

# Englist.me



## Vocabulary Builder Reference from...

Colm Kelleher: *Is light a particle or a wave?* | TED Talk

[https://www.ted.com/talks/colm\\_kelleher\\_is\\_light\\_a\\_particle\\_or\\_a\\_wave](https://www.ted.com/talks/colm_kelleher_is_light_a_particle_or_a_wave)

### All Words

#### IMPORTANT

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

## Session 1: Word List

### brain

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

*synonym*: intellect, mind, encephalon

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

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

### 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.

### ancient

*adj.* relating to the long ago, particularly the historical period preceding the fall of the Western Roman Empire; very old

*synonym*: archaic, age-old, obsolete

(1) pre-Christian **ancient**, (2) **ancient** stories

They have been living near water since **ancient** times.

## scientifically

*adv.* in a way that relates to science or is connected with science

(1) investigate **scientifically**, (2) **scientifically** explainable  
The hypothesis is not yet **scientifically** proven.

## vision

*n.* the ability to think about or see the future with imagination and intelligence; the faculty of being able to see

*synonym*: sight, image, concept

(1) a prodigious **vision**, (2) telescopic **vision**  
Driving is difficult for me because of my poor **vision**.

## philosophy

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

*synonym*: doctrine, attitude, creed

(1) **philosophy** of education, (2) western **philosophy**  
Ethics is a branch of **philosophy**.

## platonic

*adj.* (of relationship or emotion) friendly or affectionate but not sexual

*synonym*: nonphysical, nonsexual, spiritual

(1) **platonic** relationship, (2) **platonic** love  
His relationship with her was completely **platonic**.

## 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.

## invisible

*adj.* impossible or nearly impossible to see

*synonym*: hidden, imperceptible, unseen

(1) an **invisible** asset, (2) **invisible** stars  
The phenomenon is **invisible** at optical wavelengths.

## probe

*n.* a tool used for testing or examining, especially for medical or scientific purposes, or an exploratory mission to a planet or other celestial body; (verb) to investigate,

examine, or search into something

*synonym* : investigation, inquiry, examination

(1) a lunar **probe**, (2) **probe** for inside information

NASA sent a **probe** to study the atmosphere of Jupiter.

## faraway

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

*synonym* : distant, remote, far-off

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

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

## intelligence

*n.* the ability to learn, comprehend, or make judgments or conclusions based on reasons

*synonym* : brains, brightness, cleverness

(1) an **intelligence** test, (2) field of artificial **intelligence**

In terms of **intelligence**, he was head and shoulders above his classmates.

## emit

*v.* to give off or send out something such as light, heat, sound, gas, etc.

*synonym* : give off, radiate, expel

(1) **emit** a gamma ray, (2) **emit** air pollution

During the unloading, the container box **emits** a clicking sound.

## bulb

*n.* a rounded underground storage organ of some plants from which the plant grows; the rounded part of a cylindrical structure; electric lamp consisting of a glass ball

(1) wet- **bulb** thermometer, (2) a lily **bulb**

The light **bulb** has burned out.

## bounce

*v.* to cause to move up or away after hitting a surface; to spring back

*synonym* : bound, leap, spring

(1) **bounce** across the floor, (2) **bounce** back from failure  
They will **bounce** between various emotional states.

## 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.

## 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.

## 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.

## modern

*adj.* of or belonging to the present time or recent times

*synonym*: contemporary, stylish, current

(1) **modern** poetry, (2) pre- **modern** agricultural society

Their headquarters are in a **modern** skyscraper.

- era** *n.* a period that is distinct from others, typically in history  
*synonym* : epoch, age, period  
(1) dawn of a new **era**, (2) the **era** of the Renaissance  
Political corruption was common throughout the postwar **era**.
- Newtonian** *adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation  
*synonym* : classical, physics, mechanics  
(1) **Newtonian** physics, (2) **Newtonian** mechanics  
The motion of planets can be described using **Newtonian** mechanics.
- corpuscle** *n.* a generic term used to describe various types of small biological cells or particles, such as red or white blood cells, or cells found in specific organs or tissues  
*synonym* : cell, particle  
(1) red **corpuscle** concentration, (2) white blood **corpuscle**  
The **corpuscle** count in his blood sample was found to be outside the normal range.
- assume** *v.* to think or accept something to be true without having proof of it; to take or begin to have power; to begin to exhibit a specific quality or appearance  
*synonym* : guess, presume, suppose  
(1) **assume** a lousy attitude to his boss, (2) **assume** an important role  
The following example **assumes** that the capacity of each battery is the same.
- refraction** *n.* the bending or change in the direction of a ray of light, sound, or heat as it passes through a medium or travels from one medium to another  
*synonym* : bending, deviation, deflection  
(1) **refraction** of light, (2) angle of **refraction**  
The atmospheric **refraction** of the sun causes it to appear to be above the horizon when it is actually below it.

**beam**

*n.* a long, sturdy piece of timber, metal, or other material used to support a structure or span a distance; a ray or stream of light emitted by a source

*synonym* : ray, ray of light, shaft of light

(1) **beam** of light, (2) a structural **beam** of a building

The sun's **beam** shone through the window and illuminated the room.

**passe**

*adj.* no longer fashionable or current; outdated; considered to be old-fashioned or out of date

*synonym* : outdated, old-fashioned, antique

(1) **passe** entertainment, (2) **passe** trend

Bell-bottom jeans, once considered **passe** fashion, have made a surprising comeback in recent years.

**genius**

*n.* someone who has exceptional intellectual ability and originality

*synonym* : brilliance, brainiac, acumen

(1) a person of **genius**, (2) a **genius** for music

Mozart was a musical **genius**.

**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.

**interact**

*v.* to communicate or react with somebody

*synonym* : cooperate, combine, collaborate

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

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

**solid**

*adj.* hard or firm; characterized by good substantial quality

*synonym* : stable, reliable, hard

(1) **solid** ally, (2) **solid** employment measures

The **solid-state** of water is called ice.

## involve

*v.* to include or affect someone or something as a necessary part of something else

*synonym*: implicate, include, engage

(1) **involve** a lot of paperwork, (2) **involve** a high degree of risk

The investigation **involves** several government agencies and is expected to take several months.

## collision

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

*synonym*: crash, impact, smash

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

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

## random

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

*synonym*: incidental, arbitrary, unanticipated

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

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

## laser

*n.* a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification

*synonym*: beam, bar, ray

(1) **laser** printer, (2) pulse **laser**

The company holds patents on core components of **laser** jet printers.

## chalk

*n.* a soft, white, porous sedimentary rock composed of calcium carbonate, often used for drawing or writing on surfaces such as blackboards

*synonym*: white rock, limestone, gypsum

(1) a piece of **chalk**, (2) **chalk** on a blackboard  
The kids used colored **chalk** to create a mural on the pavement.

## interference

*n.* the act or process of getting involved in and trying to influence a specific situation; the state of being affected and influenced with

*synonym*: obstruction, hindrance, impedance

(1) officious **interference**, (2) **interference** wave

Unfortunately, the radio **interference** made it difficult to hear the broadcast.

## complicated

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

*synonym*: complex, convoluted, intricate

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

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

## undulate

*v.* to move with a smooth wavelike motion; to have a wavy form or outline

*synonym*: roll, ripple, wave

(1) **undulate** waves, (2) **undulate** in the wind

The snake **undulated** its way through the underbrush, silently stalking its prey.

## occupy

*v.* to consume all of someone's space, attention, or time

*synonym*: inhabit, settle, populate

(1) **occupy** his time, (2) **occupy** a position

The young prince will soon **occupy** the throne.

## disturb

*v.* to interrupt someone who is trying to work, sleep, etc.

*synonym*: agitate, bother, intrude

(1) **disturb** the peace, (2) **disturb** his sleep

Tourists frequently **disturb** the island's delicate natural balance.



## bonus

*n.* an extra amount of money that is added to payment as a present or reward for good work

*synonym*: extra, perk, compensation

(1) **bonus** appraisal, (2) annual **bonus**

The committee abolished the controversial **bonus** system.

## naturally

*adv.* as might be expected; by natural manners

*synonym*: by nature, inherently, intrinsically

(1) **naturally** arising, (2) **naturally** regenerated forest

He was **naturally** gifted.

## explanation

*n.* the information or arguments that someone provides to make something understandable or clear

*synonym*: description, elucidation, account

(1) the **explanation** for the failure, (2) detailed **explanation**

The following **explanation** is currently being used to explain the phenomenon in question.

## settle

*v.* to reach an agreement of disagreement

*synonym*: inhabit, occupy, decide

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

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

## instance

*n.* a particular example or single occurrence of something

*synonym*: example, sample, illustration

(1) for **instance**, (2) notable **instance**

These articles cite five **instances** of climate change.

## metal

*n.* a solid material that is typically hard, shiny, malleable, fusible, and ductile, with good electrical and thermal conductivity, and often used as a structural material, a conductor of heat or electricity, or for decorative purposes

*synonym*: alloy, metalloid

(1) **metal** fabrication, (2) precious **metal**

The construction worker used a **metal** saw to cut through the

stubborn sheet metal.

## transfer

*v.* to move, pass, or change from one person, place, or situation to another

*synonym*: move, relocate, shift

(1) **transfer** a file, (2) **transfer** power

She **transferred** the money from her savings account to her checking account.

## discrete

*adj.* separate and distinct; not continuous; individually distinguishable

*synonym*: separate, distinct, individual

(1) **discrete** metric space, (2) **discrete** variable

The company divided the tasks into **discrete** segments to increase efficiency.

## 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.

## 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.

## sphere

*n.* a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity

*synonym*: ball, globe, scope

(1) **sphere** of influence, (2) business **sphere**

The **sphere** of the earth is divided into several layers including the crust, mantle, and core.

## revolutionary

*adj.* relating to or characterized by a complete or dramatic change

*synonym*: radical, innovative, groundbreaking

(1) **revolutionary** change, (2) enforce **revolutionary** justice

The **revolutionary** leader inspired others to join the fight for freedom and democracy.

## physics

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

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

He studied the **physics** of radiation.

## 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.

## Session 2: Spelling

1. rev\_\_\_\_\_ary change *adj.* relating to or characterized by a complete or dramatic change
2. field of artificial int\_\_\_\_\_nce *n.* the ability to learn, comprehend, or make judgments or conclusions based on reasons
3. notable in\_\_\_\_\_ce *n.* a particular example or single occurrence of something
4. di\_\_\_\_\_te variable *adj.* separate and distinct; not continuous; individually distinguishable
5. business sp\_\_\_\_\_e *n.* a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity
6. ref\_\_\_\_\_on of light *n.* the bending or change in the direction of a ray of light, sound, or heat as it passes through a medium or travels from one medium to another
7. a ra\_\_\_\_\_m choice *adj.* made, done, or happening without method, conscious decision, or any regular pattern
8. a lily b\_\_b *n.* a rounded underground storage organ of some plants from which the plant grows; the rounded part of a cylindrical structure; electric lamp consisting of a glass ball
9. 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

ANSWERS: 1. revolutionary, 2. intelligence, 3. instance, 4. discrete, 5. sphere, 6. refraction, 7. random, 8. bulb, 9. ripple

- |                                  |      |  |
|----------------------------------|------|--|
| 10. e__t air pollution           | v.   | to give off or send out something such as light, heat, sound, gas, etc.  |
| 11. di____b the peace            | v.   | to interrupt someone who is trying to work, sleep, etc.  |
| 12. or____n of information       | n.   | the first existence or beginning of something  |
| 13. a ge____s for music          | n.   | someone who has exceptional intellectual ability and originality   |
| 14. a lunar pr__e                | n.   | a tool used for testing or examining, especially for medical or scientific purposes, or an exploratory mission to a planet or other celestial body; (verb) to investigate, examine, or search into something |
| 15. e__t a gamma ray             | v.   | to give off or send out something such as light, heat, sound, gas, etc.  |
| 16. bo____e back from failure    | v.   | to cause to move up or away after hitting a surface; to spring back  |
| 17. an____t stories              | adj. | relating to the long ago, particularly the historical period preceding the fall of the Western Roman Empire; very old  |
| 18. series of exp____nts         | n.   | the scientific test conducted to observe what happens and gain new knowledge   |
| 19. phi____hy of education       | n.   | the study of general and fundamental questions, such as those about existence, reason, knowledge, values, mind   |
| 20. probabilistic qu____m theory | n.   | the smallest amount or unit of something, especially (electromagnetic) energy  |

ANSWERS: 10. emit, 11. disturb, 12. origin, 13. genius, 14. probe, 15. emit, 16. bounce, 17. ancient, 18. experiment, 19. philosophy, 20. quantum

21. di\_\_\_\_b his sleep *v.* to interrupt someone who is trying to work, sleep, etc.
22. the exp\_\_\_\_\_on for the failure *n.* the information or arguments that someone provides to make something understandable or clear
23. become increasingly com\_\_\_\_\_ed *adj.* involving a lot of different things or parts in a way that is difficult to understand or analyze
24. pre-mo\_\_\_n agricultural society *adj.* of or belonging to the present time or recent times
25. dawn of a new e\_a *n.* a period that is distinct from others, typically in history
26. 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
27. basic br\_\_\_n function *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
28. in\_\_\_\_\_ct with one another *v.* to communicate or react with somebody
29. in\_\_\_\_\_e a lot of paperwork *v.* to include or affect someone or something as a necessary part of something else
30. p\_\_d water *n.* a small, shallow lake
31. as\_\_\_e a lousy attitude to his boss *v.* to think or accept something to be true without having proof of it; to take or begin to have power; to begin to exhibit a specific quality or appearance

ANSWERS: 21. disturb, 22. explanation, 23. complicated, 24. modern, 25. era, 26. distance, 27. brain, 28. interact, 29. involve, 30. pond, 31. assume

32. precious me\_\_l *n.* a solid material that is typically hard, shiny, malleable, fusible, and ductile, with good electrical and thermal conductivity, and often used as a structural material, a conductor of heat or electricity, or for decorative purposes
33. investigate sci\_\_\_\_\_lly *adv.* in a way that relates to science or is connected with science
34. me\_\_l fabrication *n.* a solid material that is typically hard, shiny, malleable, fusible, and ductile, with good electrical and thermal conductivity, and often used as a structural material, a conductor of heat or electricity, or for decorative purposes
35. mo\_\_\_n poetry *adj.* of or belonging to the present time or recent times
36. sp\_\_\_e of influence *n.* a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity
37. annual bo\_\_s *n.* an extra amount of money that is added to payment as a present or reward for good work
38. 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
39. 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: 32. metal, 33. scientifically, 34. metal, 35. modern, 36. sphere, 37. bonus, 38. atom, 39. mechanics

40. pa\_\_\_\_le energy *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
41. la\_\_r printer *n.* a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification
42. nuclear ph\_\_\_\_s *n.* the science of matter and energy and their interactions
43. Ne\_\_\_\_\_an mechanics *adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation
44. 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
45. a structural b\_\_m of a building *n.* a long, sturdy piece of timber, metal, or other material used to support a structure or span a distance; a ray or stream of light emitted by a source
46. wet-b\_\_b thermometer *n.* a rounded underground storage organ of some plants from which the plant grows; the rounded part of a cylindrical structure; electric lamp consisting of a glass ball
47. 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
48. a piece of ch\_\_k *n.* a soft, white, porous sedimentary rock composed of calcium carbonate, often used for drawing or writing on surfaces such as blackboards

ANSWERS: 40. particle, 41. laser, 42. physics, 43. Newtonian, 44. atom, 45. beam, 46. bulb, 47. packet, 48. chalk



49. Ne\_\_\_\_\_an physics *adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation
50. se\_\_\_e down in the town *v.* to reach an agreement of disagreement
51. bo\_\_s appraisal *n.* an extra amount of money that is added to payment as a present or reward for good work
52. laws of qu\_\_\_\_\_m mechanics *n.* the smallest amount or unit of something, especially (electromagnetic) energy
53. pa\_\_e entertainment *adj.* no longer fashionable or current; outdated; considered to be old-fashioned or out of date
54. so\_\_d employment measures *adj.* hard or firm; characterized by good substantial quality
55. pre-Christian an\_\_\_\_\_t *adj.* relating to the long ago, particularly the historical period preceding the fall of the Western Roman Empire; very old
56. 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
57. co\_\_\_\_\_on detection *n.* an instance of two or more objects or entities crashing into each other, usually resulting in damage, impact, or conflict
58. tr\_\_\_\_\_er power *v.* to move, pass, or change from one person, place, or situation to another
59. as\_\_\_e an important role *v.* to think or accept something to be true without having proof of it; to take or begin to have power; to begin to exhibit a specific quality or appearance

ANSWERS: 49. Newtonian, 50. settle, 51. bonus, 52. quantum, 53. passe, 54. solid, 55. ancient, 56. distance, 57. collision, 58. transfer, 59. assume

60. pl\_\_\_\_ic love *adj.* (of relationship or emotion) friendly or affectionate but not sexual
61. angle of ref\_\_\_\_\_on *n.* the bending or change in the direction of a ray of light, sound, or heat as it passes through a medium or travels from one medium to another
62. racial or\_\_\_\_n *n.* the first existence or beginning of something
63. western phi\_\_\_\_\_hy *n.* the study of general and fundamental questions, such as those about existence, reason, knowledge, values, mind
64. ch\_\_k on a blackboard *n.* a soft, white, porous sedimentary rock composed of calcium carbonate, often used for drawing or writing on surfaces such as blackboards
65. come into co\_\_\_\_\_on with my friend *n.* an instance of two or more objects or entities crashing into each other, usually resulting in damage, impact, or conflict
66. 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
67. telescopic vi\_\_\_\_n *n.* the ability to think about or see the future with imagination and intelligence; the faculty of being able to see
68. permanent br\_\_n damage *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling

ANSWERS: 60. platonic, 61. refraction, 62. origin, 63. philosophy, 64. chalk, 65. collision, 66. packet, 67. vision, 68. brain

69. an in\_\_\_\_\_le asset *adj.* impossible or nearly impossible to see
70. a garden p\_\_d *n.* a small, shallow lake
71. in\_\_\_\_\_le stars *adj.* impossible or nearly impossible to see
72. fa\_\_\_\_\_y dream *adj.* located at a geographically distant place; remote or separated by distance; distant or not easily accessible
73. di\_\_\_\_\_te metric space *adj.* separate and distinct; not continuous; individually distinguishable
74. bo\_\_\_\_\_e across the floor *v.* to cause to move up or away after hitting a surface; to spring back
75. int\_\_\_\_\_nce wave *n.* the act or process of getting involved in and trying to influence a specific situation; the state of being affected and influenced with
76. red co\_\_\_\_\_le concentration *n.* a generic term used to describe various types of small biological cells or particles, such as red or white blood cells, or cells found in specific organs or tissues
77. enforce rev\_\_\_\_\_ary justice *adj.* relating to or characterized by a complete or dramatic change
78. fa\_\_\_\_\_y land *adj.* located at a geographically distant place; remote or separated by distance; distant or not easily accessible
79. a person of ge\_\_\_\_\_s *n.* someone who has exceptional intellectual ability and originality
80. un\_\_\_\_\_te waves *v.* to move with a smooth wavelike motion; to have a wavy form or outline

ANSWERS: 69. invisible, 70. pond, 71. invisible, 72. faraway, 73. discrete, 74. bounce, 75. interference, 76. corpuscle, 77. revolutionary, 78. faraway, 79. genius, 80. undulate

81. bombs fell at ra\_\_\_m *adj.* made, done, or happening without method, conscious decision, or any regular pattern
82. charged pa\_\_\_\_\_le *n.* a small piece of something; a word or piece of a term with grammatical function but little or no significance
83. laws of ph\_\_\_\_\_s *n.* the science of matter and energy and their interactions
84. the e\_a of the Renaissance *n.* a period that is distinct from others, typically in history
85. b\_\_m of light *n.* a long, sturdy piece of timber, metal, or other material used to support a structure or span a distance; a ray or stream of light emitted by a source
86. pl\_\_\_\_\_ic relationship *adj.* (of relationship or emotion) friendly or affectionate but not sexual
87. an int\_\_\_\_\_nce test *n.* the ability to learn, comprehend, or make judgments or conclusions based on reasons
88. tr\_\_\_\_\_er a file *v.* to move, pass, or change from one person, place, or situation to another
89. a com\_\_\_\_\_ed process *adj.* involving a lot of different things or parts in a way that is difficult to understand or analyze
90. exp\_\_\_\_\_nt design *n.* the scientific test conducted to observe what happens and gain new knowledge
91. oc\_\_\_y his time *v.* to consume all of someone's space, attention, or time
92. officious int\_\_\_\_\_nce *n.* the act or process of getting involved in and trying to influence a specific situation; the state of being affected and influenced with

ANSWERS: 81. random, 82. particle, 83. physics, 84. era, 85. beam, 86. platonic, 87. intelligence, 88. transfer, 89. complicated, 90. experiment, 91. occupy, 92. interference

93. oc\_\_\_y a position *v.* to consume all of someone's space, attention, or time
94. pr\_\_\_e for inside information *n.* a tool used for testing or examining, especially for medical or scientific purposes, or an exploratory mission to a planet or other celestial body; (verb) to investigate, examine, or search into something
95. in\_\_\_\_\_ct directly with customers *v.* to communicate or react with somebody
96. detailed exp\_\_\_\_\_on *n.* the information or arguments that someone provides to make something understandable or clear
97. pa\_\_\_e trend *adj.* no longer fashionable or current; outdated; considered to be old-fashioned or out of date
98. for in\_\_\_\_\_ce *n.* a particular example or single occurrence of something
99. se\_\_\_e a dispute *v.* to reach an agreement of disagreement
100. un\_\_\_\_\_te in the wind *v.* to move with a smooth wavelike motion; to have a wavy form or outline
101. na\_\_\_\_\_ly regenerated forest *adv.* as might be expected; by natural manners
102. in\_\_\_\_\_e a high degree of risk *v.* to include or affect someone or something as a necessary part of something else
103. sci\_\_\_\_\_lly explainable *adv.* in a way that relates to science or is connected with science
104. na\_\_\_\_\_ly arising *adv.* as might be expected; by natural manners

ANSWERS: 93. occupy, 94. probe, 95. interact, 96. explanation, 97. passe, 98. instance, 99. settle, 100. undulate, 101. naturally, 102. involve, 103. scientifically, 104. naturally

105. so\_\_d ally *adj.* hard or firm; characterized by good substantial quality
106. pulse la\_\_r *n.* a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification
107. 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
108. white blood co\_\_\_\_\_le *n.* a generic term used to describe various types of small biological cells or particles, such as red or white blood cells, or cells found in specific organs or tissues
109. a prodigious vi\_\_\_n *n.* the ability to think about or see the future with imagination and intelligence; the faculty of being able to see
110. ri\_\_\_e in the water *n.* a small wave on the surface of a liquid, typically caused by an object falling into it or a slight wind

ANSWERS: 105. solid, 106. laser, 107. mechanics, 108. corpuscle, 109. vision, 110. ripple

## Session 3: Fill in the Blanks

1. Unfortunately, the radio \_\_\_\_\_ made it difficult to hear the broadcast.  
*n.* the act or process of getting involved in and trying to influence a specific situation; the state of being affected and influenced with
2. The \_\_\_\_\_ leader inspired others to join the fight for freedom and democracy.  
*adj.* relating to or characterized by a complete or dramatic change
3. Political corruption was common throughout the postwar \_\_\_\_\_.  
*n.* a period that is distinct from others, typically in history
4. Bell-bottom jeans, once considered \_\_\_\_\_ fashion, have made a surprising comeback in recent years.  
*adj.* no longer fashionable or current; outdated; considered to be old-fashioned or out of date
5. 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
6. These articles cite five \_\_\_\_\_ of climate change.  
*n.* a particular example or single occurrence of something
7. 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

ANSWERS: 1. interference, 2. revolutionary, 3. era, 4. passe, 5. mechanics, 6. instances, 7. atom

8. They have been living near water since \_\_\_\_\_ times.

*adj.* relating to the long ago, particularly the historical period preceding the fall of the Western Roman Empire; very old

9. Driving is difficult for me because of my poor \_\_\_\_\_.

*n.* the ability to think about or see the future with imagination and intelligence; the faculty of being able to see

10. His relationship with her was completely \_\_\_\_\_.

*adj.* (of relationship or emotion) friendly or affectionate but not sexual

11. The company holds patents on core components of \_\_\_\_\_ jet printers.

*n.* a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification

12. The \_\_\_\_\_ of water is called ice.

*adj.* hard or firm; characterized by good substantial quality

13. The sun's \_\_\_\_\_ shone through the window and illuminated the room.

*n.* a long, sturdy piece of timber, metal, or other material used to support a structure or span a distance; a ray or stream of light emitted by a source

14. The committee abolished the controversial \_\_\_\_\_ system.

*n.* an extra amount of money that is added to payment as a present or reward for good work

15. The kids used colored \_\_\_\_\_ to create a mural on the pavement.

*n.* a soft, white, porous sedimentary rock composed of calcium carbonate, often used for drawing or writing on surfaces such as blackboards

ANSWERS: 8. ancient, 9. vision, 10. platonic, 11. laser, 12. solid-state, 13. beam, 14. bonus, 15. chalk



16. The young prince will soon \_\_\_\_\_ the throne.  
*v.* to consume all of someone's space, attention, or time
17. The freshwater \_\_\_\_\_ was home to many different types of fish and was a popular spot for fishing.  
*n.* a small, shallow lake
18. Their headquarters are in a \_\_\_\_\_ skyscraper.  
*adj.* of or belonging to the present time or recent times
19. The view from the \_\_\_\_\_ hilltop was breathtakingly beautiful.  
*adj.* located at a geographically distant place; remote or separated by distance; distant or not easily accessible
20. X-rays revealed a small tumor in his \_\_\_\_\_.  
*n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
21. His \_\_\_\_\_ showed highly positive results.  
*n.* the scientific test conducted to observe what happens and gain new knowledge
22. During the unloading, the container box \_\_\_\_\_ a clicking sound.  
*v.* to give off or send out something such as light, heat, sound, gas, etc.
23. They will \_\_\_\_\_ between various emotional states.  
*v.* to cause to move up or away after hitting a surface; to spring back
24. The snake \_\_\_\_\_ its way through the underbrush, silently stalking its prey.  
*v.* to move with a smooth wavelike motion; to have a wavy form or outline

ANSWERS: 16. occupy, 17. pond, 18. modern, 19. faraway, 20. brain, 21. experiments, 22. emits, 23. bounce, 24. undulated

25. 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
26. She \_\_\_\_\_ the money from her savings account to her checking account.  
*v.* to move, pass, or change from one person, place, or situation to another
27. The following example \_\_\_\_\_ that the capacity of each battery is the same.  
*v.* to think or accept something to be true without having proof of it; to take or begin to have power; to begin to exhibit a specific quality or appearance
28. The hypothesis is not yet \_\_\_\_\_ proven.  
*adv.* in a way that relates to science or is connected with science
29. He was \_\_\_\_\_ gifted.  
*adv.* as might be expected; by natural manners
30. The \_\_\_\_\_ count in his blood sample was found to be outside the normal range.  
*n.* a generic term used to describe various types of small biological cells or particles, such as red or white blood cells, or cells found in specific organs or tissues
31. The company divided the tasks into \_\_\_\_\_ segments to increase efficiency.  
*adj.* separate and distinct; not continuous; individually distinguishable
32. He studied the \_\_\_\_\_ of radiation.  
*n.* the science of matter and energy and their interactions

ANSWERS: 25. ripple, 26. transferred, 27. assumes, 28. scientifically, 29. naturally, 30. corpuscle, 31. discrete, 32. physics

33. The atmospheric \_\_\_\_\_ of the sun causes it to appear to be above the horizon when it is actually below it.
- n.* the bending or change in the direction of a ray of light, sound, or heat as it passes through a medium or travels from one medium to another
34. In terms of \_\_\_\_\_ he was head and shoulders above his classmates.
- n.* the ability to learn, comprehend, or make judgments or conclusions based on reasons
35. The construction worker used a \_\_\_\_\_ saw to cut through the stubborn sheet metal.
- n.* a solid material that is typically hard, shiny, malleable, fusible, and ductile, with good electrical and thermal conductivity, and often used as a structural material, a conductor of heat or electricity, or for decorative purposes
36. The investigation \_\_\_\_\_ several government agencies and is expected to take several months.
- v.* to include or affect someone or something as a necessary part of something else
37. 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
38. 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
39. 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

ANSWERS: 33. refraction, 34. intelligence, 35. metal, 36. involves, 37. packet, 38. particles, 39. distance

40. There are various hypotheses concerning the \_\_\_\_\_ of life.  
*n.* the first existence or beginning of something
41. Tourists frequently \_\_\_\_\_ the island's delicate natural balance.  
*v.* to interrupt someone who is trying to work, sleep, etc.
42. The phenomenon is \_\_\_\_\_ at optical wavelengths.  
*adj.* impossible or nearly impossible to see
43. The motion of planets can be described using \_\_\_\_\_ mechanics.  
*adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation
44. He did \_\_\_\_\_ pen-and-ink drawings in just a few days.  
*adj.* involving a lot of different things or parts in a way that is difficult to understand or analyze
45. He should \_\_\_\_\_ more with his colleagues.  
*v.* to communicate or react with somebody
46. To find drunk drivers, police conduct \_\_\_\_\_ tests.  
*adj.* made, done, or happening without method, conscious decision, or any regular pattern
47. Mozart was a musical \_\_\_\_\_.  
*n.* someone who has exceptional intellectual ability and originality
48. The \_\_\_\_\_ of the earth is divided into several layers including the crust, mantle, and core.  
*n.* a round object or geometric shape that is three-dimensional and symmetrical around a central point; a particular aspect or scope of life or activity

ANSWERS: 40. origin, 41. disturb, 42. invisible, 43. Newtonian, 44. complicated, 45. interact, 46. random, 47. genius, 48. sphere

49. The \_\_\_\_\_ of tectonic plates can result in new mountain ranges, such as the Himalayas or the Alps.
- n.* an instance of two or more objects or entities crashing into each other, usually resulting in damage, impact, or conflict
50. Big techs are now eager to develop \_\_\_\_\_ computers.
- n.* the smallest amount or unit of something, especially (electromagnetic) energy
51. The following \_\_\_\_\_ is currently being used to explain the phenomenon in question.
- n.* the information or arguments that someone provides to make something understandable or clear
52. I don't want to \_\_\_\_\_ for second best.
- v.* to reach an agreement of disagreement
53. The light \_\_\_\_\_ has burned out.
- n.* a rounded underground storage organ of some plants from which the plant grows; the rounded part of a cylindrical structure; electric lamp consisting of a glass ball
54. Ethics is a branch of \_\_\_\_\_.
- n.* the study of general and fundamental questions, such as those about existence, reason, knowledge, values, mind
55. NASA sent a \_\_\_\_\_ to study the atmosphere of Jupiter.
- n.* a tool used for testing or examining, especially for medical or scientific purposes, or an exploratory mission to a planet or other celestial body; (verb) to investigate, examine, or search into something

ANSWERS: 49. collision, 50. quantum, 51. explanation, 52. settle, 53. bulb, 54. philosophy, 55. probe

ANSWERS: