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Vocabulary Builder Reference from...

Aaron Sams: How to speed up chemical reactions (and get a date) | TED Talk https://www.ted.com/talks/aaron_sams_how_to_speed_up_chemical_reactions_and_get_a_date



All Words

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Session 1: Word List

chemistry

- the branch of the natural sciences dealing with the composition of substances and their properties and reactions
- (1) professor of **chemistry**, (2) the **chemistry** of soil He is familiar with **chemistry** and biology.

chemical

adj. relating to or connected with chemistry;synonym: chemic, synthetic

toxic chemicals, (2) a chemical compound
 The firm has grown into a large chemical manufacturing.

reaction

 a response that reveals a person's feelings or attitude;
 (in chemistry) a process in which one or more substances are changed into others

synonym: response, reply, answer

(1) chemical reaction, (2) trigger a reaction
There was a chemical reaction of the lime with the groundwater.

process

 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.

dispose

to put things or people in a particular manner or position; to incline someone towards a specific activity or mood; throw or cast away

synonym: get rid of, arrange, set

(1) **dispose** battleships for a battle, (2) **dispose** of a used product

Generally speaking, the child is innately **disposed** to learn a language.

unbeknownst

adv. without the knowledge or awareness of someone; without someone's knowledge or participation

synonym: secretly, covertly

(1) **unbeknownst** to me, (2) **unbeknownst** to any of us **Unbeknownst** to the family, the treasure had been hidden in the attic for years.

sprint

to run at full speed over a short distance or period of time

synonym: dash, bolt, race

- (1) **sprint** for a bus, (2) **sprint** towards the finish line Top athletes can **sprint** 100 meters in less than 10 seconds.
- an instance of two or more objects or entities crashing n. into each other, usually resulting in damage, impact, or conflict

synonym: crash, impact, smash

(1) **collision** detection, (2) come into **collision** with my friend

The **collision** of tectonic plates can result in new mountain ranges, such as the Himalayas or the Alps.

collision

squarely

adv. directly and firmly; in a square shape synonym: honestly, justly, straightforwardly

(1) look **squarely** at reality, (2) a **squarely** cut piece of paper

We must **squarely** address the problem.

recollect

- v. to remember or call to mind something from the past synonym: remember, recall, reminisce
- (1) **recollect** the image, (2) as far as I can **recollect**She closed her eyes and tried to **recollect** her thoughts before the meeting.

belong

 to be the property of someone or something; to be a member or part of a group; to be in the proper or appropriate place

synonym: fit, be appropriate, be suitable

(1) **belong** to different species, (2) **belong** to a group All the books in this section **belong** to the library's rare collection and must be handled carefully.

politely

adv. in a courteous or respectful manner, showing good manners or consideration for others

synonym: courteously, respectfully, graciously

(1) politely ask, (2) nodded politely

She **politely** declined the invitation to the party, saying she had other plans.

collide

 ν . to hit something violently when moving

synonym: clash, slam, contradict

(1) **collide** head-on, (2) **collide** in midair The interests of the two countries **collide**.

characteristic

 a typical feature or quality that can identify, tell apart, or describe something or somebody

synonym: feature, quality, attribute

(1) stripes **characteristic** of the zebra, (2) my friend's

characteristic laugh

Bananas have their **characteristic** taste and odor.

orientation

 a person's basic attitudes, beliefs, and preferences about particular things; a course introducing a new situation or environment

synonym: direction, introduction, frontage

(1) sexual **orientation**, (2) the school **orientation**There will be an **orientation** lecture for new students this afternoon.

incident

an event or occurrence, often unexpected or unplanned;
 something that happens

synonym: event, occurrence, accident

(1) traffic incident, (2) security incident

The **incident** at the airport caused a delay in my flight.

decide

- v. to make up someone's mind about something; to come to a conclusion or judgment after considering options
 synonym: choose, determine, settle
- (1) **decide** a question, (2) **decide** on a course of action

She couldn't **decide** whether to order the pizza or the pasta for dinner.

parallel

 adj. being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations

synonym: aligned, side-by-side, similar

(1) a **parallel** case, (2) **parallel** processing He walked a road **parallel** to the railroad.

hallway

- n. an interior passage or corridor onto which rooms opensynonym: foyer, corridor, entrance
- (1) the head of a **hallway**, (2) wax a **hallway** floor He dashed down a **hallway** to a bathroom.

educational

adj. relating to education or providing knowledge or instruction

synonym: instructional, informative, enlightening

(1) **educational** system, (2) elevate **educational** standards The museum offers a variety of **educational** programs for children and adults.

environment

 the natural world such as air, water, and land in which humans, animals, and plants live

synonym: atmosphere, surroundings, climate

(1) **environment** affairs, (2) chaotic **environment**Every human is responsible for taking care of the Earth's **environment**.

facilitate

- v. to make something easier or more likely to happen synonym: aid, assist, help
- (1) **facilitate** a smooth transition, (2) **facilitate** the process The company implemented a new software system to **facilitate** employee communication and collaboration.

improvisation

- n. the act of making something up on the spot or creating or performing something without preparationsynonym: spontaneity, ad-lib, extemporization
- (1) **improvisation** on stage, (2) jazz **improvisation** He created a beautiful piece of music using only **improvisation**.

propose

- v. to make a proposal, declare a plan for something synonym: suggest, offer, recommend
- (1) **propose** the amendment, (2) **propose** changes I want to **propose** a toast in honor of our longstanding relationship.

shrink

v. to become smaller, or to make something smaller in size or amount

synonym: decrease, diminish, shy away

(1) **shrink** the tumor, (2) **shrink** with fear This shirt will **shrink** in the wash.

navigate

v. to plan and direct the way that a ship, plane, etc. will travel, often by using a map

synonym: guide, helm, voyage

(1) **navigate** the Pacific, (2) **navigate** through a document Our knowledge helps **navigate** our clients successfully.

likelihood

 the probability or chance that something will happen or be the case

synonym: probability, chance, possibility

(1) **likelihood** of the success, (2) improve the **likelihood** of a cure

The **likelihood** of the project being completed on time is uncertain.

alignment

- n. an arrangement in which two or more elements are placed in a straight line or parallel to each othersynonym: conjunction, arrangement, coalition
- (1) **alignment** in an organization, (2) be in **alignment** In the last century, Britain formed a strong **alignment** with Egypt.

equivalent

- n. having the same value, quality, meaning, purpose, etc.synonym: equal, counterpart, match
- (1) **equivalent** amounts, (2) **equivalent** in meaning
 The European Central Bank is Europe's **equivalent** of the
 Federal Reserve.

volume

 the amount of space occupied by an object or substance; the magnitude of sound

synonym: capacity, amount, intensity

(1) **volume** of work, (2) high **volume**

This container has a **volume** of 10 cubic meters.

vessel

n. a ship or large boatsynonym: boat, ship, craft

(1) blood vessels, (2) naval vessels

The **vessel** arrived in port the following day.

mixture

 a combination of different elements, substances, or entities, usually in non-uniform proportions, resulting in a homogeneous or heterogeneous blend of physical or chemical properties

synonym: blend, amalgam, concoction

(1) mixture of emotions, (2) perfect mixture

The paint was a **mixture** of different pigments to achieve the desired color.

individual

- n. a single person or thing, as distinct from a group synonym: person, being, self
- (1) a private **individual**, (2) **individual** freedom
 As an **individual**, he had the right to make his own decisions and live his life as he saw fit.

particle

- n. a small piece of something; a word or piece of a term with grammatical function but little or no significance synonym: atom, grain, bit
- charged particle, (2) particle energy
 we can calculate the position of the particles statistically.

appropriate

adj. suitable or proper in the circumstances; fitting *synonym*: fitting, suitable, proper

(1) **appropriate** behavior, (2) an **appropriate** time It would be **appropriate** to dress nicely for the wedding.

configuration

 the arrangement or pattern of something or a group of related things

synonym: arrangement, composition, formatting

(1) **configuration** of the system, (2) engine **configuration**The **configuration** of molecules in steel changes significantly

with temperature.

velocity

 the rate of change of an object's position with respect to time, often measured in meters per second (m/s)

synonym: speed, rapidity, swiftness

(1) initial velocity, (2) high velocity

The **velocity** of the car was too fast for the road conditions.

analogous

 adj. similar or equivalent in some respects, typically as a result of functioning in a similar way

synonym: similar, comparable, equivalent

(1) analogous fashion, (2) entirely analogous

The human heart is **analogous** to a pump in a plumbing system.

temperature

- n. the degree of hotness or coldness of a thing or placesynonym: climate, warmth, degree
- (1) extreme **temperatures**, (2) the atmospheric **temperature**

Cities around the world set records for highest **temperatures** this summer.

insulate

ν. 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.

undergo

v. to go through something unpleasant or that involves a change

synonym: experience, suffer, endure

- (1) **undergo** surgery, (2) **undergo** a decrease The train has to **undergo** rigorous safety checks.

to divide, or to make something divide into two or more

parts, especially along a particular line *synonym*: break, divide, break apart

split

(1) **split** a bill, (2) **split** a reward equally

Companies often **split** their shares to lower the stock price and encourage investors to buy.

exposed

adj. having no protection or shield from something, such as bad weather, attack, or criticism

synonym: endangered, revealed, disclosed

(1) exposed to radiation, (2) an exposed rock

Tech companies often employ **exposed** ducts and other materials in their office interiors.

clump

- n. a small group of bushes, trees, flowers, people, etc.synonym: cluster, bunch, bundle
- (1) clump of bacteria, (2) a clump of trees

I heard the **clump** of his boots in the hallway.

react

- v. to take action in response to something
- synonym: respond, reply, oppose
- (1) **react** at a high temperature, (2) **react** against his way of thinking

How did he react to your idea?

hire

v. to give somebody a job

synonym: employ, engage, lease

(1) hire a guide, (2) hire a car by the hour

We should always be prepared to **hire** talented recruits.

matchmake

- v. to arrange or facilitate a romantic relationship or marriage between two people; to act as a matchmakersynonym: arrange marriages, pair up, introduce people
- (1) **matchmake** a couple, (2) **matchmake** people based on their interests

She tried to **matchmake** her two friends on a blind date, but it was a disaster.

materimake

violent

adj. involving or caused by physical force or aggression against someone or something

synonym: aggressive, intense, turbulent

(1) victim of a **violent** crime, (2) **violent** incident

The protesters became **violent** when the police tried to disperse them.

initial

adj. of or happening at the beginning; (noun) the first letter of a word, especially a person's name

synonym: basic, primary, beginning

(1) initial velocity, (2) an initial letter

They took the **initial** step toward reconciliation.

coordinate

v. to bring the different parts of the activity and the people into an organized, ordered, or efficient relationship; (adjective) of equal importance, rank, or degree

synonym: organize, harmonize, ordinate

(1) **coordinate** a special project, (2) a **coordinate** clause We want to **coordinate** a schedule for the investigation.

catalyst

 a person or thing that causes an important event to happen or changes the current situation rapidly; (chemistry) a substance that initiates or accelerates a chemical reaction without being changed itself

synonym: accelerator, stimulant, motivation

(1) a **catalyst** in the process of hydrolysis, (2) **catalyst** for reform

The global financial crisis acted as a **catalyst** to unite the country.

function

n. the purpose or use of an object, system, or process; a particular activity or operation that is designed to serve a specific purpose; a mathematical concept that describes a relationship between two sets of values, called the input and output sets; (verb) to operate or work in a specific way, or to perform a particular task or purpose

synonym: purpose, mapping, job

(1) **function** properly, (2) immune **function**The brain is an incredibly complex organ that controls the body's **function**.

orient

- v. to position or adjust someone or something for a particular purpose; (noun) the countries of Asiasynonym: position, align, adjust
- (1) **orient** my thinking, (2) the exotic flavor of the **Orient** She took a moment to **orient** herself in the unfamiliar city.

accelerate

v. to make something faster or earlier; to cause to develop or progress more quickly

synonym: speed up, quicken, rev

(1) **accelerate** a chemical reaction, (2) **accelerate** the car The government tried to **accelerate** the commercialization of this development.

Session 2: Spelling

1.	come into coon with my friend	n.	an instance of two or more objects or entities crashing into each other, usually resulting in damage, impact, or conflict
2.	chaotic envnt	n.	the natural world such as air, water, and land in which humans, animals, and plants live
3.	anus fashion	adj.	similar or equivalent in some respects, typically as a result of functioning in a similar way
4.	a chal compound	adj.	relating to or connected with chemistry;
5.	be in alnt	n.	an arrangement in which two or more elements are placed in a straight line or parallel to each other
6.	sexual orion	n.	a person's basic attitudes, beliefs, and preferences about particular things; a course introducing a new situation or environment
7.	make people based on their interests	ν.	to arrange or facilitate a romantic relationship or marriage between two people; to act as a matchmaker
8.	high voe	n.	the amount of space occupied by an object or substance; the magnitude of sound
9.	professor of chry	n.	the branch of the natural sciences dealing with the composition of substances and their properties and reactions

ANSWERS: 1. collision, 2. environment, 3. analogous, 4. chemical, 5. alignment, 6. orientation, 7. matchmake, 8. volume, 9. chemistry

10.	uno surgery	<i>v</i> .	to go through something unpleasant or that involves a change
11.	charged pale	n.	a small piece of something; a word or piece of a term with grammatical function but little or no significance
12.	victim of a vit crime	adj.	involving or caused by physical force or aggression against someone or something
13.	the head of a hay	n.	an interior passage or corridor onto which rooms open
14.	extreme temres	n.	the degree of hotness or coldness of a thing or place
15.	coe in midair	ν.	to hit something violently when moving
16.	blood vels	n.	a ship or large boat
17.	dee a question	<i>v</i> .	to make up someone's mind about something; to come to a conclusion or judgment after considering options
18.	die of a used product	ν.	to put things or people in a particular manner or position; to incline someone towards a specific activity or mood; throw or cast away
19.	pael processing	adj.	being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations
20.	security innt	n.	an event or occurrence, often unexpected or unplanned; something that happens

ANSWERS: 10. undergo, 11. particle, 12. violent, 13. hallway, 14. temperature, 15. collide, 16. vessel, 17. decide, 18. dispose, 19. parallel, 20. incident

23. pr___e the amendment v. to make a proposal, declare a plan for something

n. the purpose or use of an object, system, or process; a particular activity or operation that is designed to serve a specific purpose; a mathematical concept that describes a relationship between two sets of values, called the input and output sets; (verb) to operate or work in a specific way, or to perform a particular task or purpose

 a small piece of something; a word or piece of a term with grammatical function but little or no significance

v. to arrange or facilitate a romantic relationship or marriage between two people; to act as a matchmaker

n. having the same value, quality, meaning, purpose, etc.

an event or occurrence, often unexpected or unplanned; something that happens

v. to make a proposal, declare a plan for something

23. pr___e the amendment 24. fu on properly 25. pa le energy 26. ma____ke a couple 27. equ____nt amounts 28. traffic in___nt 29. pr___e changes

ANSWERS: 21. orientation, 22. shrink, 23. propose, 24. function, 25. particle, 26. matchmake, 27. equivalent, 28. incident, 29. propose

 an instance of two or more objects or entities crashing into each other, usually resulting in damage, impact, or conflict

which rooms open

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

ANSWERS: 30. navigate, 31. politely, 32. improvisation, 33. initial, 34. mixture, 35. vessel, 36. belong, 37. hallway, 38. collision, 39. improvisation

38. co on detection

39. jazz imp ion

ANSWERS: 40. characteristic, 41. process, 42. violent, 43. dispose, 44. undergo, 45. orient, 46. individual, 47. individual, 48. coordinate

degree

(adjective) of equal importance, rank, or

49.	shk with fear	<i>v</i> .	to become smaller, or to make something smaller in size or amount
50.	chemical reon	n.	a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others
51.	an appte time	adj.	suitable or proper in the circumstances; fitting
52.	edual system	adj.	relating to education or providing knowledge or instruction
53.	inte the room from sound	<i>v</i> .	to protect something by interposing material that prevents heat, noise, electricity, etc.
54.	prs 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
55.	high vety	n.	the rate of change of an object's position with respect to time, often measured in meters per second (m/s)
56.	the exotic flavor of the Ort	ν.	to position or adjust someone or something for a particular purpose; (noun) the countries of Asia
57.	a pael case	adj.	being everywhere equidistant and not intersecting; of or relating to the simultaneous performance of multiple operations

ANSWERS: 49. shrink, 50. reaction, 51. appropriate, 52. educational, 53. insulate, 54. process, 55. velocity, 56. orient, 57. parallel

ANSWERS: 58. facilitate, 59. exposed, 60. recollect, 61. volume, 62. coordinate, 63. recollect, 64. environment, 65. likelihood, 66. chemical, 67. mixture, 68. accelerate

ν.

quickly

68. acc te a chemical reaction

homogeneous or heterogeneous blend

to make something faster or earlier; to

cause to develop or progress more

of physical or chemical properties

69.	inI velocity	adj.	of or happening at the beginning; (noun) the first letter of a word, especially a person's name
70.	a clp of trees	<i>n</i> .	a small group of bushes, trees, flowers, people, etc.
71.	spt towards the finish line	<i>v</i> .	to run at full speed over a short distance or period of time
72.	accte the car	<i>v</i> .	to make something faster or earlier; to cause to develop or progress more quickly
73.	he a car by the hour	<i>v</i> .	to give somebody a job
74.	a sqly cut piece of paper	adv.	directly and firmly; in a square shape
75.	beg to a group	ν.	to be the property of someone or something; to be a member or part of a group; to be in the proper or appropriate place
76.	cl_p of bacteria	n.	a small group of bushes, trees, flowers, people, etc.
77.	coe head-on	v.	to hit something violently when moving
78.	alnt in an organization	n.	an arrangement in which two or more elements are placed in a straight line or parallel to each other
79.	initial vety	n.	the rate of change of an object's position with respect to time, often measured in meters per second (m/s)
80.	he a guide	v.	to give somebody a job
81.	engine conion	n.	the arrangement or pattern of something or a group of related things

ANSWERS: 69. initial, 70. clump, 71. sprint, 72. accelerate, 73. hire, 74. squarely, 75. belong, 76. clump, 77. collide, 78. alignment, 79. velocity, 80. hire, 81. configuration

ANSWERS: 82. educational, 83. split, 84. likelihood, 85. function, 86. configuration, 87. analogous, 88. equivalent, 89. react, 90. insulate, 91. unbeknownst

99. look sq____ly at reality

100. nodded po____ly

adv. directly and firmly; in a square shape

changed itself

a chemical reaction without being

adv. in a courteous or respectful manner, showing good manners or consideration for others

ANSWERS: 92. catalyst, 93. exposed, 94. characteristic, 95. react, 96. chemistry, 97. reaction, 98. catalyst, 99. squarely, 100. politely

101. the atmospheric tem re the degree of hotness or coldness of a n. thing or place 102. de e on a course of action to make up someone's mind about ν. something; to come to a conclusion or judgment after considering options 103. fac te a smooth transition to make something easier or more likely ν. to happen 104. sp tabill to divide, or to make something divide into two or more parts, especially along a particular line 105. app____te behavior adj. suitable or proper in the circumstances; fitting 106. unb____st to me adv. without the knowledge or awareness of someone; without someone's knowledge or participation to plan and direct the way that a ship, 107. na____te through a document ν. plane, etc. will travel, often by using a map 108. sp___t for a bus to run at full speed over a short distance ν.

or period of time

ANSWERS: 101. temperature, 102. decide, 103. facilitate, 104. split, 105. appropriate, 106. unbeknownst, 107. navigate, 108. sprint

Session 3: Fill in the Blanks

1.	It would be to dress nicely for the wedding.
ad	i. suitable or proper in the circumstances; fitting
2.	The human heart is to a pump in a plumbing system.
adj	 similar or equivalent in some respects, typically as a result of functioning in a similar way
3.	Our knowledge helps our clients successfully.
<i>v</i> .	to plan and direct the way that a ship, plane, etc. will travel, often by using a map
4.	The interests of the two countries
<i>v</i> .	to hit something violently when moving
5.	All the books in this section to the library's rare collection and must be handled carefully.
<i>v</i> .	to be the property of someone or something; to be a member or part of a group to be in the proper or appropriate place
6.	Bananas have their taste and odor.
n.	a typical feature or quality that can identify, tell apart, or describe something or somebody
7.	The government tried to the commercialization of this development.
<i>v</i> .	to make something faster or earlier; to cause to develop or progress more quickly
	SWERS: 1. appropriate, 2. analogous, 3. navigate, 4. collide, 5. belong, 6.

Vocab-Builder Ref from "Aaron Sams: How to speed up chemical reactions (and get a date) | TED Talk" (54 words)

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ANSWERS: 25. environment, 26. equivalent, 27. sprint, 28. shrink, 29. violent, 30. matchmake, 31. process, 32. insulated

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