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Vocabulary Builder Reference from...

Paul McEuen and Marc Miskin: Tiny robots with giant potential | TED Talk

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

Advanced Words Only

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Session 1: Word List

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**.

microorganism n. a very small living thing that may exist in its single-celled form or as a colony of cells and is too small to be seen without a microscope
synonym : germ, microbe, bacterium
(1) pathogenic **microorganism**, (2) **microorganisms** in his gut
This **microorganism** is a producer of respiratory disease.

saltwater *adj.* of or connected with seawater or water containing salt; living in or found in the sea
synonym : marine, naval, maritime
(1) a **saltwater** fish, (2) **saltwater** crocodile
The ecosystem upstream of the river significantly impacts the **saltwater** ecosystem downstream.

envy v. to experience a feeling of jealousy or resentment towards someone because of their possessions,

qualities, or achievements; to desire to have something that someone else has; (noun) a feeling of resentment or jealousy towards someone else's perceived advantage or success

synonym : covet, resent, grudge

(1) **envy** his success, (2) feeling **envy** toward him
I can't help but **envy** my friend's ability to stay calm in stressful situations.

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.

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.

paramecium

n. a single-celled freshwater organism characterized by a slipper-like shape and the presence of cilia, used for movement and food gathering

synonym : slipper animalcule, ciliate

(1) **paramecium** species, (2) **paramecium** reproduction
The **paramecium** colony flourished in the petri dish, providing a perfect sample for our experiment.

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**.

firefly

n. a flying nocturnal insect common in warm regions with a tail that shines in the dark

(1) the glow of a **firefly**, (2) sparkle like **firefly**

In that country, there is a culture of eating live **firefly** squid.

wafer

n. a thin, flat, crisp biscuit or cake, often used as a communion element in religious services; a thin slice or piece of semiconductor material used in the production of computer chips and other electronic devices

synonym: thin cake, biscuit, disk

(1) strawberry **wafer**, (2) **wafer** cleaning system

The solar panel uses high-quality silicon **wafers** to convert sunlight into electricity efficiently.

app

n. (abbreviation for application) software designed to run on smartphones and other mobile devices or inside a web browser on a PC

synonym: application, software

(1) killer **app**, (2) cannot log in to the **app**

The discovery of a critical bug caused the company to delay the **app's** release.

excite

v. to make someone feel suddenly enthusiastic or eager

synonym: thrill, exhilarate, animate

(1) **excite** the crowd, (2) **excite** rebellion

The news of her promotion **excited** her.

fingerprint

n. a unique pattern of ridges and valleys on the surface of a finger that can be used to identify a person

synonym: print, mark, impression

(1) **fingerprint** at a crime scene, (2) **fingerprint** identification

The police used a **fingerprint** scanner to identify the suspect.

neuron

n. a cell that is specialized to carry information within the brain and between the brain and other parts of the body

synonym: nerve cell

(1) excite the **neurons**, (2) **neuron** cell body

Our body transfers information along each **neuron** using an electrical impulse.

preexist

v. to exist or occur before something else, especially referring to a time period or event; to predate or come before

synonym: antedate, precede

(1) **preexist** the modern city, (2) **preexist** the current political tensions

The idea for the novel **preexisted** as fragments of a dream in the author's mind.

actuate

v. to cause a machine or equipment to start to work

synonym: motivate, spark, drive

(1) **actuate** the circuits, (2) **actuate** a parking brake

A desire for success **actuated** her.

unbend

v. to relax or loosen up after a period of tension or seriousness; to straighten out or loosen something that was previously bent, twisted, or distorted

synonym: relax, loosen, unwind

(1) **unbend** a tense atmosphere, (2) **unbend** a difficult problem

I need to **unbend** the wire hanger to use it as a tool.

brawn

n. physical strength and muscular development; meat from a pig's or calf's head that has been cooked and jellied

synonym: muscle, power, strength

(1) **brawn** drain, (2) show off his **brawn**

The bodybuilder's **brawn** was impressive.

microprocessor

n. a computer component containing all the functions of the central processing unit

synonym: IC, chip, microchip

(1) **microprocessor** chip, (2) dedicated **microprocessor**

As a result of improvements in **microprocessor** performance, many consumer electronics products are now Internet-connected.

etch

v. to carve, cut, or engrave (a design or text) into a hard surface; to corrode, erode or eat away at a metal surface using acid or another chemical substance to create a design or pattern

synonym: engrave, inscribe, carve

(1) **etch** a metal plate, (2) **etch** a design into wood

He used a sharp tool to **etch** his initials onto the metal.

dissolve

v. to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss

synonym: disband, disappear, liquefy

(1) **dissolve** the sugar, (2) officially **dissolved** the marriage

The political party **dissolved** after much internal fighting.

pipette

n. a slender tube or tube-like instrument used for measuring small quantities of liquid, often with a bulb at one end that can be squeezed to draw liquid inside

synonym: dropper, tube

(1) **pipette** tip, (2) multi-channel **pipette**

After handling a toxic substance, she disposed of the contaminated **pipette** in the designated hazardous waste bin.

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.

hypodermic

adj. relating to the area below the skin; referring to a method of administering drugs or vaccines through a hypodermic needle or syringe

synonym: injectable, subcutaneous, intravenous

(1) **hypodermic** abscess, (2) **hypodermic** injection

The doctors administered the vaccine through a **hypodermic** needle.

rectangle

n. a four-sided geometric shape with four right angles, where opposite sides are parallel and of equal length

synonym: oblong, square, quadrangle

(1) orthogonal **rectangle**, (2) **rectangle** box

The living room had a **rectangle-shaped** coffee table in the center of it.

bloodstream

n. the blood flowing through the body

(1) **bloodstream** in an artery, (2) **bloodstream** to the brain

Cancer cells are often carried throughout the body by the **bloodstream**.

Session 2: Spelling

1. killer a_p *n.* (abbreviation for application) software designed to run on smartphones and other mobile devices or inside a web browser on a PC
2. a sa_____er fish *adj.* of or connected with seawater or water containing salt; living in or found in the sea
3. ex___e rebellion *v.* to make someone feel suddenly enthusiastic or eager
4. par_____um species *n.* a single-celled freshwater organism characterized by a slipper-like shape and the presence of cilia, used for movement and food gathering
5. pr_____st the modern city *v.* to exist or occur before something else, especially referring to a time period or event; to predate or come before
6. ac_____e the circuits *v.* to cause a machine or equipment to start to work
7. hyp_____ic abscess *adj.* relating to the area below the skin; referring to a method of administering drugs or vaccines through a hypodermic needle or syringe
8. mic_____isms in his gut *n.* a very small living thing that may exist in its single-celled form or as a colony of cells and is too small to be seen without a microscope
9. 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

ANSWERS: 1. app, 2. saltwater, 3. excite, 4. paramecium, 5. preexist, 6. actuate, 7. hypodermic, 8. microorganism, 9. transistor

10. mic_____sor chip *n.* a computer component containing all the functions of the central processing unit
11. par_____um reproduction *n.* a single-celled freshwater organism characterized by a slipper-like shape and the presence of cilia, used for movement and food gathering
12. cannot log in to the a_p *n.* (abbreviation for application) software designed to run on smartphones and other mobile devices or inside a web browser on a PC
13. fin_____nt at a crime scene *n.* a unique pattern of ridges and valleys on the surface of a finger that can be used to identify a person
14. ind_____us worker *adj.* hardworking, diligent, and persistent in effort
15. di_____ve the sugar *v.* to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
16. multi-channel pi_____e *n.* a slender tube or tube-like instrument used for measuring small quantities of liquid, often with a bulb at one end that can be squeezed to draw liquid inside
17. un____d a difficult problem *v.* to relax or loosen up after a period of tension or seriousness; to straighten out or loosen something that was previously bent, twisted, or distorted
18. 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)

ANSWERS: 10. microprocessor, 11. paramecium, 12. app, 13. fingerprint, 14. industrious, 15. dissolve, 16. pipette, 17. unbend, 18. inject

19. sa_____er crocodile *adj.* of or connected with seawater or water containing salt; living in or found in the sea
20. pi_____e tip *n.* a slender tube or tube-like instrument used for measuring small quantities of liquid, often with a bulb at one end that can be squeezed to draw liquid inside
21. officially di_____ved the marriage *v.* to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
22. strawberry wa__r *n.* a thin, flat, crisp biscuit or cake, often used as a communion element in religious services; a thin slice or piece of semiconductor material used in the production of computer chips and other electronic devices
23. e__y his success *v.* to experience a feeling of jealousy or resentment towards someone because of their possessions, qualities, or achievements; to desire to have something that someone else has; (noun) a feeling of resentment or jealousy towards someone else's perceived advantage or success
24. show off his br__n *n.* physical strength and muscular development; meat from a pig's or calf's head that has been cooked and jellied
25. hyp_____ic injection *adj.* relating to the area below the skin; referring to a method of administering drugs or vaccines through a hypodermic needle or syringe

ANSWERS: 19. saltwater, 20. pipette, 21. dissolve, 22. wafer, 23. envy, 24. brawn, 25. hypodermic

26. wa__r cleaning system *n.* a thin, flat, crisp biscuit or cake, often used as a communion element in religious services; a thin slice or piece of semiconductor material used in the production of computer chips and other electronic devices
27. br__n drain *n.* physical strength and muscular development; meat from a pig's or calf's head that has been cooked and jellied
28. un___d a tense atmosphere *v.* to relax or loosen up after a period of tension or seriousness; to straighten out or loosen something that was previously bent, twisted, or distorted
29. pathogenic mic_____ism *n.* a very small living thing that may exist in its single-celled form or as a colony of cells and is too small to be seen without a microscope
30. e__h a design into wood *v.* to carve, cut, or engrave (a design or text) into a hard surface; to corrode, erode or eat away at a metal surface using acid or another chemical substance to create a design or pattern
31. feeling e__y toward him *v.* to experience a feeling of jealousy or resentment towards someone because of their possessions, qualities, or achievements; to desire to have something that someone else has; (noun) a feeling of resentment or jealousy towards someone else's perceived advantage or success

ANSWERS: 26. wafer, 27. brawn, 28. unbend, 29. microorganism, 30. etch, 31. envy

32. begin to r_t *v.* to decay, or cause something to decay, naturally and gradually
33. excite the ne___ns *n.* a cell that is specialized to carry information within the brain and between the brain and other parts of the body
34. 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
35. ind_____us student *adj.* hardworking, diligent, and persistent in effort
36. ac_____e a parking brake *v.* to cause a machine or equipment to start to work
37. r_t with age *v.* to decay, or cause something to decay, naturally and gradually
38. fin_____nt identification *n.* a unique pattern of ridges and valleys on the surface of a finger that can be used to identify a person
39. re_____le box *n.* a four-sided geometric shape with four right angles, where opposite sides are parallel and of equal length
40. dedicated mic_____sor *n.* a computer component containing all the functions of the central processing unit
41. ex___e the crowd *v.* to make someone feel suddenly enthusiastic or eager
42. sma_____ne addict *n.* a mobile phone that functions as a computer and connects to the Internet

ANSWERS: 32. rot, 33. neuron, 34. transistor, 35. industrious, 36. actuate, 37. rot, 38. fingerprint, 39. rectangle, 40. microprocessor, 41. excite, 42. smartphone

43. sparkle like fi____y *n.* a flying nocturnal insect common in warm regions with a tail that shines in the dark
44. e__h a metal plate *v.* to carve, cut, or engrave (a design or text) into a hard surface; to corrode, erode or eat away at a metal surface using acid or another chemical substance to create a design or pattern
45. blo____am to the brain *n.* the blood flowing through the body
46. pr____st the current political tensions *v.* to exist or occur before something else, especially referring to a time period or event; to predate or come before
47. sma____ne app developer *n.* a mobile phone that functions as a computer and connects to the Internet
48. 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)
49. ne____n cell body *n.* a cell that is specialized to carry information within the brain and between the brain and other parts of the body
50. the glow of a fi____y *n.* a flying nocturnal insect common in warm regions with a tail that shines in the dark
51. blo____am in an artery *n.* the blood flowing through the body
52. orthogonal re____le *n.* a four-sided geometric shape with four right angles, where opposite sides are parallel and of equal length

ANSWERS: 43. firefly, 44. etch, 45. bloodstream, 46. preexist, 47. smartphone, 48. inject, 49. neuron, 50. firefly, 51. bloodstream, 52. rectangle

ANSWERS:

Session 3: Fill in the Blanks

1. After handling a toxic substance, she disposed of the contaminated _____ in the designated hazardous waste bin.
 - n.* a slender tube or tube-like instrument used for measuring small quantities of liquid, often with a bulb at one end that can be squeezed to draw liquid inside
2. The living room had a _____ coffee table in the center of it.
 - n.* a four-sided geometric shape with four right angles, where opposite sides are parallel and of equal length
3. The discovery of a critical bug caused the company to delay the _____ release.
 - n.* (abbreviation for application) software designed to run on smartphones and other mobile devices or inside a web browser on a PC
4. The idea for the novel _____ as fragments of a dream in the author's mind.
 - v.* to exist or occur before something else, especially referring to a time period or event; to predate or come before
5. Cancer cells are often carried throughout the body by the _____.
 - n.* the blood flowing through the body
6. 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
7. I can't help but _____ my friend's ability to stay calm in stressful situations.
 - v.* to experience a feeling of jealousy or resentment towards someone because of their possessions, qualities, or achievements; to desire to have something that someone else has; (noun) a feeling of resentment or jealousy towards someone else's perceived advantage or success

ANSWERS: 1. pipette, 2. rectangle-shaped, 3. app's, 4. preexisted, 5. bloodstream, 6. transistor, 7. envy

8. Internet traffic volumes have increased significantly with the advent of _____.
- n.* a mobile phone that functions as a computer and connects to the Internet
9. Our body transfers information along each _____ using an electrical impulse.
- n.* a cell that is specialized to carry information within the brain and between the brain and other parts of the body
10. A desire for success _____ her.
- v.* to cause a machine or equipment to start to work
11. The _____ colony flourished in the petri dish, providing a perfect sample for our experiment.
- n.* a single-celled freshwater organism characterized by a slipper-like shape and the presence of cilia, used for movement and food gathering
12. The solar panel uses high-quality silicon _____ to convert sunlight into electricity efficiently.
- n.* a thin, flat, crisp biscuit or cake, often used as a communion element in religious services; a thin slice or piece of semiconductor material used in the production of computer chips and other electronic devices
13. I need to _____ the wire hanger to use it as a tool.
- v.* to relax or loosen up after a period of tension or seriousness; to straighten out or loosen something that was previously bent, twisted, or distorted
14. In that country, there is a culture of eating live _____ squid.
- n.* a flying nocturnal insect common in warm regions with a tail that shines in the dark

ANSWERS: 8. smartphones, 9. neuron, 10. actuated, 11. paramecium, 12. wafers, 13. unbend, 14. firefly

15. This _____ is a producer of respiratory disease.
- n.* a very small living thing that may exist in its single-celled form or as a colony of cells and is too small to be seen without a microscope
16. 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)
17. The political party _____ after much internal fighting.
- v.* to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
18. The doctors administered the vaccine through a _____ needle.
- adj.* relating to the area below the skin; referring to a method of administering drugs or vaccines through a hypodermic needle or syringe
19. The ecosystem upstream of the river significantly impacts the _____ ecosystem downstream.
- adj.* of or connected with seawater or water containing salt; living in or found in the sea
20. He was known to be very _____ and would often work late into the night.
- adj.* hardworking, diligent, and persistent in effort
21. The bodybuilder's _____ was impressive.
- n.* physical strength and muscular development; meat from a pig's or calf's head that has been cooked and jellied
22. Please refrigerate the meat, or it will _____.
- v.* to decay, or cause something to decay, naturally and gradually

ANSWERS: 15. microorganism, 16. inject, 17. dissolved, 18. hypodermic, 19. saltwater, 20. industrious, 21. brawn, 22. rot

23. The news of her promotion _____ her.
- v. to make someone feel suddenly enthusiastic or eager
24. The police used a _____ scanner to identify the suspect.
- n. a unique pattern of ridges and valleys on the surface of a finger that can be used to identify a person
25. As a result of improvements in _____ performance, many consumer electronics products are now Internet-connected.
- n. a computer component containing all the functions of the central processing unit
26. He used a sharp tool to _____ his initials onto the metal.
- v. to carve, cut, or engrave (a design or text) into a hard surface; to corrode, erode or eat away at a metal surface using acid or another chemical substance to create a design or pattern

ANSWERS: 23. excited, 24. fingerprint, 25. microprocessor, 26. etch