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Vocabulary Builder Reference from...

Joshua Harvey: The evolution of the human eye |

TED Talk

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

Advanced Words Only

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Session 1: Word List

euglena

n. a single-celled organism belonging to the group of protists, typically green, and can undergo photosynthesis but can also feed on other organisms

(1) **euglena** photosynthesis, (2) **euglena** reproduction

The students observed the fascinating **euglena** movement under the microscope, noting its whip-like flagellum.

flagellum

n. (plural, flagella) a long, thin, whip-like structure that some cells use for movement

synonym: cilia, whip, appendage

(1) **flagellum** structure, (2) bacterial **flagellum**

The **flagellum** of the sperm cells help it to move towards the egg.

planarian

n. a small, flatworm with a simple nervous system found in freshwater environments that is used as a model organism in biological and medical research, especially for studying regeneration

synonym: flatworm, tapeworm

(1) **planarian** regeneration, (2) freshwater **planarian**

The nervous system of **planarians** is relatively simple and easy to study.

predator

n. an animal whose natural behavior is to prey on others
synonym: vulture, bloodsucker

(1) apex **predator**, (2) sexual **predators**

The native South American animals were in danger because of the **predator's** arrival.

pinhole

n. a tiny hole in a material, often made by a needle, that allows light or other substances to pass through

synonym: aperture, perforation, pore

(1) **pinhole** image, (2) **pinhole** leak

The camera's **pinhole** lens creates a unique blur effect in photographs.

nautilus

n. a marine mollusk of the cephalopod family that possesses a coiled spiral shell divided into multiple chambers, often found in the Indo-Pacific region, with unique features such as tentacles, an external ornate shell, and a relatively unchanged evolutionary history

synonym: cephalopod

(1) **nautilus** shell, (2) marine **nautilus**

The chambered **nautilus** propels itself by expelling water from its mantle cavity, allowing it to move backward.

ancestor

n. a person from whom one is descended; a forefather

synonym: forebear, forefather, progenitor

(1) **ancestor** language, (2) earliest human **ancestor**

My remote **ancestor** immigrated to the United States from Ireland in the 1800s.

octopus

n. a sea creature with a soft round body and eight long tentacles (= long parts like arms)

synonym: devilfish

(1) giant **octopus**, (2) venomous **octopus**

He experienced nausea after eating live **octopus**.

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**.

crystalline

adj. resembling crystal in clarity, transparency, or brilliance; having a highly ordered and symmetrical molecular structure

synonym : crystallized, clear, transparent

(1) **crystalline** structure, (2) **crystalline** water

The geologist found a beautiful specimen of a **crystalline** mineral.

retina

n. the innermost light-sensitive membrane covering the back wall of the eyeball

(1) **retinal** cells, (2) **retina** scanner

Damage to the **retina** may play a role in the development of glaucoma.

adaptable

adj. able or willing to modify or be modified to deal with new situations

synonym : flexible, adjustable, elastic

(1) **adaptable** enough for the environment, (2) an **adaptable** person

We seek a candidate who possesses **adaptable** fighting potential.

curvature

n. the degree to which a line or surface deviates from being straight or flat; a measure of the amount of bending of a curve

synonym : bend, arch, bow

(1) the degree of **curvature**, (2) spinal **curvature**

The **curvature** of the earth can be seen from space.

iris

n. the colored part of the eye that surrounds the pupil; a flower with showy petals, named for its resemblance to the eye's iris

synonym : pupil, diaphragm, aperture

(1) blue **iris**, (2) **iris** pattern

The **iris** of the eye contracts and expands to control the amount of light that enters.

sclera

n. the tough, white outer layer of the eyeball that covers most of its surface, providing structural support and protection

synonym : white of the eye, eye sclera, eyeball covering

(1) **sclera** color, (2) inflamed **sclera**

The doctor noted a yellow **sclera** staining in the patient's eyes, indicating a potential liver issue.

invert

v. to turn something upside down, inside out; to reverse the position, order, or relationship of something

synonym : turn upside down, reverse, flip

(1) **invert** a glass, (2) **invert** position

He decided to **invert** his investment portfolio, shifting from stocks to bonds.

pierce

v. to cut or make a way through with a sharp instrument

synonym : jab, penetrate, stab

(1) **pierce** the armored shells, (2) **pierce** a mystery

The extreme cold **pierced** our bones.

photosensitive

adj. sensitive or responsive to light, particularly in a scientific or medical context; referring to the ability to react to or be affected by light

synonym : photosensitive, light-sensitive, reactive

(1) **photosensitive** paper, (2) **photosensitive** reaction

The **photosensitive** material must be stored in a dark room to prevent damage.

cephalopod

n. marine mollusk such as an octopus or squid, characterized by a well-developed head, eyes, and tentacles (= long parts like arms)

(1) **cephalopod** mollusk, (2) a **cephalopod** with eight arms

Cephalopods move quickly through the outflow of water from a muscular funnel beneath the head.

sect

n. a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream

synonym: group, faction, cult

(1) **sect** beliefs, (2) secret **sect**

The minority **sect** believed in a set of unconventional religious practices.

impair

v. to damage something or make it weaker or worse

synonym: degrade, mar, deface

(1) **impair** my health, (2) **impair** insulin sensitivity

The accident made his vision **impaired**.

surpass

v. to be or do better than someone or something; to excel or go beyond the limits or standards of something

synonym: excel, outdo, outperform

(1) **surpass** imagination, (2) **surpass** \$20 billion in sales

The athlete's record-breaking performance **surpassed** all expectations.

Session 2: Spelling

1. i__s pattern *n.* the colored part of the eye that surrounds the pupil; a flower with showy petals, named for its resemblance to the eye's iris
2. fl_____um structure *n.* (plural, flagella) a long, thin, whip-like structure that some cells use for movement
3. eu_____a photosynthesis *n.* a single-celled organism belonging to the group of protists, typically green, and can undergo photosynthesis but can also feed on other organisms
4. im___r insulin sensitivity *v.* to damage something or make it weaker or worse
5. cry_____ne structure *adj.* resembling crystal in clarity, transparency, or brilliance; having a highly ordered and symmetrical molecular structure
6. blue i__s *n.* the colored part of the eye that surrounds the pupil; a flower with showy petals, named for its resemblance to the eye's iris
7. im___r my health *v.* to damage something or make it weaker or worse
8. s__t beliefs *n.* a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream

ANSWERS: 1. iris, 2. flagellum, 3. euglena, 4. impair, 5. crystalline, 6. iris, 7. impair, 8. sect

9. in___t a glass *v.* to turn something upside down, inside out; to reverse the position, order, or relationship of something
10. cep_____od mollusk *n.* marine mollusk such as an octopus or squid, characterized by a well-developed head, eyes, and tentacles (= long parts like arms)
11. na_____us shell *n.* a marine mollusk of the cephalopod family that possesses a coiled spiral shell divided into multiple chambers, often found in the Indo-Pacific region, with unique features such as tentacles, an external ornate shell, and a relatively unchanged evolutionary history
12. su_____s \$20 billion in sales *v.* to be or do better than someone or something; to excel or go beyond the limits or standards of something
13. pho_____ive paper *adj.* sensitive or responsive to light, particularly in a scientific or medical context; referring to the ability to react to or be affected by light
14. imp_____ion on stage *n.* the act of making something up on the spot or creating or performing something without preparation
15. pi___e the armored shells *v.* to cut or make a way through with a sharp instrument
16. ad_____le enough for the environment *adj.* able or willing to modify or be modified to deal with new situations
17. su_____s imagination *v.* to be or do better than someone or something; to excel or go beyond the limits or standards of something

ANSWERS: 9. invert, 10. cephalopod, 11. nautilus, 12. surpass, 13. photosensitive, 14. improvisation, 15. pierce, 16. adaptable, 17. surpass

18. secret s__t *n.* a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream
19. apex pr____or *n.* an animal whose natural behavior is to prey on others
20. earliest human an____or *n.* a person from whom one is descended; a forefather
21. re___al cells *n.* the innermost light-sensitive membrane covering the back wall of the eyeball
22. a cep_____od with eight arms *n.* marine mollusk such as an octopus or squid, characterized by a well-developed head, eyes, and tentacles (= long parts like arms)
23. the degree of cu_____re *n.* the degree to which a line or surface deviates from being straight or flat; a measure of the amount of bending of a curve
24. giant oc_____s *n.* a sea creature with a soft round body and eight long tentacles (= long parts like arms)
25. spinal cu_____re *n.* the degree to which a line or surface deviates from being straight or flat; a measure of the amount of bending of a curve
26. cry_____ne water *adj.* resembling crystal in clarity, transparency, or brilliance; having a highly ordered and symmetrical molecular structure

ANSWERS: 18. sect, 19. predator, 20. ancestor, 21. retina, 22. cephalopod, 23. curvature, 24. octopus, 25. curvature, 26. crystalline

27. in___t position *v.* to turn something upside down, inside out; to reverse the position, order, or relationship of something
28. venomous oc_____s *n.* a sea creature with a soft round body and eight long tentacles (= long parts like arms)
29. bacterial fl_____um *n.* (plural, flagella) a long, thin, whip-like structure that some cells use for movement
30. freshwater pl_____an *n.* a small, flatworm with a simple nervous system found in freshwater environments that is used as a model organism in biological and medical research, especially for studying regeneration
31. jazz imp_____ion *n.* the act of making something up on the spot or creating or performing something without preparation
32. an ad_____le person *adj.* able or willing to modify or be modified to deal with new situations
33. sexual pr_____ors *n.* an animal whose natural behavior is to prey on others
34. inflamed sc___a *n.* the tough, white outer layer of the eyeball that covers most of its surface, providing structural support and protection
35. pi___e a mystery *v.* to cut or make a way through with a sharp instrument
36. pl_____an regeneration *n.* a small, flatworm with a simple nervous system found in freshwater environments that is used as a model organism in biological and medical research, especially for studying regeneration

ANSWERS: 27. invert, 28. octopus, 29. flagellum, 30. planarian, 31. improvisation, 32. adaptable, 33. predator, 34. sclera, 35. pierce, 36. planarian

37. pi____e leak *n.* a tiny hole in a material, often made by a needle, that allows light or other substances to pass through
38. eu____a reproduction *n.* a single-celled organism belonging to the group of protists, typically green, and can undergo photosynthesis but can also feed on other organisms
39. sc____a color *n.* the tough, white outer layer of the eyeball that covers most of its surface, providing structural support and protection
40. an____or language *n.* a person from whom one is descended; a forefather
41. pho_____ive reaction *adj.* sensitive or responsive to light, particularly in a scientific or medical context; referring to the ability to react to or be affected by light
42. marine na____us *n.* a marine mollusk of the cephalopod family that possesses a coiled spiral shell divided into multiple chambers, often found in the Indo-Pacific region, with unique features such as tentacles, an external ornate shell, and a relatively unchanged evolutionary history
43. pi____e image *n.* a tiny hole in a material, often made by a needle, that allows light or other substances to pass through
44. re____a scanner *n.* the innermost light-sensitive membrane covering the back wall of the eyeball

ANSWERS: 37. pinhole, 38. euglena, 39. sclera, 40. ancestor, 41. photosensitive, 42. nautilus, 43. pinhole, 44. retina

Session 3: Fill in the Blanks

1. The athlete's record-breaking performance _____ all expectations.
 - v.* to be or do better than someone or something; to excel or go beyond the limits or standards of something

2. The _____ of the earth can be seen from space.
 - n.* the degree to which a line or surface deviates from being straight or flat; a measure of the amount of bending of a curve

3. The camera's _____ lens creates a unique blur effect in photographs.
 - n.* a tiny hole in a material, often made by a needle, that allows light or other substances to pass through

4. The accident made his vision _____.
 - v.* to damage something or make it weaker or worse

5. _____ move quickly through the outflow of water from a muscular funnel beneath the head.
 - n.* marine mollusk such as an octopus or squid, characterized by a well-developed head, eyes, and tentacles (= long parts like arms)

6. The nervous system of _____ is relatively simple and easy to study.
 - n.* a small, flatworm with a simple nervous system found in freshwater environments that is used as a model organism in biological and medical research, especially for studying regeneration

7. The geologist found a beautiful specimen of a _____ mineral.
 - adj.* resembling crystal in clarity, transparency, or brilliance; having a highly ordered and symmetrical molecular structure

ANSWERS: 1. surpassed, 2. curvature, 3. pinhole, 4. impaired, 5. Cephalopods, 6. planarians, 7. crystalline

8. The _____ of the eye contracts and expands to control the amount of light that enters.
- n.* the colored part of the eye that surrounds the pupil; a flower with showy petals, named for its resemblance to the eye's iris
9. My remote _____ immigrated to the United States from Ireland in the 1800s.
- n.* a person from whom one is descended; a forefather
10. The _____ of the sperm cells help it to move towards the egg.
- n.* (plural, flagella) a long, thin, whip-like structure that some cells use for movement
11. He decided to _____ his investment portfolio, shifting from stocks to bonds.
- v.* to turn something upside down, inside out; to reverse the position, order, or relationship of something
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. The doctor noted a yellow _____ staining in the patient's eyes, indicating a potential liver issue.
- n.* the tough, white outer layer of the eyeball that covers most of its surface, providing structural support and protection
14. We seek a candidate who possesses _____ fighting potential.
- adj.* able or willing to modify or be modified to deal with new situations
15. He experienced nausea after eating live _____.
- n.* a sea creature with a soft round body and eight long tentacles (= long parts like arms)

ANSWERS: 8. iris, 9. ancestor, 10. flagellum, 11. invert, 12. improvisation, 13. sclera, 14. adaptable, 15. octopus

16. The students observed the fascinating _____ movement under the microscope, noting its whip-like flagellum.
- n.* a single-celled organism belonging to the group of protists, typically green, and can undergo photosynthesis but can also feed on other organisms
17. Damage to the _____ may play a role in the development of glaucoma.
- n.* the innermost light-sensitive membrane covering the back wall of the eyeball
18. The _____ material must be stored in a dark room to prevent damage.
- adj.* sensitive or responsive to light, particularly in a scientific or medical context; referring to the ability to react to or be affected by light
19. The chambered _____ propels itself by expelling water from its mantle cavity, allowing it to move backward.
- n.* a marine mollusk of the cephalopod family that possesses a coiled spiral shell divided into multiple chambers, often found in the Indo-Pacific region, with unique features such as tentacles, an external ornate shell, and a relatively unchanged evolutionary history
20. The extreme cold _____ our bones.
- v.* to cut or make a way through with a sharp instrument
21. The minority _____ believed in a set of unconventional religious practices.
- n.* a group of people who follow a particular religious or philosophical belief system, especially one that is regarded as outside the norm or mainstream
22. The native South American animals were in danger because of the _____ arrival.
- n.* an animal whose natural behavior is to prey on others

ANSWERS: 16. euglena, 17. retina, 18. photosensitive, 19. nautilus, 20. pierced, 21. sect, 22. predator's

ANSWERS: