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Vocabulary Builder Reference from...

Michel Laberge: How synchronized hammer strikes could generate nuclear fusion | TED Talk

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

Advanced Words Only

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Session 1: Word List

fission

n. the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces

synonym : splitting, division, separation

(1) heavy-ion **fission**, (2) atomic **fission**

Nuclear **fission** is the process of splitting an atom into two smaller ones.

helium

n. a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas series in the periodic table

synonym : He, light gas, noble gas

(1) **helium** atom, (2) **helium** gas

The **helium-filled** balloons floated into the sky.

posit

v. to suggest or accept something as fact or as a basis for argument or consideration

synonym : assert, declare, assume

(1) **posit** the existence of life after death, (2) **posit** the premise

We should **posit** several hypotheses to discuss the matter.

fuse

n. a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat

synonym: (verb) melt, (verb) blend

(1) **fuse** blows, (2) **fuse** with one another

He has a short **fuse**.

repulsion

n. a feeling of intense disgust or dislike; a physical force that resists the approach or contact of two objects

synonym: dislike, disgust, repugnance

(1) **repulsion** force, (2) sense of **repulsion**

The sight of spiders fills me with **repulsion**.

industrious

adj. hardworking, diligent, and persistent in effort

synonym: diligent, hardworking, assiduous

(1) **industrious** worker, (2) **industrious** student

He was known to be very **industrious** and would often work late into the night.

midlife

n. the period of life between young adulthood and old age, typically characterized by a sense of maturity, stability, and sometimes, dissatisfaction or restlessness

(1) **midlife** depression, (2) **midlife** changes

Many people go through a **midlife** crisis and contemplate major life changes.

bury

v. to place a dead body in the ground, grave, or tomb

synonym: entomb, sink, forget

(1) **bury** in the earth, (2) **bury** emotion

There is plenty of space to **bury** everyone.

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.

tokamak

n. a type of experimental facility used in nuclear fusion research that uses a magnetic field to confine a plasma in the shape of a torus to achieve controlled nuclear fusion reactions

synonym: fusion reactor, plasma device

(1) **tokamak** reactor, (2) experimental **tokamak**

Scientists at the research facility are working on the latest **tokamak** reactor to harness clean energy from nuclear fusion.

zap

v. to strike, destroy, get rid of, or kill something or someone suddenly and with force

synonym: destroy, kill, exterminate

(1) **zap** a huge target, (2) **zap** bar code

They provided allies with powerful weapons that could **zap** the enemy from thousands of miles away.

squash

v. to forcefully crush or flatten something; to suppress, stifle, or defeat an idea or opposition forcefully

synonym: smash, crush, compress

(1) **squash** a package, (2) **squash** a rebellion

I like to **squash** my grapes when making homemade wine.

pellet

n. a small, round piece of compressed material, such as wood or plastic

synonym: bead, ball, bullet

(1) the form of a small **pellet**, (2) **pellet** stove

The **pellet** gun was used to shoot small metal balls.

fable

n. a short story, often with animal characters, that teaches a general truth or a moral lesson

synonym: fantasy, story, legend

(1) classic **fable**, (2) moralize a **fable**

In his speech, he quoted a passage from a well-known **fable**.

transistor

n. a semiconductor device that can be used to amplify or switch electronic signals and power which is an

essential component in modern electronics

synonym : semiconductor, microchip, circuit

(1) **transistor** radio, (2) **transistor** circuit

The invention of the **transistor** revolutionized the field of electronics.

selfie

n. a photograph that one has taken of oneself, typically one taken with a smartphone or webcam to share on social media

synonym : self-portrait, self-photo, self-snap

(1) **selfie** stick, (2) pose for a **selfie**

She took a **selfie** in front of the famous tower and shared it on the app.

lad

n. a young boy or man, often used in an informal or affectionate way

synonym : boy, youth, youngster

(1) working-class **lad**, (2) local **lad**

The older man gave the young **lad** some helpful life advice.

afterthought

n. a thought or idea that comes to mind after the fact, often too late to be of much use; something that is added or considered belatedly, especially in speech or writing

synonym : reconsideration, second thought, reconsideration

(1) **afterthought** comment, (2) an **afterthought** decision

Forgetting to mention our meeting was just an **afterthought** for him.

vortex

n. a mass of whirling air, water, dust, or smoke, especially a whirlpool or whirlwind

synonym : whirlpool, whirlwind, maelstrom

(1) **vortex** formation, (2) blow in a **vortex**

The **vortex** of the tornado was massive and destructive.

piston

n. a cylindrical component of an engine, such as in a car or a pump, that moves back and forth inside a cylinder and transmits power

synonym : plunger, rod, moving part

(1) **piston** ring, (2) air **piston**

The **piston** in my car's engine needs to be replaced.

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.

sham

n. something that is not as good or true as it seems to be and is intended to deceive people; a person who pretends to be something they are not

synonym : bogus, counterfeit, fraudulent

(1) a **sham** battle, (2) turn out to be all **sham**

The data he prepared was completely **sham**.

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.

inject

v. to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube)

synonym : shoot, infiltrate, insinuate

(1) **inject** under the skin, (2) **inject** a personal opinion into a debate

Let's try to **inject** a bit of enthusiasm into your performance.

lukewarm

adj. moderately warm or tepid; lacking enthusiasm, interest, or vigor; uncertain or hesitant

synonym : tepid, unenthusiastic, half-hearted

(1) **lukewarm** reception, (2) **lukewarm** water

I received a **lukewarm** welcome from my new colleagues.

crooked

adj. not straight or aligned; bent or curved to one side; not honest or fair; characterized by deception, fraud, or wrongdoing; irregular, uneven, or jagged in shape or form

synonym : bent, curved, twisted

(1) **crooked** smile, (2) **crooked** line

The table leg was **crooked**, causing all the cups to slide to one side.

doable

adj. possible to do; capable of existing, taking place, or proving true

synonym : realizable, accomplishable, achievable

(1) make a **doable** plan, (2) **doable** in daily life

This project is **doable** despite the tight schedule.

Session 2: Spelling

1. co____ss the chest
v. to press or squeeze together to make something take up less space
2. z_p bar code
v. to strike, destroy, get rid of, or kill something or someone suddenly and with force
3. sq____h a rebellion
v. to forcefully crush or flatten something; to suppress, stifle, or defeat an idea or opposition forcefully
4. local l_d
n. a young boy or man, often used in an informal or affectionate way
5. tra_____or radio
n. a semiconductor device that can be used to amplify or switch electronic signals and power which is an essential component in modern electronics
6. f__e with one another
n. a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat
7. blow in a vo____x
n. a mass of whirling air, water, dust, or smoke, especially a whirlpool or whirlwind
8. po__t the premise
v. to suggest or accept something as fact or as a basis for argument or consideration
9. experimental to_____k
n. a type of experimental facility used in nuclear fusion research that uses a magnetic field to confine a plasma in the shape of a torus to achieve controlled nuclear fusion reactions

ANSWERS: 1. compress, 2. zap, 3. squash, 4. lad, 5. transistor, 6. fuse, 7. vortex, 8. posit, 9. tokamak

10. do___e in daily life *adj.* possible to do; capable of existing, taking place, or proving true
11. turn out to be all s__m *n.* something that is not as good or true as it seems to be and is intended to deceive people; a person who pretends to be something they are not
12. ind_____us worker *adj.* hardworking, diligent, and persistent in effort
13. re_____on force *n.* a feeling of intense disgust or dislike; a physical force that resists the approach or contact of two objects
14. mi_____e depression *n.* the period of life between young adulthood and old age, typically characterized by a sense of maturity, stability, and sometimes, dissatisfaction or restlessness
15. classic fa__e *n.* a short story, often with animal characters, that teaches a general truth or a moral lesson
16. cr_____d smile *adj.* not straight or aligned; bent or curved to one side; not honest or fair; characterized by deception, fraud, or wrongdoing; irregular, uneven, or jagged in shape or form
17. mi_____e changes *n.* the period of life between young adulthood and old age, typically characterized by a sense of maturity, stability, and sometimes, dissatisfaction or restlessness
18. po__t the existence of life after death *v.* to suggest or accept something as fact or as a basis for argument or consideration

ANSWERS: 10. doable, 11. sham, 12. industrious, 13. repulsion, 14. midlife, 15. fable, 16. crooked, 17. midlife, 18. posit

19. moralize a fa__e *n.* a short story, often with animal characters, that teaches a general truth or a moral lesson
20. f__e blows *n.* a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat
21. se___e stick *n.* a photograph that one has taken of oneself, typically one taken with a smartphone or webcam to share on social media
22. ind____us student *adj.* hardworking, diligent, and persistent in effort
23. a s__m battle *n.* something that is not as good or true as it seems to be and is intended to deceive people; a person who pretends to be something they are not
24. make a do___e plan *adj.* possible to do; capable of existing, taking place, or proving true
25. lu____rm reception *adj.* moderately warm or tepid; lacking enthusiasm, interest, or vigor; uncertain or hesitant
26. the form of a small pe___t *n.* a small, round piece of compressed material, such as wood or plastic
27. to____k reactor *n.* a type of experimental facility used in nuclear fusion research that uses a magnetic field to confine a plasma in the shape of a torus to achieve controlled nuclear fusion reactions

ANSWERS: 19. fable, 20. fuse, 21. selfie, 22. industrious, 23. sham, 24. doable, 25. lukewarm, 26. pellet, 27. tokamak

28. vo___x formation *n.* a mass of whirling air, water, dust, or smoke, especially a whirlpool or whirlwind
29. 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
30. sq___h a package *v.* to forcefully crush or flatten something; to suppress, stifle, or defeat an idea or opposition forcefully
31. an aft_____ght decision *n.* a thought or idea that comes to mind after the fact, often too late to be of much use; something that is added or considered belatedly, especially in speech or writing
32. theoretical ph_____st *n.* a scientist who specializes in the field of physics
33. tra_____or circuit *n.* a semiconductor device that can be used to amplify or switch electronic signals and power which is an essential component in modern electronics
34. in___t under the skin *v.* to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube)
35. pose for a se___e *n.* a photograph that one has taken of oneself, typically one taken with a smartphone or webcam to share on social media
36. in___t a personal opinion into a debate *v.* to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube)

ANSWERS: 28. vortex, 29. electrify, 30. squash, 31. afterthought, 32. physicist, 33. transistor, 34. inject, 35. selfie, 36. inject

37. co____ss gas *v.* to press or squeeze together to make something take up less space
38. heavy-ion fi____n *n.* the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces
39. air pi____n *n.* a cylindrical component of an engine, such as in a car or a pump, that moves back and forth inside a cylinder and transmits power
40. z_p a huge target *v.* to strike, destroy, get rid of, or kill something or someone suddenly and with force
41. cr____d line *adj.* not straight or aligned; bent or curved to one side; not honest or fair; characterized by deception, fraud, or wrongdoing; irregular, uneven, or jagged in shape or form
42. working-class l_d *n.* a young boy or man, often used in an informal or affectionate way
43. sense of re____on *n.* a feeling of intense disgust or dislike; a physical force that resists the approach or contact of two objects
44. lu____rm water *adj.* moderately warm or tepid; lacking enthusiasm, interest, or vigor; uncertain or hesitant
45. atomic fi____n *n.* the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces

ANSWERS: 37. compress, 38. fission, 39. piston, 40. zap, 41. crooked, 42. lad, 43. repulsion, 44. lukewarm, 45. fission

46. b__y emotion *v.* to place a dead body in the ground, grave, or tomb
47. pi___n ring *n.* a cylindrical component of an engine, such as in a car or a pump, that moves back and forth inside a cylinder and transmits power
48. 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
49. talented ph_____st *n.* a scientist who specializes in the field of physics
50. he___m atom *n.* a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas series in the periodic table
51. b__y in the earth *v.* to place a dead body in the ground, grave, or tomb
52. aft_____ght comment *n.* a thought or idea that comes to mind after the fact, often too late to be of much use; something that is added or considered belatedly, especially in speech or writing
53. he___m gas *n.* a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas series in the periodic table
54. pe___t stove *n.* a small, round piece of compressed material, such as wood or plastic

ANSWERS: 46. bury, 47. piston, 48. electrify, 49. physicist, 50. helium, 51. bury, 52. afterthought, 53. helium, 54. pellet

ANSWERS:

Session 3: Fill in the Blanks

1. The _____ gun was used to shoot small metal balls.
n. a small, round piece of compressed material, such as wood or plastic
2. 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
3. Forgetting to mention our meeting was just an _____ for him.
n. a thought or idea that comes to mind after the fact, often too late to be of much use; something that is added or considered belatedly, especially in speech or writing
4. I like to _____ my grapes when making homemade wine.
v. to forcefully crush or flatten something; to suppress, stifle, or defeat an idea or opposition forcefully
5. The table leg was _____ causing all the cups to slide to one side.
adj. not straight or aligned; bent or curved to one side; not honest or fair; characterized by deception, fraud, or wrongdoing; irregular, uneven, or jagged in shape or form
6. There is plenty of space to _____ everyone.
v. to place a dead body in the ground, grave, or tomb
7. This project is _____ despite the tight schedule.
adj. possible to do; capable of existing, taking place, or proving true

ANSWERS: 1. pellet, 2. electrify, 3. afterthought, 4. squash, 5. crooked, 6. bury, 7. doable

8. He was known to be very _____ and would often work late into the night.
adj. hardworking, diligent, and persistent in effort
9. The _____ of the tornado was massive and destructive.
n. a mass of whirling air, water, dust, or smoke, especially a whirlpool or whirlwind
10. We should _____ several hypotheses to discuss the matter.
v. to suggest or accept something as fact or as a basis for argument or consideration
11. The older man gave the young ____ some helpful life advice.
n. a young boy or man, often used in an informal or affectionate way
12. Many people go through a _____ crisis and contemplate major life changes.
n. the period of life between young adulthood and old age, typically characterized by a sense of maturity, stability, and sometimes, dissatisfaction or restlessness
13. Scientists at the research facility are working on the latest _____ reactor to harness clean energy from nuclear fusion.
n. a type of experimental facility used in nuclear fusion research that uses a magnetic field to confine a plasma in the shape of a torus to achieve controlled nuclear fusion reactions
14. The data he prepared was completely _____.
n. something that is not as good or true as it seems to be and is intended to deceive people; a person who pretends to be something they are not
15. The invention of the _____ revolutionized the field of electronics.
n. a semiconductor device that can be used to amplify or switch electronic signals and power which is an essential component in modern electronics

ANSWERS: 8. industrious, 9. vortex, 10. posit, 11. lad, 12. midlife, 13. tokamak, 14. sham, 15. transistor

16. The _____ balloons floated into the sky.
- n.* a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas series in the periodic table
17. In his speech, he quoted a passage from a well-known _____.
- n.* a short story, often with animal characters, that teaches a general truth or a moral lesson
18. The sight of spiders fills me with _____.
- n.* a feeling of intense disgust or dislike; a physical force that resists the approach or contact of two objects
19. Let's try to _____ a bit of enthusiasm into your performance.
- v.* to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube)
20. Einstein was an outstanding and famous _____ of the 20th century.
- n.* a scientist who specializes in the field of physics
21. He has a short _____.
- n.* a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat
22. 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
23. The _____ in my car's engine needs to be replaced.
- n.* a cylindrical component of an engine, such as in a car or a pump, that moves back and forth inside a cylinder and transmits power

ANSWERS: 16. helium-filled, 17. fable, 18. repulsion, 19. inject, 20. physicist, 21. fuse, 22. compressed, 23. piston

24. She took a _____ in front of the famous tower and shared it on the app.

n. a photograph that one has taken of oneself, typically one taken with a smartphone or webcam to share on social media

25. I received a _____ welcome from my new colleagues.

adj. moderately warm or tepid; lacking enthusiasm, interest, or vigor; uncertain or hesitant

26. They provided allies with powerful weapons that could ____ the enemy from thousands of miles away.

v. to strike, destroy, get rid of, or kill something or someone suddenly and with force

27. Nuclear _____ is the process of splitting an atom into two smaller ones.

n. the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces

ANSWERS: 24. selfie, 25. lukewarm, 26. zap, 27. fission