

# Englist.me



## Vocabulary Builder Reference from...

Chad Orzel: What is the Heisenberg Uncertainty Principle? | TED Talk

[https://www.ted.com/talks/chad\\_orzel\\_what\\_is\\_the\\_heisenberg\\_uncertainty\\_principle](https://www.ted.com/talks/chad_orzel_what_is_the_heisenberg_uncertainty_principle)

### All Words

#### IMPORTANT

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## Session 1: Word List

### uncertain

*adj.* not being sure of something; not being able to choose  
*synonym*: doubtful, skeptical, pending

(1) numerous **uncertain** factors, (2) take an **uncertain** attitude

She was **uncertain** about her friend's intentions.

### principle

*n.* a fundamental law or truth that explains or controls how something happens or works

*synonym*: rule, creed, code

(1) **principle** of treatment, (2) **principle** in business

Efficiency isn't an essential **principle** here; fairness is.

### 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.

### physics

*n.* the science of matter and energy and their interactions

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

He studied the **physics** of radiation.

## 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.

## simultaneously

*adv.* at the same time

*synonym*: concurrently, coincidentally, together

(1) **simultaneously** affected, (2) take several inputs

**simultaneously**

Two students answered the teacher's question

**simultaneously**.

## metaphor

*n.* a figure of speech in which an expression is used to refer to something that it does not denote to suggest a similarity

*synonym*: conceit, analogy, symbol

(1) **metaphor** for death, (2) visual **metaphor**

She expressed her thought in an artful choice of **metaphors**.

## criticism

*n.* the act of analyzing, evaluating, or judging something, especially literary or artistic work, to find fault with it or to offer suggestions for improvement; the expression of disapproval or censure

*synonym*: critique, commentary, review

(1) **criticism** from the public, (2) harsh **criticism**

Constructive **criticism** is always helpful to help improving one's work.

## vice

*n.* wrongdoing or wicked behavior; (in the form of vice versa) with the order reversed; (as a prefix) someone with a job immediately below a particular person

*synonym*: corruption, depravity, evil

(1) virtue and **vice**, (2) **vice-chair** of the committee

Cats hate dogs and **vice versa**.

## origin

*n.* the first existence or beginning of something

*synonym*: root, source, ancestor

(1) **origin** of information, (2) racial **origin**

There are various hypotheses concerning the **origin** of life.

## amazing

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

*synonym*: exceptional, extraordinary, wonderful

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

The golfer recorded an **amazing** distance.

## 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.

## particle

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

*synonym*: atom, grain, bit

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

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

## mechanics

*n.* the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles

*synonym*: kinematics, dynamics

(1) **mechanics** equation, (2) **mechanics** of the game

He studied **mechanics** in college and now works as an engineer.

## definition

*n.* 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.

## instant

*adj.* happening immediately, with no delay

*synonym* : immediate, urgent, moment

(1) get **instant** access, (2) an **instant** reply

His pleasant face turned cold in an **instant**.

## 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.

## graph

*n.* a picture consisting of a line, lines, points, etc., that shows how two or more sets of certain quantities are related to each other

*synonym* : chart, diagram, figure

(1) **graph** theory, (2) a **graph** sample

This bar **graph** shows sales over the past five years.

## probabilistic

*adj.* characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks

*synonym* : probable, statistical, likely

(1) **probabilistic** model, (2) **probabilistic** approach

In a **probabilistic** system, the outcome is uncertain and can vary based on chance.

## spike

*n.* a narrow, thin, pointed piece of metal, wood, etc.; a sudden large increase in the magnitude or concentration of something

*synonym* : end, spindle, point

(1) to **spike**, (2) to prevent blood sugar **spikes**

The recent **spike** in grain prices is partly due to the war in the producing countries.

## 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.

## disturbance

*n.* something that interrupts a settled and peaceful condition or that makes someone feel nervous or worried

*synonym* : disorder, upset, annoyance

(1) a nervous **disturbance**, (2) a **disturbance** caused by a terrorist

This building construction causes serious **disturbance** to residents.

## ripple

*n.* a small wave on the surface of a liquid, typically caused by an object falling into it or a slight wind

*synonym* : wave, undulation, fluctuation

(1) a **ripple** of laughter, (2) **ripple** in the water

Many businesses felt the **ripple** effect of the economy's decline.

## pond

*n.* a small, shallow lake

*synonym* : lake, pool, basin

(1) a garden **pond**, (2) **pond** water

The freshwater **pond** was home to many different types of fish and was a popular spot for fishing.

## identify

*v.* to recognize someone or something and say or prove who or what they are

*synonym* : determine, specify, recognize

(1) **identify** handwriting, (2) **identify** gene sequences

I will introduce you to how to **identify** the leading causes of the malfunction.

- feat** *n.* a notable or impressive achievement, especially one that requires great skill or bravery  
*synonym*: achievement, accomplishment, exploit  
(1) intellectual **feat**, (2) **feat** accomplishment  
It is an incredible **feat** to climb Mount Everest, the highest mountain in the world.
- wavelength** *n.* the distance between two points in the same phase in consecutive cycles of a wave  
(1) **wavelength** of light, (2) long- **wavelength** laser  
White color is made up of many different **wavelengths** of light.
- 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.
- peak** *n.* the point to which something or someone is at its strongest, best, or most successful; the pointed top of a mountain  
*synonym*: summit, vertex, apex  
(1) at **peak** hour, (2) the **peak** current in the circuit  
This measurement aims to reduce traffic at **peak** periods.
- valley** *n.* a long depression on the surface of the land, which typically contains a river  
*synonym*: canyon, gorge, dale  
(1) **valley** bottom, (2) basin-shaped **valley**  
The **valley** had received a mild snowfall the previous week.
- assign** *v.* to give a specific job or piece of work to a someone  
*synonym*: entrust, delegate, designate

(1) **assign** projects, (2) **assign** top priority  
Please **assign** a different color to each other kind of item.

## 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.

## 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.

## mass

*n.* a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together

*synonym*: abundance, crowd, mob

(1) a **mass** of molten rock, (2) critical **mass**

The **mass** of people who do not own property is politically impotent.

## velocity

*n.* the rate of change of an object's position with respect to time, often measured in meters per second (m/s)

*synonym*: speed, rapidity, swiftness

(1) initial **velocity**, (2) high **velocity**

The **velocity** of the car was too fast for the road conditions.

## moving

*adj.* causing strong emotions or feelings, especially sadness or sympathy

*synonym*: emotional, poignant, touching

(1) **moving** experience, (2) **moving** ceremony

His **moving** speech about his struggles with addiction

brought tears to the audience's eyes.

## correspond

v. to match or be similar to something else almost exactly;  
to exchange messages

*synonym*: match, equate, communicate

(1) **correspond** to a standard, (2) **correspond** with a foreign student

The numbers on the sign **correspond** to points on the map.

## toss

v. to throw something carelessly with a light motion

*synonym*: throw, sway

(1) **toss** a coin, (2) **toss** the bottle into a trash can

It would be best if you **tossed** out all those old magazines.

## trillion

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

(1) **trillion** cubic feet, (2) many **trillions** of dollars

One light year is nearly 6 **trillion** miles.

## detect

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

*synonym*: catch, observe, notice

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

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

## atom

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

*synonym*: particle, element, fraction

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

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

## electron

n. a tiny particle with the negative electrical charge

*synonym*: negatron

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

The outermost **electron** shell determines the chemical



properties of an atom.

## 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.

## combine

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

*synonym*: coalesce, cohere, blend

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

(2) **combine** augmented reality

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

## possibility

*n.* a chance that something may happen or be true

*synonym*: chance, prospect, likelihood

(1) **possibility** for growth, (2) **possibility** of a major earthquake

The **possibility** of getting the disease will drastically increase.

## separate

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

*synonym*: disunite, isolate, ramify

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

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

## cancel

*v.* to decide that a previously scheduled activity will not take place

*synonym*: abort, invalidate, annul

(1) **cancel** a class, (2) **cancel** a free subscription trial

When customers **cancel** their reservations, they lose the deposit they made.

## wavy

*adj.* characterized by a series of curves, undulations, or bends that create a rippled or serpentine appearance; not straight or flat

*synonym* : curly, undulating, rippled

(1) **wavy** pattern, (2) **wavy** sea

The model's hair was long and **wavy**, cascading down her back in soft waves.

## packet

*n.* a small container or envelope that holds one or more items typically used for storing or transporting items like food, medicine, or marketing materials

*synonym* : package, parcel, bundle

(1) **packet** delivery, (2) **packet** data network

I need to buy a **packet** of biscuits from the store.

## accomplish

*v.* to finish or achieve something successfully

*synonym* : achieve, complete, execute

(1) **accomplish** a goal, (2) **accomplish** military operations

Humankind took centuries to **accomplish** true democracy.

## certainty

*n.* the state of being certain

*synonym* : inevitability, confidence, assurance

(1) scientific **certainty**, (2) reach **certainty** about the theory

Through investigation, his suspicions hardened into **certainty**.

## restricted

*adj.* limited in extent, number, scope, or action, especially by official rules, laws, etc.

*synonym* : limited, determinate, fixed

(1) **restricted** area, (2) lactose **restricted** diet

The country has designated our products as **restricted** import goods.

## corresponding

*adj.* similar to, connected with, or accompanying something, especially in position or purpose

*synonym* : matching, equivalent, analogous

(1) find a **corresponding** lack, (2) the **corresponding** word in Spanish

The **corresponding** number on the dial was 3.

## germ

*n.* a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one

*synonym* : bacterium, microbe, pathogen

(1) antibiotic-resistant **germ**, (2) a **germ-free** environment

The **germ** of his idea came from watching birds flying in flocks.

## physicist

*n.* a scientist who specializes in the field of physics

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

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

## inevitable

*adj.* certain to happen and unavoidable

*synonym* : inescapable, unavoidable, sure

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

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

## practical

*adj.* of or connected with actual use or real situation rather than with theory and ideas

*synonym* : applicable, functional, realistic

(1) **practical** English, (2) gain **practical** experience

Her concept is highly **practical** and helpful.

## 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.

## 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.

## Session 2: Spelling

- |                                     |  |
|-------------------------------------|--|
| 1. va___y bottom                    | <i>n.</i> a long depression on the surface of the land, which typically contains a river   |
| 2. reach ce_____ty about the theory | <i>n.</i> the state of being certain   |
| 3. flow of el_____ons               | <i>n.</i> a tiny particle with the negative electrical charge  |
| 4. se_____te cream from milk        | <i>v.</i> to force, take, or pull apart; mark as different   |
| 5. at p__k hour                     | <i>n.</i> the point to which something or someone is at its strongest, best, or most successful; the pointed top of a mountain                 |
| 6. pos_____ty of a major earthquake | <i>n.</i> a chance that something may happen or be true  |
| 7. pos_____ty for growth            | <i>n.</i> a chance that something may happen or be true  |
| 8. critical m__s                    | <i>n.</i> a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together         |
| 9. to sp__e                         | <i>n.</i> a narrow, thin, pointed piece of metal, wood, etc.; a sudden large increase in the magnitude or concentration of something           |
| 10. expansion of the un_____se      | <i>n.</i> everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy |

ANSWERS: 1. valley, 2. certainty, 3. electron, 4. separate, 5. peak, 6. possibility, 7. possibility, 8. mass, 9. spike, 10. universe

- |  |           |   |
|--|-----------|---|
| 11. as___n top priority                | <i>v.</i> | to give a specific job or piece of work to a someone  |
| 12. p__d water                         | <i>n.</i> | a small, shallow lake   |
| 13. pa_____le energy                   | <i>n.</i> | a small piece of something; a word or piece of a term with grammatical function but little or no significance   |
| 14. intellectual f__t                  | <i>n.</i> | a notable or impressive achievement, especially one that requires great skill or bravery  |
| 15. many tr_____ons of dollars         | <i>n.</i> | the number 1,000,000,000,000; a million million   |
| 16. the st_____re of a machine         | <i>n.</i> | the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts                                   |
| 17. a dis_____ce caused by a terrorist | <i>n.</i> | something that interrupts a settled and peaceful condition or that makes someone feel nervous or worried  |
| 18. laws of ph_____s                   | <i>n.</i> | the science of matter and energy and their interactions   |
| 19. antibiotic-resistant g__m          | <i>n.</i> | a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one |
| 20. ri___e in the water                | <i>n.</i> | a small wave on the surface of a liquid, typically caused by an object falling into it or a slight wind   |
| 21. de___t smuggling across borders    | <i>v.</i> | to find or recognize something, especially something difficult to see, hear, etc.   |

ANSWERS: 11. assign, 12. pond, 13. particle, 14. feat, 15. trillion, 16. structure, 17. disturbance, 18. physics, 19. germ, 20. ripple, 21. detect

22. the def\_\_\_\_\_on of a word *n.* a concise explanation of the meaning of a word, phrase, or symbol
23. co\_\_\_\_\_e augmented reality *v.* to join or merge to form a single thing or group
24. beam of el\_\_\_\_\_ons *n.* a tiny particle with the negative electrical charge
25. 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
26. initial ve\_\_\_\_\_ty *n.* the rate of change of an object's position with respect to time, often measured in meters per second (m/s)
27. talented ph\_\_\_\_\_st *n.* a scientist who specializes in the field of physics
28. the p\_\_k current in the circuit *n.* the point to which something or someone is at its strongest, best, or most successful; the pointed top of a mountain
29. get in\_\_\_\_\_t access *adj.* happening immediately, with no delay
30. 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
31. me\_\_\_\_\_cs equation *n.* the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles

ANSWERS: 22. definition, 23. combine, 24. electron, 25. distance, 26. velocity, 27. physicist, 28. peak, 29. instant, 30. universe, 31. mechanics

32. 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
33. es\_\_\_\_\_al amino acid *adj.* indispensable; fundamental
34. theoretical ph\_\_\_\_\_st *n.* a scientist who specializes in the field of physics
35. a nervous dis\_\_\_\_\_ce *n.* something that interrupts a settled and peaceful condition or that makes someone feel nervous or worried
36. harsh cr\_\_\_\_\_sm *n.* the act of analyzing, evaluating, or judging something, especially literary or artistic work, to find fault with it or to offer suggestions for improvement; the expression of disapproval or censure
37. v\_\_e-chair of the committee *n.* wrongdoing or wicked behavior; (in the form of vice versa) with the order reversed; (as a prefix) someone with a job immediately below a particular person
38. sim\_\_\_\_\_sly affected *adv.* at the same time
39. 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
40. 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

ANSWERS: 32. distance, 33. essential, 34. physicist, 35. disturbance, 36. criticism, 37. vice, 38. simultaneously, 39. relate, 40. relate



41. industry-sp\_\_\_\_ic regulations *adj.* clearly defined or particular to a certain thing or situation; distinct, explicit, and precise
42. pro\_\_\_\_\_tic model *adj.* characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks
43. neutral hydrogen a\_\_ms *n.* the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus
44. a ri\_\_\_e of laughter *n.* a small wave on the surface of a liquid, typically caused by an object falling into it or a slight wind
45. an in\_\_\_\_\_t reply *adj.* happening immediately, with no delay
46. ex\_\_\_\_d a lineup *v.* to increase or to make something greater in size, number, or importance
47. or\_\_\_n of information *n.* the first existence or beginning of something
48. racial or\_\_\_n *n.* the first existence or beginning of something
49. wav\_\_\_\_\_th of light *n.* the distance between two points in the same phase in consecutive cycles of a wave
50. me\_\_\_\_\_or for death *n.* a figure of speech in which an expression is used to refer to something that it does not denote to suggest a similarity
51. ex\_\_\_\_d agricultural output *v.* to increase or to make something greater in size, number, or importance

ANSWERS: 41. specific, 42. probabilistic, 43. atom, 44. ripple, 45. instant, 46. expand, 47. origin, 48. origin, 49. wavelength, 50. metaphor, 51. expand

52. numerous un\_\_\_\_\_in factors *adj.* not being sure of something; not being able to choose
53. t\_\_s a coin *v.* to throw something carelessly with a light motion
54. pa\_\_\_t delivery *n.* a small container or envelope that holds one or more items typically used for storing or transporting items like food, medicine, or marketing materials
55. as\_\_\_n projects *v.* to give a specific job or piece of work to a someone
56. take an un\_\_\_\_\_in attitude *adj.* not being sure of something; not being able to choose
57. es\_\_\_\_\_al commodities of life *adj.* indispensable; fundamental
58. ca\_\_\_l a class *v.* to decide that a previously scheduled activity will not take place
59. fun\_\_\_\_\_al rights *adj.* forming an essential base or core from which everything else develops or is affected
60. ine\_\_\_\_\_le result *adj.* certain to happen and unavoidable
61. tr\_\_\_\_\_on cubic feet *n.* the number 1,000,000,000,000; a million million
62. gr\_\_h theory *n.* a picture consisting of a line, lines, points, etc., that shows how two or more sets of certain quantities are related to each other
63. basin-shaped va\_\_\_y *n.* a long depression on the surface of the land, which typically contains a river
64. mo\_\_\_g experience *adj.* causing strong emotions or feelings, especially sadness or sympathy

ANSWERS: 52. uncertain, 53. toss, 54. packet, 55. assign, 56. uncertain, 57. essential, 58. cancel, 59. fundamental, 60. inevitable, 61. trillion, 62. graph, 63. valley, 64. moving

65. pa\_\_\_t data network *n.* a small container or envelope that holds one or more items typically used for storing or transporting items like food, medicine, or marketing materials
66. id\_\_\_\_\_fy handwriting *v.* to recognize someone or something and say or prove who or what they are
67. f\_\_t accomplishment *n.* a notable or impressive achievement, especially one that requires great skill or bravery
68. re\_\_\_\_\_nt by a diagram *v.* to speak, act, or be present on behalf of another person or group; to form or constitute
69. sp\_\_\_\_\_ic instructions *adj.* clearly defined or particular to a certain thing or situation; distinct, explicit, and precise
70. a precise def\_\_\_\_\_on *n.* a concise explanation of the meaning of a word, phrase, or symbol
71. to prevent blood sugar sp\_\_es *n.* a narrow, thin, pointed piece of metal, wood, etc.; a sudden large increase in the magnitude or concentration of something
72. cor\_\_\_\_\_nd with a foreign student *v.* to match or be similar to something else almost exactly; to exchange messages
73. se\_\_\_\_\_te video into chapter *v.* to force, take, or pull apart; mark as different
74. high ve\_\_\_\_\_ty *n.* the rate of change of an object's position with respect to time, often measured in meters per second (m/s)
75. take several inputs sim\_\_\_\_\_sly *adv.* at the same time

ANSWERS: 65. packet, 66. identify, 67. feat, 68. represent, 69. specific, 70. definition, 71. spike, 72. correspond, 73. separate, 74. velocity, 75. simultaneously

76. w\_\_y sea *adj.* characterized by a series of curves, undulations, or bends that create a rippled or serpentine appearance; not straight or flat
77. the most am\_\_\_\_g feeling *adj.* extremely surprising, especially in a way that you like or admire
78. acc\_\_\_\_\_sh a goal *v.* to finish or achieve something successfully
79. ine\_\_\_\_\_le changes of the seasons *adj.* certain to happen and unavoidable
80. the characters that re\_\_\_\_\_nt numbers *v.* to speak, act, or be present on behalf of another person or group; to form or constitute
81. find a cor\_\_\_\_\_ing lack *adj.* similar to, connected with, or accompanying something, especially in position or purpose
82. ca\_\_\_l a free subscription trial *v.* to decide that a previously scheduled activity will not take place
83. acc\_\_\_\_\_sh military operations *v.* to finish or achieve something successfully
84. charged pa\_\_\_\_\_le *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
85. probabilistic qu\_\_\_\_\_m theory *n.* the smallest amount or unit of something, especially (electromagnetic) energy
86. a gr\_\_h sample *n.* a picture consisting of a line, lines, points, etc., that shows how two or more sets of certain quantities are related to each other

ANSWERS: 76. wavy, 77. amazing, 78. accomplish, 79. inevitable, 80. represent, 81. corresponding, 82. cancel, 83. accomplish, 84. particle, 85. quantum, 86. graph

87. a m\_\_s of molten rock *n.* a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together
88. de\_\_\_t a bad event *v.* to find or recognize something, especially something difficult to see, hear, etc.
89. the cor\_\_\_\_\_ing word in Spanish *adj.* similar to, connected with, or accompanying something, especially in position or purpose
90. nuclear ph\_\_\_\_s *n.* the science of matter and energy and their interactions
91. exp\_\_\_\_\_nt design *n.* the scientific test conducted to observe what happens and gain new knowledge
92. fun\_\_\_\_\_al education *adj.* forming an essential base or core from which everything else develops or is affected
93. laws of qu\_\_\_\_\_m mechanics *n.* the smallest amount or unit of something, especially (electromagnetic) energy
94. co\_\_\_\_\_e chemically with another substance *v.* to join or merge to form a single thing or group
95. pr\_\_\_\_\_le of treatment *n.* a fundamental law or truth that explains or controls how something happens or works
96. cr\_\_\_\_\_sm from the public *n.* the act of analyzing, evaluating, or judging something, especially literary or artistic work, to find fault with it or to offer suggestions for improvement; the expression of disapproval or censure

ANSWERS: 87. mass, 88. detect, 89. corresponding, 90. physics, 91. experiment, 92. fundamental, 93. quantum, 94. combine, 95. principle, 96. criticism

97. am\_\_\_\_\_g advances *adj.* extremely surprising, especially in a way that you like or admire
98. long-wav\_\_\_\_\_th laser *n.* the distance between two points in the same phase in consecutive cycles of a wave
99. w\_\_y pattern *adj.* characterized by a series of curves, undulations, or bends that create a rippled or serpentine appearance; not straight or flat
100. cor\_\_\_\_\_nd to a standard *v.* to match or be similar to something else almost exactly; to exchange messages
101. a garden p\_\_d *n.* a small, shallow lake
102. gain pr\_\_\_\_\_al experience *adj.* of or connected with actual use or real situation rather than with theory and ideas
103. me\_\_\_\_\_cs of the game *n.* the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles
104. pr\_\_\_\_\_al English *adj.* of or connected with actual use or real situation rather than with theory and ideas
105. 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
106. mo\_\_\_g ceremony *adj.* causing strong emotions or feelings, especially sadness or sympathy

ANSWERS: 97. amazing, 98. wavelength, 99. wavy, 100. correspond, 101. pond, 102. practical, 103. mechanics, 104. practical, 105. structure, 106. moving

107. pr\_\_\_\_\_le in business *n.* a fundamental law or truth that explains or controls how something happens or works
108. oxygen a\_\_m *n.* the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus
109. id\_\_\_\_\_fy gene sequences *v.* to recognize someone or something and say or prove who or what they are
110. t\_\_s the bottle into a trash can *v.* to throw something carelessly with a light motion
111. visual me\_\_\_\_\_or *n.* a figure of speech in which an expression is used to refer to something that it does not denote to suggest a similarity
112. scientific ce\_\_\_\_\_ty *n.* the state of being certain
113. a g\_\_m-free environment *n.* a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one
114. pro\_\_\_\_\_tic approach *adj.* characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks
115. lactose res\_\_\_\_\_ed diet *adj.* limited in extent, number, scope, or action, especially by official rules, laws, etc.
116. res\_\_\_\_\_ed area *adj.* limited in extent, number, scope, or action, especially by official rules, laws, etc.

ANSWERS: 107. principle, 108. atom, 109. identify, 110. toss, 111. metaphor, 112. certainty, 113. germ, 114. probabilistic, 115. restricted, 116. restricted

117. virtue and v\_\_e

*n.* wrongdoing or wicked behavior; (in the form of vice versa) with the order reversed; (as a prefix) someone with a job immediately below a particular person

118. series of exp\_\_\_\_\_nts

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

ANSWERS: 117. vice, 118. experiment



## Session 3: Fill in the Blanks

1. White color is made up of many different \_\_\_\_\_ of light.
  - n.* the distance between two points in the same phase in consecutive cycles of a wave
  
2. She expressed her thought in an artful choice of \_\_\_\_\_.
  - n.* a figure of speech in which an expression is used to refer to something that it does not denote to suggest a similarity
  
3. The \_\_\_\_\_ had received a mild snowfall the previous week.
  - n.* a long depression on the surface of the land, which typically contains a river
  
4. The golfer recorded an \_\_\_\_\_ distance.
  - adj.* extremely surprising, especially in a way that you like or admire
  
5. The \_\_\_\_\_ of getting the disease will drastically increase.
  - n.* a chance that something may happen or be true
  
6. 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
  
7. Hydrogen and oxygen \_\_\_\_\_ to form water.
  - v.* to join or merge to form a single thing or group
  
8. The scientist conducted a study that provided \_\_\_\_\_ details about the species' behavior.
  - adj.* clearly defined or particular to a certain thing or situation; distinct, explicit, and precise

ANSWERS: 1. wavelengths, 2. metaphors, 3. valley, 4. amazing, 5. possibility, 6. relate, 7. combine, 8. specific

9. She was \_\_\_\_\_ about her friend's intentions.

*adj.* not being sure of something; not being able to choose

10. The numbers on the sign \_\_\_\_\_ to points on the map.

*v.* to match or be similar to something else almost exactly; to exchange messages

11. Her concept is highly \_\_\_\_\_ and helpful.

*adj.* of or connected with actual use or real situation rather than with theory and ideas

12. When customers \_\_\_\_\_ their reservations, they lose the deposit they made.

*v.* to decide that a previously scheduled activity will not take place

13. Two students answered the teacher's question \_\_\_\_\_.

*adv.* at the same time

14. Many businesses felt the \_\_\_\_\_ effect of the economy's decline.

*n.* a small wave on the surface of a liquid, typically caused by an object falling into it or a slight wind

15. 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

16. Cats hate dogs and \_\_\_\_\_ versa.

*n.* wrongdoing or wicked behavior; (in the form of vice versa) with the order reversed; (as a prefix) someone with a job immediately below a particular person

ANSWERS: 9. uncertain, 10. correspond, 11. practical, 12. cancel, 13. simultaneously, 14. ripple, 15. distance, 16. vice

17. The country has designated our products as \_\_\_\_\_ import goods.  
*adj.* limited in extent, number, scope, or action, especially by official rules, laws, etc.
18. Trial and error is an \_\_\_\_\_ part of education.  
*adj.* indispensable; fundamental
19. They hope to \_\_\_\_\_ their business worldwide.  
*v.* to increase or to make something greater in size, number, or importance
20. In times of recession, an increase in unemployment is \_\_\_\_\_.  
*adj.* certain to happen and unavoidable
21. The outermost \_\_\_\_\_ shell determines the chemical properties of an atom.  
*n.* a tiny particle with the negative electrical charge
22. 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
23. The recent \_\_\_\_\_ in grain prices is partly due to the war in the producing countries.  
*n.* a narrow, thin, pointed piece of metal, wood, etc.; a sudden large increase in the magnitude or concentration of something
24. The model's hair was long and \_\_\_\_\_ cascading down her back in soft waves.  
*adj.* characterized by a series of curves, undulations, or bends that create a rippled or serpentine appearance; not straight or flat

ANSWERS: 17. restricted, 18. essential, 19. expand, 20. inevitable, 21. electron, 22. feat, 23. spike, 24. wavy,

25. His pleasant face turned cold in an \_\_\_\_\_.

*adj.* happening immediately, with no delay

26. 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

27. The freshwater \_\_\_\_\_ was home to many different types of fish and was a popular spot for fishing.

*n.* a small, shallow lake

28. The \_\_\_\_\_ of his idea came from watching birds flying in flocks.

*n.* a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one

29. Humankind took centuries to \_\_\_\_\_ true democracy.

*v.* to finish or achieve something successfully

30. The \_\_\_\_\_ number on the dial was 3.

*adj.* similar to, connected with, or accompanying something, especially in position or purpose

31. He studied \_\_\_\_\_ in college and now works as an engineer.

*n.* the branch of physics that deals with the study of motion, forces, and energy; (mechanic) someone whose occupation is repairing and maintaining automobiles

32. It would be best if you \_\_\_\_\_ out all those old magazines.

*v.* to throw something carelessly with a light motion

ANSWERS: 25. instant, 26. definition, 27. pond, 28. germ, 29. accomplish, 30. corresponding, 31. mechanics, 32. tossed

33. The \_\_\_\_ of people who do not own property is politically impotent.
- n.* a large amount of a substance with no definite shape or form; a large number of people or things grouped or crowded together
34. This bar \_\_\_\_ shows sales over the past five years.
- n.* a picture consisting of a line, lines, points, etc., that shows how two or more sets of certain quantities are related to each other
35. I will introduce you to how to \_\_\_\_\_ the leading causes of the malfunction.
- v.* to recognize someone or something and say or prove who or what they are
36. We can calculate the position of the \_\_\_\_\_ statistically.
- n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
37. Efficiency isn't an essential \_\_\_\_\_ here; fairness is.
- n.* a fundamental law or truth that explains or controls how something happens or works
38. The \_\_\_\_\_ of the car was too fast for the road conditions.
- n.* the rate of change of an object's position with respect to time, often measured in meters per second (m/s)
39. The outermost electron shell of an \_\_\_\_ determines its chemical characteristics.
- n.* the smallest unit of ordinary matter that forms a chemical element, composed of a nucleus and one or more electrons bound to the nucleus
40. This measurement aims to reduce traffic at \_\_\_\_ periods.
- n.* the point to which something or someone is at its strongest, best, or most successful; the pointed top of a mountain

ANSWERS: 33. mass, 34. graph, 35. identify, 36. particles, 37. principle, 38. velocity, 39. atom, 40. peak

41. 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
42. The security camera has \_\_\_\_\_ four intruders.
- v.* to find or recognize something, especially something difficult to see, hear, etc.
43. He studied the \_\_\_\_\_ of radiation.
- n.* the science of matter and energy and their interactions
44. I need to buy a \_\_\_\_\_ of biscuits from the store.
- n.* a small container or envelope that holds one or more items typically used for storing or transporting items like food, medicine, or marketing materials
45. Through investigation, his suspicions hardened into \_\_\_\_\_.
- n.* the state of being certain
46. There are various hypotheses concerning the \_\_\_\_\_ of life.
- n.* the first existence or beginning of something
47. His \_\_\_\_\_ speech about his struggles with addiction brought tears to the audience's eyes.
- adj.* causing strong emotions or feelings, especially sadness or sympathy
48. One light year is nearly 6 \_\_\_\_\_ miles.
- n.* the number 1,000,000,000,000; a million million
49. Constructive \_\_\_\_\_ is always helpful to help improving one's work.
- n.* the act of analyzing, evaluating, or judging something, especially literary or artistic work, to find fault with it or to offer suggestions for improvement; the expression of disapproval or censure

ANSWERS: 41. universe, 42. detected, 43. physics, 44. packet, 45. certainty, 46. origin, 47. moving, 48. trillion, 49. criticism

50. His \_\_\_\_\_ showed highly positive results.  
*n.* the scientific test conducted to observe what happens and gain new knowledge
51. Big techs are now eager to develop \_\_\_\_\_ computers.  
*n.* the smallest amount or unit of something, especially (electromagnetic) energy
52. 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
53. Einstein was an outstanding and famous \_\_\_\_\_ of the 20th century.  
*n.* a scientist who specializes in the field of physics
54. 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
55. Human behavior has \_\_\_\_\_ characteristics.  
*adj.* forming an essential base or core from which everything else develops or is affected
56. We need to \_\_\_\_\_ the aspect of his personality from the part of his competence when making an investment decision.  
*v.* to force, take, or pull apart; mark as different
57. In a \_\_\_\_\_ system, the outcome is uncertain and can vary based on chance.  
*adj.* characterized by the influence of chance or probability; involving the use of statistical models or methods to estimate likelihoods or risks

ANSWERS: 50. experiments, 51. quantum, 52. represent, 53. physicist, 54. structure, 55. fundamental, 56. separate, 57. probabilistic

58. This building construction causes serious \_\_\_\_\_ to residents.
- n.* something that interrupts a settled and peaceful condition or that makes someone feel nervous or worried
59. Please \_\_\_\_\_ a different color to each other kind of item.
- v.* to give a specific job or piece of work to a someone

ANSWERS: 58. disturbance, 59. assign