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Vocabulary Builder Reference from...

David Camarillo: Why helmets don't prevent concussions -- and what might | TED Talk

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

Advanced Words Only

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Session 1: Word List

concussion

n. a violent blow or jolt to the head or body that jars the brain, often resulting in temporary or prolonged unconsciousness, confusion, or memory loss; a shock or upheaval caused by a sudden change or event

synonym : shock, trauma, head injury

(1) **concussion** symptoms, (2) **concussion** resistance

The football player suffered a **concussion** after being tackled during the game.

evoke

v. to bring or recall a feeling, memory, or image into your mind

synonym : arouse, raise, inspire

(1) **evoke** a sense of awe, (2) **evoke** sympathy

This movie is likely to **evoke** strong emotions in the viewer.

dementia

n. a severe decline in cognitive function, especially memory, as a result of disease or injury

synonym : cognitive decline, memory loss, Alzheimer's disease

(1) **dementia** patients, (2) probably have **dementia**

The study found that regular exercise can help to prevent the onset of **dementia** in older age.

Alzheimer

n. a neurodegenerative disease that causes memory loss, cognitive decline, and behavioral issues; is the most common cause of dementia in older adults

synonym : dementia, memory loss, cognitive decline

(1) **Alzheimer's** brain, (2) **Alzheimer's** risk factors

My grandmother has **Alzheimer's** disease requires special care and attention from her caregivers.

encephalopathy

n. disease or damage to the brain that disrupts the normal functioning of the brain, which cause a wide range of symptoms, including memory loss, confusion, seizures, and decreased cognitive abilities

synonym : brain disease, brain damage, neurological disorder

(1) hepatic **encephalopathy**, (2) acute **encephalopathy**

A severe case of **encephalopathy** left the patient with permanent brain damage.

blacksmith

n. a smith who forges and shapes iron with a hammer and anvil

(1) **blacksmith** welding, (2) **blacksmith** shop

The **blacksmith** shaped a horseshoe on his anvil.

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**.

smashing

adj. very successful or impressive; causing something to be broken or destroyed

synonym : great, wonderful, breaking

(1) a **smashing** blow, (2) give **smashing** results

The band's new album was a **smashing** success, reaching the top of the charts.

rebound

v. to spring back into a former shape or position after being compressed or stretched

synonym: spring back, resile, recover

(1) **rebound** from a setback, (2) **rebound** back into positive growth

The basketball bounced off the rim and **rebounded** to the player.

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.

vault

n. a large room or chamber used for storage, often for valuables such as money, documents, or artwork; (verb) to leap or jump over something; to move quickly or suddenly

synonym: safe, strongbox, coffer

(1) **vault** door, (2) **vault** from five to fifty percent

The government **vault** contains top-secret documents and classified information that only a few individuals can access.

contort

v. to (cause something to) twist and press out of its natural or normal shape

synonym: deform, disfigure, distort

(1) **contort** my limbs, (2) **contort** the face

He **contorted** his smile with anger coming from his gut.

accelerometer

n. a device that measures acceleration or changes in motion, typically used in aerospace, automotive, and other engineering applications to monitor and control movement or to measure things like speed or vibration

synonym: sensor, g-sensor, gravimeter

(1) **accelerometer** reading, (2) high-precision **accelerometer**

The phone's **accelerometer** measures its movement and orientation in three-dimensional space.

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.

cadaver

n. a dead body, especially one used for scientific study or medical research

synonym: corpse, body, remains

(1) **cadaver** lab, (2) **cadaver** donor

The hospital received a donation of **cadavers** for their research program.

announcer

n. a person who introduces and speaks on television or radio programs or provides commentary or information at a live event

synonym: emcee, broadcaster, commentator

(1) public address **announcer**, (2) radio **announcer**

The sports **announcer** provided live commentary during the game.

cougar

n. a large predatory feline animal, also known as a mountain lion or puma, which is native to the Americas; an older woman who pursues sexual or romantic relationships with much younger men

synonym: puma, catamount, panther

(1) **cougar** lift, (2) the **cougar's** ex-husband

We saw a large **cougar** as we hiked through the mountains.

roar

v. to make a loud, deep sound, like a lion or a car engine
synonym: bellow, yell, shout

(1) **roar** with laughter, (2) **roar** for more

The lion **roared** loudly, signaling its dominance over the other animals.

counterintuitive

adj. contrary to what common sense would suggest
synonym: unreasonable, paradoxical, nonsensical

(1) **counterintuitive** results, (2) **counterintuitive** behavior

The **counterintuitive** nature of quantum physics has been a source of confusion for scientists for decades.

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**.

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.

lobe

n. a rounded projection or division, especially of the brain, lung, or liver

synonym: part, section, division

(1) **lobe** of the liver, (2) frontal **lobe**

The lungs are divided into five **lobes**.

fissure

n. a narrow opening or crack, especially in a rock or other hard substance; a division or splitting within a group or organization

synonym: crack, crevice, gap

(1) pulmonary **fissure**, (2) **fissure** in the relationship

The **fissure** in the rock was too narrow to squeeze through.

callosum

n. a large bundle of nerve fibers that connects the two hemispheres of the brain

(1) removal of the corpus **callosum**, (2) corpus **callosum** fiber

The corpus **callosum** is essential for coordinating the functions of the two hemispheres.

dissociation

n. the separation of ideas, emotions, or memories from a person's consciousness; a process by which molecules or compounds separate into smaller units or individual atoms

synonym: separation, detachment, disconnection

(1) trauma-related **dissociation**, (2) **dissociation** reaction

His **dissociation** from his emotions made him distant and unresponsive.

atrophy

n. a decrease in size of a muscle, organ, etc., caused by disease or disuse

synonym: disintegration, degeneration, wasting away

(1) weakness with **atrophy**, (2) **atrophy** of the muscles

Daily exercise and adequate sleep are necessary to prevent the progression of **atrophy**.

ventricle

n. a chamber or cavity within an organ or structure, particularly the lower chamber of the heart that pumps blood to the lungs and other parts of the body

synonym: chamber, pumping heart muscle

(1) left **ventricle**, (2) **ventricle** in the brain

The heart's **ventricles** are responsible for pumping blood out to the body.

synchronous

adj. occurring or operating at the same time or pace; happening simultaneously; coordinated or synchronized

synonym: simultaneous, concurrent, parallel

(1) **synchronous** communication, (2) **synchronous**

learning

The group of performers perfectly executed the **synchronous** dance routine.

stuntman

n. a professional performer who performs dangerous and often physically demanding tasks or stunts in place of an actor in a film or television show

synonym: stunt double, body double, stand-in

(1) **stuntman** performance, (2) skilled **stuntman**

The professional **stuntman** jumped from the burning building and landed safely on the airbag below.

airbag

n. a safety device designed to inflate rapidly in the event of a collision, protecting the occupants of a vehicle and reducing the risk of injury or death

synonym: air cushion, safety bag, crash bag

(1) defective **airbag**, (2) **airbag** deployment

The **airbag** system in the car saved the driver's life in a severe crash.

explode

v. to burst or break open violently and noisily; to cause something to burst or break open

synonym: detonate, blast, rupture

(1) **explode** in anger, (2) **explode** in popularity

The old building **exploded** in a fiery inferno.

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.

grandparent

n. a parent of one's father or mother

(1) great- **grandparent**, (2) person of **grandparent** age

She was close to her paternal **grandparents** and often spent summers with them.

Session 2: Spelling

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|-------------------------------|--|
| 1. ind_____us worker | <i>adj.</i> hardworking, diligent, and persistent in effort |
| 2. l__e of the liver | <i>n.</i> a rounded projection or division, especially of the brain, lung, or liver |
| 3. high-precision acc_____ter | <i>n.</i> a device that measures acceleration or changes in motion, typically used in aerospace, automotive, and other engineering applications to monitor and control movement or to measure things like speed or vibration |
| 4. radio an_____er | <i>n.</i> a person who introduces and speaks on television or radio programs or provides commentary or information at a live event |
| 5. defective ai____g | <i>n.</i> a safety device designed to inflate rapidly in the event of a collision, protecting the occupants of a vehicle and reducing the risk of injury or death |
| 6. cou_____ive behavior | <i>adj.</i> contrary to what common sense would suggest |
| 7. re_____d from a setback | <i>v.</i> to spring back into a former shape or position after being compressed or stretched |
| 8. ve_____le in the brain | <i>n.</i> a chamber or cavity within an organ or structure, particularly the lower chamber of the heart that pumps blood to the lungs and other parts of the body |

ANSWERS: 1. industrious, 2. lobe, 3. accelerometer, 4. announcer, 5. airbag, 6. counterintuitive, 7. rebound, 8. ventricle

9. syn_____us communication *adj.* occurring or operating at the same time or pace; happening simultaneously; coordinated or synchronized
10. ca_____r lab *n.* a dead body, especially one used for scientific study or medical research
11. Al_____er's risk factors *n.* a neurodegenerative disease that causes memory loss, cognitive decline, and behavioral issues; is the most common cause of dementia in older adults
12. 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
13. con_____on resistance *n.* a violent blow or jolt to the head or body that jars the brain, often resulting in temporary or prolonged unconsciousness, confusion, or memory loss; a shock or upheaval caused by a sudden change or event
14. frontal l___e *n.* a rounded projection or division, especially of the brain, lung, or liver
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. great-gra_____nt *n.* a parent of one's father or mother
17. hepatic enc_____thy *n.* disease or damage to the brain that disrupts the normal functioning of the brain, which cause a wide range of symptoms, including memory loss, confusion, seizures, and decreased cognitive abilities

ANSWERS: 9. synchronous, 10. cadaver, 11. Alzheimer, 12. oscillate, 13. concussion, 14. lobe, 15. oscillate, 16. grandparent, 17. encephalopathy

- | | |
|--|--|
| 18. cou_____ive results | <i>adj.</i> contrary to what common sense would suggest |
| 19. r__r for more | <i>v.</i> to make a loud, deep sound, like a lion or a car engine |
| 20. probably have de_____ia | <i>n.</i> a severe decline in cognitive function, especially memory, as a result of disease or injury |
| 21. co_____t my limbs | <i>v.</i> to (cause something to) twist and press out of its natural or normal shape |
| 22. fi_____e in the relationship | <i>n.</i> a narrow opening or crack, especially in a rock or other hard substance; a division or splitting within a group or organization |
| 23. con_____on symptoms | <i>n.</i> a violent blow or jolt to the head or body that jars the brain, often resulting in temporary or prolonged unconsciousness, confusion, or memory loss; a shock or upheaval caused by a sudden change or event |
| 24. re_____d back into positive growth | <i>v.</i> to spring back into a former shape or position after being compressed or stretched |
| 25. co_____ss the chest | <i>v.</i> to press or squeeze together to make something take up less space |
| 26. removal of the corpus ca_____um | <i>n.</i> a large bundle of nerve fibers that connects the two hemispheres of the brain |
| 27. begin to r_t | <i>v.</i> to decay, or cause something to decay, naturally and gradually |

ANSWERS: 18. counterintuitive, 19. roar, 20. dementia, 21. contort, 22. fissure, 23. concussion, 24. rebound, 25. compress, 26. callosum, 27. rot

28. give sm_____ng results *adj.* very successful or impressive; causing something to be broken or destroyed
29. trauma-related dis_____ion *n.* the separation of ideas, emotions, or memories from a person's consciousness; a process by which molecules or compounds separate into smaller units or individual atoms
30. r__r with laughter *v.* to make a loud, deep sound, like a lion or a car engine
31. public address an_____er *n.* a person who introduces and speaks on television or radio programs or provides commentary or information at a live event
32. a sm_____ng blow *adj.* very successful or impressive; causing something to be broken or destroyed
33. ev__e sympathy *v.* to bring or recall a feeling, memory, or image into your mind
34. co_____t the face *v.* to (cause something to) twist and press out of its natural or normal shape
35. co____r lift *n.* a large predatory feline animal, also known as a mountain lion or puma, which is native to the Americas; an older woman who pursues sexual or romantic relationships with much younger men
36. 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

ANSWERS: 28. smashing, 29. dissociation, 30. roar, 31. announcer, 32. smashing, 33. evoke, 34. contort, 35. cougar, 36. gyroscope

37. r_v up the crowd *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
38. skilled st____an *n.* a professional performer who performs dangerous and often physically demanding tasks or stunts in place of an actor in a film or television show
39. Al_____er's brain *n.* a neurodegenerative disease that causes memory loss, cognitive decline, and behavioral issues; is the most common cause of dementia in older adults
40. acute enc_____thy *n.* disease or damage to the brain that disrupts the normal functioning of the brain, which cause a wide range of symptoms, including memory loss, confusion, seizures, and decreased cognitive abilities
41. bla_____th shop *n.* a smith who forges and shapes iron with a hammer and anvil
42. 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
43. de_____ia patients *n.* a severe decline in cognitive function, especially memory, as a result of disease or injury

ANSWERS: 37. rev, 38. stuntman, 39. Alzheimer, 40. encephalopathy, 41. blacksmith, 42. gyroscope, 43. dementia

44. syn_____us learning *adj.* occurring or operating at the same time or pace; happening simultaneously; coordinated or synchronized
45. weakness with at_____y *n.* a decrease in size of a muscle, organ, etc., caused by disease or disuse
46. person of gra_____nt age *n.* a parent of one's father or mother
47. 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
48. ex_____e in popularity *v.* to burst or break open violently and noisily; to cause something to burst or break open
49. ex_____e in anger *v.* to burst or break open violently and noisily; to cause something to burst or break open
50. at_____y of the muscles *n.* a decrease in size of a muscle, organ, etc., caused by disease or disuse
51. ai____g deployment *n.* a safety device designed to inflate rapidly in the event of a collision, protecting the occupants of a vehicle and reducing the risk of injury or death
52. va__t door *n.* a large room or chamber used for storage, often for valuables such as money, documents, or artwork; (verb) to leap or jump over something; to move quickly or suddenly
53. pulmonary fi_____e *n.* a narrow opening or crack, especially in a rock or other hard substance; a division or splitting within a group or organization

ANSWERS: 44. synchronous, 45. atrophy, 46. grandparent, 47. rev, 48. explode, 49. explode, 50. atrophy, 51. airbag, 52. vault, 53. fissure

54. dis_____ion reaction *n.* the separation of ideas, emotions, or memories from a person's consciousness; a process by which molecules or compounds separate into smaller units or individual atoms
55. r_t with age *v.* to decay, or cause something to decay, naturally and gradually
56. left ve_____le *n.* a chamber or cavity within an organ or structure, particularly the lower chamber of the heart that pumps blood to the lungs and other parts of the body
57. va__t from five to fifty percent *n.* a large room or chamber used for storage, often for valuables such as money, documents, or artwork; (verb) to leap or jump over something; to move quickly or suddenly
58. bla_____th welding *n.* a smith who forges and shapes iron with a hammer and anvil
59. ind_____us student *adj.* hardworking, diligent, and persistent in effort
60. corpus ca_____um fiber *n.* a large bundle of nerve fibers that connects the two hemispheres of the brain
61. st_____an performance *n.* a professional performer who performs dangerous and often physically demanding tasks or stunts in place of an actor in a film or television show
62. ca_____r donor *n.* a dead body, especially one used for scientific study or medical research

ANSWERS: 54. dissociation, 55. rot, 56. ventricle, 57. vault, 58. blacksmith, 59. industrious, 60. callosum, 61. stuntman, 62. cadaver

63. the co___r's ex-husband *n.* a large predatory feline animal, also known as a mountain lion or puma, which is native to the Americas; an older woman who pursues sexual or romantic relationships with much younger men
64. co_____ss gas *v.* to press or squeeze together to make something take up less space
65. ev__e a sense of awe *v.* to bring or recall a feeling, memory, or image into your mind
66. acc_____ter reading *n.* a device that measures acceleration or changes in motion, typically used in aerospace, automotive, and other engineering applications to monitor and control movement or to measure things like speed or vibration

ANSWERS: 63. cougar, 64. compress, 65. evoke, 66. accelerometer

Session 3: Fill in the Blanks

1. The heart's _____ are responsible for pumping blood out to the body.
n. a chamber or cavity within an organ or structure, particularly the lower chamber of the heart that pumps blood to the lungs and other parts of the body
2. He was known to be very _____ and would often work late into the night.
adj. hardworking, diligent, and persistent in effort
3. A severe case of _____ left the patient with permanent brain damage.
n. disease or damage to the brain that disrupts the normal functioning of the brain, which cause a wide range of symptoms, including memory loss, confusion, seizures, and decreased cognitive abilities
4. The football player suffered a _____ after being tackled during the game.
n. a violent blow or jolt to the head or body that jars the brain, often resulting in temporary or prolonged unconsciousness, confusion, or memory loss; a shock or upheaval caused by a sudden change or event
5. The sports _____ provided live commentary during the game.
n. a person who introduces and speaks on television or radio programs or provides commentary or information at a live event
6. 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
7. The corpus _____ is essential for coordinating the functions of the two hemispheres.
n. a large bundle of nerve fibers that connects the two hemispheres of the brain

ANSWERS: 1. ventricles, 2. industrious, 3. encephalopathy, 4. concussion, 5. announcer, 6. oscillates, 7. callosum

8. She was close to her paternal _____ and often spent summers with them.
n. a parent of one's father or mother
9. The old building _____ in a fiery inferno.
v. to burst or break open violently and noisily; to cause something to burst or break open
10. The group of performers perfectly executed the _____ dance routine.
adj. occurring or operating at the same time or pace; happening simultaneously; coordinated or synchronized
11. 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
12. Please refrigerate the meat, or it will _____.
v. to decay, or cause something to decay, naturally and gradually
13. The professional _____ jumped from the burning building and landed safely on the airbag below.
n. a professional performer who performs dangerous and often physically demanding tasks or stunts in place of an actor in a film or television show
14. The _____ shaped a horseshoe on his anvil.
n. a smith who forges and shapes iron with a hammer and anvil
15. The lungs are divided into five _____.
n. a rounded projection or division, especially of the brain, lung, or liver

ANSWERS: 8. grandparents, 9. exploded, 10. synchronous, 11. rev, 12. rot, 13. stuntman, 14. blacksmith, 15. lobes

16. 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
17. His _____ from his emotions made him distant and unresponsive.
- n.* the separation of ideas, emotions, or memories from a person's consciousness; a process by which molecules or compounds separate into smaller units or individual atoms
18. He _____ his smile with anger coming from his gut.
- v.* to (cause something to) twist and press out of its natural or normal shape
19. The lion _____ loudly, signaling its dominance over the other animals.
- v.* to make a loud, deep sound, like a lion or a car engine
20. The phone's _____ measures its movement and orientation in three-dimensional space.
- n.* a device that measures acceleration or changes in motion, typically used in aerospace, automotive, and other engineering applications to monitor and control movement or to measure things like speed or vibration
21. Daily exercise and adequate sleep are necessary to prevent the progression of _____.
- n.* a decrease in size of a muscle, organ, etc., caused by disease or disuse
22. The basketball bounced off the rim and _____ to the player.
- v.* to spring back into a former shape or position after being compressed or stretched

ANSWERS: 16. gyroscope, 17. dissociation, 18. contorted, 19. roared, 20. accelerometer, 21. atrophy, 22. rebounded

23. We saw a large _____ as we hiked through the mountains.
- n.* a large predatory feline animal, also known as a mountain lion or puma, which is native to the Americas; an older woman who pursues sexual or romantic relationships with much younger men
24. The _____ system in the car saved the driver's life in a severe crash.
- n.* a safety device designed to inflate rapidly in the event of a collision, protecting the occupants of a vehicle and reducing the risk of injury or death
25. The _____ nature of quantum physics has been a source of confusion for scientists for decades.
- adj.* contrary to what common sense would suggest
26. 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
27. My grandmother has _____ disease requires special care and attention from her caregivers.
- n.* a neurodegenerative disease that causes memory loss, cognitive decline, and behavioral issues; is the most common cause of dementia in older adults
28. The government _____ contains top-secret documents and classified information that only a few individuals can access.
- n.* a large room or chamber used for storage, often for valuables such as money, documents, or artwork; (verb) to leap or jump over something; to move quickly or suddenly
29. The hospital received a donation of _____ for their research program.
- n.* a dead body, especially one used for scientific study or medical research

ANSWERS: 23. cougar, 24. airbag, 25. counterintuitive, 26. compressed, 27. Alzheimer's, 28. vault, 29. cadavers

30. The band's new album was a _____ success, reaching the top of the charts.

adj. very successful or impressive; causing something to be broken or destroyed

31. The study found that regular exercise can help to prevent the onset of _____ in older age.

n. a severe decline in cognitive function, especially memory, as a result of disease or injury

32. This movie is likely to _____ strong emotions in the viewer.

v. to bring or recall a feeling, memory, or image into your mind

33. The _____ in the rock was too narrow to squeeze through.

n. a narrow opening or crack, especially in a rock or other hard substance; a division or splitting within a group or organization

ANSWERS: 30. smashing, 31. dementia, 32. evoke, 33. fissure