

# Englist.me



## Vocabulary Builder Reference from...

*Helen Czerski: The fascinating physics of everyday life | TED Talk*

[https://www.ted.com/talks/helen\\_czerski\\_the\\_fascinating\\_physics\\_of\\_everyday\\_life](https://www.ted.com/talks/helen_czerski_the_fascinating_physics_of_everyday_life)

### Advanced Words Only

#### IMPORTANT

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## Session 1: Word List

### 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.

### hieroglyph

*n.* a writing system using picture symbols, such as the one used in ancient Egypt

*synonym*: character, cipher, figure

(1) Egyptian **hieroglyph**, (2) the **hieroglyph** of the bird

Each beautiful **hieroglyph** represents either an idea or a sound.

### broaden

*v.* to make or become wider or more extensive; to make or become more tolerant or liberal.

*synonym*: expand, widen, enlarge

(1) **broaden** students' knowledge, (2) **broaden** their horizon

The company **broadened** its product line to include more customer options.

### confer

*v.* to have a meeting or discussion to come to a decision or agreement or exchange ideas; to bestow something

*synonym*: consult, meet, discuss

(1) **confer** degree, (2) **confer** honor

The leaders of the two countries met to **confer** on the issue.

## grapple

*v.* to make a strenuous effort to solve a problem; to engage in a close fight or conflict without weapons

*synonym*: brawl, scuffle, wrestle

(1) **grapple** with problem, (2) **grapple** with each other

He needed to **grapple** with structural reforms to improve the company's revenue.

## deterministic

*adj.* characterized by an assumption of cause and effect and the absence of chance or randomness, often used to describe scientific or engineering calculations

*synonym*: predictable, predetermined, certain

(1) **deterministic** approach, (2) **deterministic** system

The **deterministic** algorithm always produces the same result for a given input.

## 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.

## stern

*adj.* serious, unyielding, or strict in manner or attitude

*synonym*: severe, harsh, strict

(1) **stern** warning, (2) a **stern** look

The students' antics did not amuse the **stern** teacher.

## collide

*v.* to hit something violently when moving

*synonym*: clash, slam, contradict

(1) **collide** head-on, (2) **collide** in midair

The interests of the two countries **collide**.

## inaccessible

*adj.* unable to travel to or reach; not available

*synonym*: inapproachable, unreachable, remote

(1) **inaccessible** to an unauthorized user, (2) **inaccessible** areas

Heavy snow made it **inaccessible** to go to the mountain village.

## cosmology

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

*synonym*: cosmogony

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

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

## volcano

*n.* a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.

*synonym*: mount, peak, crater

(1) **volcano** alert level, (2) active **volcano**

The island was formed by a **volcano** millions of years ago.

## clarinet

*n.* a musical instrument of the woodwind family, with a single reed, a cylindrical bore, and a curved mouthpiece, known for its versatility and rich, warm tone

*synonym*: reed instrument

(1) **clarinet** reed, (2) **clarinet** player

The **clarinet's** unique sound added to the jazz ensemble.

## dolphin

*n.* a marine mammal that typically has a beaklike snout, a streamlined body, and flippers and that feeds on fish and squid

*synonym*: porpoise, cetacean, marine mammal

(1) **dolphin** show, (2) **dolphin-watching** tour

The large group of **dolphins** swam gracefully in the ocean, jumping out of the water now and then.

## 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.

## thermodynamics

*n.* the area of physics that deals with heat, work, and temperature and their relation to energy, entropy, and the physical properties of matter and radiation

(1) applied **thermodynamics**, (2) the laws of **thermodynamics**

The second law of **thermodynamics** denies the existence of a perpetual motion engine.

## 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**.

## sect

*n.* a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream

*synonym*: group, faction, cult

(1) **sect** beliefs, (2) secret **sect**

The minority **sect** believed in a set of unconventional religious practices.

## gyroscope

*n.* a device consisting of a spinning wheel or disk mounted in such a way that it can rotate freely in any direction, used to maintain balance, stability, or orientation in navigation, aerospace, or other systems

*synonym*: gyro, stabilizer, compass

(1) **gyroscope** sensor, (2) inertial navigation **gyroscope**

The **gyroscope** in the spacecraft helps to stabilize its orientation during the mission.

## indefinitely

*adv.* without any fixed or definite limit; for an unknown or unspecified period of time

*synonym*: endlessly, permanently, perpetually

(1) postpone a meeting **indefinitely**, (2) **indefinitely**  
suspended

The construction project has been delayed **indefinitely** due to the pandemic.

## orient

v. to position or adjust someone or something for a particular purpose; (noun) the countries of Asia

*synonym*: position, align, adjust

(1) **orient** my thinking, (2) the exotic flavor of the **Orient**

She took a moment to **orient** herself in the unfamiliar city.

## afterward

*adv.* after the time mentioned

*synonym*: later, thereafter, following

(1) a few years **afterward**, (2) go there **afterward**

We will explain the countermeasure concerning this problem **afterward**.

## tug

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

*synonym*: draw, jerk, pull

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

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

## mundane

*adj.* very ordinary and therefore lacking interest or excitement

*synonym*: ordinary, everyday, prosaic

(1) **mundane** affairs, (2) **mundane** objects

After returning from the war, he had a pretty **mundane** life.

## fizz

v. to make a hissing or bubbling sound, often accompanied by the release of gas or effervescence; to be lively, exciting, or effervescent in character or atmosphere; (noun) the sound, process, or result of something producing small bubbles

*synonym*: fizzle, effervesce, bubble

(1) **fizz** up after the speech, (2) **fizz** with life

The soda began to **fizz** when I opened the can, spilling over the top and onto my shirt.

## raisin

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

*synonym* : dried grape, sultana, currant

(1) **raisin** pie, (2) **raisin** oatmeal cookies

The **raisin** bread had a deliciously sweet flavor.

## secondly

*adv.* used to introduce the second point or item in a list or series of statements, considerations, etc.

*synonym* : in the second place, next, subsequently

(1) **secondly** connected, (2) **secondly**, it is important

Firstly, we will discuss the budget; **secondly**, we will go over the schedule.

## viscosity

*n.* the state or quality of being thick, sticky, and semi-fluid in consistency; resistance to flow

*synonym* : thickness, consistency, texture

(1) high **viscosity**, (2) dynamic **viscosity**

The **viscosity** of the oil made it difficult to pour.

## posh

*adj.* elegant, fashionable, or luxurious, often to an excessive or ostentatious degree; associated with the upper classes or a high level of social status

*synonym* : elegant, fancy, luxurious

(1) **posh** district, (2) **posh** restaurant

The CEO's office was decorated in a **posh** and elegant style.

## oversea

*adj.* situated or operating beyond national boundaries; in, from, or to foreign countries

*synonym* : foreign, abroad, international

(1) **oversea** shipments, (2) for **oversea** use

The company enhanced **oversea** operations to tap into new markets.

## helpless

*adj.* unable to take care of oneself or to do things without help

*synonym*: defenseless, powerless, susceptible

(1) **helpless** baby, (2) **helpless** victims

I feel so **helpless** without you.

## embarrass

*v.* to cause someone to feel awkward, worried, or ashamed

*synonym*: disconcert, unsettle, agitate

(1) **embarrass** political enemy, (2) **embarrass** my project

He looked for an opportunity to **embarrass** that actor in public.

## Session 2: Spelling

1. for ov\_\_\_\_a use *adj.* situated or operating beyond national boundaries; in, from, or to foreign countries
2. st\_\_n warning *adj.* serious, unyielding, or strict in manner or attitude
3. cl\_\_\_\_et player *n.* a musical instrument of the woodwind family, with a single reed, a cylindrical bore, and a curved mouthpiece, known for its versatility and rich, warm tone
4. r\_t with age *v.* to decay, or cause something to decay, naturally and gradually
5. det\_\_\_\_\_tic system *adj.* characterized by an assumption of cause and effect and the absence of chance or randomness, often used to describe scientific or engineering calculations
6. he\_\_\_\_ss victims *adj.* unable to take care of oneself or to do things without help
7. p\_\_h restaurant *adj.* elegant, fashionable, or luxurious, often to an excessive or ostentatious degree; associated with the upper classes or a high level of social status
8. t\_g at his hand *v.* to pull something quickly and hard, often several times
9. the laws of the\_\_\_\_\_ics *n.* the area of physics that deals with heat, work, and temperature and their relation to energy, entropy, and the physical properties of matter and radiation

ANSWERS: 1. oversea, 2. stern, 3. clarinet, 4. rot, 5. deterministic, 6. helpless, 7. posh, 8. tug, 9. thermodynamics



10. the exotic flavor of the Or\_\_\_t      *v.* to position or adjust someone or something for a particular purpose; (noun) the countries of Asia
11. begin to r\_t      *v.* to decay, or cause something to decay, naturally and gradually
12. cl\_\_\_\_\_et reed      *n.* a musical instrument of the woodwind family, with a single reed, a cylindrical bore, and a curved mouthpiece, known for its versatility and rich, warm tone
13. a st\_\_n look      *adj.* serious, unyielding, or strict in manner or attitude
14. theoretical ph\_\_\_\_\_st      *n.* a scientist who specializes in the field of physics
15. or\_\_\_t my thinking      *v.* to position or adjust someone or something for a particular purpose; (noun) the countries of Asia
16. modern co\_\_\_\_\_gy      *n.* the scientific study of the nature and origin of the universe
17. gr\_\_\_\_\_e with problem      *v.* to make a strenuous effort to solve a problem; to engage in a close fight or conflict without weapons
18. ina\_\_\_\_\_ble areas      *adj.* unable to travel to or reach; not available
19. se\_\_\_\_\_ly connected      *adv.* used to introduce the second point or item in a list or series of statements, considerations, etc.
20. dynamic vi\_\_\_\_\_ty      *n.* the state or quality of being thick, sticky, and semi-fluid in consistency; resistance to flow

ANSWERS: 10. orient, 11. rot, 12. clarinet, 13. stern, 14. physicist, 15. orient, 16. cosmology, 17. grapple, 18. inaccessible, 19. secondly, 20. viscosity

21. 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
22. Ne\_\_\_\_\_an physics *adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation
23. go there af\_\_\_\_\_rd *adv.* after the time mentioned
24. mu\_\_\_\_\_e affairs *adj.* very ordinary and therefore lacking interest or excitement
25. physical co\_\_\_\_\_gy *n.* the scientific study of the nature and origin of the universe
26. inertial navigation gy\_\_\_\_\_pe *n.* a device consisting of a spinning wheel or disk mounted in such a way that it can rotate freely in any direction, used to maintain balance, stability, or orientation in navigation, aerospace, or other systems
27. gy\_\_\_\_\_pe sensor *n.* a device consisting of a spinning wheel or disk mounted in such a way that it can rotate freely in any direction, used to maintain balance, stability, or orientation in navigation, aerospace, or other systems
28. high vi\_\_\_\_\_ty *n.* the state or quality of being thick, sticky, and semi-fluid in consistency; resistance to flow
29. ov\_\_\_\_\_a shipments *adj.* situated or operating beyond national boundaries; in, from, or to foreign countries
30. the hie\_\_\_\_\_ph of the bird *n.* a writing system using picture symbols, such as the one used in ancient Egypt

ANSWERS: 21. grapple, 22. Newtonian, 23. afterward, 24. mundane, 25. cosmology, 26. gyroscope, 27. gyroscope, 28. viscosity, 29. oversea, 30. hieroglyph

31. talented ph\_\_\_\_\_st  
*n.* a scientist who specializes in the field of physics
32. 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
33. vo\_\_\_\_\_o alert level  
*n.* a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.
34. co\_\_\_\_r honor  
*v.* to have a meeting or discussion to come to a decision or agreement or exchange ideas; to bestow something
35. co\_\_\_\_\_e in midair  
*v.* to hit something violently when moving
36. em\_\_\_\_\_ss political enemy  
*v.* to cause someone to feel awkward, worried, or ashamed
37. postpone a meeting ind\_\_\_\_\_ely  
*adv.* without any fixed or definite limit; for an unknown or unspecified period of time
38. Ne\_\_\_\_\_an mechanics  
*adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation
39. co\_\_\_\_\_e head-on  
*v.* to hit something violently when moving
40. a few years af\_\_\_\_\_rd  
*adv.* after the time mentioned
41. applied the\_\_\_\_\_ics  
*n.* the area of physics that deals with heat, work, and temperature and their relation to energy, entropy, and the physical properties of matter and radiation
42. s\_\_t beliefs  
*n.* a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream

ANSWERS: 31. physicist, 32. probabilistic, 33. volcano, 34. confer, 35. collide, 36. embarrass, 37. indefinitely, 38. Newtonian, 39. collide, 40. afterward, 41. thermodynamics, 42. sect

43. Egyptian hieroglyph *n.* a writing system using picture symbols, such as the one used in ancient Egypt
44. embarrass my project *v.* to cause someone to feel awkward, worried, or ashamed
45. tug a rope *v.* to pull something quickly and hard, often several times
46. secondly, it is important *adv.* used to introduce the second point or item in a list or series of statements, considerations, etc.
47. sect *n.* a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream
48. fizz with life *v.* to make a hissing or bubbling sound, often accompanied by the release of gas or effervescence; to be lively, exciting, or effervescent in character or atmosphere; (noun) the sound, process, or result of something producing small bubbles
49. confer degree *v.* to have a meeting or discussion to come to a decision or agreement or exchange ideas; to bestow something
50. deterministic approach *adj.* characterized by an assumption of cause and effect and the absence of chance or randomness, often used to describe scientific or engineering calculations
51. raisin pie *n.* a dried grape, typically made from certain varieties of grapes that are specifically grown for this purpose; a popular snack food or baking ingredient

ANSWERS: 43. hieroglyph, 44. embarrass, 45. tug, 46. secondly, 47. sect, 48. fizz, 49. confer, 50. deterministic, 51. raisin

52. ina\_\_\_\_\_ble to an unauthorized user  
*adj.* unable to travel to or reach; not available
53. ind\_\_\_\_\_ely suspended  
*adv.* without any fixed or definite limit; for an unknown or unspecified period of time
54. ra\_\_\_\_n oatmeal cookies  
*n.* a dried grape, typically made from certain varieties of grapes that are specifically grown for this purpose; a popular snack food or baking ingredient
55. mu\_\_\_\_\_e objects  
*adj.* very ordinary and therefore lacking interest or excitement
56. p\_\_h district  
*adj.* elegant, fashionable, or luxurious, often to an excessive or ostentatious degree; associated with the upper classes or a high level of social status
57. f\_\_z up after the speech  
*v.* to make a hissing or bubbling sound, often accompanied by the release of gas or effervescence; to be lively, exciting, or effervescent in character or atmosphere; (noun) the sound, process, or result of something producing small bubbles
58. 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
59. he\_\_\_\_\_ss baby  
*adj.* unable to take care of oneself or to do things without help
60. br\_\_\_\_\_n students' knowledge  
*v.* to make or become wider or more extensive; to make or become more tolerant or liberal.

ANSWERS: 52. inaccessible, 53. indefinitely, 54. raisin, 55. mundane, 56. posh, 57. fizz, 58. probabilistic, 59. helpless, 60. broaden

61. br\_\_\_\_n their horizon
62. active vo\_\_\_\_o
63. do\_\_\_\_n show
64. do\_\_\_\_n-watching tour
- v.* to make or become wider or more extensive; to make or become more tolerant or liberal.
- n.* a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.
- n.* a marine mammal that typically has a beaklike snout, a streamlined body, and flippers and that feeds on fish and squid
- n.* a marine mammal that typically has a beaklike snout, a streamlined body, and flippers and that feeds on fish and squid

ANSWERS: 61. broaden, 62. volcano, 63. dolphin, 64. dolphin

## Session 3: Fill in the Blanks

1. The large group of \_\_\_\_\_ swam gracefully in the ocean, jumping out of the water now and then.  
*n.* a marine mammal that typically has a beaklike snout, a streamlined body, and flippers and that feeds on fish and squid
2. Firstly, we will discuss the budget; \_\_\_\_\_ we will go over the schedule.  
*adv.* used to introduce the second point or item in a list or series of statements, considerations, etc.
3. Heavy snow made it \_\_\_\_\_ to go to the mountain village.  
*adj.* unable to travel to or reach; not available
4. The minority \_\_\_\_\_ believed in a set of unconventional religious practices.  
*n.* a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream
5. The second law of \_\_\_\_\_ denies the existence of a perpetual motion engine.  
*n.* the area of physics that deals with heat, work, and temperature and their relation to energy, entropy, and the physical properties of matter and radiation
6. After returning from the war, he had a pretty \_\_\_\_\_ life.  
*adj.* very ordinary and therefore lacking interest or excitement
7. The construction project has been delayed \_\_\_\_\_ due to the pandemic.  
*adv.* without any fixed or definite limit; for an unknown or unspecified period of time

ANSWERS: 1. dolphins, 2. secondly, 3. inaccessible, 4. sect, 5. thermodynamics, 6. mundane, 7. indefinitely

8. Each beautiful \_\_\_\_\_ represents either an idea or a sound.  
*n.* a writing system using picture symbols, such as the one used in ancient Egypt
9. 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
10. We will explain the countermeasure concerning this problem \_\_\_\_\_.  
*adv.* after the time mentioned
11. The \_\_\_\_\_ bread had a deliciously sweet flavor.  
*n.* a dried grape, typically made from certain varieties of grapes that are specifically grown for this purpose; a popular snack food or baking ingredient
12. The company enhanced \_\_\_\_\_ operations to tap into new markets.  
*adj.* situated or operating beyond national boundaries; in, from, or to foreign countries
13. The interests of the two countries \_\_\_\_\_.  
*v.* to hit something violently when moving
14. The company \_\_\_\_\_ its product line to include more customer options.  
*v.* to make or become wider or more extensive; to make or become more tolerant or liberal.
15. 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

ANSWERS: 8. hieroglyph, 9. probabilistic, 10. afterward, 11. raisin, 12. oversea, 13. collide, 14. broadened, 15. grapple



16. The \_\_\_\_\_ algorithm always produces the same result for a given input.

*adj.* characterized by an assumption of cause and effect and the absence of chance or randomness, often used to describe scientific or engineering calculations

17. The soda began to \_\_\_\_\_ when I opened the can, spilling over the top and onto my shirt.

*v.* to make a hissing or bubbling sound, often accompanied by the release of gas or effervescence; to be lively, exciting, or effervescent in character or atmosphere; (noun) the sound, process, or result of something producing small bubbles

18. Please refrigerate the meat, or it will \_\_\_\_\_.

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

19. The island was formed by a \_\_\_\_\_ millions of years ago.

*n.* a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.

20. I feel so \_\_\_\_\_ without you.

*adj.* unable to take care of oneself or to do things without help

21. The leaders of the two countries met to \_\_\_\_\_ on the issue.

*v.* to have a meeting or discussion to come to a decision or agreement or exchange ideas; to bestow something

22. She took a moment to \_\_\_\_\_ herself in the unfamiliar city.

*v.* to position or adjust someone or something for a particular purpose; (noun) the countries of Asia

ANSWERS: 16. deterministic, 17. fizz, 18. rot, 19. volcano, 20. helpless, 21. confer, 22. orient

23. The students' antics did not amuse the \_\_\_\_\_ teacher.

*adj.* serious, unyielding, or strict in manner or attitude

24. He looked for an opportunity to \_\_\_\_\_ that actor in public.

*v.* to cause someone to feel awkward, worried, or ashamed

25. \_\_\_\_\_ evolved from people's philosophical questions about the natural world.

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

26. The \_\_\_\_\_ of the oil made it difficult to pour.

*n.* the state or quality of being thick, sticky, and semi-fluid in consistency; resistance to flow

27. The \_\_\_\_\_ unique sound added to the jazz ensemble.

*n.* a musical instrument of the woodwind family, with a single reed, a cylindrical bore, and a curved mouthpiece, known for its versatility and rich, warm tone

28. The \_\_\_\_\_ in the spacecraft helps to stabilize its orientation during the mission.

*n.* a device consisting of a spinning wheel or disk mounted in such a way that it can rotate freely in any direction, used to maintain balance, stability, or orientation in navigation, aerospace, or other systems

29. Einstein was an outstanding and famous \_\_\_\_\_ of the 20th century.

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

30. This movie \_\_\_\_\_ at everyone's heartstrings.

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

ANSWERS: 23. stern, 24. embarrass, 25. Cosmology, 26. viscosity, 27. clarinet's, 28. gyroscope, 29. physicist, 30. tugs

31. The motion of planets can be described using \_\_\_\_\_ mechanics.

*adj.* relating to Sir Isaac Newton or his laws of motion and universal gravitation

32. The CEO's office was decorated in a \_\_\_\_\_ and elegant style.

*adj.* elegant, fashionable, or luxurious, often to an excessive or ostentatious degree; associated with the upper classes or a high level of social status

ANSWERS: 31. Newtonian, 32. posh