

# Englist.me



## Vocabulary Builder Reference from...

*Dennis Hong: My seven species of robot -- and how we created them | TED Talk*

[https://www.ted.com/talks/dennis\\_hong\\_my\\_seven\\_species\\_of\\_robot\\_and\\_how\\_we\\_created\\_them](https://www.ted.com/talks/dennis_hong_my_seven_species_of_robot_and_how_we_created_them)

### Advanced Words Only

#### IMPORTANT

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## Session 1: Word List

### stride

v. to walk with long steps in a particular direction; (noun) an important and positive progress

*synonym*: step, walk, march

(1) **stride** across a room, (2) **stride** down a slope

She **strides** confidently across the stage to accept her award.

### terrorize

v. to make someone feel extremely frightened by violence or threats

*synonym*: intimidate, frighten, threaten

(1) **terrorize** the prisoners, (2) **terrorize** boys into shutting up

The criminal gang **terrorized** innocent people.

### biped

n. an animal with two feet

*synonym*: hominoid

(1) **biped** robot, (2) a featherless **biped**

**Biped** walking encouraged the further evolution of humankind.

### pendulum

n. a weight hung from a fixed point used to regulate the movement of a clock or other mechanism

*synonym*: oscillator, balance, clock

(1) **pendulum** swings, (2) political **pendulum**

The **pendulum** clock was a familiar sight in the old house.

## locomotion

*n.* the action or ability to move from one place to another

*synonym*: movement, travel, mobility

(1) **locomotion** system, (2) **locomotion** control

The **locomotion** of the robotic arm was smooth and precise.

## long-range

*adj.* relating to or extending over a long distance, period of time, or range of possibilities

*synonym*: far-reaching, extended, distant

(1) **long-range** radar, (2) **long-range** weather forecast

The military uses **long-range** missiles to hit targets from far away.

## synthesize

*v.* to combine a substance to make a more complex product or compound

*synonym*: incorporate, amalgamate

(1) **synthesize** molecules, (2) **synthesize** information

The spider can **synthesize** multiple different silk proteins.

## motto

*n.* a phrase or slogan that expresses a guiding principle or goal

*synonym*: slogan, catchphrase, phrase

(1) the **motto** for safe traffic, (2) company **motto**

The company's **motto** is "Innovation and Service," which is reflected in its products and customer support.

## mechatronics

*n.* technology or a field of science that combines electronics and mechanical engineering

(1) **mechatronics** design, (2) control **mechatronics** apparatuses

Researchers at that university's **mechatronics** laboratory have launched a humanoid robot startup.

## reinvent

*v.* to change something so drastically that it looks to be completely new

*synonym* : recreate, remake, revive

(1) **reinvent** local dishes, (2) **reinvent** our life

They have tried to **reinvent** their grocery stores.

## tactile

*adj.* relating to the sense of touch; tangible or perceptible through the sense of touch

*synonym* : touchable, tangible, palpable

(1) **tactile** stimulation, (2) **tactile** feedback

The **tactile** sensation of the fabric was soft and smooth to the touch.

## steer

*v.* to control the direction or movement of a vehicle; to direct a course of action; to guide or motivate someone

*synonym* : guide, direct, control

(1) **steer** a steady course, (2) **steer** a conversation

The captain told him to **steer** the ship north.

## axle

*n.* a rod or spindle around which a wheel or pair of wheels revolves; a central shaft used to transmit power to machinery or vehicles

*synonym* : spindle, shaft, pivot

(1) **axle** grease, (2) rear **axle**

The manufacturer tested the **axles** on the truck to ensure they were durable enough to handle heavy loads.

## 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**.

## rover

*n.* a vehicle designed to travel over rough terrain, especially on the surface of a planet or moon

*synonym* : vehicle, robot, explorer

(1) **rover** mission, (2) lunar **rover**

The **rover** on Mars is gathering data on the planet's surface and sending it back to Earth.

## winch

*n.* a mechanical device consisting of a drum or cylinder around which a rope or chain can be wound, typically used for lifting or pulling heavy objects

*synonym* : hoist, windlass, pulley

(1) electric **winch**, (2) **winch-controlled** pulley

Construction workers use a **winch** mechanism to lift heavy materials to higher floors.

## exert

*v.* to put forth effort; to put into action; to bring into play

*synonym* : apply, use, maintain

(1) **exert** control, (2) **exert** influence

He **exerted** himself to lift the heavyweight.

## stabilize

*v.* to become or cause to become steady or unlikely to give way

*synonym* : brace, steady, secure

(1) **stabilize** prices, (2) **stabilize** blood sugar levels

The raising of interest rates **stabilizes** the inflation rate.

## robotic

*adj.* of or relating to mechanical robots; (robotics) the interdisciplinary branch of computer science and engineering with the practical use of robots

*synonym* : automated, mechanical, laborsaving

(1) **robotic** arm, (2) **robotic** guide operation

The surgeon removed the tumor using **robotic** video assistance.

## hexapod

*n.* an animal or machine with six legs

*synonym* : six-legged, six-legged creature, six-legged animal

(1) **hexapod** animal, (2) **hexapod** mechanism

The **hexapod** robot was able to move in multiple directions.

## gait

*n.* a person's manner of walking, running, or moving on foot; a particular pattern or style of movement or

### locomotion

*synonym* : pace, stride, step

(1) awkward **gait**, (2) brisk **gait**

The older woman's **gait** was slow and unsteady.

### unstructured

*adj.* not having a clear organization or arrangement

*synonym* : unorganized, unarranged, formless

(1) **unstructured** text, (2) **unstructured** information

The **unstructured** data took a lot of work to analyze and interpret.

### sinkage

*n.* the act or process of sinking or the state of being sunk;  
the amount or depth by which something sinks

*synonym* : subsidence, sinking, settling

(1) **sinkage** measurement, (2) soil **sinkage**

The ship's **sinkage** resulted from the heavy cargo it was carrying.

### ameba

*n.* a single-celled organism that typically has the shape of a small, round blob and moves by means of temporary projections called pseudopodia

*synonym* : protozoan, single-celled organism, unicellular organism

(1) **ameba** culture, (2) **ameba** movement

The pathogenetic **ameba** moved by extending and retracting its pseudopodia.

### chimera

*n.* (in Greek mythology) a fire-breathing creature with a lion's head, a goat's body, and a snake's tail; a thing that is illusory or impossible to achieve

*synonym* : delusion, illusion, figment

(1) **chimera** mouse, (2) interspecies **chimera**

Animal **chimeras** are created by combining multiple fertilized eggs.

### actuate

*v.* to cause a machine or equipment to start to work

*synonym* : motivate, spark, drive

(1) **actuate** the circuits, (2) **actuate** a parking brake  
A desire for success **actuated** her.

## blob

*n.* a small amount or drop of a thick liquid or sticky substance

*synonym* : chunk, lump, hunk

(1) a big **blob** of yellow, (2) a **blob** of jelly

A **blob** of ink fell on the floor.

## ligament

*n.* a band of tissue that connects bones or holds organs in place to support and stabilize the body

*synonym* : band, cord, tendon

(1) a **ligament** in the ankle, (2) cruciate **ligament**

The **ligaments** in the knee provide stability and support.

## prosthetic

*adj.* of or relating to an artificial part of the body, such as a limb, a heart, or a breast implant

(1) have **prosthetic** arms, (2) **prosthetic** limbs

New **prosthetic** joints are less prone to metal poisoning.

## compress

*v.* to press or squeeze together to make something take up less space

*synonym* : condense, constrict, squeeze

(1) **compress** the chest, (2) **compress** gas

She **compressed** the files into a single ZIP archive to save space on her computer.

## serpentine

*adj.* characterized by twists, turns, or curves shaped like a snake; sly, cunning, or devious in behavior or expression

*synonym* : twisting, winding, curving

(1) **serpentine** road, (2) **serpentine** design

The **serpentine** river snaked through the lush forest.

## anthropomorphic

*adj.* describing or relating to the attribution of human characteristics to non-human entities

*synonym* : human-like

(1) **anthropomorphic** agent, (2) **anthropomorphic** design  
The **anthropomorphic** robot was designed to have a human-like appearance.

## humanoid

*n.* a machine or creature that has a body shape similar to that of a human

*synonym*: android, anthropomorphic

(1) **humanoid** hand, (2) **humanoid** design

The **humanoid** robot was able to mimic human movements and expressions.

## kinematics

*n.* the branch of mechanics that deals with the motion of objects without considering the forces that cause the motion; the study of the geometric and algebraic properties of motion, such as displacement, velocity, and acceleration

*synonym*: movement, motion, mechanics

(1) **kinematics** analysis, (2) rotational **kinematics**

The **kinematics** equations he used accurately predicted the object's future position.

## umbilical

*n.* relating to a flexible cord-like structure that connects a developing fetus to the placenta in the mother's uterus during pregnancy, called umbilical cord; connected or corresponding closely to something essential, such as a source of nourishment or support

*synonym*: navel, belly button, cord

(1) **umbilical** blood, (2) **umbilical** hernia

The **umbilical** cord is a vital lifeline between a mother and her unborn baby.

## hertz

*n.* the unit of frequency, equal to one cycle per second, often used to describe the frequency of electromagnetic waves or electronic signals

*synonym*: frequency, cycles per second

(1) audio **hertz**, (2) tera- **hertz** radiation

The human ear can detect sounds with frequencies ranging

from 20 to 20,000 **hertz**.

## accelerometer

*n.* a device that measures acceleration or changes in motion, typically used in aerospace, automotive, and other engineering applications to monitor and control movement or to measure things like speed or vibration

*synonym*: sensor, g-sensor, gravimeter

(1) **accelerometer** reading, (2) high-precision

### **accelerometer**

The phone's **accelerometer** measures its movement and orientation in three-dimensional space.

## lithium

*n.* a soft, silvery-white metal that is highly reactive and used in batteries, alloy production, and medications for bipolar disorder

*synonym*: lithy, Li, salt

(1) **lithium** carbonate, (2) **lithium** mining

**Lithium-ion** batteries are commonly used in laptops, smartphones, and electric vehicles.

## tether

*v.* to tie or secure an animal, person, or object with a rope, chain, or other similar devices to prevent it from moving too far away; (noun) a rope or chain used to tie up or restrain an animal, such as a horse or dog

*synonym*: tie, fasten, secure

(1) **tether** a horse, (2) **tether** strap

The hiker **tethered** their dog to a tree while they camped for the night.

## spectator

*n.* someone present at an event, such as a sports game, play, or concert, to watch or observe it

*synonym*: onlooker, observer, viewer

(1) mass **spectator** sport, (2) **spectator** seat

She enjoyed watching the game as a **spectator**.

## groan

*v.* to make a low, moaning sound, often indicating pain, discomfort, or dissatisfaction



*synonym* : moan, grunt, sigh

(1) **groan** in pain, (2) **groan** for water

The sight of the huge pile of laundry made me **groan** with dread.

## symphony

*n.* a long musical composition in Western classical music for orchestra, usually with three or four main parts called movements

*synonym* : orchestra, harmony, concert

(1) a **symphony** orchestra, (2) a beautiful **symphony**

The frequent performances of the **symphony** prove its popularity.

## macho

*adj.* characterized by a strong sense of masculinity or male dominance, often in a way that is perceived as arrogant or aggressive

*synonym* : masculine, aggressive, virile

(1) **macho** culture, (2) maintain a **macho** image

His **macho** posturing was just a cover for his insecurities and lack of confidence.

## scribble

*v.* to write or draw carelessly and in a hurry

*synonym* : scabble, scrawl, jot

(1) **scribble** on paper, (2) **scribble** notes

The words were **scribbled** in pencil.

## handwriting

*n.* (also "penmanship") the particular way in which a person writes, as distinct from printing or typing

*synonym* : script, penmanship, calligraphy

(1) **handwriting** identification, (2) **handwriting** sample

The **handwriting** on the note was barely legible.

## decipher

*v.* to read or understand something that is written in code or in a difficult or obscure way

*synonym* : interpret, decode, translate

(1) **decipher** code, (2) **decipher** message

He spent hours trying to **decipher** the ancient text.

## ingenious

*adj.* showing inventiveness and ability or skill

*synonym* : creative, innovative, inventive

(1) **ingenious** device, (2) **ingenious** idea

I always look forward to reading his stories since they're so **ingenious**.

## eureka

*n.* exclamation of triumph on discovering something; realization or sudden insight

*synonym* : discovery, breakthrough, aha moment

(1) have a **eureka** moment, (2) shout "**eureka!**"

"**Eureka!**" he exclaimed, finally solving the problem.

## brainstorming

*n.* a group activity or business method in which a group of people meet and think about something at the same time to solve a problem or to create good ideas

(1) **brainstorming** session, (2) do a **brainstorming** about a new product

Many companies employ **brainstorming** as a good way of generating innovative ideas.

## wacky

*adj.* funny in a slightly odd, peculiar, irregular way

*synonym* : absurd, eccentric, ludicrous

(1) **wacky** value, (2) **wacky** plan for selling more books

His friend was a pretty wild and **wacky** character.

## electrify

*v.* to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something

*synonym* : wire, amaze, astonish

(1) **electrify** the audience, (2) **electrify** a manufacturing process

The product developed through years of research continues to **electrify** the market.



## Session 2: Spelling

1. sc\_\_\_\_\_le on paper  
*v.* to write or draw carelessly and in a hurry
2. ma\_\_o culture  
*adj.* characterized by a strong sense of masculinity or male dominance, often in a way that is perceived as arrogant or aggressive
3. a sy\_\_\_\_\_ny orchestra  
*n.* a long musical composition in Western classical music for orchestra, usually with three or four main parts called movements
4. st\_\_\_\_\_ze blood sugar levels  
*v.* to become or cause to become steady or unlikely to give way
5. st\_\_r a steady course  
*v.* to control the direction or movement of a vehicle; to direct a course of action; to guide or motivate someone
6. a beautiful sy\_\_\_\_\_ny  
*n.* a long musical composition in Western classical music for orchestra, usually with three or four main parts called movements
7. bi\_\_d robot  
*n.* an animal with two feet
8. begin to r\_t  
*v.* to decay, or cause something to decay, naturally and gradually
9. ac\_\_\_\_\_e a parking brake  
*v.* to cause a machine or equipment to start to work
10. loc\_\_\_\_\_on system  
*n.* the action or ability to move from one place to another

ANSWERS: 1. scribble, 2. macho, 3. symphony, 4. stabilize, 5. steer, 6. symphony, 7. biped, 8. rot, 9. actuate, 10. locomotion

11. st\_\_\_e across a room      *v.* to walk with long steps in a particular direction; (noun) an important and positive progress
12. rotational kin\_\_\_\_\_cs      *n.* the branch of mechanics that deals with the motion of objects without considering the forces that cause the motion; the study of the geometric and algebraic properties of motion, such as displacement, velocity, and acceleration
13. re\_\_\_\_\_nt local dishes      *v.* to change something so drastically that it looks to be completely new
14. in\_\_\_\_\_on research      *n.* the ability to understand or know something without reasoning or evidence; a feeling that guides a person to do or believe something without fully understanding why
15. sc\_\_\_\_\_le notes      *v.* to write or draw carelessly and in a hurry
16. maintain a ma\_\_o image      *adj.* characterized by a strong sense of masculinity or male dominance, often in a way that is perceived as arrogant or aggressive
17. a li\_\_\_\_\_nt in the ankle      *n.* a band of tissue that connects bones or holds organs in place to support and stabilize the body
18. li\_\_\_\_\_m carbonate      *n.* a soft, silvery-white metal that is highly reactive and used in batteries, alloy production, and medications for bipolar disorder
19. han\_\_\_\_\_ng identification      *n.* (also "penmanship") the particular way in which a person writes, as distinct from printing or typing

ANSWERS: 11. stride, 12. kinematics, 13. reinvent, 14. intuition, 15. scribble, 16. macho, 17. ligament, 18. lithium, 19. handwriting

20. syn\_\_\_\_\_ze information      *v.* to combine a substance to make a more complex product or compound
21. wa\_\_y plan for selling more books      *adj.* funny in a slightly odd, peculiar, irregular way
22. gr\_\_\_\_\_e with each other      *v.* to make a strenuous effort to solve a problem; to engage in a close fight or conflict without weapons
23. te\_\_\_r strap      *v.* to tie or secure an animal, person, or object with a rope, chain, or other similar devices to prevent it from moving too far away; (noun) a rope or chain used to tie up or restrain an animal, such as a horse or dog
24. ro\_\_r mission      *n.* a vehicle designed to travel over rough terrain, especially on the surface of a planet or moon
25. a handy ga\_\_\_t      *n.* a small tool or device that is useful for a particular job
26. gr\_\_n in pain      *v.* to make a low, moaning sound, often indicating pain, discomfort, or dissatisfaction
27. tera-he\_\_z radiation      *n.* the unit of frequency, equal to one cycle per second, often used to describe the frequency of electromagnetic waves or electronic signals
28. uns\_\_\_\_\_red text      *adj.* not having a clear organization or arrangement
29. a big b\_\_b of yellow      *n.* a small amount or drop of a thick liquid or sticky substance

ANSWERS: 20. synthesize, 21. wacky, 22. grapple, 23. tether, 24. rover, 25. gadget, 26. groan, 27. hertz, 28. unstructured, 29. blob



39. electric wi\_\_h *n.* a mechanical device consisting of a drum or cylinder around which a rope or chain can be wound, typically used for lifting or pulling heavy objects
40. kin\_\_\_\_\_cs analysis *n.* the branch of mechanics that deals with the motion of objects without considering the forces that cause the motion; the study of the geometric and algebraic properties of motion, such as displacement, velocity, and acceleration
41. in\_\_\_\_\_us idea *adj.* showing inventiveness and ability or skill
42. ant\_\_\_\_\_hic agent *adj.* describing or relating to the attribution of human characteristics to non-human entities
43. control mec\_\_\_\_\_ics apparatuses *n.* technology or a field of science that combines electronics and mechanical engineering
44. awkward g\_\_t *n.* a person's manner of walking, running, or moving on foot; a particular pattern or style of movement or locomotion
45. creative in\_\_\_\_\_on *n.* the ability to understand or know something without reasoning or evidence; a feeling that guides a person to do or believe something without fully understanding why
46. st\_\_r a conversation *v.* to control the direction or movement of a vehicle; to direct a course of action; to guide or motivate someone
47. mec\_\_\_\_\_ics design *n.* technology or a field of science that combines electronics and mechanical engineering

ANSWERS: 39. winch, 40. kinematics, 41. ingenious, 42. anthropomorphic, 43. mechatronics, 44. gait, 45. intuition, 46. steer, 47. mechatronics



48. ti\_\_\_r with the bill *v.* to make repairs, adjustments, or improvements to something, especially in an experimental or makeshift way
49. hu\_\_\_\_\_id hand *n.* a machine or creature that has a body shape similar to that of a human
50. de\_\_\_\_\_er message *v.* to read or understand something that is written in code or in a difficult or obscure way
51. a b\_\_b of jelly *n.* a small amount or drop of a thick liquid or sticky substance
52. ro\_\_\_\_\_c guide operation *adj.* of or relating to mechanical robots; (robotics) the interdisciplinary branch of computer science and engineering with the practical use of robots
53. he\_\_\_\_\_d animal *n.* an animal or machine with six legs
54. ac\_\_\_\_\_e the circuits *v.* to cause a machine or equipment to start to work
55. cruciate li\_\_\_\_\_nt *n.* a band of tissue that connects bones or holds organs in place to support and stabilize the body
56. gr\_\_n for water *v.* to make a low, moaning sound, often indicating pain, discomfort, or dissatisfaction
57. uns\_\_\_\_\_red information *adj.* not having a clear organization or arrangement
58. k\_n of the person *n.* knowledge, perception, understanding, or range of sight; (verb) to be aware of or know

ANSWERS: 48. tinker, 49. humanoid, 50. decipher, 51. blob, 52. robotic, 53. hexapod, 54. actuate, 55. ligament, 56. groan, 57. unstructured, 58. ken

59. gr\_\_\_\_e with problem      *v.* to make a strenuous effort to solve a problem; to engage in a close fight or conflict without weapons
60. have pro\_\_\_\_ic arms      *adj.* of or relating to an artificial part of the body, such as a limb, a heart, or a breast implant
61. lunar ro\_\_r      *n.* a vehicle designed to travel over rough terrain, especially on the surface of a planet or moon
62. pro\_\_\_\_ic limbs      *adj.* of or relating to an artificial part of the body, such as a limb, a heart, or a breast implant
63. re\_\_\_\_nt our life      *v.* to change something so drastically that it looks to be completely new
64. a\_\_e grease      *n.* a rod or spindle around which a wheel or pair of wheels revolves; a central shaft used to transmit power to machinery or vehicles
65. in\_\_\_\_us device      *adj.* showing inventiveness and ability or skill
66. audio he\_\_z      *n.* the unit of frequency, equal to one cycle per second, often used to describe the frequency of electromagnetic waves or electronic signals
67. st\_\_\_e down a slope      *v.* to walk with long steps in a particular direction; (noun) an important and positive progress
68. syn\_\_\_\_ze molecules      *v.* to combine a substance to make a more complex product or compound

ANSWERS: 59. grapple, 60. prosthetic, 61. rover, 62. prosthetic, 63. reinvent, 64. axle, 65. ingenious, 66. hertz, 67. stride, 68. synthesize

69. ex\_\_t influence *v.* to put forth effort; to put into action; to bring into play
70. li\_\_\_\_m mining *n.* a soft, silvery-white metal that is highly reactive and used in batteries, alloy production, and medications for bipolar disorder
71. bra\_\_\_\_\_ing session *n.* a group activity or business method in which a group of people meet and think about something at the same time to solve a problem or to create good ideas
72. ti\_\_\_r with the settings *v.* to make repairs, adjustments, or improvements to something, especially in an experimental or makeshift way
73. st\_\_\_\_\_ze prices *v.* to become or cause to become steady or unlikely to give way
74. ch\_\_\_\_\_a mouse *n.* (in Greek mythology) a fire-breathing creature with a lion's head, a goat's body, and a snake's tail; a thing that is illusory or impossible to achieve
75. han\_\_\_\_\_ng sample *n.* (also "penmanship") the particular way in which a person writes, as distinct from printing or typing
76. interspecies ch\_\_\_\_\_a *n.* (in Greek mythology) a fire-breathing creature with a lion's head, a goat's body, and a snake's tail; a thing that is illusory or impossible to achieve
77. high-precision acc\_\_\_\_\_ter *n.* a device that measures acceleration or changes in motion, typically used in aerospace, automotive, and other engineering applications to monitor and control movement or to measure things like speed or vibration

ANSWERS: 69. exert, 70. lithium, 71. brainstorming, 72. tinker, 73. stabilize, 74. chimera, 75. handwriting, 76. chimera, 77. accelerometer

78. company mo\_\_o *n.* a phrase or slogan that expresses a guiding principle or goal
79. shout "eu\_\_\_a!" *n.* exclamation of triumph on discovering something; realization or sudden insight
80. loc\_\_\_\_\_on control *n.* the action or ability to move from one place to another
81. lon\_\_\_\_\_ge weather forecast *adj.* relating to or extending over a long distance, period of time, or range of possibilities
82. brisk g\_\_t *n.* a person's manner of walking, running, or moving on foot; a particular pattern or style of movement or locomotion
83. co\_\_\_\_\_ss the chest *v.* to press or squeeze together to make something take up less space
84. mass sp\_\_\_\_\_or sport *n.* someone present at an event, such as a sports game, play, or concert, to watch or observe it
85. hu\_\_\_\_\_id design *n.* a machine or creature that has a body shape similar to that of a human
86. te\_\_\_r a horse *v.* to tie or secure an animal, person, or object with a rope, chain, or other similar devices to prevent it from moving too far away; (noun) a rope or chain used to tie up or restrain an animal, such as a horse or dog
87. the mo\_\_o for safe traffic *n.* a phrase or slogan that expresses a guiding principle or goal
88. am\_\_a movement *n.* a single-celled organism that typically has the shape of a small, round blob and moves by means of temporary projections called pseudopodia

ANSWERS: 78. motto, 79. eureka, 80. locomotion, 81. long-range, 82. gait, 83. compress, 84. spectator, 85. humanoid, 86. tether, 87. motto, 88. ameba

89. um\_\_\_\_\_al blood *n.* relating to a flexible cord-like structure that connects a developing fetus to the placenta in the mother's uterus during pregnancy, called umbilical cord; connected or corresponding closely to something essential, such as a source of nourishment or support
90. co\_\_\_\_\_ss gas *v.* to press or squeeze together to make something take up less space
91. wi\_\_h-controlled pulley *n.* a mechanical device consisting of a drum or cylinder around which a rope or chain can be wound, typically used for lifting or pulling heavy objects
92. ant\_\_\_\_\_hic design *adj.* describing or relating to the attribution of human characteristics to non-human entities
93. ta\_\_\_\_\_e stimulation *adj.* relating to the sense of touch; tangible or perceptible through the sense of touch
94. have a eu\_\_\_a moment *n.* exclamation of triumph on discovering something; realization or sudden insight
95. te\_\_\_\_\_ze the prisoners *v.* to make someone feel extremely frightened by violence or threats
96. ser\_\_\_\_\_ne design *adj.* characterized by twists, turns, or curves shaped like a snake; sly, cunning, or devious in behavior or expression
97. um\_\_\_\_\_al hernia *n.* relating to a flexible cord-like structure that connects a developing fetus to the placenta in the mother's uterus during pregnancy, called umbilical cord; connected or corresponding closely to something essential, such as a source of nourishment or support

ANSWERS: 89. umbilical, 90. compress, 91. winch, 92. anthropomorphic, 93. tactile, 94. eureka, 95. terrorize, 96. serpentine, 97. umbilical

98. a featherless bi\_\_d *n.* an animal with two feet
99. el\_\_\_\_\_fy the audience *v.* to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something
100. soil si\_\_\_\_\_e *n.* the act or process of sinking or the state of being sunk; the amount or depth by which something sinks
101. ta\_\_\_\_\_e feedback *adj.* relating to the sense of touch; tangible or perceptible through the sense of touch
102. el\_\_\_\_\_fy a manufacturing process *v.* to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something
103. rear a\_\_e *n.* a rod or spindle around which a wheel or pair of wheels revolves; a central shaft used to transmit power to machinery or vehicles
104. time-saving ga\_\_\_\_t *n.* a small tool or device that is useful for a particular job
105. he\_\_\_\_\_d mechanism *n.* an animal or machine with six legs
106. si\_\_\_\_\_e measurement *n.* the act or process of sinking or the state of being sunk; the amount or depth by which something sinks
107. wa\_\_y value *adj.* funny in a slightly odd, peculiar, irregular way
108. am\_\_a culture *n.* a single-celled organism that typically has the shape of a small, round blob and moves by means of temporary projections called pseudopodia

ANSWERS: 98. biped, 99. electrify, 100. sinkage, 101. tactile, 102. electrify, 103. axle, 104. gadget, 105. hexapod, 106. sinkage, 107. wacky, 108. ameba

109. lon\_\_\_\_\_ge radar                      *adj.* relating to or extending over a long distance, period of time, or range of possibilities
110. r\_t with age                              *v.* to decay, or cause something to decay, naturally and gradually
111. de\_\_\_\_\_er code                      *v.* to read or understand something that is written in code or in a difficult or obscure way
112. te\_\_\_\_\_ze boys into shutting up                      *v.* to make someone feel extremely frightened by violence or threats

ANSWERS: 109. long-range, 110. rot, 111. decipher, 112. terrorize

## Session 3: Fill in the Blanks

1. The military uses \_\_\_\_\_ missiles to hit targets from far away.  
*adj.* relating to or extending over a long distance, period of time, or range of possibilities
2. The \_\_\_\_\_ of the robotic arm was smooth and precise.  
*n.* the action or ability to move from one place to another
3. The criminal gang \_\_\_\_\_ innocent people.  
*v.* to make someone feel extremely frightened by violence or threats
4. The \_\_\_\_\_ cord is a vital lifeline between a mother and her unborn baby.  
*n.* relating to a flexible cord-like structure that connects a developing fetus to the placenta in the mother's uterus during pregnancy, called umbilical cord; connected or corresponding closely to something essential, such as a source of nourishment or support
5. A desire for success \_\_\_\_\_ her.  
*v.* to cause a machine or equipment to start to work
6. I always look forward to reading his stories since they're so \_\_\_\_\_.  
*adj.* showing inventiveness and ability or skill
7. The surgeon removed the tumor using \_\_\_\_\_ video assistance.  
*adj.* of or relating to mechanical robots; (robotics) the interdisciplinary branch of computer science and engineering with the practical use of robots
8. New \_\_\_\_\_ joints are less prone to metal poisoning.  
*adj.* of or relating to an artificial part of the body, such as a limb, a heart, or a breast implant

ANSWERS: 1. long-range, 2. locomotion, 3. terrorized, 4. umbilical, 5. actuated, 6. ingenious, 7. robotic, 8. prosthetic



9. The ship's \_\_\_\_\_ resulted from the heavy cargo it was carrying.  
*n.* the act or process of sinking or the state of being sunk; the amount or depth by which something sinks
10. The \_\_\_\_\_ robot was able to mimic human movements and expressions.  
*n.* a machine or creature that has a body shape similar to that of a human
11. The \_\_\_\_\_ on Mars is gathering data on the planet's surface and sending it back to Earth.  
*n.* a vehicle designed to travel over rough terrain, especially on the surface of a planet or moon
12. Some studies suggest that people's \_\_\_\_\_ can be influenced by their experiences and biases.  
*n.* the ability to understand or know something without reasoning or evidence; a feeling that guides a person to do or believe something without fully understanding why
13. The \_\_\_\_\_ sensation of the fabric was soft and smooth to the touch.  
*adj.* relating to the sense of touch; tangible or perceptible through the sense of touch
14. I found the kitchen \_\_\_\_\_ that will serve as a bottle opener in the store.  
*n.* a small tool or device that is useful for a particular job
15. The captain told him to \_\_\_\_\_ the ship north.  
*v.* to control the direction or movement of a vehicle; to direct a course of action; to guide or motivate someone
16. They have tried to \_\_\_\_\_ their grocery stores.  
*v.* to change something so drastically that it looks to be completely new

ANSWERS: 9. sinkage, 10. humanoid, 11. rover, 12. intuitions, 13. tactile, 14. gadget, 15. steer, 16. reinvent

17. The phone's \_\_\_\_\_ measures its movement and orientation in three-dimensional space.
- n.* a device that measures acceleration or changes in motion, typically used in aerospace, automotive, and other engineering applications to monitor and control movement or to measure things like speed or vibration
18. She \_\_\_\_\_ the files into a single ZIP archive to save space on her computer.
- v.* to press or squeeze together to make something take up less space
19. He spent hours trying to \_\_\_\_\_ the ancient text.
- v.* to read or understand something that is written in code or in a difficult or obscure way
20. The spider can \_\_\_\_\_ multiple different silk proteins.
- v.* to combine a substance to make a more complex product or compound
21. Many companies employ \_\_\_\_\_ as a good way of generating innovative ideas.
- n.* a group activity or business method in which a group of people meet and think about something at the same time to solve a problem or to create good ideas
22. He \_\_\_\_\_ himself to lift the heavyweight.
- v.* to put forth effort; to put into action; to bring into play
23. The frequent performances of the \_\_\_\_\_ prove its popularity.
- n.* a long musical composition in Western classical music for orchestra, usually with three or four main parts called movements
24. The human ear can detect sounds with frequencies ranging from 20 to 20,000 \_\_\_\_\_.
- n.* the unit of frequency, equal to one cycle per second, often used to describe the frequency of electromagnetic waves or electronic signals

ANSWERS: 17. accelerometer, 18. compressed, 19. decipher, 20. synthesize, 21. brainstorming, 22. exerted, 23. symphony, 24. hertz

25. Animal \_\_\_\_\_ are created by combining multiple fertilized eggs.
- n.* (in Greek mythology) a fire-breathing creature with a lion's head, a goat's body, and a snake's tail; a thing that is illusory or impossible to achieve
26. The \_\_\_\_\_ on the note was barely legible.
- n.* (also "penmanship") the particular way in which a person writes, as distinct from printing or typing
27. The sight of the huge pile of laundry made me \_\_\_\_\_ with dread.
- v.* to make a low, moaning sound, often indicating pain, discomfort, or dissatisfaction
28. The pathogenetic \_\_\_\_\_ moved by extending and retracting its pseudopodia.
- n.* a single-celled organism that typically has the shape of a small, round blob and moves by means of temporary projections called pseudopodia
29. A \_\_\_\_\_ of ink fell on the floor.
- n.* a small amount or drop of a thick liquid or sticky substance
30. The \_\_\_\_\_ in the knee provide stability and support.
- n.* a band of tissue that connects bones or holds organs in place to support and stabilize the body
31. She enjoyed watching the game as a \_\_\_\_\_.
- n.* someone present at an event, such as a sports game, play, or concert, to watch or observe it
32. The product developed through years of research continues to \_\_\_\_\_ the market.
- v.* to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something

ANSWERS: 25. chimeras, 26. handwriting, 27. groan, 28. ameba, 29. blob, 30. ligaments, 31. spectator, 32. electrify

33. The \_\_\_\_\_ data took a lot of work to analyze and interpret.  
*adj.* not having a clear organization or arrangement
34. He needed to \_\_\_\_\_ with structural reforms to improve the company's revenue.  
*v.* to make a strenuous effort to solve a problem; to engage in a close fight or conflict without weapons
35. The hiker \_\_\_\_\_ their dog to a tree while they camped for the night.  
*v.* to tie or secure an animal, person, or object with a rope, chain, or other similar devices to prevent it from moving too far away; (noun) a rope or chain used to tie up or restrain an animal, such as a horse or dog
36. The words were \_\_\_\_\_ in pencil.  
*v.* to write or draw carelessly and in a hurry
37. "\_\_\_\_\_ he exclaimed, finally solving the problem.  
*n.* exclamation of triumph on discovering something; realization or sudden insight
38. The manufacturer tested the \_\_\_\_\_ on the truck to ensure they were durable enough to handle heavy loads.  
*n.* a rod or spindle around which a wheel or pair of wheels revolves; a central shaft used to transmit power to machinery or vehicles
39. The company's \_\_\_\_\_ is "Innovation and Service," which is reflected in its products and customer support.  
*n.* a phrase or slogan that expresses a guiding principle or goal
40. The \_\_\_\_\_ robot was designed to have a human-like appearance.  
*adj.* describing or relating to the attribution of human characteristics to non-human entities

ANSWERS: 33. unstructured, 34. grapple, 35. tethered, 36. scribbled, 37. Eureka!", 38. axles, 39. motto, 40. anthropomorphic

41. Construction workers use a \_\_\_\_\_ mechanism to lift heavy materials to higher floors.
- n.* a mechanical device consisting of a drum or cylinder around which a rope or chain can be wound, typically used for lifting or pulling heavy objects
42. The \_\_\_\_\_ river snaked through the lush forest.
- adj.* characterized by twists, turns, or curves shaped like a snake; sly, cunning, or devious in behavior or expression
43. The raising of interest rates \_\_\_\_\_ the inflation rate.
- v.* to become or cause to become steady or unlikely to give way
44. Researchers at that university's \_\_\_\_\_ laboratory have launched a humanoid robot startup.
- n.* technology or a field of science that combines electronics and mechanical engineering
45. She \_\_\_\_\_ confidently across the stage to accept her award.
- v.* to walk with long steps in a particular direction; (noun) an important and positive progress
46. The \_\_\_\_\_ clock was a familiar sight in the old house.
- n.* a weight hung from a fixed point used to regulate the movement of a clock or other mechanism
47. His \_\_\_\_\_ posturing was just a cover for his insecurities and lack of confidence.
- adj.* characterized by a strong sense of masculinity or male dominance, often in a way that is perceived as arrogant or aggressive
48. He spent the afternoon \_\_\_\_\_ with his car engine.
- v.* to make repairs, adjustments, or improvements to something, especially in an experimental or makeshift way

ANSWERS: 41. winch, 42. serpentine, 43. stabilizes, 44. mechatronics, 45. strides, 46. pendulum, 47. macho, 48. tinkering

49. The older woman's \_\_\_\_\_ was slow and unsteady.
- n.* a person's manner of walking, running, or moving on foot; a particular pattern or style of movement or locomotion
50. Please refrigerate the meat, or it will \_\_\_\_\_.
- v.* to decay, or cause something to decay, naturally and gradually
51. His friend was a pretty wild and \_\_\_\_\_ character.
- adj.* funny in a slightly odd, peculiar, irregular way
52. \_\_\_\_\_ walking encouraged the further evolution of humankind.
- n.* an animal with two feet
53. He had a good \_\_\_\_\_ of the city and could easily find his way around.
- n.* knowledge, perception, understanding, or range of sight; (verb) to be aware of or know
54. \_\_\_\_\_ batteries are commonly used in laptops, smartphones, and electric vehicles.
- n.* a soft, silvery-white metal that is highly reactive and used in batteries, alloy production, and medications for bipolar disorder
55. The \_\_\_\_\_ robot was able to move in multiple directions.
- n.* an animal or machine with six legs
56. The \_\_\_\_\_ equations he used accurately predicted the object's future position.
- n.* the branch of mechanics that deals with the motion of objects without considering the forces that cause the motion; the study of the geometric and algebraic properties of motion, such as displacement, velocity, and acceleration

ANSWERS: 49. gait, 50. rot, 51. wacky, 52. Biped, 53. ken, 54. Lithium-ion, 55. hexapod, 56. kinematics

ANSWERS: