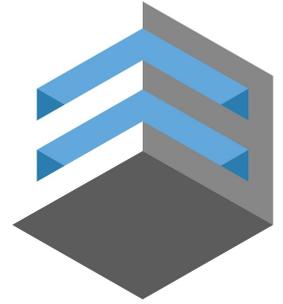


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Vocabulary Builder Reference from...

Leah Buechley: How to "sketch" with electronics |
TED Talk

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

All Words

IMPORTANT

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Session 1: Word List

sketch

n. a simple, quickly-made picture that does not have many details; a short descriptive summary of something

synonym: drawing, outline, blueprint

(1) a penciled **sketch**, (2) first design **sketches**

Yesterday, I created a rough **sketch** of the plan.

electronics

n. the branch of physics and technology that deals with the behavior and control of electrons and the use of electronic devices and systems

synonym: technology, gadgets, circuitry

(1) **electronics** industry, (2) **electronics** store

The company specializes in manufacturing and selling cutting-edge **electronics**.

electrical

adj. relating to electricity

(1) an **electrical** storm, (2) degree in **electrical** engineering

Actuators convert **electrical** pulses into motion.

engineer

n. a person whose job is designing, building, or maintaining something such as machines, structures, or software

synonym: architect, creator, builder

(1) a civil **engineer**, (2) **engineer** shortage

The **engineer** will repair my telephone tomorrow morning.

specifically

adv. only associated with or meant for one thing

synonym : especially, particularly, notably

(1) designed **specifically** for men, (2) for **specifically** American customers

This ad campaign is aimed **specifically** at young women.

process

n. a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products

synonym : procedure, method, system

(1) **process** improvement, (2) decision-making **process**

The **process** for applying for a visa can be lengthy and complicated.

problematic

adj. full of difficulties; difficult to deal with or solve

synonym : inappropriate, inconvenient, worrisome

(1) a **problematic** situation, (2) seems to be highly **problematic**

Direct democracy is effective in quickly resolving **problematic** situations within a community.

outcome

n. the result or effect of an action, event, etc.

synonym : result, consequence, effect

(1) improved student **outcomes**, (2) a desirable **outcome**

They awaited news of the **outcome** of the election.

electron

n. a tiny particle with the negative electrical charge

synonym : negatron

(1) flow of **electrons**, (2) beam of **electrons**

The outermost **electron** shell determines the chemical properties of an atom.

circuit

n. (in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area

synonym : route, course, rotation

(1) **circuit** breaker, (2) federal **circuit** courts

An intelligent battery has a voltage monitoring **circuit**.

frank

adj. honest and sincere; open and candid in expression

synonym : candid, direct, freehearted

(1) **frank** and open discussion, (2) make a **frank** apology

Full involvement means **frank** and prompt responses.

attractive

adj. immensely appealing in look or sound; having characteristics or qualities that make something appealing and valuable

synonym : beautiful, fetching, alluring

(1) **attractive** men, (2) **attractive** opportunity

The growth of the "sharing economy" is **attractive** for tech companies.

inexpensive

adj. costing little; having a low price

synonym : cheap, affordable, economical

(1) **inexpensive** option, (2) an **inexpensive** inn

The restaurant offered delicious food at an **inexpensive** price.

fluid

n. a substance that can flow and is not solid

synonym : liquid, aqua, sap

(1) plenty of **fluids**, (2) **fluid** assets

She was diagnosed with a **fluid** buildup in her lungs.

improvisation

n. the act of making something up on the spot or creating or performing something without preparation

synonym : spontaneity, ad-lib, extemporization

(1) **improvisation** on stage, (2) jazz **improvisation**

He created a beautiful piece of music using only **improvisation**.

possibility

n. a chance that something may happen or be true
synonym : chance, prospect, likelihood

(1) **possibility** for growth, (2) **possibility** of a major earthquake

The **possibility** of getting the disease will drastically increase.

investigation

n. the act or process of thoroughly examining a crime, problem, statement, etc., to uncover the truth

synonym : examination, analysis, inspection

(1) a preliminary **investigation**, (2) the scope of an **investigation**

We have never before conducted a legitimate **investigation**.

magnetic

adj. having the properties of attracting or repelling certain materials containing iron or steel

synonym : attractive, drawing, hypnotic

(1) **magnetic** field, (2) a **magnetic** tape

The **magnetic** force of the earth keeps our planet spinning.

conductivity

n. the quality of a material's ability to conduct electricity, heat, etc.

synonym : conduction

(1) low **conductivity**, (2) electrical **conductivity**

High thermal **conductivity** is also essential for the exterior of the machine.

lab

n. a workplace for the conduct of scientific research; a laboratory

synonym : workshop, laboratory, research chamber

(1) **lab** instrument, (2) medical **lab**

The Prime Minister will pay a courtesy visit to the Nobel laureate's **lab**.

stick

v. to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other

material

synonym : pierce, adhere, stay

(1) **stick** a key in a lock, (2) fire **stick**

You **stick** a bill in the change machine, and the coins pop out.

template

n. a pre-designed file or document used as a starting point for a particular application so that the format does not have to be created from scratch

synonym : pattern, model, blueprint

(1) **template** file, (2) **template** design

The **template** format provided a useful guide for creating the budget.

shadow

n. a dark area or shape cast by an object blocking the passage of light; an area in darkness or shade; a reflected image or copy of something; a person, activity, or influence that follows or accompanies someone or something closely and persistently, often in a secretive or ominous manner

synonym : shade, silhouette, outline

(1) **shadow** cast, (2) **shadow** puppetry

The tree cast a **shadow** over the picnic area, providing relief from the sun.

intelligence

n. the ability to learn, comprehend, or make judgments or conclusions based on reasons

synonym : brains, brightness, cleverness

(1) an **intelligence** test, (2) field of artificial **intelligence**

In terms of **intelligence**, he was head and shoulders above his classmates.

controller

n. a person or device that manages or regulates the operation of a system, equipment, or machine; a high-level position within an organization responsible for overseeing management, operations, and reporting

synonym : regulator, manager, handler

(1) **controller** board, (2) financial **controller**

The gaming **controller** was the missing piece I needed to enjoy my video games fully.

interface

n. (computer science) a program that controls a display for the user and that allows the user to interact with the system; (chemistry) a surface forming a common boundary between two things

synonym : junction, surface, UI

(1) **interface** between gas and liquid, (2) the user **interface**

Detergent weakens the surface tension at the **interface** of two liquids.

develop

v. to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created

synonym : evolve, progress, advance

(1) **develop** a strategy, (2) **develop** a skill

We must **develop** a new system to streamline our workflow and increase efficiency.

essentially

adv. relating to the essential features or concepts of anything

synonym : fundamentally, basically, virtually

(1) **essentially** correct, (2) become **essentially** same

Essentially, a society is an organism.

workshop

n. a place where people work, especially one where they do manual or practical work; a brief intensive course for a small group

synonym : studio, laboratory, atelier

(1) **workshop** attendee, (2) carpentry **workshop**

The artist held a **workshop** to teach students how to paint with watercolors.

technique

n. a particular way or art of doing something that needs skill

synonym: approach, procedure, strategy

(1) a **technique** in martial arts, (2) the **technique** applied to construction

Jockey's superior **technique** brought him victory.

fundamental

adj. forming an essential base or core from which everything else develops or is affected

synonym: basic, essential, entire

(1) **fundamental** education, (2) **fundamental** rights

Human behavior has **fundamental** characteristics.

Session 2: Spelling

1. pr____s improvement
n. a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
2. imp_____ion on stage
n. the act of making something up on the spot or creating or performing something without preparation
3. te____te design
n. a pre-designed file or document used as a starting point for a particular application so that the format does not have to be created from scratch
4. fire st__k
v. to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
5. for spe_____lly American customers
adv. only associated with or meant for one thing
6. te____te file
n. a pre-designed file or document used as a starting point for a particular application so that the format does not have to be created from scratch
7. con_____er board
n. a person or device that manages or regulates the operation of a system, equipment, or machine; a high-level position within an organization responsible for overseeing management, operations, and reporting

ANSWERS: 1. process, 2. improvisation, 3. template, 4. stick, 5. specifically, 6. template, 7. controller

8. ele_____cs store *n.* the branch of physics and technology that deals with the behavior and control of electrons and the use of electronic devices and systems
9. an ele_____al storm *adj.* relating to electricity
10. fl__d assets *n.* a substance that can flow and is not solid
11. beam of el_____ons *n.* a tiny particle with the negative electrical charge
12. an int_____nce test *n.* the ability to learn, comprehend, or make judgments or conclusions based on reasons
13. att_____ve opportunity *adj.* immensely appealing in look or sound; having characteristics or qualities that make something appealing and valuable
14. electrical con_____ity *n.* the quality of a material's ability to conduct electricity, heat, etc.
15. a penciled sk___h *n.* a simple, quickly-made picture that does not have many details; a short descriptive summary of something
16. plenty of fl__ds *n.* a substance that can flow and is not solid
17. seems to be highly pro_____ic *adj.* full of difficulties; difficult to deal with or solve
18. degree in ele_____al engineering *adj.* relating to electricity
19. the scope of an inv_____ion *n.* the act or process of thoroughly examining a crime, problem, statement, etc., to uncover the truth

ANSWERS: 8. electronics, 9. electrical, 10. fluid, 11. electron, 12. intelligence, 13. attractive, 14. conductivity, 15. sketch, 16. fluid, 17. problematic, 18. electrical, 19. investigation

20. a preliminary inv_____ion *n.* the act or process of thoroughly examining a crime, problem, statement, etc., to uncover the truth
21. carpentry wo_____op *n.* a place where people work, especially one where they do manual or practical work; a brief intensive course for a small group
22. att_____ve men *adj.* immensely appealing in look or sound; having characteristics or qualities that make something appealing and valuable
23. first design sk____hes *n.* a simple, quickly-made picture that does not have many details; a short descriptive summary of something
24. medical l_b *n.* a workplace for the conduct of scientific research; a laboratory
25. l_b instrument *n.* a workplace for the conduct of scientific research; a laboratory
26. jazz imp_____ion *n.* the act of making something up on the spot or creating or performing something without preparation
27. financial con_____er *n.* a person or device that manages or regulates the operation of a system, equipment, or machine; a high-level position within an organization responsible for overseeing management, operations, and reporting
28. improved student ou_____es *n.* the result or effect of an action, event, etc.

ANSWERS: 20. investigation, 21. workshop, 22. attractive, 23. sketch, 24. lab, 25. lab, 26. improvisation, 27. controller, 28. outcome

29. low con_____ity
30. sh___w puppetry
31. a desirable ou_____e
32. the te_____ue applied to construction
33. en_____er shortage
34. pos_____ty of a major earthquake
35. fun_____al education
36. de_____p a strategy
37. the user in_____ce
- n.* the quality of a material's ability to conduct electricity, heat, etc.
- n.* a dark area or shape cast by an object blocking the passage of light; an area in darkness or shade; a reflected image or copy of something; a person, activity, or influence that follows or accompanies someone or something closely and persistently, often in a secretive or ominous manner
- n.* the result or effect of an action, event, etc.
- n.* a particular way or art of doing something that needs skill
- n.* a person whose job is designing, building, or maintaining something such as machines, structures, or software
- n.* a chance that something may happen or be true
- adj.* forming an essential base or core from which everything else develops or is affected
- v.* to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
- n.* (computer science) a program that controls a display for the user and that allows the user to interact with the system; (chemistry) a surface forming a common boundary between two things

ANSWERS: 29. conductivity, 30. shadow, 31. outcome, 32. technique, 33. engineer, 34. possibility, 35. fundamental, 36. develop, 37. interface

38. st__k a key in a lock *v.* to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
39. sh___w cast *n.* a dark area or shape cast by an object blocking the passage of light; an area in darkness or shade; a reflected image or copy of something; a person, activity, or influence that follows or accompanies someone or something closely and persistently, often in a secretive or ominous manner
40. ess_____ly correct *adv.* relating to the essential features or concepts of anything
41. a te_____ue in martial arts *n.* a particular way or art of doing something that needs skill
42. fr__k and open discussion *adj.* honest and sincere; open and candid in expression
43. flow of el_____ons *n.* a tiny particle with the negative electrical charge
44. become ess_____ly same *adv.* relating to the essential features or concepts of anything
45. in_____ce between gas and liquid *n.* (computer science) a program that controls a display for the user and that allows the user to interact with the system; (chemistry) a surface forming a common boundary between two things
46. a ma_____ic tape *adj.* having the properties of attracting or repelling certain materials containing iron or steel

ANSWERS: 38. stick, 39. shadow, 40. essentially, 41. technique, 42. frank, 43. electron, 44. essentially, 45. interface, 46. magnetic

47. ine_____ve option *adj.* costing little; having a low price
48. make a fr__k apology *adj.* honest and sincere; open and candid in expression
49. a civil en_____er *n.* a person whose job is designing, building, or maintaining something such as machines, structures, or software
50. field of artificial int_____nce *n.* the ability to learn, comprehend, or make judgments or conclusions based on reasons
51. de_____p a skill *v.* to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
52. ma_____ic field *adj.* having the properties of attracting or repelling certain materials containing iron or steel
53. a pro_____ic situation *adj.* full of difficulties; difficult to deal with or solve
54. an ine_____ve inn *adj.* costing little; having a low price
55. decision-making pr_____s *n.* a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products

ANSWERS: 47. inexpensive, 48. frank, 49. engineer, 50. intelligence, 51. develop, 52. magnetic, 53. problematic, 54. inexpensive, 55. process

56. ele_____cs industry *n.* the branch of physics and technology that deals with the behavior and control of electrons and the use of electronic devices and systems
57. fun_____al rights *adj.* forming an essential base or core from which everything else develops or is affected
58. designed spe_____lly for men *adv.* only associated with or meant for one thing
59. federal ci_____t courts *n.* (in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area
60. ci_____t breaker *n.* (in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area
61. wo_____op attendee *n.* a place where people work, especially one where they do manual or practical work; a brief intensive course for a small group
62. pos_____ty for growth *n.* a chance that something may happen or be true

ANSWERS: 56. electronics, 57. fundamental, 58. specifically, 59. circuit, 60. circuit, 61. workshop, 62. possibility

Session 3: Fill in the Blanks

1. The tree cast a _____ over the picnic area, providing relief from the sun.
n. a dark area or shape cast by an object blocking the passage of light; an area in darkness or shade; a reflected image or copy of something; a person, activity, or influence that follows or accompanies someone or something closely and persistently, often in a secretive or ominous manner
2. This ad campaign is aimed _____ at young women.
adv. only associated with or meant for one thing
3. Actuators convert _____ pulses into motion.
adj. relating to electricity
4. The _____ format provided a useful guide for creating the budget.
n. a pre-designed file or document used as a starting point for a particular application so that the format does not have to be created from scratch
5. The restaurant offered delicious food at an _____ price.
adj. costing little; having a low price
6. The _____ for applying for a visa can be lengthy and complicated.
n. a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
7. They awaited news of the _____ of the election.
n. the result or effect of an action, event, etc.

ANSWERS: 1. shadow, 2. specifically, 3. electrical, 4. template, 5. inexpensive, 6. process, 7. outcome

8. We have never before conducted a legitimate _____.
- n.* the act or process of thoroughly examining a crime, problem, statement, etc., to uncover the truth
9. In terms of _____ he was head and shoulders above his classmates.
- n.* the ability to learn, comprehend, or make judgments or conclusions based on reasons
10. We must _____ a new system to streamline our workflow and increase efficiency.
- v.* to grow or expand; to improve or refine through a process of progress and refinement, often to achieve greater sophistication or complexity; to elaborate or add detail to something that is in the process of being created
11. You _____ a bill in the change machine, and the coins pop out.
- v.* to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
12. Detergent weakens the surface tension at the _____ of two liquids.
- n.* (computer science) a program that controls a display for the user and that allows the user to interact with the system; (chemistry) a surface forming a common boundary between two things
13. _____ a society is an organism.
- adv.* relating to the essential features or concepts of anything
14. The outermost _____ shell determines the chemical properties of an atom.
- n.* a tiny particle with the negative electrical charge

ANSWERS: 8. investigation, 9. intelligence, 10. develop, 11. stick, 12. interface, 13. Essentially, 14. electron

15. He created a beautiful piece of music using only _____.
- n.* the act of making something up on the spot or creating or performing something without preparation
16. The _____ will repair my telephone tomorrow morning.
- n.* a person whose job is designing, building, or maintaining something such as machines, structures, or software
17. An intelligent battery has a voltage monitoring _____.
- n.* (in electrical engineering) an electrical device that provides a path for electrical current to flow; a journey or route around a particular place or area
18. The gaming _____ was the missing piece I needed to enjoy my video games fully.
- n.* a person or device that manages or regulates the operation of a system, equipment, or machine; a high-level position within an organization responsible for overseeing management, operations, and reporting
19. High thermal _____ is also essential for the exterior of the machine.
- n.* the quality of a material's ability to conduct electricity, heat, etc.
20. The growth of the "sharing economy" is _____ for tech companies.
- adj.* immensely appealing in look or sound; having characteristics or qualities that make something appealing and valuable
21. The company specializes in manufacturing and selling cutting-edge _____.
- n.* the branch of physics and technology that deals with the behavior and control of electrons and the use of electronic devices and systems

ANSWERS: 15. improvisation, 16. engineer, 17. circuit, 18. controller, 19. conductivity, 20. attractive, 21. electronics

22. Full involvement means _____ and prompt responses.

adj. honest and sincere; open and candid in expression

23. The _____ of getting the disease will drastically increase.

n. a chance that something may happen or be true

24. She was diagnosed with a _____ buildup in her lungs.

n. a substance that can flow and is not solid

25. Human behavior has _____ characteristics.

adj. forming an essential base or core from which everything else develops or is affected

26. Yesterday, I created a rough _____ of the plan.

n. a simple, quickly-made picture that does not have many details; a short descriptive summary of something

27. The _____ force of the earth keeps our planet spinning.

adj. having the properties of attracting or repelling certain materials containing iron or steel

28. The artist held a _____ to teach students how to paint with watercolors.

n. a place where people work, especially one where they do manual or practical work; a brief intensive course for a small group

29. The Prime Minister will pay a courtesy visit to the Nobel laureate's ____.

n. a workplace for the conduct of scientific research; a laboratory

30. Direct democracy is effective in quickly resolving _____ situations within a community.

adj. full of difficulties; difficult to deal with or solve

ANSWERS: 22. frank, 23. possibility, 24. fluid, 25. fundamental, 26. sketch, 27. magnetic, 28. workshop, 29. lab, 30. problematic

31. Jockey's superior _____ brought him victory.

n. a particular way or art of doing something that needs skill

ANSWERS: 31. technique