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Vocabulary Builder Reference from...

Sarah Rugheimer: The search for microscopic aliens | TED Talk

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

Advanced Words Only

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Session 1: Word List

hurdle

n. a barrier or obstacle that must be overcome

synonym: obstacle, barrier, challenge

(1) overcome **hurdles**, (2) **hurdle** race

The company faced several **hurdles** in the development of its new product.

extraterrestrial

adj. relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth

synonym: alien, outer, otherworldly

(1) **extraterrestrial** planet, (2) **extraterrestrial** intelligence

Scientists are constantly searching for signs of **extraterrestrial** life in the universe.

microbe

n. a tiny living thing that can only be seen with a microscope and that may cause disease

synonym: germ, microorganism, bacterium

(1) pathogenic **microbe**, (2) **microbes** sterilizer

Microbes thrive on the surface of the human skin.

biosphere

n. the part of the Earth and its atmosphere in which living organisms exist, including plants, animals, and microorganisms

synonym: ecosphere, ecospace, ecosystem

(1) terrestrial **biosphere**, (2) artificial **biosphere**

The balance of the **biosphere** is crucial for the survival of species.

emit

v. to give off or send out something such as light, heat, sound, gas, etc.

synonym: give off, radiate, expel

(1) **emit** a gamma ray, (2) **emit** air pollution

During the unloading, the container box **emits** a clicking sound.

astronomer

n. a physicist who studies astronomy

synonym: stargazer, cosmologist, astrophysicist

(1) amateur **astronomer**, (2) solar **astronomer**

This question has fascinated solar **astronomers** for decades.

methane

n. a chemical compound with the chemical formula CH₄ with no smell or color, often used as a fuel

(1) atmospheric **methane**, (2) reduce **methane** emissions

The ignition of **methane** gas in the plant killed five employees.

nit

n. the egg of a louse (= that is a tiny insect that lives in human hair) or some other insect; a foolish person

(1) **nit** in the dog's fur, (2) she is a little **nit**

Careful brushing can remove **nit**.

determinant

n. a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result

synonym: cause, factor, element

(1) environmental **determinant**, (2) a **determinant** of crop yields

One **determinant** of success is having a positive attitude and a strong work ethic.

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.

biosignature

n. distinctive chemical or physical features that indicate the presence of past or current life

synonym: indicators, signs, evidence

(1) **biosignatures** detection, (2) **biosignatures** discovery

Scientists are searching for **biosignatures** on other planets that could indicate the presence of life.

phosphine

n. a colorless, flammable gas that is made up of one phosphorus atom and three hydrogen atoms and has a fishy or garlic-like odor

synonym: phosphorus hydride, diphosphine, phosphorus trihydride

(1) **phosphine** gas, (2) organic **phosphine**

The synthesis of **phosphine** was first achieved in the 17th century.

confuse

v. to mistake one thing for another; to make somebody hard to understand

synonym: confound, obscure, disorient

(1) **confuse** the listener, (2) **confuse** fantasy with reality

Her remarks **confused** the debate.

temperate

adj. mild or moderate in temperature or climate; exhibiting self-restraint, particularly about the consumption of food, drink, or other indulgences; showing moderation or restraint in behavior or attitude

synonym: moderate, mild, genial

(1) **temperate** grassland, (2) **temperate** behavior

The **temperate** climate of the region made it an ideal vacation spot.

photochemical

adj. relating to or caused by the chemical effects of light, particularly those that involve the absorption or emission

of light by molecules in a reaction

synonym : photooxidative, photoreactive, phototoxic

(1) **photochemical** degradation, (2) **photochemical** reaction

Photochemical smog is a major problem in many urban areas.

sober

adj. not drunk or affected by alcohol; dignified in manner or character and committed to keeping promises

synonym : calm, lucid, temperate

(1) **sober** discussion, (2) as **sober** as a judge

He led a **sober** life.

molten

adj. in a liquid state as a result of being heated

synonym : melted, liquefied, fused

(1) a **molten** image, (2) **molten** lava

The **molten** metal was poured into the mold.

flare

v. to burn brightly with a sudden, intense burst of flame or light; (noun) a sudden and brief burst of bright flame or light; a sudden and intense burst of radiation from the Sun's surface

synonym : blaze, ignite, light up

(1) **flare** up into a major crisis, (2) the **flare** of a match

The Sun **flared** and caused a sudden brightening in the sky.

ambiguity

n. the quality of being open to more than one interpretation; the uncertainty of meaning

synonym : uncertainty, vagueness, obscurity

(1) free from **ambiguity**, (2) avoid **ambiguity** in writing

The **ambiguity** in the instructions made it difficult for her to complete the task.

nuanced

adj. characterized by subtle differences in appearance, meaning, sound, etc.

synonym : fine, subtle, slight

(1) **nuanced** view, (2) the common but **nuanced** opinion
The sommelier can distinguish **nuanced** variance in the flavor of the wine.

skepticism

n. an attitude of doubting or questioning that claims or statements are true or valuable or that something will happen; the disbelief in any claims of ultimate knowledge

synonym: distrust, doubt, suspicion

(1) natural **skepticism**, (2) **skepticism** toward bureaucracy
This party expresses **skepticism** about the efficacy of the health insurance system.

teleport

v. to transport or transmit instantly from one location to another, typically using advanced technology or imagined supernatural powers

synonym: beam, transport, transmit

(1) **teleport** objects through space, (2) **teleport** to any location in the world

The magician seemed to **teleport** instantly from one side of the stage to the other.

kangaroo

n. a large marsupial native to Australia with powerful hind legs for jumping and carrying young in a pouch on the mother's belly

synonym: bouncy, marsupial, joey

(1) giant **kangaroo**, (2) red **kangaroo**

The female **kangaroo** carries and nurses her young, or joey, in a pouch on her belly.

teem

v. to be abuzz; to move in large numbers; to fall heavily

synonym: brim, swarm, overflow

(1) **teem** with activity, (2) **teem** down

The city **teems** with traffic on holiday.

Session 2: Spelling

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|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. amateur ast_____er | <i>n.</i> a physicist who studies astronomy |
| 2. t__m with activity | <i>v.</i> to be abuzz; to move in large numbers; to fall heavily |
| 3. mi_____es sterilizer | <i>n.</i> a tiny living thing that can only be seen with a microscope and that may cause disease |
| 4. the common but nu_____d opinion | <i>adj.</i> characterized by subtle differences in appearance, meaning, sound, etc. |
| 5. natural ske_____sm | <i>n.</i> an attitude of doubting or questioning that claims or statements are true or valuable or that something will happen; the disbelief in any claims of ultimate knowledge |
| 6. the glow of a fi_____y | <i>n.</i> a flying nocturnal insect common in warm regions with a tail that shines in the dark |
| 7. as so__r as a judge | <i>adj.</i> not drunk or affected by alcohol; dignified in manner or character and committed to keeping promises |
| 8. overcome hu___es | <i>n.</i> a barrier or obstacle that must be overcome |
| 9. fl__e up into a major crisis | <i>v.</i> to burn brightly with a sudden, intense burst of flame or light; (noun) a sudden and brief burst of bright flame or light; a sudden and intense burst of radiation from the Sun's surface |

ANSWERS: 1. astronomer, 2. teem, 3. microbe, 4. nuanced, 5. skepticism, 6. firefly, 7. sober, 8. hurdle, 9. flare

10. te____rt objects through space *v.* to transport or transmit instantly from one location to another, typically using advanced technology or imagined supernatural powers
11. free from am_____ty *n.* the quality of being open to more than one interpretation; the uncertainty of meaning
12. mo____n lava *adj.* in a liquid state as a result of being heated
13. co_____e the listener *v.* to mistake one thing for another; to make somebody hard to understand
14. giant ka_____oo *n.* a large marsupial native to Australia with powerful hind legs for jumping and carrying young in a pouch on the mother's belly
15. environmental det_____nt *n.* a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result
16. sparkle like fi_____y *n.* a flying nocturnal insect common in warm regions with a tail that shines in the dark
17. ph_____ne gas *n.* a colorless, flammable gas that is made up of one phosphorus atom and three hydrogen atoms and has a fishy or garlic-like odor
18. e__t a gamma ray *v.* to give off or send out something such as light, heat, sound, gas, etc.
19. the fl__e of a match *v.* to burn brightly with a sudden, intense burst of flame or light; (noun) a sudden and brief burst of bright flame or light; a sudden and intense burst of radiation from the Sun's surface

ANSWERS: 10. teleport, 11. ambiguity, 12. molten, 13. confuse, 14. kangaroo, 15. determinant, 16. firefly, 17. phosphine, 18. emit, 19. flare

20. ext_____ial planet *adj.* relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth
21. she is a little n_t *n.* the egg of a louse (= that is a tiny insect that lives in human hair) or some other insect; a foolish person
22. e__t air pollution *v.* to give off or send out something such as light, heat, sound, gas, etc.
23. pho_____cal degradation *adj.* relating to or caused by the chemical effects of light, particularly those that involve the absorption or emission of light by molecules in a reaction
24. artificial bi_____re *n.* the part of the Earth and its atmosphere in which living organisms exist, including plants, animals, and microorganisms
25. a mo___n image *adj.* in a liquid state as a result of being heated
26. pathogenic mi_____e *n.* a tiny living thing that can only be seen with a microscope and that may cause disease
27. reduce me_____e emissions *n.* a chemical compound with the chemical formula CH₄ with no smell or color, often used as a fuel
28. a det_____nt of crop yields *n.* a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result

ANSWERS: 20. extraterrestrial, 21. nit, 22. emit, 23. photochemical, 24. biosphere, 25. molten, 26. microbe, 27. methane, 28. determinant

29. te_____te behavior *adj.* mild or moderate in temperature or climate; exhibiting self-restraint, particularly about the consumption of food, drink, or other indulgences; showing moderation or restraint in behavior or attitude
30. n_t in the dog's fur *n.* the egg of a louse (= that is a tiny insect that lives in human hair) or some other insect; a foolish person
31. terrestrial bi_____re *n.* the part of the Earth and its atmosphere in which living organisms exist, including plants, animals, and microorganisms
32. t__m down *v.* to be abuzz; to move in large numbers; to fall heavily
33. te_____te grassland *adj.* mild or moderate in temperature or climate; exhibiting self-restraint, particularly about the consumption of food, drink, or other indulgences; showing moderation or restraint in behavior or attitude
34. te_____rt to any location in the world *v.* to transport or transmit instantly from one location to another, typically using advanced technology or imagined supernatural powers
35. co_____e fantasy with reality *v.* to mistake one thing for another; to make somebody hard to understand
36. bio_____ures detection *n.* distinctive chemical or physical features that indicate the presence of past or current life

ANSWERS: 29. temperate, 30. nit, 31. biosphere, 32. teem, 33. temperate, 34. teleport, 35. confuse, 36. biosignature

37. ext_____ial intelligence *adj.* relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth
38. hu___e race *n.* a barrier or obstacle that must be overcome
39. bio_____ures discovery *n.* distinctive chemical or physical features that indicate the presence of past or current life
40. solar ast_____er *n.* a physicist who studies astronomy
41. atmospheric me_____e *n.* a chemical compound with the chemical formula CH₄ with no smell or color, often used as a fuel
42. ske_____sm toward bureaucracy *n.* an attitude of doubting or questioning that claims or statements are true or valuable or that something will happen; the disbelief in any claims of ultimate knowledge
43. so__r discussion *adj.* not drunk or affected by alcohol; dignified in manner or character and committed to keeping promises
44. pho_____cal reaction *adj.* relating to or caused by the chemical effects of light, particularly those that involve the absorption or emission of light by molecules in a reaction
45. nu_____d view *adj.* characterized by subtle differences in appearance, meaning, sound, etc.
46. organic ph_____ne *n.* a colorless, flammable gas that is made up of one phosphorus atom and three hydrogen atoms and has a fishy or garlic-like odor

ANSWERS: 37. extraterrestrial, 38. hurdle, 39. biosignature, 40. astronomer, 41. methane, 42. skepticism, 43. sober, 44. photochemical, 45. nuanced, 46. phosphine

47. avoid am_____ty in writing

n. the quality of being open to more than one interpretation; the uncertainty of meaning

48. red ka_____oo

n. a large marsupial native to Australia with powerful hind legs for jumping and carrying young in a pouch on the mother's belly

ANSWERS: 47. ambiguity, 48. kangaroo

Session 3: Fill in the Blanks

1. _____ thrive on the surface of the human skin.
n. a tiny living thing that can only be seen with a microscope and that may cause disease
2. The _____ metal was poured into the mold.
adj. in a liquid state as a result of being heated
3. The _____ climate of the region made it an ideal vacation spot.
adj. mild or moderate in temperature or climate; exhibiting self-restraint, particularly about the consumption of food, drink, or other indulgences; showing moderation or restraint in behavior or attitude
4. 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
5. The ignition of _____ gas in the plant killed five employees.
n. a chemical compound with the chemical formula CH₄ with no smell or color, often used as a fuel
6. The synthesis of _____ was first achieved in the 17th century.
n. a colorless, flammable gas that is made up of one phosphorus atom and three hydrogen atoms and has a fishy or garlic-like odor
7. Scientists are searching for _____ on other planets that could indicate the presence of life.
n. distinctive chemical or physical features that indicate the presence of past or current life

ANSWERS: 1. Microbes, 2. molten, 3. temperate, 4. firefly, 5. methane, 6. phosphine, 7. biosignatures

8. He led a _____ life.

adj. not drunk or affected by alcohol; dignified in manner or character and committed to keeping promises

9. This question has fascinated solar _____ for decades.

n. a physicist who studies astronomy

10. One _____ of success is having a positive attitude and a strong work ethic.

n. a factor, circumstance, or condition that contributes to the shaping, influencing, or determining of a particular outcome or result

11. Careful brushing can remove _____.

n. the egg of a louse (= that is a tiny insect that lives in human hair) or some other insect; a foolish person

12. The sommelier can distinguish _____ variance in the flavor of the wine.

adj. characterized by subtle differences in appearance, meaning, sound, etc.

13. The female _____ carries and nurses her young, or joey, in a pouch on her belly.

n. a large marsupial native to Australia with powerful hind legs for jumping and carrying young in a pouch on the mother's belly

14. _____ smog is a major problem in many urban areas.

adj. relating to or caused by the chemical effects of light, particularly those that involve the absorption or emission of light by molecules in a reaction

15. Her remarks _____ the debate.

v. to mistake one thing for another; to make somebody hard to understand

ANSWERS: 8. sober, 9. astronomers, 10. determinant, 11. nit, 12. nuanced, 13. kangaroo, 14. Photochemical, 15. confused

16. The balance of the _____ is crucial for the survival of species.
n. the part of the Earth and its atmosphere in which living organisms exist, including plants, animals, and microorganisms
17. The city _____ with traffic on holiday.
v. to be abuzz; to move in large numbers; to fall heavily
18. The company faced several _____ in the development of its new product.
n. a barrier or obstacle that must be overcome
19. This party expresses _____ about the efficacy of the health insurance system.
n. an attitude of doubting or questioning that claims or statements are true or valuable or that something will happen; the disbelief in any claims of ultimate knowledge
20. The _____ in the instructions made it difficult for her to complete the task.
n. the quality of being open to more than one interpretation; the uncertainty of meaning
21. During the unloading, the container box _____ a clicking sound.
v. to give off or send out something such as light, heat, sound, gas, etc.
22. The Sun _____ and caused a sudden brightening in the sky.
v. to burn brightly with a sudden, intense burst of flame or light; (noun) a sudden and brief burst of bright flame or light; a sudden and intense burst of radiation from the Sun's surface
23. The magician seemed to _____ instantly from one side of the stage to the other.
v. to transport or transmit instantly from one location to another, typically using advanced technology or imagined supernatural powers

ANSWERS: 16. biosphere, 17. teems, 18. hurdles, 19. skepticism, 20. ambiguity, 21. emits, 22. flared, 23. teleport

24. Scientists are constantly searching for signs of _____ life in the universe.

adj. relating to or existing outside of the Earth's atmosphere or planetary boundaries; pertaining to beings or phenomena that originate from beyond the Earth

ANSWERS: 24. extraterrestrial