his hand

This movie **tugs** at everyone's heartstrings.

gravity

n. the force that attracts a body towards the center of the earth or towards any other physical body having mass; a manner that is solemn

synonym: heaviness, attraction, weight

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

void

n. an empty space; a feeling of emptiness; (adjective) lacking any legal or binding force

synonym: emptiness, vacuity, (adjective) null

(1) **void** of expression, (2) **void** contract

The **void** in her heart was filled with the love of her family.

cosmology

n. the scientific study of the nature and origin of the universe

synonym: cosmogony

(1) physical **cosmology**, (2) modern **cosmology**

Cosmology evolved from people's philosophical questions about the natural world.

mathematics

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

synonym: arithmetic, calculation, calculus

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

He has a flair for **mathematics**.

speculate

v. to form a theory or conjecture or guess about a subject without solid evidence

synonym: assume, conjecture, infer

(1) **speculate** about the reason, (2) **speculate** on the outcome

He **speculated** that this investment would lead to success.

spacetime

n. a four-dimensional continuum consisting of three dimensions of space and one dimension of time, used to describe the physical universe according to Einstein's theory of general relativity

(1) **spacetime** continuum, (2) quantum **spacetime**

The curvature of **spacetime** is affected by the presence of mass and energy.

hypothesis

n. a proposed idea or explanation that is based on a few known facts but has not yet been proven to be true or accurate

synonym: assumption, conjecture, theory

(1) test my **hypothesis**, (2) a bold **hypothesis**

This evidence supports the big-bang **hypothesis**.

tackle

v. to try to deal with a complex problem or situation

synonym: deal with, dive into, work on

(1) **tackle** the issue, (2) help **tackle** climate change

The government is determined to **tackle** sharp inflation.

kink

n. a tight curl, twist or bend in an object, particularly in a piece of wire, hose, or tubing; a peculiar or eccentric liking or habit

synonym: bend, twist, curl

(1) **kink** in the neck, (2) sexual **kink**

The **kink** in the hose was preventing water from flowing correctly.

distribute

v. to give something to a large number of individuals, or to spread or furnish something

synonym: broadcast, disperse, hand out

(1) **distribute** wealth evenly, (2) **distribute** video content

His estate was **distributed** to his sons.

evenly

adv. in equal amounts or shares; in a balanced or impartial way

synonym: constantly, smoothly, equally

(1) **evenly** colored, (2) almost **evenly** divided

This product can spread the cement **evenly**.

sparse

adj. only in small quantities or numbers and often spread over a wide area

synonym : scarce, exiguous, infrequent

(1) a **sparse** population, (2) **sparse** snowfall

There is a **sparse** area between galaxies.

inflation

n. a general and progressive increase in prices;
(cosmology) a theory of the exponential expansion of space in the early universe; the act of filling something with air

synonym : increase, swelling, boom

(1) **inflation** control, (2) global **inflation**

Investment in index funds can often be a hedge against **inflation**.

incredibly

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

synonym : enormously, exceptionally, extraordinarily

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

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

relate

v. to establish a connection or association between two or more things; to narrate or tell about an event, experience, or relationship; to empathize or feel sympathy with someone or something

synonym : connect, link, associate

(1) **relate** a story, (2) **relate** a message

He tried to **relate** his experience to the group, but they couldn't understand.

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.

fluctuation

n. a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes

synonym : change, instability, flux

(1) price **fluctuations**, (2) **fluctuation** of water level

Temperature **fluctuations** are often milder in oceanfront areas.

clump

n. a small group of bushes, trees, flowers, people, etc.

synonym : cluster, bunch, bundle

(1) **clump** of bacteria, (2) a **clump** of trees

I heard the **clump** of his boots in the hallway.

eventually

adv. finally, particularly after a long time or a lot of struggle, complications, and so on

synonym : finally, someday, ultimately

(1) **eventually** become obsolete, (2) **eventually** succeed

The corporation **eventually** dominated the entire tobacco business.

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.

imply

v. to indicate the truth or existence of something without referring to it

synonym : hint, indicate, denote

(1) **imply** a strong correlation, (2) **imply** the presence of alien

The salespeople speak in technical terms to **imply** that they are more knowledgeable than the customer.

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.

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.

endless

adj. having no end or conclusion; infinitely very large in size or amount

synonym : infinite, ceaseless, boundless

(1) **endless** possibilities, (2) **endless** hours

He looked out the window at the **endless** stream of people.

eternal

adj. being without beginning or end; lasting forever

synonym : endless, everlasting, undying

(1) the hope of **eternal** life, (2) **eternal** quarreling

In every civilization, rulers have tried everything possible to obtain **eternal** life.

inflate

v. to fill something with air or gas so that it becomes bigger and rounder

synonym : blow up, expand, puff up

(1) **inflate** a tire, (2) **inflate** expense reports

She **inflated** the balloons for the party.

prediction

n. the act of predicting the future by reasoning; a statement made about the future

synonym : forecast, anticipation, foretelling

(1) make my **predictions**, (2) gloomy **predictions**

These results muddied the **prediction**.

unstable

adj. lacking solidity, persistence, or firmness and therefore not strong, safe, or likely to continue; lacking control of one's emotions

synonym : shaky, unbalanced, inconsistent

(1) mentally **unstable**, (2) **unstable** weather

The tower proved to be **unstable** in the high wind.

settle

v. to reach an agreement of disagreement

synonym : inhabit, occupy, decide

(1) **settle** a dispute, (2) **settle** down in the town

I don't want to **settle** for second best.

random

adj. made, done, or happening without method, conscious decision, or any regular pattern

synonym : incidental, arbitrary, unanticipated

(1) a **random** choice, (2) bombs fell at **random**

To find drunk drivers, police conduct **random** tests.

stable

adj. firm and steady; not easily moved, disturbed, or changed

synonym : sturdy, unmoving, durable

(1) in **stable** condition, (2) have a **stable** job

Relations between the two countries have been relatively **stable** due to the summit meeting.

bubble

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

synonym : blob, balloon, mania

(1) **bubble** in the champagne glass, (2) economic **bubble**

Many people worry that the current real estate market is a **bubble** that could burst soon.

physics

n. the science of matter and energy and their interactions

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

He studied the **physics** of radiation.

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.

fantastic

adj. extremely good; excellent

synonym: incredible, unbelievable, marvelous

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

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

encounter

v. to face something, particularly something unpleasant or difficult, while attempting to do something else; to meet, especially unexpectedly

synonym: meet, run into, come across

(1) **encounter** a crisis, (2) **encounter** a storm

I'm prepared to **encounter** challenges throughout this adventure.

fundamental

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

synonym: basic, essential, entire

(1) **fundamental** education, (2) **fundamental** rights

Human behavior has **fundamental** characteristics.

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.

addition

n. the act or process of adding something to something else; the process of adding numbers

synonym: accumulation, expansion, addendum

(1) chemical **addition**, (2) **addition** of vectors
In **addition**, private corporations provide healthcare services.

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.

atomic

adj. of or relating to atom (= the smallest component of an element)

synonym: tiny, microscopic, nuclear

(1) **atomic** nucleus, (2) **atomic** bomb

Carbon has an **atomic** mass of 12.

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.

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.

propose

v. to make a proposal, declare a plan for something

synonym: suggest, offer, recommend

(1) **propose** the amendment, (2) **propose** changes

I want to **propose** a toast in honor of our longstanding relationship.

vibrate

v. to move or cause anything to move fast and in small increments from side to side

synonym: oscillate, convulse, jerk

(1) **vibrate** at a regular frequency, (2) **vibrate** with anger
During the flight, the wings of the plane **vibrate**.

compete

v. to strive to achieve more success than someone or something

synonym: contend, contest, vie

(1) **compete** against a friend, (2) **compete** fiercely
You must **compete** with others to obtain this position.

consolidate

v. to make something more vital, more solid, or more certain

synonym: crystallize, concentrate, cement

(1) **consolidate** his debt, (2) **consolidate** a leadership
The two universities will **consolidate** in July next year.

interact

v. to communicate or react with somebody

synonym: cooperate, combine, collaborate

(1) **interact** directly with customers, (2) **interact** with one another

He should **interact** more with his colleagues.

massive

adj. enormous amount; very heavy and solid

synonym: enormous, giant, immense

(1) **massive** amounts, (2) **massive** stars

The recent economic downturn has resulted in **massive** layoffs.

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.

bran

n. the outermost layer of cereal grain, such as wheat or rice, which is removed during milling and is often used as animal feed or as a source of dietary fiber for humans; a type of coarse, fibrous substance that remains as a residue or byproduct in various industrial processes, such as oil extraction or papermaking

synonym: husk, chaff, grain shell

(1) **bran** muffins, (2) **bran** cereal

Adding **bran** to your meals can help improve your digestion and increase fiber intake.

bulk

n. the quantity or size of something that is very large; the main part of something

synonym: majority, largeness, amount

(1) buy in **bulk**, (2) **bulk** data transfer

I received a parcel of great **bulk**.

coexist

v. to live or exist together at the same time in the same place

synonym: cohabit, accompany, synchronize

(1) **coexist** with nature, (2) **coexist** with diversity

The different species can **coexist** in the same ecosystem by filling different niches and using different resources.

isolate

v. to physically or socially separate someone or something from other people or things

synonym: separate, sequester, insulate

(1) **isolate** a compound, (2) **isolate** a patient

You should not **isolate** them from the community.

bump

v. to hit or knock against something hard, often with a dull sound; to meet with by accident

synonym: collide, hit, jolt

(1) **bump** against a wall, (2) **bump** up prices

She accidentally **bumped** into him in the crowded room.

echo

n. a sound heard after being reflected off a surface, such as a wall or a cliff

synonym: reverberate, repeat, reflection

(1) the **echo** of a person's footsteps, (2) sound **echo**

A thunderous boom **echoed** throughout the valley.

collision

n. an instance of two or more objects or entities crashing into each other, usually resulting in damage, impact, or conflict

synonym: crash, impact, smash

(1) **collision** detection, (2) come into **collision** with my friend

The **collision** of tectonic plates can result in new mountain ranges, such as the Himalayas or the Alps.

microwave

n. a form of electromagnetic radiation with wavelengths ranging from about one millimeter to one meter and frequencies between 300 MHz (0.3 GHz) and 300 GHz; an electric oven that cooks food by exposing it to high-frequency electromagnetic radiation, which causes the food molecules to vibrate and heat up quickly

synonym: oven, waveguide, radar range

(1) **microwave** radiation, (2) **microwave** popcorn

I heated my leftover food in the **microwave** oven, which tasted just as good as freshly cooked.

background

n. the details of a person's social heritage, such as family, vocational or educational experience; past information that is essential to understanding a situation or problem

synonym: ground, experience, backdrop

(1) a **background** color, (2) a criminal **background**

The company's hiring criteria emphasize personality, not a person's **background**.

radiation

n. the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health

synonym : dissemination, emission, irradiation

(1) exposure to **radiation**, (2) electromagnetic **radiation**
He tried every possible treatment, including chemotherapy and **radiation** therapy.

relic

n. an object from a previous era, especially one of historical value

synonym : whiff, vestige, antique

(1) historical **relic**, (2) holy **relics**
This bronze sword is a **relic** of ancient times.

suspect

v. to consider anything to be actual or probable

synonym : assume, distrust, surmise

(1) **suspect** a plot, (2) **suspect** that he is sick
The cops **suspected** him of being the killer.

differ

v. to be not like someone or something in some way

synonym : vary, diverge, disagree

(1) **differ** from the majority, (2) **differ** according to species
The two products **differed** in their quality and price.

coalesce

v. to come together or merge into a single group, mass, or whole; to blend or combine elements or ideas into a unified whole

synonym : merge, combine, unite

(1) **coalesce** ideas, (2) **coalesce** with the other
The various departments of the company will **coalesce** into one cohesive unit.

replace

v. to take the place of something

synonym : substitute, supersede, displace

(1) **replace** one word with another, (2) **replace** a phone
Eventually, the new design will **replace** all older models.

inspire

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

synonym: boost, encourage, enlighten

(1) **inspire** a feeling of curiosity, (2) **inspire** him to write a novel

The unique style of this martial arts **inspired** many action film producers.

experiment

n. the scientific test conducted to observe what happens and gain new knowledge

synonym: experimentation, investigation

(1) **experiment** design, (2) series of **experiments**

His **experiments** showed highly positive results.

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.

elegance

n. the quality of being graceful and stylish in appearance or manner

synonym: grace, refinement, poise

(1) austere **elegance**, (2) natural **elegance**

The **elegance** of her dress was breathtaking.

Session 2: Spelling

- | | |
|---------------------------------|--|
| 1. nuclear ph____s | <i>n.</i> the science of matter and energy and their interactions |
| 2. in____e him to write a novel | <i>v.</i> to make somebody fill with the desire, confidence, or enthusiasm, especially to do something creative |
| 3. co____t with nature | <i>v.</i> to live or exist together at the same time in the same place |
| 4. outdoor rec____on | <i>n.</i> the activity that renews your health and spirits by enjoyment and relaxation; the act or process of making something that existed in the past exists or seems to exist again in a different time or place |
| 5. cultural pa____gm | <i>n.</i> a standard or typical example of something; a pattern or model |
| 6. b__n cereal | <i>n.</i> the outermost layer of cereal grain, such as wheat or rice, which is removed during milling and is often used as animal feed or as a source of dietary fiber for humans; a type of coarse, fibrous substance that remains as a residue or byproduct in various industrial processes, such as oil extraction or papermaking |
| 7. a cl__p of trees | <i>n.</i> a small group of bushes, trees, flowers, people, etc. |
| 8. rec____on of the homeland | <i>n.</i> the activity that renews your health and spirits by enjoyment and relaxation; the act or process of making something that existed in the past exists or seems to exist again in a different time or place |

ANSWERS: 1. physics, 2. inspire, 3. coexist, 4. recreation, 5. paradigm, 6. bran, 7. clump, 8. recreation

9. in__r-disciplinary *v.* to bury or place a dead body in a tomb or grave; to temporarily detain or imprison someone; (prefix) between or among
10. co_____on detection *n.* an instance of two or more objects or entities crashing into each other, usually resulting in damage, impact, or conflict
11. pr_____t the future *v.* to state beforehand that something will happen in the future, mainly based on knowledge or experience
12. in_____et the question *v.* to explain or assign the meaning of information, actions, etc.
13. the ba___r's box *v.* to hit something or someone repeatedly with much force; (noun, baseball) a ballplayer who is batting
14. 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
15. 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
16. pr_____e the amendment *v.* to make a proposal, declare a plan for something
17. un_____le weather *adj.* lacking solidity, persistence, or firmness and therefore not strong, safe, or likely to continue; lacking control of one's emotions

ANSWERS: 9. inter, 10. collision, 11. predict, 12. interpret, 13. batter, 14. astronomy, 15. universe, 16. propose, 17. unstable

18. vi_____e with anger *v.* to move or cause anything to move fast and in small increments from side to side
19. ex____d a lineup *v.* to increase or to make something greater in size, number, or importance
20. modern co_____gy *n.* the scientific study of the nature and origin of the universe
21. pr_____e changes *v.* to make a proposal, declare a plan for something
22. re_____e a phone *v.* to take the place of something
23. in_____on control *n.* a general and progressive increase in prices; (cosmology) a theory of the exponential expansion of space in the early universe; the act of filling something with air
24. di____r from the majority *v.* to be not like someone or something in some way
25. in_____e a tire *v.* to fill something with air or gas so that it becomes bigger and rounder
26. int_____tic matter *adj.* existing or occurring between different galaxies (= an independent group of stars)
27. eve_____ly succeed *adv.* finally, particularly after a long time or a lot of struggle, complications, and so on
28. second co____c velocity *adj.* relating to the universe or cosmos; vast or limitless
29. global in_____on *n.* a general and progressive increase in prices; (cosmology) a theory of the exponential expansion of space in the early universe; the act of filling something with air

ANSWERS: 18. vibrate, 19. expand, 20. cosmology, 21. propose, 22. replace, 23. inflation, 24. differ, 25. inflate, 26. intergalactic, 27. eventually, 28. cosmic, 29. inflation

30. laws of ph____s *n.* the science of matter and energy and their interactions
31. electromagnetic ra_____on *n.* the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health
32. elliptic ga____y *n.* an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
33. ad_____on of vectors *n.* the act or process of adding something to something else; the process of adding numbers
34. flu_____on of water level *n.* a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes
35. mat_____cs competition *n.* the science dealing with the logic of quantities, shapes, spaces, and arrangement
36. 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
37. en_____er a crisis *v.* to face something, particularly something unpleasant or difficult, while attempting to do something else; to meet, especially unexpectedly
38. un_____o a decrease *v.* to go through something unpleasant or that involves a change
39. a good grounding in mat_____cs *n.* the science dealing with the logic of quantities, shapes, spaces, and arrangement

ANSWERS: 30. physics, 31. radiation, 32. galaxy, 33. addition, 34. fluctuation, 35. mathematics, 36. multiverse, 37. encounter, 38. undergo, 39. mathematics

40. make my pre_____ons *n.* the act of predicting the future by reasoning; a statement made about the future
41. absolutely fa_____ic event *adj.* extremely good; excellent
42. b__p up prices *v.* to hit or knock against something hard, often with a dull sound; to meet with by accident
43. inc_____ly cheerful character *adv.* in a way that is very difficult to believe; exceedingly or extremely
44. physical co_____gy *n.* the scientific study of the nature and origin of the universe
45. quantum sp_____me *n.* a four-dimensional continuum consisting of three dimensions of space and one dimension of time, used to describe the physical universe according to Einstein's theory of general relativity
46. k__k in the neck *n.* a tight curl, twist or bend in an object, particularly in a piece of wire, hose, or tubing; a peculiar or eccentric liking or habit
47. mi_____ve radiation *n.* a form of electromagnetic radiation with wavelengths ranging from about one millimeter to one meter and frequencies between 300 MHz (0.3 GHz) and 300 GHz; an electric oven that cooks food by exposing it to high-frequency electromagnetic radiation, which causes the food molecules to vibrate and heat up quickly

ANSWERS: 40. prediction, 41. fantastic, 42. bump, 43. incredibly, 44. cosmology, 45. spacetime, 46. kink, 47. microwave

48. sexual k__k *n.* a tight curl, twist or bend in an object, particularly in a piece of wire, hose, or tubing; a peculiar or eccentric liking or habit
49. fa____y land *adj.* located at a geographically distant place; remote or separated by distance; distant or not easily accessible
50. in____e a feeling of curiosity *v.* to make somebody fill with the desire, confidence, or enthusiasm, especially to do something creative
51. con____te a leadership *v.* to make something more vital, more solid, or more certain
52. ex____d agricultural output *v.* to increase or to make something greater in size, number, or importance
53. et____l quarreling *adj.* being without beginning or end; lasting forever
54. sp____te on the outcome *v.* to form a theory or conjecture or guess about a subject without solid evidence
55. b__g a phone down *v.* to hit or cause to hit something in a way that makes a loud noise
56. b__p against a wall *v.* to hit or knock against something hard, often with a dull sound; to meet with by accident
57. re____e a story *v.* to establish a connection or association between two or more things; to narrate or tell about an event, experience, or relationship; to empathize or feel sympathy with someone or something
58. historical re__c *n.* an object from a previous era, especially one of historical value

ANSWERS: 48. kink, 49. faraway, 50. inspire, 51. consolidate, 52. expand, 53. eternal, 54. speculate, 55. bang, 56. bump, 57. relate, 58. relic

59. sp___e snowfall *adj.* only in small quantities or numbers and often spread over a wide area
60. come into co_____on with my friend *n.* an instance of two or more objects or entities crashing into each other, usually resulting in damage, impact, or conflict
61. fun_____al rights *adj.* forming an essential base or core from which everything else develops or is affected
62. new di_____on *n.* a measurable extent of a particular kind, such as width, height, or length
63. mentally un_____le *adj.* lacking solidity, persistence, or firmness and therefore not strong, safe, or likely to continue; lacking control of one's emotions
64. cl__p of bacteria *n.* a small group of bushes, trees, flowers, people, etc.
65. re___e in the darkness *v.* to pull back or move away or backward
66. eve_____ly become obsolete *adv.* finally, particularly after a long time or a lot of struggle, complications, and so on
67. ma_____e amounts *adj.* enormous amount; very heavy and solid
68. dis_____te video content *v.* to give something to a large number of individuals, or to spread or furnish something
69. bu___e in the champagne glass *n.* a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses

ANSWERS: 59. sparse, 60. collision, 61. fundamental, 62. dimension, 63. unstable, 64. clump, 65. recede, 66. eventually, 67. massive, 68. distribute, 69. bubble

70. co____ce with the other
v. to come together or merge into a single group, mass, or whole; to blend or combine elements or ideas into a unified whole
71. the characters that re_____nt numbers
v. to speak, act, or be present on behalf of another person or group; to form or constitute
72. a remote re____ve
adj. considered and evaluated through comparison with something else
73. a chemical eq____on
n. the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign
74. ev____y colored
adv. in equal amounts or shares; in a balanced or impartial way
75. en____s possibilities
adj. having no end or conclusion; infinitely very large in size or amount
76. use a st____in in an exam
n. a person or thing that acts as a substitute, replacement, or temporary assistant for someone or something else; a double or understudy for a performer or actor
77. a hand-loomed fa____c
n. cloth or other material produced by weaving wool, cotton, silk, etc., used for making clothes, covering furniture, etc.
78. holy re__cs
n. an object from a previous era, especially one of historical value
79. fun_____al education
adj. forming an essential base or core from which everything else develops or is affected

ANSWERS: 70. coalesce, 71. represent, 72. relative, 73. equation, 74. evenly, 75. endless, 76. stand-in, 77. fabric, 78. relic, 79. fundamental

80. major pa_____gm shift *n.* a standard or typical example of something; a pattern or model
81. co___c background radiation *adj.* relating to the universe or cosmos; vast or limitless
82. se___e down in the town *v.* to reach an agreement of disagreement
83. the hope of et_____l life *adj.* being without beginning or end; lasting forever
84. beam of el_____ons *n.* a tiny particle with the negative electrical charge
85. su_____t that he is sick *v.* to consider anything to be actual or probable
86. 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
87. 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
88. test my hyp_____is *n.* a proposed idea or explanation that is based on a few known facts but has not yet been proven to be true or accurate
89. but mo_____er, they work well together *adv.* indicating that what follows is an additional or supplementary point; furthermore; in addition to what has been said before

ANSWERS: 80. paradigm, 81. cosmic, 82. settle, 83. eternal, 84. electron, 85. suspect, 86. structure, 87. quark, 88. hypothesis, 89. moreover

90. ra___n oatmeal cookies *n.* a dried grape, typically made from certain varieties of grapes that are specifically grown for this purpose; a popular snack food or baking ingredient
91. co_____ce ideas *v.* to come together or merge into a single group, mass, or whole; to blend or combine elements or ideas into a unified whole
92. dis_____te wealth evenly *v.* to give something to a large number of individuals, or to spread or furnish something
93. in_____ct with one another *v.* to communicate or react with somebody
94. fa_____y dream *adj.* located at a geographically distant place; remote or separated by distance; distant or not easily accessible
95. the crosswise di_____on *n.* a measurable extent of a particular kind, such as width, height, or length
96. 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
97. a fa_____ic dress *adj.* extremely good; excellent
98. int_____tic travel *adj.* existing or occurring between different galaxies (= an independent group of stars)
99. have a st___e job *adj.* firm and steady; not easily moved, disturbed, or changed

ANSWERS: 90. raisin, 91. coalesce, 92. distribute, 93. interact, 94. faraway, 95. dimension, 96. quark, 97. fantastic, 98. intergalactic, 99. stable

100. the attraction of gr____y *n.* the force that attracts a body towards the center of the earth or towards any other physical body having mass; a manner that is solemn
101. 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
102. the eq____on of poverty with ignorance *n.* the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign
103. a ga____y of famous actors *n.* an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
104. ta____e the issue *v.* to try to deal with a complex problem or situation
105. austere el____ce *n.* the quality of being graceful and stylish in appearance or manner
106. bombs fell at ra____m *adj.* made, done, or happening without method, conscious decision, or any regular pattern
107. natural el____ce *n.* the quality of being graceful and stylish in appearance or manner
108. 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

ANSWERS: 100. gravity, 101. argue, 102. equation, 103. galaxy, 104. tackle, 105. elegance, 106. random, 107. elegance, 108. structure

109. st____h along the coast *v.* to make or be capable of making anything longer or broader without hurting or breaking
110. ba____r the eggs *v.* to hit something or someone repeatedly with much force; (noun, baseball) a ballplayer who is batting
111. a sp____e population *adj.* only in small quantities or numbers and often spread over a wide area
112. 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
113. se____e a dispute *v.* to reach an agreement of disagreement
114. laws of qu____m mechanics *n.* the smallest amount or unit of something, especially (electromagnetic) energy
115. v__d of expression *n.* an empty space; a feeling of emptiness; (adjective) lacking any legal or binding force
116. re____nt by a diagram *v.* to speak, act, or be present on behalf of another person or group; to form or constitute
117. retie the st____g and make it strong *n.* long, thin material used for tying things together, composed of several twisted threads
118. is____e a patient *v.* to physically or socially separate someone or something from other people or things
119. l__f around during the day *n.* a quantity of bread that is shaped and baked in one piece and usually sliced for serving; (verb) to be lazy or idle

ANSWERS: 109. stretch, 110. batter, 111. sparse, 112. universe, 113. settle, 114. quantum, 115. void, 116. represent, 117. string, 118. isolate, 119. loaf

120. st____in teacher *n.* a person or thing that acts as a substitute, replacement, or temporary assistant for someone or something else; a double or understudy for a performer or actor
121. buy in b__k *n.* the quantity or size of something that is very large; the main part of something
122. co_____e fiercely *v.* to strive to achieve more success than someone or something
123. a def_____ve edition *adj.* serving to provide a final solution or to end a situation; final and not able to be changed
124. in__r a dead body *v.* to bury or place a dead body in a tomb or grave; to temporarily detain or imprison someone; (prefix) between or among
125. im__y the presence of alien *v.* to indicate the truth or existence of something without referring to it
126. b__n muffins *n.* the outermost layer of cereal grain, such as wheat or rice, which is removed during milling and is often used as animal feed or as a source of dietary fiber for humans; a type of coarse, fibrous substance that remains as a residue or byproduct in various industrial processes, such as oil extraction or papermaking
127. a bold hyp_____is *n.* a proposed idea or explanation that is based on a few known facts but has not yet been proven to be true or accurate

ANSWERS: 120. stand-in, 121. bulk, 122. compete, 123. definitive, 124. inter, 125. imply, 126. bran, 127. hypothesis

128. con_____te his debt *v.* to make something more vital, more solid, or more certain
129. en_____er a storm *v.* to face something, particularly something unpleasant or difficult, while attempting to do something else; to meet, especially unexpectedly
130. ra___n pie *n.* a dried grape, typically made from certain varieties of grapes that are specifically grown for this purpose; a popular snack food or baking ingredient
131. in st___e condition *adj.* firm and steady; not easily moved, disturbed, or changed
132. en_____s hours *adj.* having no end or conclusion; infinitely very large in size or amount
133. pr_____t when she will arrive *v.* to state beforehand that something will happen in the future, mainly based on knowledge or experience
134. exposure to ra_____on *n.* the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health
135. di___r according to species *v.* to be not like someone or something in some way
136. a ra___m choice *adj.* made, done, or happening without method, conscious decision, or any regular pattern
137. a com_____ed process *adj.* involving a lot of different things or parts in a way that is difficult to understand or analyze

ANSWERS: 128. consolidate, 129. encounter, 130. raisin, 131. stable, 132. endless, 133. predict, 134. radiation, 135. differ, 136. random, 137. complicated

138. flow of el_____ons *n.* a tiny particle with the negative electrical charge
139. ma_____e stars *adj.* enormous amount; very heavy and solid
140. obs_____on instrument *n.* the act or activity of carefully examining or monitoring something or someone
141. probabilistic qu_____m theory *n.* the smallest amount or unit of something, especially (electromagnetic) energy
142. un_____o surgery *v.* to go through something unpleasant or that involves a change
143. 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
144. in_____e expense reports *v.* to fill something with air or gas so that it becomes bigger and rounder
145. mi_____ve popcorn *n.* a form of electromagnetic radiation with wavelengths ranging from about one millimeter to one meter and frequencies between 300 MHz (0.3 GHz) and 300 GHz; an electric oven that cooks food by exposing it to high-frequency electromagnetic radiation, which causes the food molecules to vibrate and heat up quickly
146. st_____h a story *v.* to make or be capable of making anything longer or broader without hurting or breaking
147. in_____et a graph *v.* to explain or assign the meaning of information, actions, etc.

ANSWERS: 138. electron, 139. massive, 140. observation, 141. quantum, 142. undergo, 143. argue, 144. inflate, 145. microwave, 146. stretch, 147. interpret

148. fa___c of creation *n.* cloth or other material produced by weaving wool, cotton, silk, etc., used for making clothes, covering furniture, etc.
149. price flu_____ons *n.* a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes
150. a bac_____nd color *n.* the details of a person's social heritage, such as family, vocational or educational experience; past information that is essential to understanding a situation or problem
151. economic bu___e *n.* a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses
152. sp_____me continuum *n.* a four-dimensional continuum consisting of three dimensions of space and one dimension of time, used to describe the physical universe according to Einstein's theory of general relativity
153. at___c bomb *adj.* of or relating to atom (= the smallest component of an element)
154. vi_____e at a regular frequency *v.* to move or cause anything to move fast and in small increments from side to side
155. gloomy pre_____ons *n.* the act of predicting the future by reasoning; a statement made about the future

ANSWERS: 148. fabric, 149. fluctuation, 150. background, 151. bubble, 152. spacetime, 153. atomic, 154. vibrate, 155. prediction

156. t_g a rope *v.* to pull something quickly and hard, often several times
157. in____ct directly with customers *v.* to communicate or react with somebody
158. a comprehensive su____y *n.* an investigation of the opinions, behavior, etc. of a particular group of people, made by asking people questions
159. b__g his fist on a desk *v.* to hit or cause to hit something in a way that makes a loud noise
160. help ta____e climate change *v.* to try to deal with a complex problem or situation
161. re____e a message *v.* to establish a connection or association between two or more things; to narrate or tell about an event, experience, or relationship; to empathize or feel sympathy with someone or something
162. driving di____ce *n.* the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance
163. re____ve factors *adj.* considered and evaluated through comparison with something else
164. series of exp____nts *n.* the scientific test conducted to observe what happens and gain new knowledge
165. get inc____ly insecure *adv.* in a way that is very difficult to believe; exceedingly or extremely
166. sp____te about the reason *v.* to form a theory or conjecture or guess about a subject without solid evidence

ANSWERS: 156. tug, 157. interact, 158. survey, 159. bang, 160. tackle, 161. relate, 162. distance, 163. relative, 164. experiment, 165. incredibly, 166. speculate

167. def_____ve answer	<i>adj.</i> serving to provide a final solution or to end a situation; final and not able to be changed
168. tense piano st____gs	<i>n.</i> long, thin material used for tying things together, composed of several twisted threads
169. preserve my gr_____y	<i>n.</i> the force that attracts a body towards the center of the earth or towards any other physical body having mass; a manner that is solemn
170. industrial ex_____on	<i>n.</i> the process of becoming larger or more extensive, or the result of this process
171. is_____e a compound	<i>v.</i> to physically or socially separate someone or something from other people or things
172. at____c nucleus	<i>adj.</i> of or relating to atom (= the smallest component of an element)
173. exp_____nt design	<i>n.</i> the scientific test conducted to observe what happens and gain new knowledge
174. chemical ad_____on	<i>n.</i> the act or process of adding something to something else; the process of adding numbers
175. sound e__o	<i>n.</i> a sound heard after being reflected off a surface, such as a wall or a cliff
176. ex_____on project	<i>n.</i> the process of becoming larger or more extensive, or the result of this process
177. t_g at his hand	<i>v.</i> to pull something quickly and hard, often several times
178. class obs_____on day	<i>n.</i> the act or activity of carefully examining or monitoring something or someone

ANSWERS: 167. definitive, 168. string, 169. gravity, 170. expansion, 171. isolate, 172. atomic, 173. experiment, 174. addition, 175. echo, 176. expansion, 177. tug, 178. observation

179. b__k data transfer *n.* the quantity or size of something that is very large; the main part of something
180. co_____e against a friend *v.* to strive to achieve more success than someone or something
181. crusty l__f *n.* a quantity of bread that is shaped and baked in one piece and usually sliced for serving; (verb) to be lazy or idle
182. mo_____er, she decided to go *adv.* indicating that what follows is an additional or supplementary point; furthermore; in addition to what has been said before
183. re_____e one word with another *v.* to take the place of something
184. a criminal bac_____nd *n.* the details of a person's social heritage, such as family, vocational or educational experience; past information that is essential to understanding a situation or problem
185. almost ev___y divided *adv.* in equal amounts or shares; in a balanced or impartial way
186. co_____t with diversity *v.* to live or exist together at the same time in the same place
187. im___y a strong correlation *v.* to indicate the truth or existence of something without referring to it
188. v__d contract *n.* an empty space; a feeling of emptiness; (adjective) lacking any legal or binding force
189. the e__o of a person's footsteps *n.* a sound heard after being reflected off a surface, such as a wall or a cliff

ANSWERS: 179. bulk, 180. compete, 181. loaf, 182. moreover, 183. replace, 184. background, 185. evenly, 186. coexist, 187. imply, 188. void, 189. echo

190. social di____ce *n.* the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance
191. re____e from view *v.* to pull back or move away or backward
192. 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
193. su____t a plot *v.* to consider anything to be actual or probable
194. recent su____y *n.* an investigation of the opinions, behavior, etc. of a particular group of people, made by asking people questions
195. become increasingly com____ed *adj.* involving a lot of different things or parts in a way that is difficult to understand or analyze
196. the mul____se hypothesis *n.* a hypothetical space or realm consisting of multiple universes, of which our universe is just one of them

ANSWERS: 190. distance, 191. recede, 192. astronomy, 193. suspect, 194. survey, 195. complicated, 196. multiverse

Session 3: Fill in the Blanks

1. These synthetic _____ are used in military vests because of their excellent abrasion resistance.
 - n.* cloth or other material produced by weaving wool, cotton, silk, etc., used for making clothes, covering furniture, etc.

2. He tried to _____ his experience to the group, but they couldn't understand.
 - v.* to establish a connection or association between two or more things; to narrate or tell about an event, experience, or relationship; to empathize or feel sympathy with someone or something

3. He tried every possible treatment, including chemotherapy and _____ therapy.
 - n.* the energy that comes from a nuclear reaction in the form of rays, waves, or particles and that can be hazardous to health

4. The new amusement park ride was _____ with twists, turns, and drops that left riders screaming with excitement.
 - adj.* extremely good; excellent

5. The astronaut felt weightless in space due to the absence of _____.
 - n.* the force that attracts a body towards the center of the earth or towards any other physical body having mass; a manner that is solemn

6. This product can spread the cement _____.
 - adv.* in equal amounts or shares; in a balanced or impartial way

7. There is a _____ area between galaxies.
 - adj.* only in small quantities or numbers and often spread over a wide area

ANSWERS: 1. fabrics, 2. relate, 3. radiation, 4. fantastic, 5. gravity, 6. evenly, 7. sparse

8. 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
9. _____ rays are high-energy particles that originate from outside the solar system.
- adj. relating to the universe or cosmos; vast or limitless
10. This movie _____ at everyone's heartstrings.
- v. to pull something quickly and hard, often several times
11. 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
12. I want to _____ a toast in honor of our longstanding relationship.
- v. to make a proposal, declare a plan for something
13. _____ evolved from people's philosophical questions about the natural world.
- n. the scientific study of the nature and origin of the universe
14. 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

ANSWERS: 8. stretch, 9. Cosmic, 10. tugs, 11. multiverse, 12. propose, 13. Cosmology, 14. quark-gluon

15. 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

16. The corporation _____ dominated the entire tobacco business.

adv. finally, particularly after a long time or a lot of struggle, complications, and so on

17. In _____ private corporations provide healthcare services.

n. the act or process of adding something to something else; the process of adding numbers

18. He studied the _____ of radiation.

n. the science of matter and energy and their interactions

19. She _____ the balloons for the party.

v. to fill something with air or gas so that it becomes bigger and rounder

20. She wore a _____ of pearls around her neck.

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

21. The recent economic downturn has resulted in _____ layoffs.

adj. enormous amount; very heavy and solid

22. The _____ bread had a deliciously sweet flavor.

n. a dried grape, typically made from certain varieties of grapes that are specifically grown for this purpose; a popular snack food or baking ingredient

ANSWERS: 15. astronomy, 16. eventually, 17. addition, 18. physics, 19. inflated, 20. string, 21. massive, 22. raisin

23. The study provided _____ proof of the effectiveness of the new drug.
adj. serving to provide a final solution or to end a situation; final and not able to be changed
24. Many people worry that the current real estate market is a _____ that could burst soon.
n. a thin, round, and often transparent mass of gas that is surrounded by a thin layer of liquid; a state of economic or social prosperity that is unsustainable and eventually collapses
25. Carbon has an _____ mass of 12.
adj. of or relating to atom (= the smallest component of an element)
26. The _____ in her heart was filled with the love of her family.
n. an empty space; a feeling of emptiness; (adjective) lacking any legal or binding force
27. During the flight, the wings of the plane _____.
v. to move or cause anything to move fast and in small increments from side to side
28. On my way home from work, I picked up a _____ of bread from the bakery.
n. a quantity of bread that is shaped and baked in one piece and usually sliced for serving; (verb) to be lazy or idle
29. The different species can _____ in the same ecosystem by filling different niches and using different resources.
v. to live or exist together at the same time in the same place
30. He did _____ pen-and-ink drawings in just a few days.
adj. involving a lot of different things or parts in a way that is difficult to understand or analyze

ANSWERS: 23. definitive, 24. bubble, 25. atomic, 26. void, 27. vibrate, 28. loaf, 29. coexist, 30. complicated

31. The outermost _____ shell determines the chemical properties of an atom.
n. a tiny particle with the negative electrical charge
32. 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
33. His estate was _____ to his sons.
v. to give something to a large number of individuals, or to spread or furnish something
34. The two universities will _____ in July next year.
v. to make something more vital, more solid, or more certain
35. The cops _____ him of being the killer.
v. to consider anything to be actual or probable
36. The tower proved to be _____ in the high wind.
adj. lacking solidity, persistence, or firmness and therefore not strong, safe, or likely to continue; lacking control of one's emotions
37. The marathon runner covered a long _____ in a short amount of time.
n. the amount of space between two points, measured in units such as miles, meters, or kilometers; the extent, scope, or range between two things, such as distance or emotional distance
38. In every civilization, rulers have tried everything possible to obtain _____ life.
adj. being without beginning or end; lasting forever

ANSWERS: 31. electron, 32. argue, 33. distributed, 34. consolidate, 35. suspected, 36. unstable, 37. distance, 38. eternal

39. 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

40. He _____ that this investment would lead to success.

- v. to form a theory or conjecture or guess about a subject without solid evidence

41. The king's political power _____ even further.

- v. to pull back or move away or backward

42. I heated my leftover food in the _____ oven, which tasted just as good as freshly cooked.

- n. a form of electromagnetic radiation with wavelengths ranging from about one millimeter to one meter and frequencies between 300 MHz (0.3 GHz) and 300 GHz; an electric oven that cooks food by exposing it to high-frequency electromagnetic radiation, which causes the food molecules to vibrate and heat up quickly

43. He should _____ more with his colleagues.

- v. to communicate or react with somebody

44. The company's hiring criteria emphasize personality, not a person's _____.

- n. the details of a person's social heritage, such as family, vocational or educational experience; past information that is essential to understanding a situation or problem

45. They hope to _____ their business worldwide.

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

ANSWERS: 39. represent, 40. speculated, 41. receded, 42. microwave, 43. interact, 44. background, 45. expand

46. The _____ of tectonic plates can result in new mountain ranges, such as the Himalayas or the Alps.
- n.* an instance of two or more objects or entities crashing into each other, usually resulting in damage, impact, or conflict
47. He got so angry that he _____ the door down.
- v.* to hit something or someone repeatedly with much force; (noun, baseball) a ballplayer who is batting
48. The unique style of this martial arts _____ many action film producers.
- v.* to make somebody fill with the desire, confidence, or enthusiasm, especially to do something creative
49. Relations between the two countries have been relatively _____ due to the summit meeting.
- adj.* firm and steady; not easily moved, disturbed, or changed
50. I don't want to _____ for second best.
- v.* to reach an agreement of disagreement
51. The train has to _____ rigorous safety checks.
- v.* to go through something unpleasant or that involves a change
52. Several cities are experiencing _____ high unemployment rates.
- adv.* in a way that is very difficult to believe; exceedingly or extremely
53. In this class, you will learn how to solve quadratic _____.
- n.* the act of regarding as equal; (mathematics) a statement that expresses the equality of two expressions by connecting them with the equals sign

ANSWERS: 46. collision, 47. battered, 48. inspired, 49. stable, 50. settle, 51. undergo, 52. incredibly, 53. equations

54. Basketball is their usual _____ after school.

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

55. He looked out the window at the _____ stream of people.

- adj.* having no end or conclusion; infinitely very large in size or amount

56. I received a parcel of great _____.

- n.* the quantity or size of something that is very large; the main part of something

57. The salespeople speak in technical terms to _____ that they are more knowledgeable than the customer.

- v.* to indicate the truth or existence of something without referring to it

58. 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

59. My father tried to _____ mathematics into my head since childhood.

- v.* to hit or cause to hit something in a way that makes a loud noise

60. It's notoriously challenging to _____ birth rates.

- v.* to state beforehand that something will happen in the future, mainly based on knowledge or experience

61. The government is determined to _____ sharp inflation.

- v.* to try to deal with a complex problem or situation

ANSWERS: 54. recreation, 55. endless, 56. bulk, 57. imply, 58. galaxy, 59. bang, 60. predict, 61. tackle

62. The funeral director explained the process of how they _____ remains after cremation.
- v.* to bury or place a dead body in a tomb or grave; to temporarily detain or imprison someone; (prefix) between or among
63. The _____ of her dress was breathtaking.
- n.* the quality of being graceful and stylish in appearance or manner
64. You should not _____ them from the community.
- v.* to physically or socially separate someone or something from other people or things
65. Investment in index funds can often be a hedge against _____.
- n.* a general and progressive increase in prices; (cosmology) a theory of the exponential expansion of space in the early universe; the act of filling something with air
66. He has a flair for _____.
- n.* the science dealing with the logic of quantities, shapes, spaces, and arrangement
67. To find drunk drivers, police conduct _____ tests.
- adj.* made, done, or happening without method, conscious decision, or any regular pattern
68. This evidence supports the big-bang _____.
- n.* a proposed idea or explanation that is based on a few known facts but has not yet been proven to be true or accurate
69. That _____ shows that people are accepting the tax increase to some extent.
- n.* an investigation of the opinions, behavior, etc. of a particular group of people, made by asking people questions

ANSWERS: 62. inter, 63. elegance, 64. isolate, 65. inflation, 66. mathematics, 67. random, 68. hypothesis, 69. survey

70. The _____ in the hose was preventing water from flowing correctly.
- n.* a tight curl, twist or bend in an object, particularly in a piece of wire, hose, or tubing; a peculiar or eccentric liking or habit
71. The curvature of _____ is affected by the presence of mass and energy.
- n.* a four-dimensional continuum consisting of three dimensions of space and one dimension of time, used to describe the physical universe according to Einstein's theory of general relativity
72. You must _____ with others to obtain this position.
- v.* to strive to achieve more success than someone or something
73. The company hired a _____ for the CEO for the shareholder meeting.
- n.* a person or thing that acts as a substitute, replacement, or temporary assistant for someone or something else; a double or understudy for a performer or actor
74. This bronze sword is a _____ of ancient times.
- n.* an object from a previous era, especially one of historical value
75. His _____ showed highly positive results.
- n.* the scientific test conducted to observe what happens and gain new knowledge
76. Eventually, the new design will _____ all older models.
- v.* to take the place of something
77. Most countries prohibit sexual activity between certain close _____.
- adj.* considered and evaluated through comparison with something else
78. The company is undergoing an _____ opening new locations in several states.
- n.* the process of becoming larger or more extensive, or the result of this process

ANSWERS: 70. kink, 71. spacetime, 72. compete, 73. stand-in, 74. relic, 75. experiments, 76. replace, 77. relatives, 78. expansion,

79. Overall _____ are approximately 400x200mm.

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

80. In the hospital, she will remain under constant _____.

n. the act or activity of carefully examining or monitoring something or someone

81. 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

82. She accidentally _____ into him in the crowded room.

v. to hit or knock against something hard, often with a dull sound; to meet with by accident

83. I heard the _____ of his boots in the hallway.

n. a small group of bushes, trees, flowers, people, etc.

84. Different people might _____ this news differently.

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

85. The _____ spaceship traveled to distant planets.

adj. existing or occurring between different galaxies (= an independent group of stars)

86. A thunderous boom _____ throughout the valley.

n. a sound heard after being reflected off a surface, such as a wall or a cliff

87. He postulated a completely different _____ to explain all these phenomena.

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

ANSWERS: 79. dimensions, 80. observation, 81. structure, 82. bumped, 83. clump, 84. interpret, 85. intergalactic, 86. echoed, 87. paradigm

88. The various departments of the company will _____ into one cohesive unit.
- v.* to come together or merge into a single group, mass, or whole; to blend or combine elements or ideas into a unified whole
89. Human behavior has _____ characteristics.
- adj.* forming an essential base or core from which everything else develops or is affected
90. 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
91. Adding _____ to your meals can help improve your digestion and increase fiber intake.
- n.* the outermost layer of cereal grain, such as wheat or rice, which is removed during milling and is often used as animal feed or as a source of dietary fiber for humans; a type of coarse, fibrous substance that remains as a residue or byproduct in various industrial processes, such as oil extraction or papermaking
92. Big techs are now eager to develop _____ computers.
- n.* the smallest amount or unit of something, especially (electromagnetic) energy
93. The two products _____ in their quality and price.
- v.* to be not like someone or something in some way
94. Temperature _____ are often milder in oceanfront areas.
- n.* a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes
95. These results muddied the _____.
- n.* the act of predicting the future by reasoning; a statement made about the future

ANSWERS: 88. coalesce, 89. fundamental, 90. universe, 91. bran, 92. quantum, 93. differed, 94. fluctuations, 95. prediction

96. I'm prepared to _____ challenges throughout this adventure.

v. to face something, particularly something unpleasant or difficult, while attempting to do something else; to meet, especially unexpectedly

97. The company is environmentally conscious, and _____ it uses sustainable materials in its products.

adv. indicating that what follows is an additional or supplementary point; furthermore; in addition to what has been said before

98. The view from the _____ hilltop was breathtakingly beautiful.

adj. located at a geographically distant place; remote or separated by distance; distant or not easily accessible

ANSWERS: 96. encounter, 97. moreover, 98. faraway