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Vocabulary Builder Reference from...

Chiara Decaroli: The high-stakes race to make quantum computers work | TED Talk

https://www.ted.com/talks/chiara_decaroli_the_high_s_takes_race_to_make_quantum_computers_work

Advanced Words Only

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Session 1: Word List

revolutionize

v. to bring about a complete or radical change in something, often through the introduction of new methods or ideas

synonym: transform, innovate, modernize

(1) **revolutionize** the industry, (2) **revolutionize** the technology

The invention of the smartphone **revolutionized** the way we communicate with each other.

devoid

adj. completely lacking or free from something

synonym: empty, lacking, void

(1) **devoid** of life, (2) air **devoid** of pollution

The room was **devoid** of any furniture or decorations.

outstrip

v. to exceed or surpass a particular, measurable quality or attribute, such as speed, efficiency, or quality

synonym: outdo, surpass, exceed

(1) **outstrip** competitors, (2) **outstrip** population growth

The company's sales have **outstripped** expectations for the quarter.

qubit

n. a unit of information used in quantum computing, equivalent to a single binary digit (or "bit") of classical

computing, which can exist in multiple possible states simultaneously, offering greater information processing potential than classical bits

synonym : quantum bit

(1) quantum **qubit**, (2) **qubit** storage

Technology development for controlling **qubits** is a major research goal in quantum computing.

superposition

n. a principle in physics that describes the combination or overlaying of two or more waves or states of matter; (of geology) the process by which layers of rock or sediment are deposited on top of one another over time

synonym : overlay, overlap

(1) quantum **superposition**, (2) **superposition** theorem

The **superposition** of waves can result in either constructive or destructive interference.

fluctuation

n. a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes

synonym : change, instability, flux

(1) price **fluctuations**, (2) **fluctuation** of water level

Temperature **fluctuations** are often milder in oceanfront areas.

stray

v. to move about aimlessly or without any destination; to move away from the right course or place where you should be

synonym : deviate, err, depart

(1) **stray** beyond the confines, (2) **stray** from a rule

Tourists often get lost and **stray** into a restricted area.

fickle

adj. liable to change frequently or unexpectedly, often without reason; capricious or unsteady

synonym : capricious, unpredictable, inconsistent

(1) **fickle** opinion, (2) **fickle** mood

The weather can be quite **fickle** in this region, changing

rapidly and unpredictably.

determinant

n. a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result

synonym : cause, factor, element

(1) environmental **determinant**, (2) a **determinant** of crop yields

One **determinant** of success is having a positive attitude and a strong work ethic.

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.

rev

n. a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute

synonym : revolution, RPM, speed

(1) low- **rev** engine, (2) **rev** up the crowd

He stepped on the gas pedal, and the engine released a loud **rev**.

lifespan

n. the length of time for which a person, animal lives, or thing exists

synonym : duration, lifetime, continuance

(1) **lifespan** extension, (2) **lifespan** retrieval curve

Generally speaking, men have a shorter **lifespan** than women.

Session 2: Spelling

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|-------------------------------|---|
| 1. environmental det_____nt | <i>n.</i> a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result |
| 2. rev_____ize the technology | <i>v.</i> to bring about a complete or radical change in something, often through the introduction of new methods or ideas |
| 3. rev_____ize the industry | <i>v.</i> to bring about a complete or radical change in something, often through the introduction of new methods or ideas |
| 4. fi___e opinion | <i>adj.</i> liable to change frequently or unexpectedly, often without reason; capricious or unsteady |
| 5. st__y from a rule | <i>v.</i> to move about aimlessly or without any destination; to move away from the right course or place where you should be |
| 6. ou_____ip competitors | <i>v.</i> to exceed or surpass a particular, measurable quality or attribute, such as speed, efficiency, or quality |
| 7. r_v up the crowd | <i>n.</i> a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute |
| 8. e__t a gamma ray | <i>v.</i> to give off or send out something such as light, heat, sound, gas, etc. |
| 9. air de___d of pollution | <i>adj.</i> completely lacking or free from something |

ANSWERS: 1. determinant, 2. revolutionize, 3. revolutionize, 4. fickle, 5. stray, 6. outstrip, 7. rev, 8. emit, 9. devoid

10. flu_____on of water level *n.* a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes
11. quantum sup_____ion *n.* a principle in physics that describes the combination or overlaying of two or more waves or states of matter; (of geology) the process by which layers of rock or sediment are deposited on top of one another over time
12. qu__t storage *n.* a unit of information used in quantum computing, equivalent to a single binary digit (or "bit") of classical computing, which can exist in multiple possible states simultaneously, offering greater information processing potential than classical bits
13. de___d of life *adj.* completely lacking or free from something
14. price flu_____ons *n.* a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes
15. a det_____nt of crop yields *n.* a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result
16. li_____an retrieval curve *n.* the length of time for which a person, animal lives, or thing exists
17. low-r_v engine *n.* a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute

ANSWERS: 10. fluctuation, 11. superposition, 12. qubit, 13. devoid, 14. fluctuation, 15. determinant, 16. lifespan, 17. rev

18. fi___e mood *adj.* liable to change frequently or unexpectedly, often without reason; capricious or unsteady
19. sup_____ion theorem *n.* a principle in physics that describes the combination or overlaying of two or more waves or states of matter; (of geology) the process by which layers of rock or sediment are deposited on top of one another over time
20. ou_____ip population growth *v.* to exceed or surpass a particular, measurable quality or attribute, such as speed, efficiency, or quality
21. quantum qu__t *n.* a unit of information used in quantum computing, equivalent to a single binary digit (or "bit") of classical computing, which can exist in multiple possible states simultaneously, offering greater information processing potential than classical bits
22. e__t air pollution *v.* to give off or send out something such as light, heat, sound, gas, etc.
23. li_____an extension *n.* the length of time for which a person, animal lives, or thing exists
24. st__y beyond the confines *v.* to move about aimlessly or without any destination; to move away from the right course or place where you should be

ANSWERS: 18. fickle, 19. superposition, 20. outstrip, 21. qubit, 22. emit, 23. lifespan, 24. stray

Session 3: Fill in the Blanks

1. One _____ of success is having a positive attitude and a strong work ethic.
 - n.* a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result

2. Generally speaking, men have a shorter _____ than women.
 - n.* the length of time for which a person, animal lives, or thing exists

3. The room was _____ of any furniture or decorations.
 - adj.* completely lacking or free from something

4. Temperature _____ are often milder in oceanfront areas.
 - n.* a change, or the process of changing, that frequently happens, especially from one extreme to another; the quality of being unsteady and subject to changes

5. The weather can be quite _____ in this region, changing rapidly and unpredictably.
 - adj.* liable to change frequently or unexpectedly, often without reason; capricious or unsteady

6. The invention of the smartphone _____ the way we communicate with each other.
 - v.* to bring about a complete or radical change in something, often through the introduction of new methods or ideas

7. Technology development for controlling _____ is a major research goal in quantum computing.
 - n.* a unit of information used in quantum computing, equivalent to a single binary digit (or "bit") of classical computing, which can exist in multiple possible states simultaneously, offering greater information processing potential than classical bits

ANSWERS: 1. determinant, 2. lifespan, 3. devoid, 4. fluctuations, 5. fickle, 6. revolutionized, 7. qubits

8. During the unloading, the container box _____ a clicking sound.
- v. to give off or send out something such as light, heat, sound, gas, etc.
9. Tourists often get lost and _____ into a restricted area.
- v. to move about aimlessly or without any destination; to move away from the right course or place where you should be
10. He stepped on the gas pedal, and the engine released a loud ____.
- n. a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute
11. The _____ of waves can result in either constructive or destructive interference.
- n. a principle in physics that describes the combination or overlaying of two or more waves or states of matter; (of geology) the process by which layers of rock or sediment are deposited on top of one another over time
12. The company's sales have _____ expectations for the quarter.
- v. to exceed or surpass a particular, measurable quality or attribute, such as speed, efficiency, or quality

ANSWERS: 8. emits, 9. stray, 10. rev, 11. superposition, 12. outstripped