# **Englist.me**

# Vocabulary Builder Reference from...

Colm Kelleher: The science of symmetry | TED Talk https://www.ted.com/talks/colm\_kelleher\_the\_science \_of\_symmetry



# **All Words**

#### **IMPORTANT**

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# **Session 1: Word List**

### symmetry

- *n.* balance or proportion in design or structure, with elements arranged evenly on either side of an axis
- synonym: balance, proportion, harmoniousness
- (1) bilateral **symmetry**, (2) axial **symmetry**

The building had a **symmetry** pattern that was pleasing to the eye.

#### geometric

- adj. relating to or having the characteristics of geometry (= the shape, properties, and relations of points, lines, surfaces, solids)
- synonym: mathematical, symmetrical, regular
- (1) a **geometric** proof, (2) **geometric** pattern The **geometric** shapes and patterns in the artwork are visually stunning.

#### triangle

- *n.* a three-sided polygon with three angles; something that has three sides or parts
- synonym: trilateral, delta, triad
- (1) triangle shape, (2) love triangle

The Pythagorean theorem is used to calculate the length of the sides of a right **triangle**.

# complexity

 n. the state or quality of being complicated or intricate and difficult to understand synonym: intricacy, sophistication, elaboration

(1) cognitive **complexity**, (2) **complexity** theory

The project's **complexity** made it difficult for the team to complete it on time.

## butterfly

- a diurnal insect typically has a slender body with knobbed antennae and broad, colorful wings
- butterfly effect, (2) the life cycle of a butterfly
   He enjoys collecting butterfly specimens.

#### inclined

- adj. having a tendency or preference for something; likely or disposed to think, feel, or behave in a certain waysynonym: disposed, prone, likely
- (1) inclined to think, (2) inclined angleI am inclined to believe that she is telling the truth.

#### subtle

adj. not readily apparent or visible synonym: slight, nuanced, exquisite

(1) subtle changes, (2) a subtle poisonA famous artist painted the room in a subtle pink hue.

#### modulate

v. to change the key, style, loudness, etc., of something in music to create a particular effect; to fix or adjust the time, amount, degree, or rate of something

synonym: regulate, inflect, adjust

(1) **modulate** the function, (2) **modulate** from one key to another

These chemicals **modulate** the effect of metabolism.

#### concerto

 a composition for one or more solo instruments and an orchestra, typically in three movements

synonym: symphony, composition, piece

(1) piano concerto, (2) violin concerto

A renowned symphony orchestra performed the piano **concerto**.

#### effortless

adj. requiring little or no effort; not difficult or strenuous; easy to accomplish

synonym: easy, simple, uncomplicated

(1) effortless victory, (2) effortless beauty

The dancer made her performance look **effortless** and graceful.

### prima

adj. of the highest quality or importance; primary or first in rank or position

synonym: primary, first-rate, top-notch

(1) prima facie, (2) prima donna

The **prima** ballerina wowed the audience with her graceful performance.

#### ballerina

 a female ballet (= a type of performance dance that tells a dramatic story or expresses an idea with music but no talking or singing) dancer

synonym: dancer, danseuse

(1) classical ballerina, (2) famous ballerina

The **ballerina's** graceful movements were a joy to watch.

#### 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.

#### vague

adj. not clearly expressed or understood

synonym: ambiguous, imprecise, dim

(1) vague idea, (2) make a vague answer

The **vague** rumor turned out to be false.

# harmony

 the combination of simultaneous musical notes to produce a pleasing effect; an attractive combination of related things and their properties synonym: balance, accord, congruence

(1) a **harmony** of colors, (2) break a **harmony** 

We worked in perfect **harmony**.

#### balance

 a condition in which everything has the same weight or force; something left after other parts have been taken away

synonym: equilibrium, counterpoise, remainder

(1) the **balance** of power, (2) asset on the company's **balance** sheet

Try to keep a **balance** between work and off.

#### mathematics

 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.

# specific

adj. clearly defined or particular to a certain thing or situation; distinct, explicit, and precise

synonym: particular, definite, distinct

(1) **specific** instructions, (2) industry- **specific** regulations
The scientist conducted a study that provided **specific** details about the species' behavior.

#### property

n. a thing or things that belong to someone

synonym: belongings, possessions, equity

(1) a man of **property**, (2) chemical **property** 

He stood to inherit a million-dollar **property**.

# tangible

adj. real and concrete; able to be perceived, especially able to be touched; (of business assets) having physical substance and intrinsic monetary value

synonym: palpable, real, actual

(1) tangible assets, (2) produce tangible results

A problem that has been pointed out for years finally becomes **tangible**.

#### abstract

adj. based on general ideas, feelings, or qualities and not on any a physical or concrete existence

synonym: conceptual, theoretical, ideational

(1) an abstract noun, (2) abstract science

The invention of the camera triggered the development of **abstract** painting.

# entity

something that exists independently and has its own identity

*synonym*: body, object, existent

(1) legal **entity**, (2) government **entity** 

A company is a distinct legal entity.

#### definition

 a concise explanation of the meaning of a word, phrase, or symbol

synonym: description, connotation, meaning

(1) a precise **definition**, (2) the **definition** of a word Parallel lines are, by **definition**, lines on the same plane that never cross.

#### transformation

 a complete change in form, nature, or appearance of someone or something

synonym: change, conversion, renewal

(1) the **transformation** of a tadpole into a frog, (2) cast a **transformation** spell

Understanding unitary **transformations** of a normal matrix require considerable mathematical sophistication.

# unchanged

adj. not altered, modified, or varied in any way

synonym: unaltered, constant

(1) **unchanged** routine, (2) **unchanged** from the previous month

The company's policy remained unchanged despite the

criticism.

# unpack

 to open and remove stored items from a container or package; to analyze or examine something in detail, often to clarify or understand it better

synonym: dissect, unwrap, unbox

(1) unpack a crate, (2) unpack a concept

I need to **unpack** my suitcase and put my clothes away.

# equilateral

adj. characterized by having all sides of equal length,
 typically used to describe a geometric shape, usually a triangle

synonym: equal-sided, regular, isosceles

(1) equilateral polygon, (2) equilateral shape

An **equilateral** triangle has three equal sides and three equal angles.

#### rotate

 to turn around a central point or axis; to move in a circular path around something

synonym: turn, revolve, spin

(1) **rotate** crops, (2) **rotate** about the origin

The Earth rotates on its axis once every 24 hours.

# degree

 a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment

synonym: level, qualification, diploma

(1) bachelor's **degree**, (2) **degree** centigrade

She received her **degree** in psychology from the university.

#### identical

adj. being the exact same one

synonym: duplicate, exact, analogous

(1) pair of **identical** twins, (2) an **identical** equation Infant formulas are nutritionally almost **identical** to a mother's

breast milk.

#### rotation

the action or process of moving in a circle around an axis or center

synonym: revolution, spin, turning

(1) job rotation, (2) a period of rotation

The **rotation** of the Earth causes day and night.

rot

v. to decay, or cause something to decay, naturally and gradually

synonym: perish, decay, corrode

(1) begin to **rot**, (2) **rot** with age

Please refrigerate the meat, or it will **rot**.

#### essential

adj. indispensable; fundamental synonym: critical, crucial, basic

(1) **essential** amino acid, (2) **essential** commodities of life Trial and error is an **essential** part of education.

# biology

- the scientific study of life and the natural processes of living things
- (1) evolutionary **biology**, (2) cell and molecular **biology** In junior high school, we had to dissect a frog in **biology** class.

#### mention

- v. to speak or write about something or someone briefly synonym: reference, allude, cite
- (1) **mention** name, (2) **mention** in a report I **mentioned** to him that I had seen his sister at the grocery store earlier that day.

# imaginary

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

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

#### slice

 a flat, often thin, piece of bread, meat, cheese, etc., that has been cut from a larger piece; a wound made by cutting synonym: piece, portion, slit

(1) a **slice** of the company's revenue, (2) **slice** a tomato thin The children complained because one **slice** of cake was slightly larger than the other.

#### vertical

adj. upright or perpendicular to a horizontal surface or line synonym: perpendicular, upright, plumb

vertical takeoff, (2) vertical axis
 The ladder leaned against the vertical surface of the

building.

#### bilateral

adj. involving two sides or done by two parties together synonym: two-sided, double-sided, two-faced

(1) **bilateral** talks, (2) **bilateral** symmetry Both countries signed the **bilateral** agreement.

# approximate

adj. nearly accurate or correct, but not completely sosynonym: rough, close, near

(1) linear **approximate** equation, (2) **approximate** time The **approximate** cost of the project was estimated to be around \$500,000.

# striking

adj. attractive and distinctive enough to draw notice;exceedingly appealing, frequently in an odd mannersynonym: arresting, astonishing, exceptional

(1) **striking** innovation, (2) **striking** evidence The two plays have many **striking** parallels.

feat

- 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.

#### shark

 a long-bodied, mostly predatory marine fish that has sharp teeth and a pointed fin on its back; a person who is ruthless, greedy, and dishonest

synonym: swindler, con artist, crook

(1) a man-eating **shark**, (2) card **shark** He borrowed money from a loan **shark**.

#### beetle

- an insect having a hard shell-like back covering its wings
- (1) **beetle** brows, (2) a **beetle** larva

In ancient civilizations, the scarab **beetle** was worshiped as a sacred creature.

#### orchid

- a plant with showy or unusual flowers, typically having either a single, complex flower or a cluster of small flowers, many of which are prized for their beauty and often cultivated as ornamental plants
- orchid garden, (2) orchid species
   The orchid blooms were so delicate and beautiful.

#### apparent

adj. able to see or understand easily or clearly synonym: obvious, clear, conspicuous

(1) heir **apparent**, (2) **apparent** contradiction This star is **apparent** to the naked eye.

#### instance

- n. a particular example or single occurrence of somethingsynonym: example, sample, illustration
- for instance, (2) notable instance
   These articles cite five instances of climate change.

#### urchin

 a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines

synonym: mischief, waif, guttersnipe

(1) urchin child, (2) street urchin

The young boy was an **urchin** wandering the streets without a home.

#### starfish

marine invertebrate that belongs to the phylum Echinodermata, characterized by a five-armed body shape that resembles a star, typically found on or near the seafloor

synonym: sea star, echinoderm, asteroid

(1) starfish arm, (2) starfish habitat

The **starfish's** unique shape helps it to escape from predators quickly.

#### radial

adj. of or relating to rays or the radii of a circle; spreading out from a central point

synonym: concentric, central, spoke-like

(1) radial symmetry, (2) in a radial direction

The **radial** design of the wheel allows for maximum strength and stability.

# horizontal

adj. parallel to the ground or in a baseline; being at the same level as all members of a group

synonym: even, lying, parallel

(1) horizontal lines, (2) horizontal stripes

Airplanes need horizontal tails to improve stability.

# jellyfish

 a marine creature with a soft, jelly-like body and tentacles for stinging

synonym: medusa, sea nettle, moon jelly

(1) spineless jellyfish, (2) jellyfish sting

The beach was filled with hundreds of **jellyfish**, so swimming was not recommended.

#### anemone

 a type of flowering plant that has bright, showy flowers and typically blooms in the spring; a marine creature that resembles flowers but has oral rings of tentacles

synonym: flower, blossom

(1) anemone flower, (2) European anemone

The beautiful anemones swayed gently in the ocean current.

#### asymmetric

 adj. lacking symmetry or balance; not corresponding in size, shape, or degree; characterized by an uneven or unequal distribution or arrangement

synonym: uneven, lopsided, unbalanced

(1) **asymmetric** warfare, (2) **asymmetric** information The **asymmetric** design of the building made it stand out in the city skyline.

#### exhibit

v. to show something in public for people to enjoy or to provide them with information

synonym: display, expose, show

(1) **exhibit** a bad attitude, (2) **exhibit** a great talent Other technology industries **exhibit** similarly explosive growth.

#### movement

 a group of people working together to achieve a shared goal, especially a political, social, or artistic one; the process of moving or being moved, physically or figuratively

synonym: motion, progression, action

(1) a circular **movement**, (2) **movement** of troops

The **movement** of the dancers on stage was graceful and elegant.

#### mount

 to increase, go up, or advance gradually or continuously; to prepare and supply with the necessary equipment for execution or performance; to ride on something or someone

synonym: climb, increase, get on

(1) mount a hill, (2) mount a counterattack

They **mounted** pictures on the paper in preparation for the birthday card.

# naturally

adv. as might be expected; by natural mannerssynonym: by nature, inherently, intrinsically

(1) **naturally** arising, (2) **naturally** regenerated forest He was **naturally** gifted.

# develop

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

synonym: evolve, progress, advance

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

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

#### streamline

to simplify or make more efficient by eliminating unnecessary parts or steps

synonym: simplify, optimize, make more efficient

(1) **streamline** administrative activities, (2) **streamline** workflow

The government plans to **streamline** the tax collection process to make it more efficient.

fin

a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance

synonym: flipper, appendage, stabilizer

(1) back fin, (2) a fin of a plane

The shark's powerful **fins** allowed it to swim at high speeds.

# aerodynamics

the study of the motion of air, particularly its interaction n. with solid objects moving through it, such as aircraft or cars

synonym: aeromechanics, aeronautics, airflow

(1) aerodynamics research, (2) aerodynamics design The **aerodynamics** of the car allowed it to glide smoothly through the air.

#### coordinated

adj. effectively arranged or organized so that all the parts work smoothly or systematically together

synonym: collective, unified, cooperative

(1) in a **coordinated** manner, (2) **coordinated** robot system For greater efficiency, our efforts must be better **coordinated**.

#### evolution

- n. a gradual process of transformation of living thingssynonym: elaboration, expansion, transition
- (1) human **evolution**, (2) **evolution** theory They study the **evolution** of the universe.

#### relate

 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.

#### **larva**

n. the immature free-living form of insect or an animal,
 which at hatching from the egg, is fundamentally unlike its parent and must metamorphose

synonym: caterpillar, grub, maggot

(1) **larva** of a butterfly, (2) a moth **larva**The butterfly emerged from its **larva** stage.

# fascinating

adj. extremely interestingsynonym: alluring, intriguing, captivating

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

#### reconstruct

v. to build or form something again that has been damaged or destroyed

synonym: rebuild, revamp, reorganize

(1) **reconstruct** an image, (2) **reconstruct** the original text They've decided to **reconstruct** a ruined castle.

# discovery

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

synonym: finding, uncovering, detection

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

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

#### branch

 a division of a tree or woody shrub that grows out from the trunk or a main stem; a division of some larger or more complex organization

synonym: limb, twig, bough

(1) branch office, (2) a branch pipe

The **branch** of the tree had fallen and blocked the road.

# diverge

- v. to move or extend in different directions from a common point; to branch off or deviate from a path or coursesynonym: separate, split, part
- (1) **diverge** from tradition, (2) **diverge** from the main topic As tectonic plates **diverge**, new oceanic crust is formed along mid-ocean ridges.

# evolutionary

adj. relating to or denoting how living things develop or change from earlier forms

synonym: developmental, mutative, transformative

(1) ecology and **evolutionary** biology, (2) the **evolutionary** process

**Evolutionary** algorithms can find ways to optimize that humans do not anticipate.

# **Session 2: Spelling**

1. na\_\_\_\_ly arising

2. be\_\_\_e brows

3. in a ra\_\_\_I direction

4. a precise def\_\_\_\_on

5. ra\_\_\_I symmetry

6. tr\_\_\_\_le shape

7. de\_\_\_p a strategy

8. European an\_\_\_e

9. di e from tradition

adv. as might be expected; by natural manners

an insect having a hard shell-like back covering its wings

adj. of or relating to rays or the radii of a circle; spreading out from a central point

 a concise explanation of the meaning of a word, phrase, or symbol

adj. of or relating to rays or the radii of a circle; spreading out from a central point

*n.* a three-sided polygon with three angles; something that has three sides or parts

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

n. a type of flowering plant that has bright, showy flowers and typically blooms in the spring; a marine creature that resembles flowers but has oral rings of tentacles

v. to move or extend in different directions from a common point; to branch off or deviate from a path or course

ANSWERS: 1. naturally, 2. beetle, 3. radial, 4. definition, 5. radial, 6. triangle, 7. develop, 8. anemone, 9. diverge

10.	men in a report	<i>v</i> .	to speak or write about something or someone briefly
11.	a man-eating shk	n.	a long-bodied, mostly predatory marine fish that has sharp teeth and a pointed fin on its back; a person who is ruthless, greedy, and dishonest
12.	ord garden	n.	a plant with showy or unusual flowers, typically having either a single, complex flower or a cluster of small flowers, many of which are prized for their beauty and often cultivated as ornamental plants
13.	linear appte equation	adj.	nearly accurate or correct, but not completely so
14.	classical bana	n.	a female ballet (= a type of performance dance that tells a dramatic story or expresses an idea with music but no talking or singing) dancer
15.	the life cycle of a buly	n.	a diurnal insect typically has a slender body with knobbed antennae and broad, colorful wings
16.	mont of troops	n.	a group of people working together to achieve a shared goal, especially a political, social, or artistic one; the process of moving or being moved, physically or figuratively
17.	imry number	adj.	existing only in someone's mind
18.	fasng story	adj.	extremely interesting
19.	for ince	n.	a particular example or single occurrence of something

ANSWERS: 10. mention, 11. shark, 12. orchid, 13. approximate, 14. ballerina, 15. butterfly, 16. movement, 17. imaginary, 18. fascinating, 19. instance

20.	mot a hill	ν.	to increase, go up, or advance gradually or continuously; to prepare and supply with the necessary equipment for execution or performance; to ride on something or someone
21.	mot a counterattack	ν.	to increase, go up, or advance gradually or continuously; to prepare and supply with the necessary equipment for execution or performance; to ride on something or someone
22.	cast a traion spell	n.	a complete change in form, nature, or appearance of someone or something
23.	a geic proof	adj.	relating to or having the characteristics of geometry (= the shape, properties, and relations of points, lines, surfaces, solids)
24.	uned routine	adj.	not altered, modified, or varied in any way
25.	job roon	n.	the action or process of moving in a circle around an axis or center
26.	ined angle	adj.	having a tendency or preference for something; likely or disposed to think, feel, or behave in a certain way
27.	urn child	n.	a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines
28.	an idal equation	adj.	being the exact same one

ANSWERS: 20. mount, 21. mount, 22. transformation, 23. geometric, 24. unchanged, 25. rotation, 26. inclined, 27. urchin, 28. identical

29.	men name	ν.	to speak or write about something or someone briefly
30.	the bae of power	n.	a condition in which everything has the same weight or force; something left after other parts have been taken away
31.	aerics research	n.	the study of the motion of air, particularly its interaction with solid objects moving through it, such as aircraft or cars
32.	uned from the previous month	adj.	not altered, modified, or varied in any way
33.	roe about the origin	ν.	to turn around a central point or axis; to move in a circular path around something
34.	completely fasng to me	adj.	extremely interesting
35.	pair of idal twins	adj.	being the exact same one
36.	stng innovation	adj.	attractive and distinctive enough to draw notice; exceedingly appealing, frequently in an odd manner
37.	begin to r_t	<i>v</i> .	to decay, or cause something to decay, naturally and gradually
38.	jesh sting	n.	a marine creature with a soft, jelly-like body and tentacles for stinging
39.	comty theory	n.	the state or quality of being complicated or intricate and difficult to understand
40.	strne administrative activities	<i>v</i> .	to simplify or make more efficient by eliminating unnecessary parts or steps
41.	the defon of a word	n.	a concise explanation of the meaning of a word, phrase, or symbol

ANSWERS: 29. mention, 30. balance, 31. aerodynamics, 32. unchanged, 33. rotate, 34. fascinating, 35. identical, 36. striking, 37. rot, 38. jellyfish, 39. complexity, 40. streamline, 41. definition

42.	roe crops
	sue changes a f_n of a plane
45.	notable ince
46.	ined to think
47.	back f_n
48.	ext a great talent
49.	love trle
50.	asyic information
51.	strne workflow

52. re\_\_\_e a story

- v. to turn around a central point or axis; to move in a circular path around something
- adj. not readily apparent or visible
- a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance
- n. a particular example or single occurrence of something
- adj. having a tendency or preference for something; likely or disposed to think, feel, or behave in a certain way
- a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance
- to show something in public for people to enjoy or to provide them with information
- *n.* a three-sided polygon with three angles; something that has three sides or parts
- adj. lacking symmetry or balance; not corresponding in size, shape, or degree; characterized by an uneven or unequal distribution or arrangement
- v. to simplify or make more efficient by eliminating unnecessary parts or steps
- 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

ANSWERS: 42. rotate, 43. subtle, 44. fin, 45. instance, 46. inclined, 47. fin, 48. exhibit, 49. triangle, 50. asymmetric, 51. streamline, 52. relate

53.	intellectual ft	n.	a notable or impressive achievement, especially one that requires great skill or bravery
54.	piano coto	n.	a composition for one or more solo instruments and an orchestra, typically in three movements
55.	bial talks	adj.	involving two sides or done by two parties together
56.	rent by a diagram	ν.	to speak, act, or be present on behalf of another person or group; to form or constitute
57.	recct an image	<i>v</i> .	to build or form something again that has been damaged or destroyed
58.	tale assets	adj.	real and concrete; able to be perceived, especially able to be touched; (of business assets) having physical substance and intrinsic monetary value
59.	veal takeoff	adj.	upright or perpendicular to a horizontal surface or line
60.	bial symmetry	adj.	involving two sides or done by two parties together
61.	vae idea	adj.	not clearly expressed or understood
62.	spineless jesh	n.	a marine creature with a soft, jelly-like body and tentacles for stinging
63.	evolutionary biy	n.	the scientific study of life and the natural processes of living things
64.	street urn	n.	a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines

ANSWERS: 53. feat, 54. concerto, 55. bilateral, 56. represent, 57. reconstruct, 58. tangible, 59. vertical, 60. bilateral, 61. vague, 62. jellyfish, 63. biology, 64. urchin

65.	cooed robot system	adj.	effectively arranged or organized so that all the parts work smoothly or systematically together
66.	stsh habitat	n.	marine invertebrate that belongs to the phylum Echinodermata, characterized by a five-armed body shape that resembles a star, typically found on or near the seafloor
67.	horal stripes	adj.	parallel to the ground or in a baseline; being at the same level as all members of a group
68.	effss victory	adj.	requiring little or no effort; not difficult or strenuous; easy to accomplish
69.	sle a tomato thin	n.	a flat, often thin, piece of bread, meat, cheese, etc., that has been cut from a larger piece; a wound made by cutting
70.	the great diry of the century	n.	the act or process of finding information, a place, or an object, or learning about something that was previously not known
71.	abct science	adj.	based on general ideas, feelings, or qualities and not on any a physical or concrete existence
72.	heir apnt	adj.	able to see or understand easily or clearly
73.	a moth laa	n.	the immature free-living form of insect or an animal, which at hatching from the egg, is fundamentally unlike its parent and must metamorphose

ANSWERS: 65. coordinated, 66. starfish, 67. horizontal, 68. effortless, 69. slice, 70. discovery, 71. abstract, 72. apparent, 73. larva

74.	horal lines	adj.	parallel to the ground or in a baseline; being at the same level as all members of a group
75.	an abct noun	adj.	based on general ideas, feelings, or qualities and not on any a physical or concrete existence
76.	the characters that rent numbers	ν.	to speak, act, or be present on behalf of another person or group; to form or constitute
77.	industry-spic regulations	adj.	clearly defined or particular to a certain thing or situation; distinct, explicit, and precise
78.	appte time	adj.	nearly accurate or correct, but not completely so
79.	ane flower	n.	a type of flowering plant that has bright, showy flowers and typically blooms in the spring; a marine creature that resembles flowers but has oral rings of tentacles
80.	bilateral syry	n.	balance or proportion in design or structure, with elements arranged evenly on either side of an axis
81.	the evoary process	adj.	relating to or denoting how living things develop or change from earlier forms
82.	die from the main topic	<i>v</i> .	to move or extend in different directions from a common point; to branch off or deviate from a path or course
83.	equal polygon	adj.	characterized by having all sides of equal length, typically used to describe a geometric shape, usually a triangle

ANSWERS: 74. horizontal, 75. abstract, 76. represent, 77. specific, 78. approximate, 79. anemone, 80. symmetry, 81. evolutionary, 82. diverge, 83. equilateral

84.	unk a concept	ν.	to open and remove stored items from a container or package; to analyze or examine something in detail, often to clarify or understand it better
85.	violin coto	n.	a composition for one or more solo instruments and an orchestra, typically in three movements
86.	a circular mont	n.	a group of people working together to achieve a shared goal, especially a political, social, or artistic one; the process of moving or being moved, physically or figuratively
87.	a good grounding in matcs	n.	the science dealing with the logic of quantities, shapes, spaces, and arrangement
88.	legal eny	n.	something that exists independently and has its own identity
89.	human evon	n.	a gradual process of transformation of living things
90.	esal commodities of life	adj.	indispensable; fundamental
91.	laa of a butterfly	n.	the immature free-living form of insect or an animal, which at hatching from the egg, is fundamentally unlike its parent and must metamorphose
92.	apnt contradiction	adj.	able to see or understand easily or clearly
93.	mote from one key to another	v.	to change the key, style, loudness, etc., of something in music to create a particular effect; to fix or adjust the time, amount, degree, or rate of something

ANSWERS: 84. unpack, 85. concerto, 86. movement, 87. mathematics, 88. entity, 89. evolution, 90. essential, 91. larva, 92. apparent, 93. modulate

94. make a vae answer	adj.	not clearly expressed or understood
95. pra facie	adj.	of the highest quality or importance; primary or first in rank or position
96. effss beauty	adj.	requiring little or no effort; not difficult or strenuous; easy to accomplish
97. ecology and evoary biology	adj.	relating to or denoting how living things develop or change from earlier forms
98. government eny	n.	something that exists independently and has its own identity
99. imry pregnancy	adj.	existing only in someone's mind
100. axial syry	n.	balance or proportion in design or structure, with elements arranged evenly on either side of an axis
101. break a hay	n.	the combination of simultaneous musical notes to produce a pleasing effect; an attractive combination of related things and their properties
102. stsh arm	n.	marine invertebrate that belongs to the phylum Echinodermata, characterized by a five-armed body shape that resembles a star, typically found on or near the seafloor
103. asset on the company's bae sheet	n.	a condition in which everything has the same weight or force; something left after other parts have been taken away
104. r_t with age	v.	to decay, or cause something to decay, naturally and gradually
105. a man of prty	n.	a thing or things that belong to someone

ANSWERS: 94. vague, 95. prima, 96. effortless, 97. evolutionary, 98. entity, 99. imaginary, 100. symmetry, 101. harmony, 102. starfish, 103. balance, 104. rot, 105. property

106. a sle of the company's revenue	n.	a flat, often thin, piece of bread, meat, cheese, etc., that has been cut from a larger piece; a wound made by cutting
107. card shk	n.	a long-bodied, mostly predatory marine fish that has sharp teeth and a pointed fin on its back; a person who is ruthless, greedy, and dishonest
108. aerics design	n.	the study of the motion of air, particularly its interaction with solid objects moving through it, such as aircraft or cars
109. geic pattern	adj.	relating to or having the characteristics of geometry (= the shape, properties, and relations of points, lines, surfaces, solids)
110. famous bana	n.	a female ballet (= a type of performance dance that tells a dramatic story or expresses an idea with music but no talking or singing) dancer
111. brh office	n.	a division of a tree or woody shrub that grows out from the trunk or a main stem; a division of some larger or more complex organization
112. chemical prty	n.	a thing or things that belong to someone
113. bachelor's dee	n.	a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment
114. a sue poison	adj.	not readily apparent or visible

ANSWERS: 106. slice, 107. shark, 108. aerodynamics, 109. geometric, 110. ballerina, 111. branch, 112. property, 113. degree, 114. subtle

115. cognitive comty	n.	the state or quality of being complicated or intricate and difficult to understand
116. esal amino acid	adj.	indispensable; fundamental
117. veal axis	adj.	upright or perpendicular to a horizontal surface or line
118. ext a bad attitude	v.	to show something in public for people to enjoy or to provide them with information
119. spic instructions	adj.	clearly defined or particular to a certain thing or situation; distinct, explicit, and precise
120. a hay of colors	n.	the combination of simultaneous musical notes to produce a pleasing effect; an attractive combination of related things and their properties
121. matcs competition	n.	the science dealing with the logic of quantities, shapes, spaces, and arrangement
122. buly effect	n.	a diurnal insect typically has a slender body with knobbed antennae and broad, colorful wings
123. cell and molecular biy	n.	the scientific study of life and the natural processes of living things
124. ft accomplishment	n.	a notable or impressive achievement, especially one that requires great skill or bravery
125. ree 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

ANSWERS: 115. complexity, 116. essential, 117. vertical, 118. exhibit, 119. specific, 120. harmony, 121. mathematics, 122. butterfly, 123. biology, 124. feat, 125. relate

126. recct the original text	<i>v</i> .	to build or form something again that has been damaged or destroyed
127. dep a skill	ν.	to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
128. unk a crate	<i>v</i> .	to open and remove stored items from a container or package; to analyze or examine something in detail, often to clarify or understand it better
129. naly regenerated forest	adv.	as might be expected; by natural manners
130. pra donna	adj.	of the highest quality or importance; primary or first in rank or position
131. ord species	n.	a plant with showy or unusual flowers, typically having either a single, complex flower or a cluster of small flowers, many of which are prized for their beauty and often cultivated as ornamental plants
132. a brh pipe	n.	a division of a tree or woody shrub that grows out from the trunk or a main stem; a division of some larger or more complex organization
133. a scientific diry	n.	the act or process of finding information, a place, or an object, or learning about something that was previously not known

ANSWERS: 126. reconstruct, 127. develop, 128. unpack, 129. naturally, 130. prima, 131. orchid, 132. branch, 133. discovery

134. in a cooed manner	adj.	effectively arranged or organized so that all the parts work smoothly or systematically together
135. evon theory	n.	a gradual process of transformation of living things
136. asyic warfare	adj.	lacking symmetry or balance; not corresponding in size, shape, or degree; characterized by an uneven or unequal distribution or arrangement
137. the traion of a tadpole into a frog	n.	a complete change in form, nature, or appearance of someone or something
138. produce tale results	adj.	real and concrete; able to be perceived especially able to be touched; (of business assets) having physical substance and intrinsic monetary value
139. equal shape	adj.	characterized by having all sides of equal length, typically used to describe a geometric shape, usually a triangle
140. a period of roon	n.	the action or process of moving in a circle around an axis or center
141. mote the function	<i>v</i> .	to change the key, style, loudness, etc. of something in music to create a particular effect; to fix or adjust the time amount, degree, or rate of something
142. stng evidence	adj.	attractive and distinctive enough to draw notice; exceedingly appealing, frequently in an odd manner
143. dee centigrade	n.	a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment

ANSWERS: 134. coordinated, 135. evolution, 136. asymmetric, 137. transformation, 138. tangible, 139. equilateral, 140. rotation, 141. modulate, 142. striking, 143. degree

144. a be\_\_\_e larva

n. an insect having a hard shell-like back covering its wings

ANSWERS: 144. beetle

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

1.	The young boy was an wandering the streets without a home.
n.	a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines
2.	Parallel lines are, by lines on the same plane that never cross.
n.	a concise explanation of the meaning of a word, phrase, or symbol
3.	The ballerina wowed the audience with her graceful performance.
adj	i. of the highest quality or importance; primary or first in rank or position
4.	For greater efficiency, our efforts must be better
adj	<ul> <li>effectively arranged or organized so that all the parts work smoothly or systematically together</li> </ul>
5.	Trial and error is an part of education.
adj	i. indispensable; fundamental
6.	The butterfly emerged from its stage.
n.	the immature free-living form of insect or an animal, which at hatching from the egg, is fundamentally unlike its parent and must metamorphose
7.	Try to keep a between work and off.
n.	a condition in which everything has the same weight or force; something left after other parts have been taken away
8.	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
	SWERS: 1. urchin, 2. definition, 3. prima, 4. coordinated, 5. essential, 6. larva, 7. ance, 8. feat

<ol><li>The scientist conducted a study that provided details about the species' behavior.</li></ol>
adj. clearly defined or particular to a certain thing or situation; distinct, explicit, and precise
10. The invention of the camera triggered the development of painting.
adj. based on general ideas, feelings, or qualities and not on any a physical or concrete existence
11. These chemicals the effect of metabolism.
$\nu$ . to change the key, style, loudness, etc., of something in music to create a particular effect; to fix or adjust the time, amount, degree, or rate of something
12. Little children tend to have friends.
adj. existing only in someone's mind
13. The project's made it difficult for the team to complete it on time.
n. the state or quality of being complicated or intricate and difficult to understand
14. The graceful movements were a joy to watch.
<ul> <li>a female ballet (= a type of performance dance that tells a dramatic story or expresses an idea with music but no talking or singing) dancer</li> </ul>
15. A famous artist painted the room in a pink hue.
adj. not readily apparent or visible
16. Understanding unitary of a normal matrix require considerable mathematical sophistication.
n. a complete change in form, nature, or appearance of someone or something
ANSWERS: 9. specific, 10. abstract, 11. modulate, 12. imaginary, 13. complexity, 14 ballerina's, 15. subtle, 16. transformations

17. He stood to inherit a million-dollar
n. a thing or things that belong to someone
18. He enjoys collecting specimens.
<ul> <li>a diurnal insect typically has a slender body with knobbed antennae and broad colorful wings</li> </ul>
19. The design of the building made it stand out in the city skyline.
adj. lacking symmetry or balance; not corresponding in size, shape, or degree; characterized by an uneven or unequal distribution or arrangement
20. The unique shape helps it to escape from predators quickly.
n. marine invertebrate that belongs to the phylum Echinodermata, characterized by a five-armed body shape that resembles a star, typically found on or near the seafloor
21. They study the of the universe.
n. a gradual process of transformation of living things
22. I am to believe that she is telling the truth.
adj. having a tendency or preference for something; likely or disposed to think, feel or behave in a certain way
23. Both countries signed the agreement.
adj. involving two sides or done by two parties together
24. He was gifted.
adv. as might be expected; by natural manners
ANSWERS: 17. property, 18. butterfly, 19. asymmetric, 20. starfish's, 21. evolution, 22. inclined, 23. bilateral, 24. naturally

or tell about an event, experience, or relationship; to empathize or feel sympathy with someone or something

to establish a connection or association between two or more things; to narrate

ANSWERS: 25. mentioned, 26. unpack, 27. mounted, 28. instances, 29. striking, 30. horizontal, 31. movement, 32. relate

33. He borrowed money from a loan
<ul> <li>a long-bodied, mostly predatory marine fish that has sharp teeth and a pointed fin on its back; a person who is ruthless, greedy, and dishonest</li> </ul>
34 algorithms can find ways to optimize that humans do not anticipate.
adj. relating to or denoting how living things develop or change from earlier forms
35. The rumor turned out to be false.
adj. not clearly expressed or understood
36. A problem that has been pointed out for years finally becomes
adj. real and concrete; able to be perceived, especially able to be touched; (of business assets) having physical substance and intrinsic monetary value
37. The of the Earth causes day and night.
n. the action or process of moving in a circle around an axis or center
38. Other technology industries similarly explosive growth.
v. to show something in public for people to enjoy or to provide them with information
39. In junior high school, we had to dissect a frog in class.
n. the scientific study of life and the natural processes of living things
40. As tectonic plates new oceanic crust is formed along mid-ocean ridges.
$\nu$ . to move or extend in different directions from a common point; to branch off or deviate from a path or course
ANSWERS: 33. shark, 34. Evolutionary, 35. vague, 36. tangible, 37. rotation, 38. exhibit, 39. biology, 40. diverge,

41. This star is to the naked eye.
adj. able to see or understand easily or clearly
42. The children complained because one of cake was slightly larger than the other.
<ul> <li>a flat, often thin, piece of bread, meat, cheese, etc., that has been cut from a larger piece; a wound made by cutting</li> </ul>
43. He has a flair for
n. the science dealing with the logic of quantities, shapes, spaces, and arrangement
44. Infant formulas are nutritionally almost to a mother's breast milk.  adj. being the exact same one
aug. Somig the exact came one
45. The of the tree had fallen and blocked the road.
<ul> <li>a division of a tree or woody shrub that grows out from the trunk or a main stem; a division of some larger or more complex organization</li> </ul>
46. They've decided to a ruined castle.
v. to build or form something again that has been damaged or destroyed
47. The building had a pattern that was pleasing to the eye.
<i>n</i> . balance or proportion in design or structure, with elements arranged evenly on either side of an axis
48. The museum houses a collection of Celtic artifacts.
adj. extremely interesting
ANSWERS: 41. apparent, 42. slice, 43. mathematics, 44. identical, 45. branch, 46.
reconstruct, 47. symmetry, 48. fascinating

49.	The dancer made her performance look and graceful.
adj	requiring little or no effort; not difficult or strenuous; easy to accomplish
50.	The beach was filled with hundreds of so swimming was not recommended.
n.	a marine creature with a soft, jelly-like body and tentacles for stinging
51.	Her research team made an important
n.	the act or process of finding information, a place, or an object, or learning about something that was previously not known
52.	A renowned symphony orchestra performed the piano
n.	a composition for one or more solo instruments and an orchestra, typically in three movements
53.	In ancient civilizations, the scarab was worshiped as a sacred creature.
n.	an insect having a hard shell-like back covering its wings
54.	The of the car allowed it to glide smoothly through the air.
n.	the study of the motion of air, particularly its interaction with solid objects moving through it, such as aircraft or cars
55.	The shark's powerful allowed it to swim at high speeds.
n.	a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance
56.	The blooms were so delicate and beautiful.
n.	a plant with showy or unusual flowers, typically having either a single, complex flower or a cluster of small flowers, many of which are prized for their beauty and often cultivated as ornamental plants
	SWERS: 49. effortless, 50. jellyfish, 51. discovery, 52. concerto, 53. beetle, 54. odynamics, 55. fins, 56. orchid

57.	57. We elected him to us at the international con	ference.
<i>v</i> .	v. to speak, act, or be present on behalf of another person constitute	n or group; to form or
58.	58. The Pythagorean theorem is used to calculate the length	of the sides of a right
n.	n. a three-sided polygon with three angles; something that parts	t has three sides or
59.	59. The cost of the project was estimated to be	e around \$500,000.
adj	adj. nearly accurate or correct, but not completely so	
60.	60. The design of the wheel allows for maximum stre	ength and stability.
adj	adj. of or relating to rays or the radii of a circle; spreading of	ut from a central point
61.	61. The shapes and patterns in the artwork are v	risually stunning.
adj	adj. relating to or having the characteristics of geometry (= t and relations of points, lines, surfaces, solids)	the shape, properties,
62.	62. The company's policy remained despite the o	criticism.
adj	adj. not altered, modified, or varied in any way	
63.	63. A company is a distinct legal	
n.	n. something that exists independently and has its own ide	entity
64.	64. Please refrigerate the meat, or it will	
<i>v</i> .	v. to decay, or cause something to decay, naturally and g	radually
65.	65. We must a new system to streamline our workflefficiency.	low and increase
<i>v</i> .	v. to grow or expand; to improve or refine through a proce refinement, often to achieve greater sophistication or co or add detail to something that is in the process of being	omplexity; to elaborate
AN	ANSWERS: 57. represent, 58. triangle, 59. approximate, 60.	radial, 61. geometric, 62.

unchanged, 63. entity, 64. rot, 65. develop

66.	We worked in perfect
n.	the combination of simultaneous musical notes to produce a pleasing effect; an attractive combination of related things and their properties
67.	An triangle has three equal sides and three equal angles.
adj	characterized by having all sides of equal length, typically used to describe a geometric shape, usually a triangle
68.	The government plans to the tax collection process to make it more efficient.
ν.	to simplify or make more efficient by eliminating unnecessary parts or steps
69.	The ladder leaned against the surface of the building.
adj	upright or perpendicular to a horizontal surface or line
70.	The Earth on its axis once every 24 hours.
v.	to turn around a central point or axis; to move in a circular path around something
71.	The beautiful swayed gently in the ocean current.
n.	a type of flowering plant that has bright, showy flowers and typically blooms in the spring; a marine creature that resembles flowers but has oral rings of tentacles
72.	She received her in psychology from the university.
n.	a unit of measurement for angles, temperature, or level of proficiency or achievement; a rank or level of academic or professional attainment
	SWERS: 66. harmony, 67. equilateral, 68. streamline, 69. vertical, 70. rotates, 71. emones, 72. degree