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Vocabulary Builder Reference from...

Thomas Thwaites: How I built a toaster -- from

scratch | TED Talk

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

uilt a toaster from scratch



Advanced Words Only

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Session 1: Word List

sludge

n. a thick, wet mixture of liquid and solid matter, typically one that is unpleasant or harmful

synonym: muck, ooze, mire

(1) **sludge** treatment, (2) **sludge** removal

The **sludge** at the bottom of the river was a toxic hazard for marine life.

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.

hitchhike

v. to obtain a ride in a passing vehicle by signaling to the driver or waving one's thumb; to travel by getting a free ride in someone else's vehicle

synonym: thumb a ride, bum a ride

(1) **hitchhike** a ride, (2) **hitchhike** across the country

She had to **hitchhike** to the nearest gas station when her car broke down.

populate

v. to inhabit or occupy a particular area, region, or environment with a certain number or type of people, animals, or plants; to fill out or complete a form,

document, or database with relevant information *synonym*: inhabit, occupy, dwell

(1) **populate** the countryside, (2) **populate** the spreadsheet Deer, squirrels, and birds primarily **populate** the forest.

villager

 a person who lives in a village or small rural community;
 a person who is part of a close-knit and traditional community

synonym: resident, inhabitant, countryperson

(1) villager community, (2) local villager

The rural **villagers** were saddened by the destruction of their homes in the natural disaster.

emperor

n. the male ruler of an empire

synonym: ruler, king, dictator

(1) **emperor** of Rome, (2) former **emperor**

The **Emperor** once lived in the vast palace.

Wikipedia

 an online encyclopedia that allows users to contribute and edit articles collaboratively; a vast and frequently updated repository of information on a wide range of topics

synonym: online encyclopedia, webpedia

(1) Wikipedia entry, (2) Wikipedia article

Not all teachers accept citing **Wikipedia** as a valid source for academic papers.

dismay

 a feeling of discouragement, distress, or anxiety caused by something unexpected or unwelcome; a sudden loss of courage or confidence

synonym: distress, discouragement, consternation

(1) flop down in dismay, (2) feel dismay

The employees expressed their **dismay** at the sudden announcement of massive layoffs.

nag

v. to annoy or irritate someone persistently with repeated complaints, requests, or criticism; (noun) an old or

over-worked horse

synonym: hassle, bother, badger

(1) **nag** about the minor thing, (2) **nag** political leaders

She couldn't stop **nagging** her husband to take out the trash.

crease

 a line or mark made by folding or wrinkling a surface or material; a slight ridge or fold in fabric or paper caused by pressing or folding

synonym: fold, wrinkle, ridge

(1) crease in fabric, (2) deep crease

The shirt had a noticeable **crease** along the sleeve from being folded.

limestone

 a sedimentary rock that is composed mainly of calcium carbonate, which is the mineral calcite

synonym: calcareous rock, chalk

(1) sheer **limestone** cliffs, (2) **limestone** pavement The Great Pyramid of Giza was built using blocks of **limestone**.

miner

n. a person who works in a mine (= excavation in the Earth from which ores and minerals are extracted), especially one who extracts coal, minerals, or precious metals from the Earth

synonym: digger, excavator, miner

(1) miner strike, (2) miner industry

The coal **miner** worked tirelessly to extract valuable minerals from deep underground.

metallurgy

- n. a branch of materials science and engineering that stands at metals' physical and chemical properties, their compounds with other metals, and their mixtures, called alloys.
- (1) nickel **metallurgy**, (2) welding **metallurgy** He taught engineering and **metallurgy** classes.

woodcut

a print made by cutting a design into a block of wood and then inking the surface and pressing it onto paper
 synonym: print, engraving, relief

(1) woodcut printing, (2) woodcut block

The museum had an exhibition of famous artists' woodcuts.

bellows

n. a device consisting of a bag or chamber with flexible sides that is expanded and contracted to draw in air through a valve and then force it out through a tube; a device used to blow air into a fire to make it burn more intensely

synonym: blower, puffer, blaster

(1) bellows pump, (2) blow a bellows

The blacksmith's apprentice operated the **bellows** to maintain the forge's heat.

acidic

adj. having a pH lower than 7; having characteristics of an acid, such as tasting sour or corroding metal

synonym: sour, tart, acrid

(1) acidic solution, (2) acidic taste

The soil in this region is too **acidic** for most crops to grow well.

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.

isle

n. a small island, especially one in the sea

synonym: island, atoll, cay

(1) **isle** of paradise, (2) tiny **isle**

I love to spend my vacations on a beautiful **isle** with pristine beaches.

insulate

v. to protect something by interposing material that prevents heat, noise, electricity, etc.

synonym: isolate, protect, seclude

(1) **insulate** the room from sound, (2) **insulate** electricity We had our bedroom **insulated** before winter came.

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.

jug

 a container with a handle and spout used for pouring liquids, typically made of ceramics, glass, or metal; (verb) to cook something slowly in a covered container

synonym: pitcher, carafe, decanter

(1) ceramic jug, (2) jug of beer

She filled the **jug** with ice-cold water from the fridge.

starch

 a complex carbohydrate found in many plants, including rice, wheat, and potatoes that is an important foodstuff for humans and animals

synonym: carbohydrate, glucose, dextrin

(1) **starch** granules, (2) potato **starch**

When heated, **starch** molecules absorb water and become thick and gooey, making it a useful thickening agent in cooking.

mold

a hollow container used to give shape to liquid or soft substance, which then becomes solid in the same shape as the container; a soft, green, or gray growth that forms on stale food or objects exposed to warm, moist air for too long

synonym: cavity, cast, mildew

(1) a casting **mold**, (2) **mold** allergy

Mushrooms and mold are fungi.

snail

 a slow-moving mollusk with a spiral shell that it uses to protect its body

synonym: escargot, slug, whelk

(1) snail mail, (2) snail pace

The gardener found a **snail** slowly making its way through the lettuce patch.

hydrolyze

v. to break down or decompose a compound or substance by a chemical reaction with water, often resulting in the separation of its components

synonym: dissolve, decompose, break down

(1) **hydrolyze** a chemical compound, (2) **hydrolyze** starch with enzymes

The research team seeks more efficient methods to **hydrolyze** cellulose into its glucose components.

christen

v. to give a name to a baby at a Christian ceremony to welcome them into the Christian Church

synonym: baptize, name, initiate

(1) **christen** a child, (2) **christen** the baby at the baptism The newborn baby was **christened** in a ceremony at the church.

epoch

 a particular period of time, usually marked by significant events or developments; a division of geologic time

synonym: era, age, period

(1) **epoch-making** event, (2) post-modern **epoch**The Industrial Revolution is often considered an **epoch** in human history.

stratum

 a layer or level of something, usually referring to a layer of rock or soil in the Earth's crust

synonym: layer, level, tier

(1) social **stratum**, (2) **stratum** corneum

The geologist identified a new **stratum** of rock through his research.

axion

 a hypothetical elementary particle that is a constituent of dark matter and has properties similar to those of neutrinos but with a much greater mass

synonym: particle, quantum, fermion

(1) axion particle, (2) axion mass

The **axion** field is believed to have an impact on the development of the universe.

recycle

 to sort and collect things to process them and produce valuable materials that can be used again

synonym: reclaim, reuse, reprocess

(1) **recycle** the cardboard boxes, (2) **recycle** milk packaging into new paper

We largely **recycle** the circuit board of cell phones because they contain a lot of valuable metals.

insistent

 adj. characterized by a persistent and forceful demand or urging; unyielding or uncompromising in one's position or viewpoint; persistent in pursuit of a goal or objective

synonym: demanding, persistent, assertive

(1) insistent tone, (2) insistent demand

The **insistent** chatter from the other room made it impossible for her to focus on her work.

Session 2: Spelling

1. ceramic j_g

2. li ne pavement

3. ch en a child

4. sl___e removal

5. post-modern ep__h

6. flop down in di___y

7. wo____t printing

8. in nt demand

- n. a container with a handle and spout used for pouring liquids, typically made of ceramics, glass, or metal; (verb) to cook something slowly in a covered container
- a sedimentary rock that is composed mainly of calcium carbonate, which is the mineral calcite
- to give a name to a baby at a Christian ceremony to welcome them into the Christian Church
- a thick, wet mixture of liquid and solid matter, typically one that is unpleasant or harmful
- a particular period of time, usually marked by significant events or developments; a division of geologic time
- a feeling of discouragement, distress, or anxiety caused by something unexpected or unwelcome; a sudden loss of courage or confidence
- a print made by cutting a design into a block of wood and then inking the surface and pressing it onto paper
- adj. characterized by a persistent and forceful demand or urging; unyielding or uncompromising in one's position or viewpoint; persistent in pursuit of a goal or objective

ANSWERS: 1. jug, 2. limestone, 3. christen, 4. sludge, 5. epoch, 6. dismay, 7. woodcut, 8. insistent

9.	acc solution	adj.	having a pH lower than 7; having characteristics of an acid, such as tasting sour or corroding metal
10.	Wiia entry	n.	an online encyclopedia that allows users to contribute and edit articles collaboratively; a vast and frequently updated repository of information on a wide range of topics
11.	bes pump	n.	a device consisting of a bag or chamber with flexible sides that is expanded and contracted to draw in air through a valve and then force it out through a tube; a device used to blow air into a fire to make it burn more intensely
12.	inte the room from sound	<i>v</i> .	to protect something by interposing material that prevents heat, noise, electricity, etc.
13.	by in the earth	<i>v</i> .	to place a dead body in the ground, grave, or tomb
14.	hike across the country	ν.	to obtain a ride in a passing vehicle by signaling to the driver or waving one's thumb; to travel by getting a free ride in someone else's vehicle
15.	elfy the audience	ν.	to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something
16.	sheer line cliffs	n.	a sedimentary rock that is composed mainly of calcium carbonate, which is the mineral calcite
ANSWERS: 9. acidic, 10. Wikipedia, 11. bellows, 12. insulate, 13. bury, 14. hitchhike, 15. electrify, 16. limestone			

17.	officially dived 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
18.	social stm	n.	a layer or level of something, usually referring to a layer of rock or soil in the Earth's crust
19.	dive the sugar	<i>v</i> .	to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
20.	mir strike	n.	a person who works in a mine (= excavation in the Earth from which ores and minerals are extracted), especially one who extracts coal, minerals, or precious metals from the Earth
21.	axn particle	n.	a hypothetical elementary particle that is a constituent of dark matter and has properties similar to those of neutrinos but with a much greater mass
22.	elfy a manufacturing process	ν.	to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something
23.	deep cre	n.	a line or mark made by folding or wrinkling a surface or material; a slight ridge or fold in fabric or paper caused by pressing or folding
24.	j_g of beer	n.	a container with a handle and spout used for pouring liquids, typically made of ceramics, glass, or metal; (verb) to cook something slowly in a covered container

ANSWERS: 17. dissolve, 18. stratum, 19. dissolve, 20. miner, 21. axion, 22. electrify, 23. crease, 24. jug

25. vier community	n.	a person who lives in a village or small rural community; a person who is part of a close-knit and traditional community
26. hike a ride	ν.	to obtain a ride in a passing vehicle by signaling to the driver or waving one's thumb; to travel by getting a free ride in someone else's vehicle
27. pote the spreadsheet	v.	to inhabit or occupy a particular area, region, or environment with a certain number or type of people, animals, or plants; to fill out or complete a form, document, or database with relevant information
28. former emr	n.	the male ruler of an empire
29. local vier	n.	a person who lives in a village or small rural community; a person who is part of a close-knit and traditional community
30. axn mass	n.	a hypothetical elementary particle that is a constituent of dark matter and has properties similar to those of neutrinos but with a much greater mass
31. blow a bes	n.	a device consisting of a bag or chamber with flexible sides that is expanded and contracted to draw in air through a valve and then force it out through a tube; a device used to blow air into a fire to make it burn more intensely
32. snI mail	n.	a slow-moving mollusk with a spiral shell that it uses to protect its body
ANSWERS: 25. villager, 26. hitchhike, 27. populate, 28. emperor, 29. villager, 30.		

axion, 31. bellows, 32. snail

33. hy ze a chemical compound to break down or decompose a ν. compound or substance by a chemical reaction with water, often resulting in the separation of its components 34. ac___c taste adj. having a pH lower than 7; having characteristics of an acid, such as tasting sour or corroding metal a complex carbohydrate found in many 35. st___h granules plants, including rice, wheat, and potatoes that is an important foodstuff for humans and animals to place a dead body in the ground, 36. b y emotion ν. grave, or tomb to inhabit or occupy a particular area, 37. po te the countryside ν. region, or environment with a certain number or type of people, animals, or plants; to fill out or complete a form, document, or database with relevant information a slow-moving mollusk with a spiral 38. sn I pace shell that it uses to protect its body 39. cr___e in fabric a line or mark made by folding or n. wrinkling a surface or material; a slight ridge or fold in fabric or paper caused by pressing or folding to annoy or irritate someone persistently 40. n g political leaders with repeated complaints, requests, or criticism; (noun) an old or over-worked horse 41. re e the cardboard boxes to sort and collect things to process them and produce valuable materials that can be used again

ANSWERS: 33. hydrolyze, 34. acidic, 35. starch, 36. bury, 37. populate, 38. snail, 39. crease, 40. nag, 41. recycle

42.	ie of paradise	n.	a small island, especially one in the sea
43.	eph-making event	n.	a particular period of time, usually marked by significant events or developments; a division of geologic time
44.	n_g about the minor thing	v.	to annoy or irritate someone persistently with repeated complaints, requests, or criticism; (noun) an old or over-worked horse
45.	stm corneum	n.	a layer or level of something, usually referring to a layer of rock or soil in the Earth's crust
46.	inte electricity	v.	to protect something by interposing material that prevents heat, noise, electricity, etc.
47.	innt tone	adj.	characterized by a persistent and forceful demand or urging; unyielding or uncompromising in one's position or viewpoint; persistent in pursuit of a goal or objective
48.	chen the baby at the baptism	ν.	to give a name to a baby at a Christian ceremony to welcome them into the Christian Church
49.	ree milk packaging into new paper	<i>v</i> .	to sort and collect things to process them and produce valuable materials that can be used again
50.	Wiia article	n.	an online encyclopedia that allows users to contribute and edit articles collaboratively; a vast and frequently updated repository of information on a wide range of topics

ANSWERS: 42. isle, 43. epoch, 44. nag, 45. stratum, 46. insulate, 47. insistent, 48. christen, 49. recycle, 50. Wikipedia

nickel metgy	n.	a branch of materials science and engineering that stands at metals' physical and chemical properties, their compounds with other metals, and their mixtures, called alloys.
hyze starch with enzymes	v.	to break down or decompose a compound or substance by a chemical reaction with water, often resulting in the separation of its components
wot block	n.	a print made by cutting a design into a block of wood and then inking the surface and pressing it onto paper
emr of Rome	n.	the male ruler of an empire
mir industry	n.	a person who works in a mine (= excavation in the Earth from which ores and minerals are extracted), especially one who extracts coal, minerals, or precious metals from the Earth
tiny ie	n.	a small island, especially one in the sea
potato sth	n.	a complex carbohydrate found in many plants, including rice, wheat, and potatoes that is an important foodstuff for humans and animals
sle treatment	n.	a thick, wet mixture of liquid and solid matter, typically one that is unpleasant or harmful
welding metgy	n.	a branch of materials science and engineering that stands at metals' physical and chemical properties, their compounds with other metals, and their mixtures, called alloys.
	hyze starch with enzymes wot block emr of Rome mi_r industry tiny ie potato sth sle treatment	hyze starch with enzymes v. wot block n. emr of Rome n. mir industry n. tiny ie n. potato sth n. sle treatment n.

ANSWERS: 51. metallurgy, 52. hydrolyze, 53. woodcut, 54. emperor, 55. miner, 56. isle, 57. starch, 58. sludge, 59. metallurgy

- 60. feel di___y
- 61. m__d allergy

62. a casting m__d

- a feeling of discouragement, distress, or anxiety caused by something unexpected or unwelcome; a sudden loss of courage or confidence
- n. a hollow container used to give shape to liquid or soft substance, which then becomes solid in the same shape as the container; a soft, green, or gray growth that forms on stale food or objects exposed to warm, moist air for too long
- n. a hollow container used to give shape to liquid or soft substance, which then becomes solid in the same shape as the container; a soft, green, or gray growth that forms on stale food or objects exposed to warm, moist air for too long

ANSWERS: 60. dismay, 61. mold, 62. mold

Session 3: Fill in the Blanks

1.	Deer, squirrels, and birds primarily the forest.
ν.	to inhabit or occupy a particular area, region, or environment with a certain number or type of people, animals, or plants; to fill out or complete a form, document, or database with relevant information
2.	The museum had an exhibition of famous artists'
n.	a print made by cutting a design into a block of wood and then inking the surface and pressing it onto paper
3.	The gardener found a slowly making its way through the lettuce patch.
n.	a slow-moving mollusk with a spiral shell that it uses to protect its body
4.	When heated, molecules absorb water and become thick and gooey, making it a useful thickening agent in cooking.
n.	a complex carbohydrate found in many plants, including rice, wheat, and potatoes that is an important foodstuff for humans and animals
5.	Mushrooms and are fungi.
<i>n</i> .	a hollow container used to give shape to liquid or soft substance, which then becomes solid in the same shape as the container; a soft, green, or gray growth that forms on stale food or objects exposed to warm, moist air for too long
6.	There is plenty of space to everyone.
v.	to place a dead body in the ground, grave, or tomb
7.	We had our bedroom before winter came.
ν.	to protect something by interposing material that prevents heat, noise, electricity, etc.
AN	SWERS: 1. populate, 2. woodcuts, 3. snail, 4. starch, 5. mold, 6. bury, 7. insulated

ANSWERS: 8. isle, 9. villagers, 10. nagging, 11. dissolved, 12. Emperor, 13. stratum, 14. Wikipedia, 15. christened

16.	The blacksmith's apprentice operated the	to maintain the forge's heat.
n.	a device consisting of a bag or chamber with flex and contracted to draw in air through a valve and tube; a device used to blow air into a fire to make	then force it out through a
17.	The Great Pyramid of Giza was built using blocks of	of
n.	a sedimentary rock that is composed mainly of camineral calcite	alcium carbonate, which is the
18.	The field is believed to have an impact on thuniverse.	ne development of the
n.	a hypothetical elementary particle that is a consti- properties similar to those of neutrinos but with a	
19.	The chatter from the other room made on her work.	it impossible for her to focus
adj.	characterized by a persistent and forceful deman uncompromising in one's position or viewpoint; per objective	
20.	The at the bottom of the river was a toxic h	nazard for marine life.
n.	a thick, wet mixture of liquid and solid matter, typharmful	ically one that is unpleasant or
21.	The Industrial Revolution is often considered an	in human history.
n.	a particular period of time, usually marked by sign developments; a division of geologic time	nificant events or
22.	The soil in this region is too for most crops	to grow well.
adj.	having a pH lower than 7; having characteristics of sour or corroding metal	of an acid, such as tasting
	SWERS: 16. bellows, 17. limestone, 18. axion, 19. i acidic	insistent, 20. sludge, 21. epoch

ANSWERS: 23. jug, 24. metallurgy, 25. recycle, 26. miner, 27. hydrolyze, 28. crease

29.	The product developed through years of research continues to the market.
<i>v</i> .	to make a machine or system work by using electricity; to make someone extremely enthusiastic about or interested in something
30.	She had to to the nearest gas station when her car broke down.
<i>v</i> .	to obtain a ride in a passing vehicle by signaling to the driver or waving one's thumb; to travel by getting a free ride in someone else's vehicle
31.	The employees expressed their at the sudden announcement of massive layoffs.
n.	a feeling of discouragement, distress, or anxiety caused by something unexpected or unwelcome; a sudden loss of courage or confidence

ANSWERS: 29. electrify, 30. hitchhike, 31. dismay