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Vocabulary Builder Reference from...

Netta Schramm: Why don't perpetual motion machines ever work? | TED Talk

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

Advanced Words Only

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Session 1: Word List

perpetual

adj. continuing for an extended period in the same way without stopping or being interrupted

synonym: enduring, unchanging, incessant

(1) **perpetual** motion machine, (2) **perpetual** struggle

The company employs a **perpetual** inventory system.

imbalance

n. a situation in which two or more things are not equal or equally treated

synonym: inequality, asymmetry, instability

(1) trade **imbalance**, (2) symptoms of hormonal **imbalance**

An **imbalance** in certain substances causes problems with brain function.

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.

windmill

n. a machine that uses wind power to generate mechanical energy or electricity

synonym : wind turbine, aerogenerator

(1) **windmill** blades, (2) **windmill** energy

The countryside was dotted with picturesque **windmills**.

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**.

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.

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.

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.

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.

capillary

n. a tube of small internal diameter; any of the minute tubes that carry blood

(1) a **capillary** tube, (2) **capillary** action

There are many **capillary** vessels in the gills of fish.

degrade

v. to make something worse, especially in quality; to show or treat someone in a way that makes them seem no value and do not have the respect or reasonable opinion of others

synonym: demean, disgrace, impair

(1) **degrade** his public image, (2) **degrade** environmental quality

You should not **degrade** yourself by allowing them to use you.

nudge

v. to push someone or something gently, especially with your elbow, to attract the person's attention; (noun) a small push or prod to encourage a desired action or behavior

synonym: bump, elbow, (noun) prod

(1) **nudge** price levels up, (2) give a person a **nudge**

The teacher **nudged** the student to get his attention and asked him a question.

invariably

adv. in every case or on every occasion; without exception

synonym: consistently, always, uniformly

(1) **invariably** polite, (2) **invariably** correct

She **invariably** arrived at the office early each day.

leech

n. a type of worm that feeds on the blood of humans or animals; a person who takes advantage of others for personal gain without giving anything in return

synonym: bloodsucker, parasite, sucker

(1) blood-sucking **leech**, (2) aquatic **leech** habitat

The pharmacy sells **leeches** for medicinal purposes, but they're not cheap.

stymie

v. to obstruct, hinder, or prevent something from succeeding or happening; to present an obstacle or impediment to progress or achievement

synonym: hinder, obstruct, impede

(1) **stymie** progress, (2) **stymie** plans

The new regulations will **stymie** the growth of small businesses in the area.

conclusive

adj. serving to settle an issue or put an end to doubt or uncertainty; irrefutable and leaves no room for doubt

synonym: decisive, definitive, convincing

(1) **conclusive** information, (2) **conclusive** statement

The research provided **conclusive** evidence that the new treatment was effective.

revisit

v. to go to a place again, especially after a long period

synonym: reexplore, review, reexamine

(1) **revisit** a place, (2) **revisit** an old friend

We need to **revisit** this proposal as soon as the budget is more apparent than before.

Session 2: Spelling

1. con_____ve statement *adj.* serving to settle an issue or put an end to doubt or uncertainty; irrefutable and leaves no room for doubt
2. ind_____ely suspended *adv.* without any fixed or definite limit; for an unknown or unspecified period of time
3. re_____t an old friend *v.* to go to a place again, especially after a long period
4. de_____e his public image *v.* to make something worse, especially in quality; to show or treat someone in a way that makes them seem no value and do not have the respect or reasonable opinion of others
5. inv_____ly polite *adv.* in every case or on every occasion; without exception
6. pe_____al motion machine *adj.* continuing for an extended period in the same way without stopping or being interrupted
7. r_t with age *v.* to decay, or cause something to decay, naturally and gradually
8. re_____t a place *v.* to go to a place again, especially after a long period
9. 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
10. pe_____al struggle *adj.* continuing for an extended period in the same way without stopping or being interrupted

ANSWERS: 1. conclusive, 2. indefinitely, 3. revisit, 4. degrade, 5. invariably, 6. perpetual, 7. rot, 8. revisit, 9. axle, 10. perpetual

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|------------------------------------|-------------|---|
| 11. pe____um swings | <i>n.</i> | a weight hung from a fixed point used to regulate the movement of a clock or other mechanism |
| 12. ca_____ry action | <i>n.</i> | a tube of small internal diameter; any of the minute tubes that carry blood |
| 13. de_____e environmental quality | <i>v.</i> | to make something worse, especially in quality; to show or treat someone in a way that makes them seem no value and do not have the respect or reasonable opinion of others |
| 14. the laws of the_____ics | <i>n.</i> | 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 |
| 15. aquatic le__h habitat | <i>n.</i> | a type of worm that feeds on the blood of humans or animals; a person who takes advantage of others for personal gain without giving anything in return |
| 16. rear a__e | <i>n.</i> | a rod or spindle around which a wheel or pair of wheels revolves; a central shaft used to transmit power to machinery or vehicles |
| 17. political pe_____um | <i>n.</i> | a weight hung from a fixed point used to regulate the movement of a clock or other mechanism |
| 18. con_____ve information | <i>adj.</i> | -serving to settle an issue or put an end to doubt or uncertainty; irrefutable and leaves no room for doubt |
| 19. applied the_____ics | <i>n.</i> | 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: 11. pendulum, 12. capillary, 13. degrade, 14. thermodynamics, 15. leech, 16. axle, 17. pendulum, 18. conclusive, 19. thermodynamics

20. blood-sucking le__h *n.* a type of worm that feeds on the blood of humans or animals; a person who takes advantage of others for personal gain without giving anything in return
21. wi_____ll blades *n.* a machine that uses wind power to generate mechanical energy or electricity
22. symptoms of hormonal im_____ce *n.* a situation in which two or more things are not equal or equally treated
23. begin to r_t *v.* to decay, or cause something to decay, naturally and gradually
24. nu__e price levels up *v.* to push someone or something gently, especially with your elbow, to attract the person's attention; (noun) a small push or prod to encourage a desired action or behavior
25. trade im_____ce *n.* a situation in which two or more things are not equal or equally treated
26. 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
27. inv_____ly correct *adv.* in every case or on every occasion; without exception
28. postpone a meeting ind_____ely *adv.* without any fixed or definite limit; for an unknown or unspecified period of time
29. give a person a nu__e *v.* to push someone or something gently, especially with your elbow, to attract the person's attention; (noun) a small push or prod to encourage a desired action or behavior

ANSWERS: 20. leech, 21. windmill, 22. imbalance, 23. rot, 24. nudge, 25. imbalance, 26. electrify, 27. invariably, 28. indefinitely, 29. nudge

30. wi_____ll energy *n.* a machine that uses wind power to generate mechanical energy or electricity
31. a ca_____ry tube *n.* a tube of small internal diameter; any of the minute tubes that carry blood
32. st___e plans *v.* to obstruct, hinder, or prevent something from succeeding or happening; to present an obstacle or impediment to progress or achievement
33. st___e progress *v.* to obstruct, hinder, or prevent something from succeeding or happening; to present an obstacle or impediment to progress or achievement
34. 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

ANSWERS: 30. windmill, 31. capillary, 32. stymie, 33. stymie, 34. electrify

Session 3: Fill in the Blanks

1. There are many _____ vessels in the gills of fish.
n. a tube of small internal diameter; any of the minute tubes that carry blood
2. Please refrigerate the meat, or it will _____.
v. to decay, or cause something to decay, naturally and gradually
3. The pharmacy sells _____ for medicinal purposes, but they're not cheap.
n. a type of worm that feeds on the blood of humans or animals; a person who takes advantage of others for personal gain without giving anything in return
4. The teacher _____ the student to get his attention and asked him a question.
v. to push someone or something gently, especially with your elbow, to attract the person's attention; (noun) a small push or prod to encourage a desired action or behavior
5. 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
6. An _____ in certain substances causes problems with brain function.
n. a situation in which two or more things are not equal or equally treated
7. 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
8. You should not _____ yourself by allowing them to use you.
v. to make something worse, especially in quality; to show or treat someone in a way that makes them seem no value and do not have the respect or reasonable opinion of others

ANSWERS: 1. capillary, 2. rot, 3. leeches, 4. nudged, 5. indefinitely, 6. imbalance, 7. electrify, 8. degrade

9. We need to _____ this proposal as soon as the budget is more apparent than before.
- v.* to go to a place again, especially after a long period
10. The company employs a _____ inventory system.
- adj.* continuing for an extended period in the same way without stopping or being interrupted
11. The research provided _____ evidence that the new treatment was effective.
- adj.* serving to settle an issue or put an end to doubt or uncertainty; irrefutable and leaves no room for doubt
12. 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
13. She _____ arrived at the office early each day.
- adv.* in every case or on every occasion; without exception
14. 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
15. The new regulations will _____ the growth of small businesses in the area.
- v.* to obstruct, hinder, or prevent something from succeeding or happening; to present an obstacle or impediment to progress or achievement

ANSWERS: 9. revisit, 10. perpetual, 11. conclusive, 12. thermodynamics, 13. invariably, 14. axles, 15. stymie

16. The countryside was dotted with picturesque _____.

n. a machine that uses wind power to generate mechanical energy or electricity

17. 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

ANSWERS: 16. windmills, 17. pendulum