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Vocabulary Builder Reference from...

Thomas Boothby: Meet the tardigrade, the toughest animal on Earth | TED Talk

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

Advanced Words Only

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Session 1: Word List

resilient

adj. able to withstand or recover quickly from difficult conditions

synonym : robust, sturdy, tough

(1) a hard and **resilient** steel, (2) **resilient** population

She is a **resilient** person and has always bounced back from setbacks.

tardigrade

n. a microscopic, water-dwelling animal that is known for its resilience and ability to survive extreme conditions

synonym : water bear, moss piglet

(1) tiny **tardigrade**, (2) **tardigrade** research

Scientists have studied the resilience of the **tardigrade**, also known as a water bear.

biochemical

adj. relating to the chemical processes and substances that occur within living organisms

synonym : molecular, biological

(1) **biochemical** reaction, (2) complex **biochemical**

Biochemical research is essential to understanding the complex chemical reactions in living organisms.

anhydrobiosis

n. a state of suspended animation or extreme desiccation in certain organisms where they can withstand

prolonged periods of extreme dryness, appearing dead, and then revive when provided with water

(1) **anhydrobiosis** organism, (2) **anhydrobiosis** in plants

Some bacteria, yeast, and plants can enter a state of **anhydrobiosis** to endure harsh conditions.

archaea

n. a group of single-celled microorganisms distinguished from bacteria by their unique cell wall structure and biochemical characteristics, which are found in extreme environments such as hot springs and salt flats

synonym: microbe, microorganism

(1) **archaea** microorganism, (2) thermophile **archaea**

The study of **archaea** is important for understanding the origins of life on Earth

synthesize

v. to combine a substance to make a more complex product or compound

synonym: incorporate, amalgamate

(1) **synthesize** molecules, (2) **synthesize** information

The spider can **synthesize** multiple different silk proteins.

unfold

v. to open up or spread out something that is folded or rolled up; to reveal or disclose something that was previously hidden or unknown

synonym: open, spread out, expose

(1) **unfold** the story, (2) **unfold** the stroller

The mystery **unfolded** as the detectives gathered more clues.

fuse

n. a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat

synonym: (verb) melt, (verb) blend

(1) **fuse** blows, (2) **fuse** with one another

He has a short **fuse**.

hydrate

v. to add water or moisture to something; to drink enough fluids to maintain proper moisture; (noun) any compound that contains water of crystallization

synonym : moisturize, water, rehydrate

(1) **hydrate** my skin, (2) acid **hydrate**

She drank water to **hydrate** her body.

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.

speculate

v. to form a theory or conjecture or guess about a subject without solid evidence

synonym : assume, conjecture, infer

(1) **speculate** about the reason, (2) **speculate** on the outcome

He **speculated** that this investment would lead to success.

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.

hardy

adj. able to withstand harsh conditions or difficult circumstances; robust, sturdy, or resilient

synonym : tough, sturdy, resilient

(1) **hardy** plants, (2) **hardy** breed

The **hardy** construction workers worked tirelessly in the scorching heat to complete the project.

biome

n. a major ecological community characterized by particular plant and animal species adapted to a specific

climate and geographic region, such as desert, tundra, or rainforest

synonym : ecosystem, habitat, biota

(1) **biome** conservation, (2) marine **biome**

The rainforest is one of the most diverse **biomes** on the planet.

rainforest

n. a forest rich in biodiversity that is generally found in tropical settings with heavy annual rainfall

(1) **rainforest** destruction, (2) tropical **rainforest**

The destruction of the **rainforest** is a ticking time bomb for the Earth.

moss

n. a small, soft plant that grows in a low, compact layer, often on the ground or on rocks

synonym : plant, foliage, greenery

(1) green **moss**, (2) **moss** garden

Moss grows in damp, shaded areas and is often found on the forest floor.

lichen

n. a composite organism consisting of a symbiotic relationship between a fungus and an alga or cyanobacterium

synonym : fungus, plant, symbiotic organism

(1) **lichen** fungus, (2) **lichen** families

The **lichen** on the old tree bark was thick and lush, a sign of a healthy ecosystem.

stabilize

v. to become or cause to become steady or unlikely to give way

synonym : brace, steady, secure

(1) **stabilize** prices, (2) **stabilize** blood sugar levels

The raising of interest rates **stabilizes** the inflation rate.

prolong

v. to extend the duration or length of something, particularly a period of time or an event

synonym :

extend, lengthen, stretch

(1) **prolong** the agony, (2) measures to **prolong** the lifespan

We need to **prolong** the meeting for another hour to discuss all the issues.

astronaut

n. a person trained by a space agency to travel outside the Earth's atmosphere

synonym : spaceman, cosmonaut

(1) **astronaut** mission, (2) **astronaut** in training

The shuttle **astronaut** trained for months before embarking on the space mission.

hospitable

adj. friendly and generous to visitors or guests

synonym : benevolent, generous, gracious

(1) **hospitable** environment, (2) a **hospitable** welcome

He is a good-natured and **hospitable** man.

Session 2: Spelling

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|-------------------------------|---|
| 1. sp_____te about the reason | <i>v.</i> to form a theory or conjecture or guess about a subject without solid evidence |
| 2. anh_____sis organism | <i>n.</i> a state of suspended animation or extreme desiccation in certain organisms where they can withstand prolonged periods of extreme dryness, appearing dead, and then revive when provided with water |
| 3. ar_____a microorganism | <i>n.</i> a group of single-celled microorganisms distinguished from bacteria by their unique cell wall structure and biochemical characteristics, which are found in extreme environments such as hot springs and salt flats |
| 4. syn_____ze molecules | <i>v.</i> to combine a substance to make a more complex product or compound |
| 5. thermophile ar_____a | <i>n.</i> a group of single-celled microorganisms distinguished from bacteria by their unique cell wall structure and biochemical characteristics, which are found in extreme environments such as hot springs and salt flats |
| 6. pr_____g the agony | <i>v.</i> to extend the duration or length of something, particularly a period of time or an event |
| 7. hy_____e my skin | <i>v.</i> to add water or moisture to something; to drink enough fluids to maintain proper moisture; (noun) any compound that contains water of crystallization |

ANSWERS: 1. speculate, 2. anhydrobiosis, 3. archaea, 4. synthesize, 5. archaea, 6. prolong, 7. hydrate

8. hos_____le environment *adj.* friendly and generous to visitors or guests
9. re_____nt population *adj.* able to withstand or recover quickly from difficult conditions
10. un____d the story *v.* to open up or spread out something that is folded or rolled up; to reveal or disclose something that was previously hidden or unknown
11. f__e with one another *n.* a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat
12. 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
13. bio_____al reaction *adj.* relating to the chemical processes and substances that occur within living organisms
14. green m__s *n.* a small, soft plant that grows in a low, compact layer, often on the ground or on rocks
15. 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
16. as_____ut in training *n.* a person trained by a space agency to travel outside the Earth's atmosphere

ANSWERS: 8. hospitable, 9. resilient, 10. unfold, 11. fuse, 12. extraterrestrial, 13. biochemical, 14. moss, 15. extraterrestrial, 16. astronaut

17. syn_____ze information *v.* to combine a substance to make a more complex product or compound
18. tropical rai_____st *n.* a forest rich in biodiversity that is generally found in tropical settings with heavy annual rainfall
19. f__e blows *n.* a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat
20. un____d the stroller *v.* to open up or spread out something that is folded or rolled up; to reveal or disclose something that was previously hidden or unknown
21. sp_____te on the outcome *v.* to form a theory or conjecture or guess about a subject without solid evidence
22. a hard and re_____nt steel *adj.* able to withstand or recover quickly from difficult conditions
23. complex bio_____al *adj.* relating to the chemical processes and substances that occur within living organisms
24. ha__y plants *adj.* able to withstand harsh conditions or difficult circumstances; robust, sturdy, or resilient
25. marine bi__e *n.* a major ecological community characterized by particular plant and animal species adapted to a specific climate and geographic region, such as desert, tundra, or rainforest

ANSWERS: 17. synthesize, 18. rainforest, 19. fuse, 20. unfold, 21. speculate, 22. resilient, 23. biochemical, 24. hardy, 25. biome

26. tar_____de research *n.* a microscopic, water-dwelling animal that is known for its resilience and ability to survive extreme conditions
27. st_____ze prices *v.* to become or cause to become steady or unlikely to give way
28. as_____ut mission *n.* a person trained by a space agency to travel outside the Earth's atmosphere
29. anh_____sis in plants *n.* a state of suspended animation or extreme desiccation in certain organisms where they can withstand prolonged periods of extreme dryness, appearing dead, and then revive when provided with water
30. tiny tar_____de *n.* a microscopic, water-dwelling animal that is known for its resilience and ability to survive extreme conditions
31. li____n families *n.* a composite organism consisting of a symbiotic relationship between a fungus and an alga or cyanobacterium
32. di_____ve the sugar *v.* to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
33. ha__y breed *adj.* able to withstand harsh conditions or difficult circumstances; robust, sturdy, or resilient
34. rai_____st destruction *n.* a forest rich in biodiversity that is generally found in tropical settings with heavy annual rainfall
35. acid hy_____e *v.* to add water or moisture to something; to drink enough fluids to maintain proper moisture; (noun) any compound that contains water of crystallization

ANSWERS: 26. tardigrade, 27. stabilize, 28. astronaut, 29. anhydrobiosis, 30. tardigrade, 31. lichen, 32. dissolve, 33. hardy, 34. rainforest, 35. hydrate

36. li___n fungus *n.* a composite organism consisting of a symbiotic relationship between a fungus and an alga or cyanobacterium
37. a hos_____le welcome *adj.* friendly and generous to visitors or guests
38. m__s garden *n.* a small, soft plant that grows in a low, compact layer, often on the ground or on rocks
39. st_____ze blood sugar levels *v.* to become or cause to become steady or unlikely to give way
40. officially di_____ved the marriage *v.* to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
41. bi__e conservation *n.* a major ecological community characterized by particular plant and animal species adapted to a specific climate and geographic region, such as desert, tundra, or rainforest
42. measures to pr_____g the lifespan *v.* to extend the duration or length of something, particularly a period of time or an event

ANSWERS: 36. lichen, 37. hospitable, 38. moss, 39. stabilize, 40. dissolve, 41. biome, 42. prolong

Session 3: Fill in the Blanks

1. The shuttle _____ trained for months before embarking on the space mission.
n. a person trained by a space agency to travel outside the Earth's atmosphere
2. The mystery _____ as the detectives gathered more clues.
v. to open up or spread out something that is folded or rolled up; to reveal or disclose something that was previously hidden or unknown
3. _____ research is essential to understanding the complex chemical reactions in living organisms.
adj. relating to the chemical processes and substances that occur within living organisms
4. He _____ that this investment would lead to success.
v. to form a theory or conjecture or guess about a subject without solid evidence
5. The _____ construction workers worked tirelessly in the scorching heat to complete the project.
adj. able to withstand harsh conditions or difficult circumstances; robust, sturdy, or resilient
6. He is a good-natured and _____ man.
adj. friendly and generous to visitors or guests
7. She drank water to _____ her body.
v. to add water or moisture to something; to drink enough fluids to maintain proper moisture; (noun) any compound that contains water of crystallization

ANSWERS: 1. astronaut, 2. unfolded, 3. Biochemical, 4. speculated, 5. hardy, 6. hospitable, 7. hydrate

8. She is a _____ person and has always bounced back from setbacks.
adj. able to withstand or recover quickly from difficult conditions
9. The rainforest is one of the most diverse _____ on the planet.
n. a major ecological community characterized by particular plant and animal species adapted to a specific climate and geographic region, such as desert, tundra, or rainforest
10. The spider can _____ multiple different silk proteins.
v. to combine a substance to make a more complex product or compound
11. _____ grows in damp, shaded areas and is often found on the forest floor.
n. a small, soft plant that grows in a low, compact layer, often on the ground or on rocks
12. The study of _____ is important for understanding the origins of life on Earth
n. a group of single-celled microorganisms distinguished from bacteria by their unique cell wall structure and biochemical characteristics, which are found in extreme environments such as hot springs and salt flats
13. He has a short _____.
n. a small part in an electrical device or machinery that can interrupt the flow of electrical current when it is overloaded; (verb) to become plastic or fluid or liquefied from heat
14. We need to _____ the meeting for another hour to discuss all the issues.
v. to extend the duration or length of something, particularly a period of time or an event
15. The destruction of the _____ is a ticking time bomb for the Earth.
n. a forest rich in biodiversity that is generally found in tropical settings with heavy annual rainfall

ANSWERS: 8. resilient, 9. biomes, 10. synthesize, 11. Moss, 12. archaea, 13. fuse, 14. prolong, 15. rainforest

16. 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
17. The political party _____ after much internal fighting.
- v.* to be or cause to be absorbed by a liquid to form a part of the solution; to close down or dismiss
18. The raising of interest rates _____ the inflation rate.
- v.* to become or cause to become steady or unlikely to give way
19. Some bacteria, yeast, and plants can enter a state of _____ to endure harsh conditions.
- n.* a state of suspended animation or extreme desiccation in certain organisms where they can withstand prolonged periods of extreme dryness, appearing dead, and then revive when provided with water
20. Scientists have studied the resilience of the _____ also known as a water bear.
- n.* a microscopic, water-dwelling animal that is known for its resilience and ability to survive extreme conditions
21. The _____ on the old tree bark was thick and lush, a sign of a healthy ecosystem.
- n.* a composite organism consisting of a symbiotic relationship between a fungus and an alga or cyanobacterium

ANSWERS: 16. extraterrestrial, 17. dissolved, 18. stabilizes, 19. anhydrobiosis, 20. tardigrade, 21. lichen