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Vocabulary Builder Reference from...

Gary Greenberg: *The beautiful nano details of our world* | TED Talk

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

Advanced Words Only

IMPORTANT

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Session 1: Word List

centimeter

n. a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter

(1) **centimeter** measurement, (2) thirty **centimeters** tall

The room was only one **centimeter** wider than the piano, making it a tight fit.

enthrall

v. to capture or hold someone's attention or interest completely; to captivate or fascinate

synonym: captivate, charm, fascinate

(1) **enthrall** with beauty, (2) **enthrall** the reader

The magician's illusions always managed to **enthrall** the audience.

amaze

v. to fill with wonder, surprise, or admiration

synonym: astound, surprise, stagger

(1) **amaze** and entertain visitors, (2) **amaze** everyone

The magician's tricks **amazed** the audience.

engulf

v. to swallow up; to surround and cover completely

synonym: swallow, submerge, inundate

(1) **engulf** the politician, (2) **engulf** in water

The fire quickly **engulfed** the entire building.

micron

n. a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms

synonym: micrometer

(1) **micron** measurements, (2) **micron** imaging

The width of a single human hair is around 100 **microns**.

micrometer

n. a tool for measuring small distances or dimensions, typically accurate to within one-thousandth of a millimeter

synonym: caliper, measuring gauge

(1) **micrometer** gauge, (2) vernier **micrometer**

The scientist used a digital **micrometer** to measure the exact thickness of the material.

nanoscale

adj. on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale

(1) **nanoscale** device, (2) things at the **nanoscale**

This process improves the strength of the metal by controlling the **nanoscale** lattice structure of the metal.

angstrom

n. (symbolized by the letter "Å") a unit of length used to measure wavelengths of light, equal to one ten-billionth of a meter (10^{-10} meters)

(1) **angstrom** resolution, (2) **angstrom** scale

When discussing atomic radii, it's common to use the **angstrom** unit for better relatability.

cobalt

n. a lustrous, hard, silver-white element with the symbol Co that is often used in alloys, batteries, and pigments and is essential for certain biological processes in humans and other organisms

synonym: Co

(1) **cobalt** steel, (2) **cobalt** blue

The blades of gas turbine engines are often coated with a **cobalt** layer to improve their durability.

petal

n. one of the separate, usually colored, segments of a flower that produce its shape and are often found arranged in a circle around the reproductive parts

synonym : blossom, flower, bloom

(1) **petal** shape, (2) rose **petal**

The botany field is concerned with studying the structure of plant **petals**.

stigma

n. a mark of shame or disgrace associated with a particular circumstance, quality, or person

synonym : mark, blemish, disgrace

(1) social **stigma**, (2) **stigma** against obesity

The mental health **stigma** often prevents people from seeking treatment.

stamen

n. the male reproductive organ of a flower, usually consisting of a filament and an anther, which supports the anther, which contains the pollen grains necessary for fertilization

synonym : pollen, filament, reproductive organ

(1) flower **stamen**, (2) **stamen** tip

Students sketched the **stamen** arrangement of the lily during their botany class.

spur

n. a thing that encourages someone to do something; any sharply pointed projection; (verb) to incite or stimulate someone or something

synonym : encouragement, motivation, stimulus

(1) **spur** of the moment, (2) **spur** a momentum of economic growth

The threat of losing his job was the **spur** he needed to work harder.

nectar

n. a sweet liquid produced by flowers that attracts and provides food for bees and other insects; any sweet liquid that is enjoyed as a drink or used as a flavoring

synonym : honey, ambrosia, syrup

(1) **nectar** of the gods, (2) fruit **nectar**

The **nectar** of the flowers attracted many bees to the garden.

pollen

n. a fine powder substance consisting of microscopic grains produced by plants that facilitate their reproductive process through the process of pollination

synonym: dust, spores, allergen

(1) **pollen** allergy symptoms, (2) high **pollen** count

My allergies flare up during **pollen** season, making it difficult to breathe.

hive

n. a structure for the reception and habitation of bees, either built by people or made by the bees themselves; a place swarming people

synonym: apiary, swarm, pack

(1) honeybees in **hives**, (2) a **hive** of activity

Bees were buzzing around the **hive**

beehive

n. a structure or container where bees live and store their honey

synonym: hive, apiary, honeycomb

(1) disturb a **beehive**, (2) get rid of a **beehive**

The beekeeper checked the **beehive** for any signs of disease.

hyacinth

n. (also "jacinth") a fragrant flowering plant with clustered flowers that grow on a tall, spiky stem, typically in shades of blue, purple, or pink

synonym: jacinth

(1) **hyacinth** flower, (2) blue **hyacinth**

The beautiful purple **hyacinth** flowers bloomed every spring in the garden.

pistil

n. the female reproductive organ of a flower, typically located in the center and composed of the stigma, style, and ovary, which receives pollen and facilitates fertilization

synonym : carpel, ovary, gynoecium

(1) flower **pistil**, (2) fragrant **pistil**

Some orchids' **pistil** structure mimics certain insects' appearance, facilitating pollination.

trichome

n. a small outgrowth or hair-like structure that can be found on various plants, algae, and lichens, which can have various functions such as protection against predators, secretion of substances, or aiding in capturing moisture from the environment

synonym : hair, filament

(1) glandular **trichome**, (2) **trichome** development

Under the microscope, the **trichome** structure reveals a complex architecture that helps protect plants from various environmental stressors.

olivine

n. a mineral consisting of a silicate of magnesium, iron, and other metals, typically green in color, and found in igneous and metamorphic rocks

synonym : peridot, chrysolite, yellow-green gemstone

(1) **olivine-rich** rocks, (2) **olivine** composition

The geology students discovered an abundance of **olivine** crystals in the volcanic rock.

volcano

n. a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.

synonym : mount, peak, crater

(1) **volcano** alert level, (2) active **volcano**

The island was formed by a **volcano** millions of years ago.

microscopic

adj. tiny; exceedingly precise and detail-oriented; of or used in microscopy

synonym : infinitesimal, tiny, atomic

(1) **microscopic** inquiry, (2) **microscopic** analysis

Inspectors noticed **microscopic** cracks in the submarine's hull.

macroscopic

adj. visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools

synonym : large, visible, apparent

(1) **macroscopic** observation, (2) **macroscopic** anatomy

The **macroscopic** view of the galaxy is simply breathtaking.

sponge

n. a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning

(1) sea **sponge**, (2) metallic **sponge**

The tiny marine **sponge** has existed for more than 500 million years.

urchin

n. a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines

synonym : mischief, waif, guttersnipe

(1) **urchin** child, (2) street **urchin**

The young boy was an **urchin** wandering the streets without a home.

trove

n. a valuable collection of rare or interesting things, usually on the earth

synonym : hoard, collection, assemblage

(1) **trove** of information, (2) stumble on a **trove**

The treasure **trove** of ancient artifacts was a museum's dream come true.

dissect

v. to cut into pieces to study the structure of something in detail

synonym : analyze, examine, study

(1) **dissect** the data, (2) **dissect** a personality

The scientist **dissected** the frog to study its internal organs.

feldspar

n. a group of minerals that are abundant in the Earth's crust and have a wide range of chemical compositions, often used in the manufacture of ceramics and glass

synonym : mineral, rock, crystal

(1) igneous **feldspar**, (2) sodium **feldspar**

The chemical composition of **feldspar** minerals varies between different geological environments.

erode

v. to gradually wear away or break down (rock, soil, or other material) through the action of wind, water, or other natural agents; to gradually weaken or undermine (something) over time

synonym : wear away, deteriorate, corrode

(1) **erode** coast, (2) **erode** trust

The ongoing budget cuts have **eroded** the quality of education in many schools.

garnet

n. a precious stone typically red in color, consisting of a group of silicate minerals; a dark red color resembling that of garnet

synonym : ruby, precious stone

(1) **garnet** stone, (2) deep red **garnet**

She wore a beautiful necklace adorned with a delicate **garnet** pendant.

epidote

n. a green to brown or black mineral belonging to the silicate group, typically occurring in metamorphic and igneous rocks, and often possessing a prismatic or tabular crystal structure

synonym : pistacite

(1) **epidote** crystal, (2) **epidote** formation

The geologist found a beautiful specimen of **epidote** embedded in the rock formation.

ubiquitous

adj. being or existing everywhere at once

synonym : universal, omnipresent, everywhere

(1) **ubiquitous** computing, (2) **ubiquitous** across

ecosystems

Sugar is **ubiquitous** in food.

meteorite

n. a solid object originating in outer space that reaches the Earth's surface without completely vaporizing in the atmosphere; a rock that has fallen from space

synonym: meteor, shooting star, asteroid

(1) **meteorite** impact, (2) **meteorite** shower

The **meteorite** fragments were collected and sent to a laboratory for analysis.

bombard

v. to attack a place with bombs or gunshots continuously; to address with continuously or persistently, as if with a barrage

synonym: bomb, shoot, blitz

(1) **bombard** him with questions, (2) **bombard** a fort with heavy shells

Overprotective parents often **bombard** their children with messages reinforcing their lack of mastery.

vaporize

v. to convert a substance into vapor or gas, often by heating or applying intense pressure; to disappear or become dispersed as if by evaporating; to destroy or eliminate completely

synonym: evaporate, disappear, vanish

(1) **vaporize** nicotine, (2) **vaporize** into thin air

The heat caused the water to **vaporize** into steam.

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.

agglutinate

v. to join or stick together, especially when referring to the merging or combining of different things or components; (of linguistics) to form words through the addition of affixes or suffixes

synonym : adhere, bond, cling

(1) **agglutinate** blood cells, (2) **agglutinate** bacteria

The research team **agglutinated** different substances together to form a new compound.

lava

n. molten rock that has been extruded from a volcano and solidified; a highly fluid, highly heated substance or material

synonym : molten rock, magma, volcanic rock

(1) **lava** flow, (2) molten **lava**

The volcano's eruption caused a **lava** river to flow down the mountainside.

basalt

n. a dark, fine-grained volcanic rock that forms from the solidification of lava

synonym : volcanic rock, lava, igneous rock

(1) **basalt** rock, (2) **basalt** glass

The hiking trail was lined with towering **basalt** columns.

harden

v. to make something firm, solid, or resistant; to toughen or strengthen physically or emotionally; to become more rigid or less flexible

synonym : strengthen, solidify, fortify

(1) **harden** your heart, (2) **harden** clay

She had to **harden** her stance on the issue to gain support from her colleagues.

tumble

v. to fall suddenly, often uncontrollably; to topple or turn over; to decline sharply and quickly in value, quality, or performance

synonym : fall, stumble, plummet

(1) **tumble** down the hill, (2) confidence **tumbles** as unemployment rates rose

The value of the currency **tumbled** against major international currencies.

Session 2: Spelling

1. di____t the data *v.* to cut into pieces to study the structure of something in detail
2. honeybees in h__es *n.* a structure for the reception and habitation of bees, either built by people or made by the bees themselves; a place swarming people
3. rose pe__l *n.* one of the separate, usually colored, segments of a flower that produce its shape and are often found arranged in a circle around the reproductive parts
4. en____ll the reader *v.* to capture or hold someone's attention or interest completely; to captivate or fascinate
5. a h__e of activity *n.* a structure for the reception and habitation of bees, either built by people or made by the bees themselves; a place swarming people
6. get rid of a be____e *n.* a structure or container where bees live and store their honey
7. active vo____o *n.* a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.
8. va____ze into thin air *v.* to convert a substance into vapor or gas, often by heating or applying intense pressure; to disappear or become dispersed as if by evaporating; to destroy or eliminate completely

ANSWERS: 1. dissect, 2. hive, 3. petal, 4. enthrall, 5. hive, 6. beehive, 7. volcano, 8. vaporize

9. social st___a *n.* a mark of shame or disgrace associated with a particular circumstance, quality, or person
10. thirty cen_____ers tall *n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
11. er__e trust *v.* to gradually wear away or break down (rock, soil, or other material) through the action of wind, water, or other natural agents; to gradually weaken or undermine (something) over time
12. na_____le device *adj.* on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
13. ep_____e formation *n.* a green to brown or black mineral belonging to the silicate group, typically occurring in metamorphic and igneous rocks, and often possessing a prismatic or tabular crystal structure
14. ep_____e crystal *n.* a green to brown or black mineral belonging to the silicate group, typically occurring in metamorphic and igneous rocks, and often possessing a prismatic or tabular crystal structure
15. high po___n count *n.* a fine powder substance consisting of microscopic grains produced by plants that facilitate their reproductive process through the process of pollination
16. ur___n child *n.* a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines

ANSWERS: 9. stigma, 10. centimeter, 11. erode, 12. nanoscale, 13. epidote, 14. epidote, 15. pollen, 16. urchin

17. disturb a be_____e *n.* a structure or container where bees live and store their honey
18. pe__l shape *n.* one of the separate, usually colored, segments of a flower that produce its shape and are often found arranged in a circle around the reproductive parts
19. en___f the politician *v.* to swallow up; to surround and cover completely
20. en_____ll with beauty *v.* to capture or hold someone's attention or interest completely; to captivate or fascinate
21. fragrant pi___l *n.* the female reproductive organ of a flower, typically located in the center and composed of the stigma, style, and ovary, which receives pollen and facilitates fertilization
22. ubi_____us computing *adj.* being or existing everywhere at once
23. a cl__p of trees *n.* a small group of bushes, trees, flowers, people, etc.
24. confidence tu___es as unemployment rates rose *v.* to fall suddenly, often uncontrollably; to topple or turn over; to decline sharply and quickly in value, quality, or performance
25. tr__e of information *n.* a valuable collection of rare or interesting things, usually on the earth
26. bo_____d him with questions *v.* to attack a place with bombs or gunshots continuously; to address with continuously or persistently, as if with a barrage

ANSWERS: 17. beehive, 18. petal, 19. engulf, 20. enthrall, 21. pistil, 22. ubiquitous, 23. clump, 24. tumble, 25. trove, 26. bombard

27. fruit ne___r *n.* a sweet liquid produced by flowers that attracts and provides food for bees and other insects; any sweet liquid that is enjoyed as a drink or used as a flavoring
28. flower pi___l *n.* the female reproductive organ of a flower, typically located in the center and composed of the stigma, style, and ovary, which receives pollen and facilitates fertilization
29. am___e everyone *v.* to fill with wonder, surprise, or admiration
30. mac_____ic observation *adj.* visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools
31. deep red ga___t *n.* a precious stone typically red in color, consisting of a group of silicate minerals; a dark red color resembling that of garnet
32. am___e and entertain visitors *v.* to fill with wonder, surprise, or admiration
33. ol_____e-rich rocks *n.* a mineral consisting of a silicate of magnesium, iron, and other metals, typically green in color, and found in igneous and metamorphic rocks
34. agg_____te bacteria *v.* to join or stick together, especially when referring to the merging or combining of different things or components; (of linguistics) to form words through the addition of affixes or suffixes

ANSWERS: 27. nectar, 28. pistil, 29. amaze, 30. macroscopic, 31. garnet, 32. amaze, 33. olivine, 34. agglutinate

35. mi___n measurements *n.* a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms
36. an____om scale *n.* (symbolized by the letter "Å") a unit of length used to measure wavelengths of light, equal to one ten-billionth of a meter (10^{-10} meters)
37. en___f in water *v.* to swallow up; to surround and cover completely
38. ha___n clay *v.* to make something firm, solid, or resistant; to toughen or strengthen physically or emotionally; to become more rigid or less flexible
39. blue hy____th *n.* (also "jacinth") a fragrant flowering plant with clustered flowers that grow on a tall, spiky stem, typically in shades of blue, purple, or pink
40. me_____te shower *n.* a solid object originating in outer space that reaches the Earth's surface without completely vaporizing in the atmosphere; a rock that has fallen from space
41. cen_____er measurement *n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
42. igneous fe____ar *n.* a group of minerals that are abundant in the Earth's crust and have a wide range of chemical compositions, often used in the manufacture of ceramics and glass

ANSWERS: 35. micron, 36. angstrom, 37. engulf, 38. harden, 39. hyacinth, 40. meteorite, 41. centimeter, 42. feldspar

43. mic_____ic inquiry *adj.* tiny; exceedingly precise and detail-oriented; of or used in microscopy
44. things at the na_____le *adj.* on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
45. agg_____te blood cells *v.* to join or stick together, especially when referring to the merging or combining of different things or components; (of linguistics) to form words through the addition of affixes or suffixes
46. mic_____ic analysis *adj.* tiny; exceedingly precise and detail-oriented; of or used in microscopy
47. co____t blue *n.* a lustrous, hard, silver-white element with the symbol Co that is often used in alloys, batteries, and pigments and is essential for certain biological processes in humans and other organisms
48. me_____te impact *n.* a solid object originating in outer space that reaches the Earth's surface without completely vaporizing in the atmosphere; a rock that has fallen from space
49. an_____om resolution *n.* (symbolized by the letter "Å") a unit of length used to measure wavelengths of light, equal to one ten-billionth of a meter (10^{-10} meters)
50. vo_____o alert level *n.* a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.

ANSWERS: 43. microscopic, 44. nanoscale, 45. agglutinate, 46. microscopic, 47. cobalt, 48. meteorite, 49. angstrom, 50. volcano

51. ba___t glass *n.* a dark, fine-grained volcanic rock that forms from the solidification of lava
52. va_____ze nicotine *v.* to convert a substance into vapor or gas, often by heating or applying intense pressure; to disappear or become dispersed as if by evaporating; to destroy or eliminate completely
53. ba___t rock *n.* a dark, fine-grained volcanic rock that forms from the solidification of lava
54. tr_____me development *n.* a small outgrowth or hair-like structure that can be found on various plants, algae, and lichens, which can have various functions such as protection against predators, secretion of substances, or aiding in capturing moisture from the environment
55. co___t steel *n.* a lustrous, hard, silver-white element with the symbol Co that is often used in alloys, batteries, and pigments and is essential for certain biological processes in humans and other organisms
56. s__r a momentum of economic growth *n.* a thing that encourages someone to do something; any sharply pointed projection; (verb) to incite or stimulate someone or something
57. bo_____d a fort with heavy shells *v.* to attack a place with bombs or gunshots continuously; to address with continuously or persistently, as if with a barrage

ANSWERS: 51. basalt, 52. vaporize, 53. basalt, 54. trichome, 55. cobalt, 56. spur, 57. bombard

58. metallic sp___e *n.* a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning
59. vernier mic_____er *n.* a tool for measuring small distances or dimensions, typically accurate to within one-thousandth of a millimeter
60. molten l__a *n.* molten rock that has been extruded from a volcano and solidified; a highly fluid, highly heated substance or material
61. ol_____e composition *n.* a mineral consisting of a silicate of magnesium, iron, and other metals, typically green in color, and found in igneous and metamorphic rocks
62. l__a flow *n.* molten rock that has been extruded from a volcano and solidified; a highly fluid, highly heated substance or material
63. tu___e down the hill *v.* to fall suddenly, often uncontrollably; to topple or turn over; to decline sharply and quickly in value, quality, or performance
64. glandular tr_____me *n.* a small outgrowth or hair-like structure that can be found on various plants, algae, and lichens, which can have various functions such as protection against predators, secretion of substances, or aiding in capturing moisture from the environment

ANSWERS: 58. sponge, 59. micrometer, 60. lava, 61. olivine, 62. lava, 63. tumble, 64. trichome

65. stumble on a tr__e *n.* a valuable collection of rare or interesting things, usually on the earth
66. po___n allergy symptoms *n.* a fine powder substance consisting of microscopic grains produced by plants that facilitate their reproductive process through the process of pollination
67. street ur___n *n.* a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines
68. ga___t stone *n.* a precious stone typically red in color, consisting of a group of silicate minerals; a dark red color resembling that of garnet
69. sodium fe_____ar *n.* a group of minerals that are abundant in the Earth's crust and have a wide range of chemical compositions, often used in the manufacture of ceramics and glass
70. flower st___n *n.* the male reproductive organ of a flower, usually consisting of a filament and an anther, which supports the anther, which contains the pollen grains necessary for fertilization
71. mi___n imaging *n.* a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms
72. mac_____ic anatomy *adj.* visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools

ANSWERS: 65. trove, 66. pollen, 67. urchin, 68. garnet, 69. feldspar, 70. stamen, 71. micron, 72. macroscopic

73. ne___r of the gods *n.* a sweet liquid produced by flowers that attracts and provides food for bees and other insects; any sweet liquid that is enjoyed as a drink or used as a flavoring
74. mic_____er gauge *n.* a tool for measuring small distances or dimensions, typically accurate to within one-thousandth of a millimeter
75. ubi_____us across ecosystems *adj.* being or existing everywhere at once
76. st___n tip *n.* the male reproductive organ of a flower, usually consisting of a filament and an anther, which supports the anther, which contains the pollen grains necessary for fertilization
77. cl___p of bacteria *n.* a small group of bushes, trees, flowers, people, etc.
78. sea sp___e *n.* a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning
79. ha___n your heart *v.* to make something firm, solid, or resistant; to toughen or strengthen physically or emotionally; to become more rigid or less flexible
80. di_____t a personality *v.* to cut into pieces to study the structure of something in detail
81. s___r of the moment *n.* a thing that encourages someone to do something; any sharply pointed projection; (verb) to incite or stimulate someone or something

ANSWERS: 73. nectar, 74. micrometer, 75. ubiquitous, 76. stamen, 77. clump, 78. sponge, 79. harden, 80. dissect, 81. spur

82. st___a against obesity *n.* a mark of shame or disgrace associated with a particular circumstance, quality, or person
83. hy_____th flower *n.* (also "jacinth") a fragrant flowering plant with clustered flowers that grow on a tall, spiky stem, typically in shades of blue, purple, or pink
84. er__e coast *v.* to gradually wear away or break down (rock, soil, or other material) through the action of wind, water, or other natural agents; to gradually weaken or undermine (something) over time

ANSWERS: 82. stigma, 83. hyacinth, 84. erode

Session 3: Fill in the Blanks

1. This process improves the strength of the metal by controlling the _____ lattice structure of the metal.
adj. on a scale that can be measured in nanometres (= one billionth of a meter); on a very small scale
2. The scientist _____ the frog to study its internal organs.
v. to cut into pieces to study the structure of something in detail
3. She had to _____ her stance on the issue to gain support from her colleagues.
v. to make something firm, solid, or resistant; to toughen or strengthen physically or emotionally; to become more rigid or less flexible
4. The scientist used a digital _____ to measure the exact thickness of the material.
n. a tool for measuring small distances or dimensions, typically accurate to within one-thousandth of a millimeter
5. The heat caused the water to _____ into steam.
v. to convert a substance into vapor or gas, often by heating or applying intense pressure; to disappear or become dispersed as if by evaporating; to destroy or eliminate completely
6. The magician's illusions always managed to _____ the audience.
v. to capture or hold someone's attention or interest completely; to captivate or fascinate
7. The tiny marine _____ has existed for more than 500 million years.
n. a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning

ANSWERS: 1. nanoscale, 2. dissected, 3. harden, 4. micrometer, 5. vaporize, 6. enthrall, 7. sponge

8. Overprotective parents often _____ their children with messages reinforcing their lack of mastery.
- v. to attack a place with bombs or gunshots continuously; to address with continuously or persistently, as if with a barrage
9. The _____ fragments were collected and sent to a laboratory for analysis.
- n. a solid object originating in outer space that reaches the Earth's surface without completely vaporizing in the atmosphere; a rock that has fallen from space
10. My allergies flare up during _____ season, making it difficult to breathe.
- n. a fine powder substance consisting of microscopic grains produced by plants that facilitate their reproductive process through the process of pollination
11. The beekeeper checked the _____ for any signs of disease.
- n. a structure or container where bees live and store their honey
12. The room was only one _____ wider than the piano, making it a tight fit.
- n. a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
13. The blades of gas turbine engines are often coated with a _____ layer to improve their durability.
- n. a lustrous, hard, silver-white element with the symbol Co that is often used in alloys, batteries, and pigments and is essential for certain biological processes in humans and other organisms
14. Bees were buzzing around the _____
- n. a structure for the reception and habitation of bees, either built by people or made by the bees themselves; a place swarming people

ANSWERS: 8. bombard, 9. meteorite, 10. pollen, 11. beehive, 12. centimeter, 13. cobalt, 14. hive

15. The chemical composition of _____ minerals varies between different geological environments.
- n.* a group of minerals that are abundant in the Earth's crust and have a wide range of chemical compositions, often used in the manufacture of ceramics and glass
16. Some orchids' _____ structure mimics certain insects' appearance, facilitating pollination.
- n.* the female reproductive organ of a flower, typically located in the center and composed of the stigma, style, and ovary, which receives pollen and facilitates fertilization
17. The hiking trail was lined with towering _____ columns.
- n.* a dark, fine-grained volcanic rock that forms from the solidification of lava
18. The beautiful purple _____ flowers bloomed every spring in the garden.
- n.* (also "jacinth") a fragrant flowering plant with clustered flowers that grow on a tall, spiky stem, typically in shades of blue, purple, or pink
19. The volcano's eruption caused a _____ river to flow down the mountainside.
- n.* molten rock that has been extruded from a volcano and solidified; a highly fluid, highly heated substance or material
20. The value of the currency _____ against major international currencies.
- v.* to fall suddenly, often uncontrollably; to topple or turn over; to decline sharply and quickly in value, quality, or performance
21. The width of a single human hair is around 100 _____.
- n.* a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms

ANSWERS: 15. feldspar, 16. pistil, 17. basalt, 18. hyacinth, 19. lava, 20. tumbled, 21. microns

22. Inspectors noticed _____ cracks in the submarine's hull.

adj. tiny; exceedingly precise and detail-oriented; of or used in microscopy

23. She wore a beautiful necklace adorned with a delicate _____ pendant.

n. a precious stone typically red in color, consisting of a group of silicate minerals; a dark red color resembling that of garnet

24. Sugar is _____ in food.

adj. being or existing everywhere at once

25. The _____ view of the galaxy is simply breathtaking.

adj. visible to the naked eye; relating to objects or phenomena that are large enough to be seen without the aid of a microscope or other magnifying tools

26. Under the microscope, the _____ structure reveals a complex architecture that helps protect plants from various environmental stressors.

n. a small outgrowth or hair-like structure that can be found on various plants, algae, and lichens, which can have various functions such as protection against predators, secretion of substances, or aiding in capturing moisture from the environment

27. The botany field is concerned with studying the structure of plant _____.

n. one of the separate, usually colored, segments of a flower that produce its shape and are often found arranged in a circle around the reproductive parts

28. The island was formed by a _____ millions of years ago.

n. a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapor, and gas are or have been erupted from the earth's crust.

ANSWERS: 22. microscopic, 23. garnet, 24. ubiquitous, 25. macroscopic, 26. trichome, 27. petals, 28. volcano

29. The geology students discovered an abundance of _____ crystals in the volcanic rock.
- n.* a mineral consisting of a silicate of magnesium, iron, and other metals, typically green in color, and found in igneous and metamorphic rocks
30. The research team _____ different substances together to form a new compound.
- v.* to join or stick together, especially when referring to the merging or combining of different things or components; (of linguistics) to form words through the addition of affixes or suffixes
31. The ongoing budget cuts have _____ the quality of education in many schools.
- v.* to gradually wear away or break down (rock, soil, or other material) through the action of wind, water, or other natural agents; to gradually weaken or undermine (something) over time
32. The mental health _____ often prevents people from seeking treatment.
- n.* a mark of shame or disgrace associated with a particular circumstance, quality, or person
33. The fire quickly _____ the entire building.
- v.* to swallow up; to surround and cover completely
34. The magician's tricks _____ the audience.
- v.* to fill with wonder, surprise, or admiration
35. I heard the _____ of his boots in the hallway.
- n.* a small group of bushes, trees, flowers, people, etc.
36. The _____ of the flowers attracted many bees to the garden.
- n.* a sweet liquid produced by flowers that attracts and provides food for bees and other insects; any sweet liquid that is enjoyed as a drink or used as a flavoring

ANSWERS: 29. olivine, 30. agglutinated, 31. eroded, 32. stigma, 33. engulfed, 34. amazed, 35. clump, 36. nectar

37. When discussing atomic radii, it's common to use the _____ unit for better relatability.
- n.* (symbolized by the letter "Å") a unit of length used to measure wavelengths of light, equal to one ten-billionth of a meter (10^{-10} meters)
38. Students sketched the _____ arrangement of the lily during their botany class.
- n.* the male reproductive organ of a flower, usually consisting of a filament and an anther, which supports the anther, which contains the pollen grains necessary for fertilization
39. The threat of losing his job was the _____ he needed to work harder.
- n.* a thing that encourages someone to do something; any sharply pointed projection; (verb) to incite or stimulate someone or something
40. The geologist found a beautiful specimen of _____ embedded in the rock formation.
- n.* a green to brown or black mineral belonging to the silicate group, typically occurring in metamorphic and igneous rocks, and often possessing a prismatic or tabular crystal structure
41. The treasure _____ of ancient artifacts was a museum's dream come true.
- n.* a valuable collection of rare or interesting things, usually on the earth
42. The young boy was an _____ wandering the streets without a home.
- n.* a poor and mischievous young child, usually living on the street or in a disadvantaged community; a small, spiny marine animal with a round body and long, pointed spines

ANSWERS: 37. angstrom, 38. stamen, 39. spur, 40. epidote, 41. trove, 42. urchin