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Vocabulary Builder Reference from...

Wanda Diaz Merced: How a blind astronomer found a way to hear the stars | TED Talk

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

Advanced Words Only

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Session 1: Word List

supernova

n. a powerful and luminous explosion that occurs in some stars, resulting in an extremely bright, short-lived object that later fades into a supernova remnant

synonym : explosion, detonation, blast

(1) extragalactic **supernova**, (2) **supernova** remnant

The **supernova** explosion created a bright new star in the night sky.

outshine

v. to be more brilliant, striking, or impressive than; to outdo or excel

synonym : surpass, excel, outdo

(1) **outshine** his teacher, (2) **outshine** expectations

The new singer **outshined** all the others on stage with her powerful voice.

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.

rot v. to decay, or cause something to decay, naturally and gradually

synonym: perish, decay, corrode

(1) begin to **rot**, (2) **rot** with age

Please refrigerate the meat, or it will **rot**.

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.

opportune *adj.* suitable or happening at a time that is suitable or convenient for a particular purpose

synonym: suitable, timely, practical

(1) **opportune** occasion, (2) an **opportune** remark

The phone rang at the most **opportune** time.

scrutinize v. to examine carefully and critically; to inspect closely

synonym: examine, inspect, audit

(1) **scrutinize** her belongings, (2) **scrutinize** a suspect

The detective **scrutinized** the evidence for any clues.

astrophysics n. the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe

(1) **astrophysics** research, (2) neutrino **astrophysics**

He was studying **astrophysics** in an attempt to understand the origins of the universe.

titanic *adj.* of or having a great size, power, or influence; of or relating to Titanium (= a light, strong grey, lustrous, corrosion-resistant metallic element)

synonym: colossal, massive, immense

(1) **titanic** battle, (2) **titanic** compound

The **titanic** ship sank on its maiden voyage.

celestial

adj. relating to the sky or the heavens; of or like the sky or the heavens

synonym : heavenly, divine, ethereal

(1) **celestial** bliss, (2) **celestial** navigation

The **celestial** bodies in the night sky were beautiful to behold.

beep

v. to make a short, high-pitched sound, typically as a signal or warning

synonym : bleep, honk, buzz

(1) **beep** out a warning, (2) **beep** the horn

The timer **beeped**, reminding me that the cake was ready to come out of the oven.

humming

adj. producing a continuous, low, vibrating sound like that of the bee

synonym : buzzing, droning, vibrating

(1) **humming** sound, (2) **humming** bird

The **humming** of the bees filled the air as she walked through the garden.

whistle

v. to make a high-pitched sound by forcing breath through a small opening, usually with the lips or fingers; (noun) a piece of equipment that forces air or steam against an edge or into a cavity and so produces a loud shrill sound

synonym : sound, honk, tweet

(1) **whistle** a tune, (2) **whistle** for help

The employee decided to **whistle-blow** on the company's illegal activities.

excite

v. to make someone feel suddenly enthusiastic or eager

synonym : thrill, exhilarate, animate

(1) **excite** the crowd, (2) **excite** rebellion

The news of her promotion **excited** her.

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.

outflow

n. the leakage of fluid from a container; a natural flow of groundwater

synonym : discharge, outpouring, gush

(1) **outflow** fluid, (2) **outflow** of capital

After the valves were closed, the **outflow** halted.

explode

v. to burst or break open violently and noisily; to cause something to burst or break open

synonym : detonate, blast, rupture

(1) **explode** in anger, (2) **explode** in popularity

The old building **exploded** in a fiery inferno.

adjoin

v. to be next to or border upon; to be adjacent or connected to something

synonym : adjoin, neighbor, border

(1) **adjoin** two rooms, (2) **adjoin** the garden

The bookstore **adjoins** the coffee shop, making it a perfect spot to relax and read.

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**.

innovate

v. to introduce new methods, ideas, or products

synonym : bring in, introduce, found

(1) **innovate** a new method, (2) **innovate** the quality of his life

Companies developing self-driving cars consistently **innovate** the emerging technologies.

excommunicate

v. to officially exclude someone from membership in a church or religious community; to expel or banish someone from a group or society

synonym: expel, ostracize, banish

(1) **excommunicate** the priest from the church,

(2) **excommunicate** a sinner

The church leaders decided to **excommunicate** the member who had committed a serious offense.

empower

v. to give someone the power or authority to do something

synonym: authorize, endow, entitle

(1) **empower** my life, (2) **empower** the secretary to do the same

The company **empowered** employees to buy low-price items without approval to achieve efficient purchasing.

flourish

v. to grow or develop vigorously or successfully

synonym: boom, advance, succeed

(1) **flourish** economically, (2) **flourish** worldwide

The Ottoman Empire **flourished** for over five centuries.

prosper

v. to be successful or thriving, especially financially; to grow and develop well; to flourish

synonym: thrive, flourish, succeed

(1) **prosper** in the long run, (2) **prosper** as a trading hub

With careful planning and hard work, she was able to **prosper** in her new business venture.

astronomical

adj. relating to astronomy or the study of celestial bodies and phenomena; very large or immense in scale or magnitude

synonym: huge, vast, enormous

(1) **astronomical** observation, (2) **astronomical** numbers

The cost of the new equipment was **astronomical** and beyond the company's budget.

observatory

n. a building designed and equipped to observe the planets, the stars, the weather, etc.

(1) space **observatory**, (2) a meteorological **observatory**
That astronomical **observatory** stands at the top of the mountain.

eject

v. to force someone to put out or leave a particular place or position

synonym: discharge, expel, emit

(1) **eject** a player from a game, (2) **eject** huge amounts of pollutant

Our immune system can **eject** disease germs from the body.

coronal

adj. of or relating to the corona (= the outermost region of the sun's atmosphere); of or relating to or similar to the crown (= traditional head adornment, or hat worn by the reigning monarch)

(1) solar **coronal** plasma, (2) the **coronal** part of a natural tooth

Several satellites failed due to a solar wind caused by **coronal** mass ejections.

sever

v. to break or separate something by cutting, especially suddenly and forcibly

synonym: cut apart, separate, detach

(1) **sever** a rope, (2) **sever** a positive relationship
He **severed** a branch from a tree quickly.

Session 2: Spelling

1. ou____w fluid *n.* the leakage of fluid from a container; a natural flow of groundwater
2. e__t air pollution *v.* to give off or send out something such as light, heat, sound, gas, etc.
3. scr_____ze a suspect *v.* to examine carefully and critically; to inspect closely
4. extragalactic su_____va *n.* a powerful and luminous explosion that occurs in some stars, resulting in an extremely bright, short-lived object that later fades into a supernova remnant
5. neutrino ast_____ics *n.* the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe
6. op_____ne occasion *adj.* suitable or happening at a time that is suitable or convenient for a particular purpose
7. pr_____r in the long run *v.* to be successful or thriving, especially financially; to grow and develop well; to flourish
8. hu_____g sound *adj.* producing a continuous, low, vibrating sound like that of the bee
9. ex_____e in anger *v.* to burst or break open violently and noisily; to cause something to burst or break open

ANSWERS: 1. outflow, 2. emit, 3. scrutinize, 4. supernova, 5. astrophysics, 6. opportune, 7. prosper, 8. humming, 9. explode

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|---|--|
| 10. the co____l part of a natural tooth | <i>adj.</i> of or relating to the corona (= the outermost region of the sun's atmosphere); of or relating to or similar to the crown (= traditional head adornment, or hat worn by the reigning monarch) |
| 11. ej__t a player from a game | <i>v.</i> to force someone to put out or leave a particular place or position |
| 12. imp_____ion on stage | <i>n.</i> the act of making something up on the spot or creating or performing something without preparation |
| 13. an op_____ne remark | <i>adj.</i> suitable or happening at a time that is suitable or convenient for a particular purpose |
| 14. fl_____sh worldwide | <i>v.</i> to grow or develop vigorously or successfully |
| 15. solar ast_____er | <i>n.</i> a physicist who studies astronomy |
| 16. se__r a positive relationship | <i>v.</i> to break or separate something by cutting, especially suddenly and forcibly |
| 17. in_____te a new method | <i>v.</i> to introduce new methods, ideas, or products |
| 18. ti_____c compound | <i>adj.</i> of or having a great size, power, or influence; of or relating to Titanium (= a light, strong grey, lustrous, corrosion-resistant metallic element) |
| 19. ce_____al bliss | <i>adj.</i> relating to the sky or the heavens; of or like the sky or the heavens |
| 20. ad__n the garden | <i>v.</i> to be next to or border upon; to be adjacent or connected to something |

ANSWERS: 10. coronal, 11. eject, 12. improvisation, 13. opportune, 14. flourish, 15. astronomer, 16. sever, 17. innovate, 18. titanic, 19. celestial, 20. adjoin

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|-------------------------------|------|---|
| 21. fl____sh economically | v. | to grow or develop vigorously or successfully |
| 22. scr_____ze her belongings | v. | to examine carefully and critically; to inspect closely |
| 23. ou_____ne expectations | v. | to be more brilliant, striking, or impressive than; to outdo or excel |
| 24. ex___e the crowd | v. | to make someone feel suddenly enthusiastic or eager |
| 25. begin to r_t | v. | to decay, or cause something to decay, naturally and gradually |
| 26. pr_____r as a trading hub | v. | to be successful or thriving, especially financially; to grow and develop well; to flourish |
| 27. r_t with age | v. | to decay, or cause something to decay, naturally and gradually |
| 28. ou_____w of capital | n. | the leakage of fluid from a container; a natural flow of groundwater |
| 29. exc_____ate a sinner | v. | to officially exclude someone from membership in a church or religious community; to expel or banish someone from a group or society |
| 30. ast_____cal numbers | adj. | relating to astronomy or the study of celestial bodies and phenomena; very large or immense in scale or magnitude |
| 31. ex_____e in popularity | v. | to burst or break open violently and noisily; to cause something to burst or break open |
| 32. wh_____e for help | v. | to make a high-pitched sound by forcing breath through a small opening, usually with the lips or fingers; (noun) a piece of equipment that forces air or steam against an edge or into a cavity and so produces a loud shrill sound |

ANSWERS: 21. flourish, 22. scrutinize, 23. outshine, 24. excite, 25. rot, 26. prosper, 27. rot, 28. outflow, 29. excommunicate, 30. astronomical, 31. explode, 32. whistle

44. exc_____ate the priest from the church
v. to officially exclude someone from membership in a church or religious community; to expel or banish someone from a group or society
45. space obs_____ry
n. a building designed and equipped to observe the planets, the stars, the weather, etc.
46. ou_____ne his teacher
v. to be more brilliant, striking, or impressive than; to outdo or excel
47. e__t a gamma ray
v. to give off or send out something such as light, heat, sound, gas, etc.
48. b__p the horn
v. to make a short, high-pitched sound, typically as a signal or warning
49. em_____r my life
v. to give someone the power or authority to do something
50. amateur ast_____er
n. a physicist who studies astronomy
51. 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
52. jazz imp_____ion
n. the act of making something up on the spot or creating or performing something without preparation
53. ast_____ics research
n. the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe
54. ti_____c battle
adj. of or having a great size, power, or influence; of or relating to Titanium (= a light, strong grey, lustrous, corrosion-resistant metallic element)

ANSWERS: 44. excommunicate, 45. observatory, 46. outshine, 47. emit, 48. beep, 49. empower, 50. astronomer, 51. determinant, 52. improvisation, 53. astrophysics, 54. titanic

55. hu____g bird

adj. producing a continuous, low, vibrating sound like that of the bee

56. solar co____l plasma

adj. of or relating to the corona (= the outermost region of the sun's atmosphere); of or relating to or similar to the crown (= traditional head adornment, or hat worn by the reigning monarch)

57. ex____e rebellion

v. to make someone feel suddenly enthusiastic or eager

58. b__p out a warning

v. to make a short, high-pitched sound, typically as a signal or warning

ANSWERS: 55. humming, 56. coronal, 57. excite, 58. beep

Session 3: Fill in the Blanks

1. Companies developing self-driving cars consistently _____ the emerging technologies.
 - v. to introduce new methods, ideas, or products

2. He was studying _____ in an attempt to understand the origins of the universe.
 - n. the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe

3. After the valves were closed, the _____ halted.
 - n. the leakage of fluid from a container; a natural flow of groundwater

4. The _____ ship sank on its maiden voyage.
 - adj. of or having a great size, power, or influence; of or relating to Titanium (= a light, strong grey, lustrous, corrosion-resistant metallic element)

5. That astronomical _____ stands at the top of the mountain.
 - n. a building designed and equipped to observe the planets, the stars, the weather, etc.

6. He _____ a branch from a tree quickly.
 - v. to break or separate something by cutting, especially suddenly and forcibly

7. During the unloading, the container box _____ a clicking sound.
 - v. to give off or send out something such as light, heat, sound, gas, etc.

ANSWERS: 1. innovate, 2. astrophysics, 3. outflow, 4. titanic, 5. observatory, 6. severed, 7. emits

8. The old building _____ in a fiery inferno.
v. to burst or break open violently and noisily; to cause something to burst or break open
9. The timer _____ reminding me that the cake was ready to come out of the oven.
v. to make a short, high-pitched sound, typically as a signal or warning
10. Our immune system can _____ disease germs from the body.
v. to force someone to put out or leave a particular place or position
11. The new singer _____ all the others on stage with her powerful voice.
v. to be more brilliant, striking, or impressive than; to outdo or excel
12. 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
13. Several satellites failed due to a solar wind caused by _____ mass ejections.
adj. of or relating to the corona (= the outermost region of the sun's atmosphere); of or relating to or similar to the crown (= traditional head adornment, or hat worn by the reigning monarch)
14. The church leaders decided to _____ the member who had committed a serious offense.
v. to officially exclude someone from membership in a church or religious community; to expel or banish someone from a group or society
15. This question has fascinated solar _____ for decades.
n. a physicist who studies astronomy

ANSWERS: 8. exploded, 9. beeped, 10. eject, 11. outshined, 12. improvisation, 13. coronal, 14. excommunicate, 15. astronomers

16. The cost of the new equipment was _____ and beyond the company's budget.

adj. relating to astronomy or the study of celestial bodies and phenomena; very large or immense in scale or magnitude

17. With careful planning and hard work, she was able to _____ in her new business venture.

v. to be successful or thriving, especially financially; to grow and develop well; to flourish

18. The phone rang at the most _____ time.

adj. suitable or happening at a time that is suitable or convenient for a particular purpose

19. 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

20. The _____ bodies in the night sky were beautiful to behold.

adj. relating to the sky or the heavens; of or like the sky or the heavens

21. Please refrigerate the meat, or it will ____.

v. to decay, or cause something to decay, naturally and gradually

22. The news of her promotion _____ her.

v. to make someone feel suddenly enthusiastic or eager

23. The company _____ employees to buy low-price items without approval to achieve efficient purchasing.

v. to give someone the power or authority to do something

ANSWERS: 16. astronomical, 17. prosper, 18. opportune, 19. determinant, 20. celestial, 21. rot, 22. excited, 23. empowered

24. The bookstore _____ the coffee shop, making it a perfect spot to relax and read.
- v. to be next to or border upon; to be adjacent or connected to something
25. The employee decided to _____ on the company's illegal activities.
- v. to make a high-pitched sound by forcing breath through a small opening, usually with the lips or fingers; (noun) a piece of equipment that forces air or steam against an edge or into a cavity and so produces a loud shrill sound
26. The _____ of the bees filled the air as she walked through the garden.
- adj. producing a continuous, low, vibrating sound like that of the bee
27. The detective _____ the evidence for any clues.
- v. to examine carefully and critically; to inspect closely
28. The Ottoman Empire _____ for over five centuries.
- v. to grow or develop vigorously or successfully
29. The _____ explosion created a bright new star in the night sky.
- n. a powerful and luminous explosion that occurs in some stars, resulting in an extremely bright, short-lived object that later fades into a supernova remnant

ANSWERS: 24. adjoins, 25. whistle-blow, 26. humming, 27. scrutinized, 28. flourished, 29. supernova