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Vocabulary Builder Reference from...

Wilton L. Virgo: How does your smartphone know your location? | TED Talk

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

Advanced Words Only

IMPORTANT

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Session 1: Word List

smartphone

n. a mobile phone that functions as a computer and connects to the Internet

(1) **smartphone** app developer, (2) **smartphone** addict
Internet traffic volumes have increased significantly with the advent of **smartphones**.

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.

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.

constrain

v. to restrict or limit someone or something's freedom or ability to do something

synonym : restrict, limit, confine

(1) **constrain** his freedom, (2) **constrain** information flow
The political situation **constrained** the country's economic growth and foreign relations.

freeway

n. a major highway designed for high-speed traffic, with no stoplights or grade crossings and having interchanges or access roads to other highways

synonym : highway, expressway, motorway

(1) **freeway** exit, (2) expanded **freeway**

We got stuck in a traffic jam on the **freeway** for over an hour.

instantaneous

adj. occurring or happening immediately or without delay; taking place in an instant or moment

synonym : immediate, prompt, rapid

(1) **instantaneous** reaction, (2) **instantaneous** message

The new software provides **instantaneous** results, making it much more efficient than the previous version.

Planck

n. a unit of measurement used in physics to quantify the smallest possible amounts of energy, typically associated with subatomic particles and other quantum phenomena

(1) **Planck** mass, (2) **Planck** length

Planck's constant is a fundamental constant of nature used in quantum mechanics.

cesium

n. a chemical element with the symbol Cs and atomic number 55, a silver-white metal that is highly reactive with water and used in various applications, including in atomic clocks

(1) **cesium** clock, (2) **cesium** radiation

Astronomers use the properties of **cesium** atoms to define the standard unit of time.

rubidium

n. a chemical element belonging to the alkali metal group, with the atomic number 37 and symbol Rb, that is a soft,

silvery-white metal that is highly reactive and is used in various scientific and industrial applications

synonym : Rb

(1) **rubidium** isotope, (2) **rubidium** atom

Rubidium-87 is commonly used for radiometric dating of rocks and minerals.

resonate

v. to be filled with a deep echoing sound

synonym : echo, reverberate, resound

(1) deeply **resonate** with the consumers, (2) **resonate** in the same frequency

The sound **resonates** well in this theater.

oscillate

v. to swing or move back and forth like a pendulum or a wave; to fluctuate or alternate between two points or states; to hesitate or be indecisive

synonym : fluctuate, swing, vibrate

(1) **oscillate** back and forth, (2) **oscillate** between joy and anger

The fan in the room **oscillates**, making the airflow more evenly.

pinpoint

v. to locate or identify the exact position in space or time of something

synonym : name, direct, identify

(1) **pinpoint** the problem, (2) **pinpoint** signs of manipulation

This radar quickly **pinpoints** the position of the enemy.

Session 2: Spelling

1. sma_____ne app developer *n.* a mobile phone that functions as a computer and connects to the Internet
2. 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
3. ce___m radiation *n.* a chemical element with the symbol Cs and atomic number 55, a silver-white metal that is highly reactive with water and used in various applications, including in atomic clocks
4. expanded fr_____y *n.* a major highway designed for high-speed traffic, with no stoplights or grade crossings and having interchanges or access roads to other highways
5. fr_____y exit *n.* a major highway designed for high-speed traffic, with no stoplights or grade crossings and having interchanges or access roads to other highways
6. re_____te in the same frequency *v.* to be filled with a deep echoing sound
7. co_____in information flow *v.* to restrict or limit someone or something's freedom or ability to do something
8. Pl___k mass *n.* a unit of measurement used in physics to quantify the smallest possible amounts of energy, typically associated with subatomic particles and other quantum phenomena

ANSWERS: 1. smartphone, 2. determinant, 3. cesium, 4. freeway, 5. freeway, 6. resonate, 7. constrain, 8. Planck

9. ru____um isotope *n.* a chemical element belonging to the alkali metal group, with the atomic number 37 and symbol Rb, that is a soft, silvery-white metal that is highly reactive and is used in various scientific and industrial applications
10. Pl____k length *n.* a unit of measurement used in physics to quantify the smallest possible amounts of energy, typically associated with subatomic particles and other quantum phenomena
11. deeply re____te with the consumers *v.* to be filled with a deep echoing sound
12. ins____ous reaction *adj.* occurring or happening immediately or without delay; taking place in an instant or moment
13. pe____um swings *n.* a weight hung from a fixed point used to regulate the movement of a clock or other mechanism
14. pi____nt signs of manipulation *v.* to locate or identify the exact position in space or time of something
15. os____te between joy and anger *v.* to swing or move back and forth like a pendulum or a wave; to fluctuate or alternate between two points or states; to hesitate or be indecisive
16. pi____nt the problem *v.* to locate or identify the exact position in space or time of something
17. ins____ous message *adj.* occurring or happening immediately or without delay; taking place in an instant or moment

ANSWERS: 9. rubidium, 10. Planck, 11. resonate, 12. instantaneous, 13. pendulum, 14. pinpoint, 15. oscillate, 16. pinpoint, 17. instantaneous

18. os_____te back and forth *v.* to swing or move back and forth like a pendulum or a wave; to fluctuate or alternate between two points or states; to hesitate or be indecisive
19. environmental det_____nt *n.* a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result
20. ce____m clock *n.* a chemical element with the symbol Cs and atomic number 55, a silver-white metal that is highly reactive with water and used in various applications, including in atomic clocks
21. political pe_____um *n.* a weight hung from a fixed point used to regulate the movement of a clock or other mechanism
22. co_____in his freedom *v.* to restrict or limit someone or something's freedom or ability to do something
23. ru_____um atom *n.* a chemical element belonging to the alkali metal group, with the atomic number 37 and symbol Rb, that is a soft, silvery-white metal that is highly reactive and is used in various scientific and industrial applications
24. sma_____ne addict *n.* a mobile phone that functions as a computer and connects to the Internet

ANSWERS: 18. oscillate, 19. determinant, 20. cesium, 21. pendulum, 22. constrain, 23. rubidium, 24. smartphone

Session 3: Fill in the Blanks

1. 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
2. _____ constant is a fundamental constant of nature used in quantum mechanics.
 - n.* a unit of measurement used in physics to quantify the smallest possible amounts of energy, typically associated with subatomic particles and other quantum phenomena
3. The political situation _____ the country's economic growth and foreign relations.
 - v.* to restrict or limit someone or something's freedom or ability to do something
4. We got stuck in a traffic jam on the _____ for over an hour.
 - n.* a major highway designed for high-speed traffic, with no stoplights or grade crossings and having interchanges or access roads to other highways
5. Astronomers use the properties of _____ atoms to define the standard unit of time.
 - n.* a chemical element with the symbol Cs and atomic number 55, a silver-white metal that is highly reactive with water and used in various applications, including in atomic clocks
6. 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

ANSWERS: 1. pendulum, 2. Planck's, 3. constrained, 4. freeway, 5. cesium, 6. determinant

7. The sound _____ well in this theater.
v. to be filled with a deep echoing sound
8. This radar quickly _____ the position of the enemy.
v. to locate or identify the exact position in space or time of something
9. The fan in the room _____ making the airflow more evenly.
v. to swing or move back and forth like a pendulum or a wave; to fluctuate or alternate between two points or states; to hesitate or be indecisive
10. Internet traffic volumes have increased significantly with the advent of _____.
n. a mobile phone that functions as a computer and connects to the Internet
11. The new software provides _____ results, making it much more efficient than the previous version.
adj. occurring or happening immediately or without delay; taking place in an instant or moment
12. _____ is commonly used for radiometric dating of rocks and minerals.
n. a chemical element belonging to the alkali metal group, with the atomic number 37 and symbol Rb, that is a soft, silvery-white metal that is highly reactive and is used in various scientific and industrial applications

ANSWERS: 7. resonates, 8. pinpoints, 9. oscillates, 10. smartphones, 11. instantaneous, 12. Rubidium-87