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Vocabulary Builder Reference from...

George Zaidan: How do pain relievers work? | TED Talk

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

All Words

IMPORTANT

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Session 1: Word List

sand

n. finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action

synonym : grit, dust, powder

(1) **sand** dunes, (2) **sand** castle

The **sand** on the beach was warm and golden.

obvious

adj. easy to see, discover or understand

synonym : apparent, conspicuous, evident

(1) **obvious** reasons, (2) his conclusion was **obvious**

There are **obvious** differences between the two wine-producing regions.

norm

n. something that is regarded as usual, typical, or standard

synonym : criterion, mean, standard

(1) **norm** of action, (2) cultural **norm**

The systems we have developed has accepted as industry **norms**.

sensation

n. a feeling associated with stimulation of a sense organ or with a specific body condition; a general feeling of interest and excitement

synonym : feeling, perception, mania

(1) cause a widespread **sensation**, (2) taste **sensation**

If you apply this ointment, you may feel a mild burning **sensation**.

extreme

adj. very great in amount or degree

synonym : farthestmost, outermost, fierce

(1) **extreme** sports, (2) **extreme** weather events

Solar gravity creates **extreme** pressures and temperatures.

discomfort

n. a feeling of being uncomfortable physically or mentally or being embarrassed; a slight pain

synonym : affliction, despair, ache

(1) endure **discomfort** and pain, (2) **discomfort** in the abdomen

He felt no **discomfort** as the dentist drilled his deadened tooth.

rinse

v. to wash off soap or remaining dirt with clean water; to gargle your mouth and throat with mouthwash

synonym : wash out, flush, irrigate

(1) **rinse** out your mouth, (2) **rinse** the shampoo

Please **rinse** the soap off of those dishes well.

warn

v. to make someone aware of potential danger or difficulty, particularly one that may occur in the future

synonym : alert, caution, admonish

(1) **warn** a reckless driver, (2) **warned** me of the plan

I attempted to **warn** him, but he ignored me.

install

v. to fix furniture, a machine, or a piece of equipment into position so that it can be used; put into an office or a position

synonym : establish, inaugurate, lodge

(1) **install** a door, (2) **install** a chairperson

The new president was **installed** immediately after the

national election.

detect

v. to find or recognize something, especially something difficult to see, hear, etc.

synonym: catch, observe, notice

(1) **detect** a bad event, (2) **detect** smuggling across borders
The security camera has **detected** four intruders.

specialized

adj. possessing or relating to specific knowledge or skills that are unique to a particular field or task; designed or intended for a particular purpose or function

synonym: technical, expert, skilled

(1) **specialized** knowledge, (2) **specialized** equipment
The hospital has many **specialized** departments, including cardiology and oncology.

nervous

adj. worried and anxious about something; relating to the nerves

synonym: neural, anxious, uneasy

(1) development of the **nervous** system, (2) get **nervous**
He suffers from **nervous** breakdowns.

nociceptor

n. a sensory nerve ending that is capable of detecting harmful stimuli, such as heat, cold, pressure, or tissue damage, and transmitting this information to the brain

(1) thermal **nociceptor**, (2) **nociceptor** fiber

The **nociceptors** in the skin are activated by heat, cold, and pressure.

stretch

v. to make or be capable of making anything longer or broader without hurting or breaking

synonym: lengthen, prolong, extend

(1) **stretch** along the coast, (2) **stretch** a story

Some herds have been observed to **stretch** hundreds of kilometers.

spinal

adj. of or relating to the spine (= the long bone in the body's back)

(1) **spinal** injury, (2) brain and **spinal** cord

The surgeon carefully confirmed how to remove the tumor to avoid damaging the **spinal** nerves.

cord

n. a strong, thick, or thin thread or rope; a piece of plastic-coated wire used to transport electricity to a piece of equipment

synonym: wire, cable, string

(1) spinal **cord**, (2) electrical **cord**

Your spinal **cord** is located deep within your body.

joint

adj. shared, held, or made between two or more people;
(*noun*) the point of connection between two bones or elements of a skeleton

synonym: collaborative, cooperative, combined

(1) a **joint** venture, (2) the bone of a **joint**

After the summit meeting, the prime ministers issued a **joint** statement.

internal

adj. of or relating to the inside of something

synonym: interior, inner, domestic

(1) **internal** organs, (2) the **internal** economy

The prime minister canceled visits to other countries to resolve **internal** disputes.

organ

n. a part of the body of an animal or plant that has a particular purpose and performs a specific job

synonym: function, structure

(1) **organ** bleeding, (2) damage to internal **organs**

These infections have the potential to impact practically every **organ** system.

conduct

v. to organize and carry out a particular activity

synonym: behave, lead, carry on

(1) **conduct** a background check, (2) **conduct** research

Police will **conduct** random breath testing for drunk driving.

electrical

adj. relating to electricity

(1) an **electrical** storm, (2) degree in **electrical** engineering

Actuators convert **electrical** pulses into motion.

locate

v. to specify or determine the exact position of someone or something

synonym: discover, find, place

(1) **locate** a missing pet, (2) **locate** a tumor

The robot can accurately **locate** construction material.

brain

n. the organ inside the head that is responsible for one's movement, thought, memory, and feeling

synonym: intellect, mind, encephalon

(1) basic **brain** function, (2) permanent **brain** damage

X-rays revealed a small tumor in his **brain**.

damage

v. to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity

synonym: harm, impair, injure

(1) **damage** a relationship, (2) **damage** assessment

During the surgery, the doctor had to be extremely cautious not to **damage** a blood vessel.

gentle

adj. having or showing a kindly or tender nature; soft and mild

synonym: mild, delicate, soft

(1) in a **gentle** voice, (2) **gentle** downward slope

Her **gentle** manner relaxed everyone there.

tip

n. the top or extreme point of something slender or tapering, usually a mountain or hill; a piece of advice about something practical; a small amount of money

given for services

synonym : edge, advice, gratuity

(1) the **tip** of a paintbrush, (2) give the waiter a **tip** .

I will introduce some **tips** on learning English in this class.

needle

n. a thin, pointed object typically used for sewing or medical purposes; a metal or plastic instrument used for administering injections or drawing blood

synonym : thorn, spike, pin

(1) **needle** prick, (2) sewing **needle**

The acupuncturist inserted **needles** into specific points on my body to alleviate my pain.

metal

n. a solid material that is typically hard, shiny, malleable, fusible, and ductile, with good electrical and thermal conductivity, and often used as a structural material, a conductor of heat or electricity, or for decorative purposes

synonym : alloy, metalloid

(1) **metal** fabrication, (2) precious **metal**

The construction worker used a **metal** saw to cut through the stubborn sheet metal.

threshold

n. the floor or ground that forms the bottom of a doorway and offers support when passing through a doorway; the smallest detectable sensation

synonym : anteroom, brink, verge

(1) the **threshold** between rooms, (2) high pain **threshold**

She's on the **threshold** of adulthood.

chemical

adj. relating to or connected with chemistry;

synonym : chemic, synthetic

(1) toxic **chemicals**, (2) a **chemical** compound

The firm has grown into a large **chemical** manufacturing.

tune

n. a musical composition or set of musical notes that are played or sung; (verb) to adjust or set something to a

specific condition or standard

synonym: melody, harmony, (verb) adjust

(1) the **tune** of a song, (2) **tune** a piano

The band played a beautiful **tune** on their instruments.

dam

n. a wall constructed over a river to block the flow of water, mainly used to generate energy

synonym: barricade, barrier, embankment

(1) **dam-building** program, (2) **dam** collapsing

The break in the **dam** threatened the valley.

crazy

adj. stupid or not sensible; very angry

synonym: insane, absurd, bizarre

(1) **crazy** about cars and racing, (2) a **crazy** scheme

The rain and thunder are **crazy** today.

over-the-counter

adj. (often abbreviated as "OTC") relating to products or medications that are available for purchase without a prescription from a licensed healthcare professional; (noun, of finance) a method of trading that doesn't take place on a formal exchange

synonym: OTC, off-the-shelf

(1) **over-the-counter** drugs, (2) **over-the-counter** trading

I prefer to buy **over-the-counter** medication instead of getting a prescription.

painkiller

n. medicine used to relieve physical pain

synonym: anesthetic, anodyne, analgesic

(1) a strong **painkiller**, (2) take a **painkiller** beforehand

Over-the-counter **painkillers** are less effective for patients who have taken many in the past.

aspirin

n. a drug used to reduce pain, fever, and inflammation

(1) prescribe **aspirin**, (2) **aspirin** sensitivity

She took a tablet of **aspirin** to soothe the fever.

ibuprofen

n. a drug used to reduce pain, fever, and inflammation

(1) **ibuprofen** intoxication, (2) **ibuprofen** tablet

Daily use of **ibuprofen** can irritate the stomach.

prostaglandin

n. a hormone-like substance produced in the body that regulates various physiological functions, including inflammation, blood pressure, and the contraction or relaxation of smooth muscles

synonym: hormone, eicosanoid, lipid mediator

(1) **prostaglandin** injection, (2) **prostaglandin** analogs

Prostaglandin inhibitors like aspirin and ibuprofen can help reduce inflammation and relieve pain.

release

v. to set free or allow to escape from confinement

synonym: free, let go, discharge

(1) **release** a prisoner, (2) **release** CO₂ into the air

The animal rights group worked to **release** the dolphins back into the wild.

arachidonate

n. the salt or ester form of arachidonic acid (= a polyunsaturated omega-6 fatty acid which is an essential fatty acid in many mammals)

synonym: arachidonic salt, eicosatetraenoate

(1) **arachidonate** metabolism, (2) cellular **arachidonate**

Dietary intake can influence the body's **arachidonate** cascade, potentially impacting inflammation.

acid

n. sour; water-soluble chemicals with a sour flavor; any of a variety of generally liquid compounds capable of reacting with and occasionally dissolving other materials

synonym: SOUR

(1) an **acid** reaction, (2) good source of essential amino **acids**

During pregnancy, the stomach generates less **acid** than usual.

enzyme

n. a substance produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction

synonym : catalyst, activator, accelerator

(1) **enzyme** reaction, (2) lack of digestive **enzymes**

A deficiency in the **enzyme** can lead to a medical condition.

convert

v. to have a talk with someone; (adjective) reversed in order, relation, or action

synonym : alter, remake, transform

(1) **convert** fat into energy, (2) **convert** base 10 to base 16

I want to **convert** my sadness into strength.

bunch

n. a grouping of several similar things which are growing or fastened together

synonym : group, assemblage, bundle

(1) a **bunch** of trees, (2) a **bunch** of schoolgirls

One bad apple spoils the whole **bunch**.

temperature

n. the degree of hotness or coldness of a thing or place

synonym : climate, warmth, degree

(1) extreme **temperatures**, (2) the atmospheric

temperature

Cities around the world set records for highest **temperatures** this summer.

inflammation

n. a physical condition in which a part of the body becomes red, painful, hot, and often swollen, especially as a reaction to infection or injury

synonym : rash, hives, irritation

(1) reduce **inflammation** and pain, (2) **inflammation** of the lungs

The medicine soothes the pain of chronic **inflammation**.

reaction

n. a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others

synonym : response, reply, answer

(1) chemical **reaction**, (2) trigger a **reaction**

There was a chemical **reaction** of the lime with the groundwater.

cozy

adj. comfortable and warm; giving a feeling of comfort, warmth, and relaxation

synonym: comfortable, warm, snug

(1) have **cozy** relations, (2) **cozy** sound of rain

The fireplace made the room feel **cozy** and inviting.

spare

adj. additional to what is necessary for ordinary use; (verb) to give time, money, space, etc. to someone

synonym: extra, excess, (verb) afford

(1) **spare** parts, (2) **spare** cost

I made plans to spend my **spare** time beneficially.

spine

n. the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column

synonym: backbone, vertebra, column

(1) the **spine** of a book, (2) a cervical **spine** injury

She has a minor curved **spine** due to desk work for many years.

porcupine

n. a large, slow-moving, spiny mammal that is covered in sharp quills and is native to Asia, Africa, and certain parts of the Americas

synonym: hedgehog, echidna, spiny mammal

(1) **porcupine** movement, (2) **porcupine** habitat

The quills on a **porcupine's** back are used for defense.

permanent

adj. lasting for a long time without essential change

synonym: lasting, ceaseless, endless

(1) literature of **permanent** value, (2) **permanent** life insurance

She is searching for a **permanent** residence.

activate

v. make something start working, more active or dynamic
synonym: mobilize, stimulate, initiate

(1) **activate** a receptor, (2) **activate** a motor

You must **activate** the software with a 16-digit key before you can use it.

spit

v. to eject saliva or other liquid from the mouth
synonym: expectorate, saliva, spew

(1) **spit** a bullet, (2) **spit** a mouthful of saliva

She tried to **spit** out the gum that she had been chewing.

bind

v. to tie or fasten someone or something tightly with rope, string, etc. so that they cannot move or are held together strongly

synonym: tie, stick to, adhere

(1) **bind** the man's hands, (2) **bind** old letters into a bundle

The company's rules **bind** the employee's working hours.

chemistry

n. the branch of the natural sciences dealing with the composition of substances and their properties and reactions

(1) professor of **chemistry**, (2) the **chemistry** of soil

He is familiar with **chemistry** and biology.

bloodstream

n. the blood flowing through the body

(1) **bloodstream** in an artery, (2) **bloodstream** to the brain

Cancer cells are often carried throughout the body by the **bloodstream**.

dimension

n. a measurable extent of a particular kind, such as width, height, or length

synonym: extent, measurement, size

(1) new **dimension**, (2) the crosswise **dimension**

Overall **dimensions** are approximately 400x200mm.

neuropath

n. a person who suffers from a neurological disorder or disease, or the disorder itself

(1) the treatment plan of the **neuropath**, (2) **neuropath's** disorder

The **neuropath's** symptoms included weakness, numbness, and difficulty with coordination.

stimulus

n. something that causes growth or arouses action

synonym: incitement, inspiration, motivation

(1) a response to a **stimulus**, (2) economic **stimulus**

This book provides children with ideas and a **stimulus** for outside recreation.

discovery

n. the act or process of finding information, a place, or an object, or learning about something that was previously not known

synonym: finding, uncovering, detection

(1) a scientific **discovery**, (2) the great **discovery** of the century

Her research team made an important **discovery**.

mood

n. the way you feel at a particular time; an angry or impatient state of mind

synonym: mindset, disposition, temper

(1) the **mood** in a room, (2) in an ugly **mood**

His gaffe spoiled the **mood** of the dinner party.

Session 2: Spelling

- | | |
|----------------------------------|--|
| 1. literature of pe_____nt value | <i>adj.</i> lasting for a long time without essential change |
| 2. prescribe as_____n | <i>n.</i> a drug used to reduce pain, fever, and inflammation |
| 3. have c__y relations | <i>adj.</i> comfortable and warm; giving a feeling of comfort, warmth, and relaxation |
| 4. da___e assessment | <i>v.</i> to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity |
| 5. w__n a reckless driver | <i>v.</i> to make someone aware of potential danger or difficulty, particularly one that may occur in the future |
| 6. ib_____en intoxication | <i>n.</i> a drug used to reduce pain, fever, and inflammation |
| 7. c__y sound of rain | <i>adj.</i> comfortable and warm; giving a feeling of comfort, warmth, and relaxation |
| 8. sewing ne___e | <i>n.</i> a thin, pointed object typically used for sewing or medical purposes; a metal or plastic instrument used for administering injections or drawing blood |
| 9. blo_____am in an artery | <i>n.</i> the blood flowing through the body |

ANSWERS: 1. permanent, 2. aspirin, 3. cozy, 4. damage, 5. warn, 6. ibuprofen, 7. cozy, 8. needle, 9. bloodstream

10. w__ned me of the plan *v.* to make someone aware of potential danger or difficulty, particularly one that may occur in the future
11. d_m-building program *n.* a wall constructed over a river to block the flow of water, mainly used to generate energy
12. de__t smuggling across borders *v.* to find or recognize something, especially something difficult to see, hear, etc.
13. chemical re____on *n.* a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others
14. the great di_____ry of the century *n.* the act or process of finding information, a place, or an object, or learning about something that was previously not known
15. spinal c__d *n.* a strong, thick, or thin thread or rope; a piece of plastic-coated wire used to transport electricity to a piece of equipment
16. in a ge___e voice *adj.* having or showing a kindly or tender nature; soft and mild
17. ove_____ter drugs *adj.* (often abbreviated as "OTC") relating to products or medications that are available for purchase without a prescription from a licensed healthcare professional; (noun, of finance) a method of trading that doesn't take place on a formal exchange

ANSWERS: 10. warn, 11. dam, 12. detect, 13. reaction, 14. discovery, 15. cord, 16. gentle, 17. over-the-counter

18. n__m of action *n.* something that is regarded as usual, typical, or standard
19. co____t a background check *v.* to organize and carry out a particular activity
20. ri__e out your mouth *v.* to wash off soap or remaining dirt with clean water; to gargle your mouth and throat with mouthwash
21. give the waiter a t_p. *n.* the top or extreme point of something slender or tapering, usually a mountain or hill; a piece of advice about something practical; a small amount of money given for services
22. new di_____on *n.* a measurable extent of a particular kind, such as width, height, or length
23. st_____h along the coast *v.* to make or be capable of making anything longer or broader without hurting or breaking
24. t__e a piano *n.* a musical composition or set of musical notes that are played or sung; (verb) to adjust or set something to a specific condition or standard
25. cr__y about cars and racing *adj.* stupid or not sensible; very angry
26. an a__d reaction *n.* sour; water-soluble chemicals with a sour flavor; any of a variety of generally liquid compounds capable of reacting with and occasionally dissolving other materials
27. high pain th_____ld *n.* the floor or ground that forms the bottom of a doorway and offers support when passing through a doorway; the smallest detectable sensation

ANSWERS: 18. norm, 19. conduct, 20. rinse, 21. tip, 22. dimension, 23. stretch, 24. tune, 25. crazy, 26. acid, 27. threshold

28. s__t a bullet *v.* to eject saliva or other liquid from the mouth
29. the bone of a jo__t *adj.* shared, held, or made between two or more people; (noun) the point of connection between two bones or elements of a skeleton
30. sp__e parts *adj.* additional to what is necessary for ordinary use; (verb) to give time, money, space, etc. to someone
31. trigger a re_____on *n.* a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others
32. ne___e prick *n.* a thin, pointed object typically used for sewing or medical purposes; a metal or plastic instrument used for administering injections or drawing blood
33. the th_____ld between rooms *n.* the floor or ground that forms the bottom of a doorway and offers support when passing through a doorway; the smallest detectable sensation
34. ove_____ter trading *adj.* (often abbreviated as "OTC") relating to products or medications that are available for purchase without a prescription from a licensed healthcare professional; (noun, of finance) a method of trading that doesn't take place on a formal exchange
35. de__t a bad event *v.* to find or recognize something, especially something difficult to see, hear, etc.

ANSWERS: 28. spit, 29. joint, 30. spare, 31. reaction, 32. needle, 33. threshold, 34. over-the-counter, 35. detect

36. ex_____e sports *adj.* very great in amount or degree
37. spe_____ed equipment *adj.* possessing or relating to specific knowledge or skills that are unique to a particular field or task; designed or intended for a particular purpose or function
38. thermal noc_____or *n.* a sensory nerve ending that is capable of detecting harmful stimuli, such as heat, cold, pressure, or tissue damage, and transmitting this information to the brain
39. the m__d in a room *n.* the way you feel at a particular time; an angry or impatient state of mind
40. pro_____din injection *n.* a hormone-like substance produced in the body that regulates various physiological functions, including inflammation, blood pressure, and the contraction or relaxation of smooth muscles
41. a response to a st_____us *n.* something that causes growth or arouses action
42. ac_____te a receptor *v.* make something start working, more active or dynamic
43. in an ugly m__d *n.* the way you feel at a particular time; an angry or impatient state of mind
44. in_____l a door *v.* to fix furniture, a machine, or a piece of equipment into position so that it can be used; put into an office or a position
45. en___e reaction *n.* a substance produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction

ANSWERS: 36. extreme, 37. specialized, 38. nociceptor, 39. mood, 40. prostaglandin, 41. stimulus, 42. activate, 43. mood, 44. install, 45. enzyme

46. co____t fat into energy *v.* to have a talk with someone; (adjective) reversed in order, relation, or action
47. permanent br__n damage *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
48. ib_____en tablet *n.* a drug used to reduce pain, fever, and inflammation
49. ri__e the shampoo *v.* to wash off soap or remaining dirt with clean water; to gargle your mouth and throat with mouthwash
50. professor of ch_____ry *n.* the branch of the natural sciences dealing with the composition of substances and their properties and reactions
51. electrical c__d *n.* a strong, thick, or thin thread or rope; a piece of plastic-coated wire used to transport electricity to a piece of equipment
52. b__d the man's hands *v.* to tie or fasten someone or something tightly with rope, string, etc. so that they cannot move or are held together strongly
53. s__t a mouthful of saliva *v.* to eject saliva or other liquid from the mouth
54. the ch_____ry of soil *n.* the branch of the natural sciences dealing with the composition of substances and their properties and reactions
55. st_____h a story *v.* to make or be capable of making anything longer or broader without hurting or breaking

ANSWERS: 46. convert, 47. brain, 48. ibuprofen, 49. rinse, 50. chemistry, 51. cord, 52. bind, 53. spit, 54. chemistry, 55. stretch

56. po_____ne movement *n.* a large, slow-moving, spiny mammal that is covered in sharp quills and is native to Asia, Africa, and certain parts of the Americas
57. lo___e a missing pet *v.* to specify or determine the exact position of someone or something
58. brain and sp___l cord *adj.* of or relating to the spine (= the long bone in the body's back)
59. b__d old letters into a bundle *v.* to tie or fasten someone or something tightly with rope, string, etc. so that they cannot move or are held together strongly
60. cultural n__m *n.* something that is regarded as usual, typical, or standard
61. re_____e a prisoner *v.* to set free or allow to escape from confinement
62. his conclusion was ob_____s *adj.* easy to see, discover or understand
63. in_____l a chairperson *v.* to fix furniture, a machine, or a piece of equipment into position so that it can be used; put into an office or a position
64. ex_____e weather events *adj.* very great in amount or degree
65. the crosswise di_____on *n.* a measurable extent of a particular kind, such as width, height, or length
66. extreme tem_____res *n.* the degree of hotness or coldness of a thing or place
67. lo___e a tumor *v.* to specify or determine the exact position of someone or something
68. the in_____al economy *adj.* of or relating to the inside of something

ANSWERS: 56. porcupine, 57. locate, 58. spinal, 59. bind, 60. norm, 61. release, 62. obvious, 63. install, 64. extreme, 65. dimension, 66. temperature, 67. locate, 68. internal

69. toxic ch____als *adj.* relating to or connected with chemistry;
70. a ch____al compound *adj.* relating to or connected with chemistry;
71. basic br__n function *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
72. ob____s reasons *adj.* easy to see, discover or understand
73. cellular ara____ate *n.* the salt or ester form of arachidonic acid (= a polyunsaturated omega-6 fatty acid which is an essential fatty acid in many mammals)
74. co____t base 10 to base 16 *v.* to have a talk with someone; (adjective) reversed in order, relation, or action
75. s__d dunes *n.* finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action
76. the sp__e of a book *n.* the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column
77. precious me__l *n.* a solid material that is typically hard, shiny, malleable, fusible, and ductile, with good electrical and thermal conductivity, and often used as a structural material, a conductor of heat or electricity, or for decorative purposes

ANSWERS: 69. chemical, 70. chemical, 71. brain, 72. obvious, 73. arachidonate, 74. convert, 75. sand, 76. spine, 77. metal

78. s__d castle *n.* finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action
79. a scientific di_____ry *n.* the act or process of finding information, a place, or an object, or learning about something that was previously not known
80. good source of essential amino a__ds *n.* sour; water-soluble chemicals with a sour flavor; any of a variety of generally liquid compounds capable of reacting with and occasionally dissolving other materials
81. taste se_____on *n.* a feeling associated with stimulation of a sense organ or with a specific body condition; a general feeling of interest and excitement
82. the atmospheric tem_____re *n.* the degree of hotness or coldness of a thing or place
83. me__l fabrication *n.* a solid material that is typically hard, shiny, malleable, fusible, and ductile, with good electrical and thermal conductivity, and often used as a structural material, a conductor of heat or electricity, or for decorative purposes
84. development of the ne_____s system *adj.* worried and anxious about something; relating to the nerves
85. a bu__h of schoolgirls *n.* a grouping of several similar things which are growing or fastened together

ANSWERS: 78. sand, 79. discovery, 80. acid, 81. sensation, 82. temperature, 83. metal, 84. nervous, 85. bunch

86. a strong pai_____er *n.* medicine used to relieve physical pain
87. a cervical sp__e injury *n.* the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column
88. get ne_____s *adj.* worried and anxious about something; relating to the nerves
89. sp__e cost *adj.* additional to what is necessary for ordinary use; (verb) to give time, money, space, etc. to someone
90. da___e a relationship *v.* to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity
91. take a pai_____er beforehand *n.* medicine used to relieve physical pain
92. ne_____th's disorder *n.* a person who suffers from a neurological disorder or disease, or the disorder itself
93. endure dis_____rt and pain *n.* a feeling of being uncomfortable physically or mentally or being embarrassed; a slight pain
94. ara_____ate metabolism *n.* the salt or ester form of arachidonic acid (= a polyunsaturated omega-6 fatty acid which is an essential fatty acid in many mammals)
95. noc_____or fiber *n.* a sensory nerve ending that is capable of detecting harmful stimuli, such as heat, cold, pressure, or tissue damage, and transmitting this information to the brain

ANSWERS: 86. painkiller, 87. spine, 88. nervous, 89. spare, 90. damage, 91. painkiller, 92. neuropath, 93. discomfort, 94. arachidonate, 95. nociceptor

96. spe_____ed knowledge *adj.* possessing or relating to specific knowledge or skills that are unique to a particular field or task; designed or intended for a particular purpose or function
97. cause a widespread se_____on *n.* a feeling associated with stimulation of a sense organ or with a specific body condition; a general feeling of interest and excitement
98. an ele_____al storm *adj.* relating to electricity
99. reduce inf_____ion and pain *n.* a physical condition in which a part of the body becomes red, painful, hot, and often swollen, especially as a reaction to infection or injury
100. blo_____am to the brain *n.* the blood flowing through the body
101. economic st_____us *n.* something that causes growth or arouses action
102. ac_____te a motor *v.* make something start working, more active or dynamic
103. as_____n sensitivity *n.* a drug used to reduce pain, fever, and inflammation
104. inf_____ion of the lungs *n.* a physical condition in which a part of the body becomes red, painful, hot, and often swollen, especially as a reaction to infection or injury
105. sp____l injury *adj.* of or relating to the spine (= the long bone in the body's back)
106. damage to internal or____ns *n.* a part of the body of an animal or plant that has a particular purpose and performs a specific job

ANSWERS: 96. specialized, 97. sensation, 98. electrical, 99. inflammation, 100. bloodstream, 101. stimulus, 102. activate, 103. aspirin, 104. inflammation, 105. spinal, 106. organ

107. lack of digestive en___es *n.* a substance produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction
108. d_m collapsing *n.* a wall constructed over a river to block the flow of water, mainly used to generate energy
109. po_____ne habitat *n.* a large, slow-moving, spiny mammal that is covered in sharp quills and is native to Asia, Africa, and certain parts of the Americas
110. re_____e CO2 into the air *v.* to set free or allow to escape from confinement
111. a cr__y scheme *adj.* stupid or not sensible; very angry
112. co_____t research *v.* to organize and carry out a particular activity
113. in_____al organs *adj.* of or relating to the inside of something
114. a bu__h of trees *n.* a grouping of several similar things which are growing or fastened together
115. or__n bleeding *n.* a part of the body of an animal or plant that has a particular purpose and performs a specific job
116. the treatment plan of the ne_____th *n.* a person who suffers from a neurological disorder or disease, or the disorder itself
117. ge___e downward slope *adj.* having or showing a kindly or tender nature; soft and mild
118. the t_p of a paintbrush *n.* the top or extreme point of something slender or tapering, usually a mountain or hill; a piece of advice about something practical; a small amount of money given for services

ANSWERS: 107. enzyme, 108. dam, 109. porcupine, 110. release, 111. crazy, 112. conduct, 113. internal, 114. bunch, 115. organ, 116. neuropath, 117. gentle, 118. tip

119. a jo__t venture *adj.* shared, held, or made between two or more people; (noun) the point of connection between two bones or elements of a skeleton
120. pe_____nt life insurance *adj.* lasting for a long time without essential change
121. pro_____din analogs *n.* a hormone-like substance produced in the body that regulates various physiological functions, including inflammation, blood pressure, and the contraction or relaxation of smooth muscles
122. degree in ele_____al engineering *adj.* relating to electricity
123. dis_____rt in the abdomen *n.* a feeling of being uncomfortable physically or mentally or being embarrassed; a slight pain
124. the t__e of a song *n.* a musical composition or set of musical notes that are played or sung; (verb) to adjust or set something to a specific condition or standard

ANSWERS: 119. joint, 120. permanent, 121. prostaglandin, 122. electrical, 123. discomfort, 124. tune

Session 3: Fill in the Blanks

1. Some herds have been observed to _____ hundreds of kilometers.
v. to make or be capable of making anything longer or broader without hurting or breaking
2. Daily use of _____ can irritate the stomach.
n. a drug used to reduce pain, fever, and inflammation
3. The break in the ____ threatened the valley.
n. a wall constructed over a river to block the flow of water, mainly used to generate energy
4. Cancer cells are often carried throughout the body by the _____.
n. the blood flowing through the body
5. Overall _____ are approximately 400x200mm.
n. a measurable extent of a particular kind, such as width, height, or length
6. The quills on a _____ back are used for defense.
n. a large, slow-moving, spiny mammal that is covered in sharp quills and is native to Asia, Africa, and certain parts of the Americas
7. If you apply this ointment, you may feel a mild burning _____.
n. a feeling associated with stimulation of a sense organ or with a specific body condition; a general feeling of interest and excitement
8. The acupuncturist inserted _____ into specific points on my body to alleviate my pain.
n. a thin, pointed object typically used for sewing or medical purposes; a metal or plastic instrument used for administering injections or drawing blood

ANSWERS: 1. stretch, 2. ibuprofen, 3. dam, 4. bloodstream, 5. dimensions, 6. porcupine's, 7. sensation, 8. needles

9. She tried to _____ out the gum that she had been chewing.
v. to eject saliva or other liquid from the mouth
10. Cities around the world set records for highest _____ this summer.
n. the degree of hotness or coldness of a thing or place
11. I want to _____ my sadness into strength.
v. to have a talk with someone; (adjective) reversed in order, relation, or action
12. She took a tablet of _____ to soothe the fever.
n. a drug used to reduce pain, fever, and inflammation
13. The robot can accurately _____ construction material.
v. to specify or determine the exact position of someone or something
14. I prefer to buy _____ medication instead of getting a prescription.
adj. (often abbreviated as "OTC") relating to products or medications that are available for purchase without a prescription from a licensed healthcare professional; (noun, of finance) a method of trading that doesn't take place on a formal exchange
15. The band played a beautiful _____ on their instruments.
n. a musical composition or set of musical notes that are played or sung; (verb) to adjust or set something to a specific condition or standard
16. The medicine soothes the pain of chronic _____.
n. a physical condition in which a part of the body becomes red, painful, hot, and often swollen, especially as a reaction to infection or injury

ANSWERS: 9. spit, 10. temperatures, 11. convert, 12. aspirin, 13. locate, 14. over-the-counter, 15. tune, 16. inflammation

17. The security camera has _____ four intruders.

v. to find or recognize something, especially something difficult to see, hear, etc.

18. After the summit meeting, the prime ministers issued a _____ statement.

adj. shared, held, or made between two or more people; (noun) the point of connection between two bones or elements of a skeleton

19. The rain and thunder are _____ today.

adj. stupid or not sensible; very angry

20. Her research team made an important _____.

n. the act or process of finding information, a place, or an object, or learning about something that was previously not known

21. He felt no _____ as the dentist drilled his deadened tooth.

n. a feeling of being uncomfortable physically or mentally or being embarrassed; a slight pain

22. She's on the _____ of adulthood.

n. the floor or ground that forms the bottom of a doorway and offers support when passing through a doorway; the smallest detectable sensation

23. The prime minister canceled visits to other countries to resolve _____ disputes.

adj. of or relating to the inside of something

24. The fireplace made the room feel _____ and inviting.

adj. comfortable and warm; giving a feeling of comfort, warmth, and relaxation

ANSWERS: 17. detected, 18. joint, 19. crazy, 20. discovery, 21. discomfort, 22. threshold, 23. internal, 24. cozy

25. During pregnancy, the stomach generates less _____ than usual.
n. sour; water-soluble chemicals with a sour flavor; any of a variety of generally liquid compounds capable of reacting with and occasionally dissolving other materials
26. The _____ symptoms included weakness, numbness, and difficulty with coordination.
n. a person who suffers from a neurological disorder or disease, or the disorder itself
27. There are _____ differences between the two wine-producing regions.
adj. easy to see, discover or understand
28. She is searching for a _____ residence.
adj. lasting for a long time without essential change
29. He suffers from _____ breakdowns.
adj. worried and anxious about something; relating to the nerves
30. Solar gravity creates _____ pressures and temperatures.
adj. very great in amount or degree
31. The new president was _____ immediately after the national election.
v. to fix furniture, a machine, or a piece of equipment into position so that it can be used; put into an office or a position
32. Police will _____ random breath testing for drunk driving.
v. to organize and carry out a particular activity

ANSWERS: 25. acid, 26. neuropath's, 27. obvious, 28. permanent, 29. nervous, 30. extreme, 31. installed, 32. conduct

33. The animal rights group worked to _____ the dolphins back into the wild.
v. to set free or allow to escape from confinement
34. The company's rules _____ the employee's working hours.
v. to tie or fasten someone or something tightly with rope, string, etc. so that they cannot move or are held together strongly
35. The hospital has many _____ departments, including cardiology and oncology.
adj. possessing or relating to specific knowledge or skills that are unique to a particular field or task; designed or intended for a particular purpose or function
36. His gaffe spoiled the _____ of the dinner party.
n. the way you feel at a particular time; an angry or impatient state of mind
37. He is familiar with _____ and biology.
n. the branch of the natural sciences dealing with the composition of substances and their properties and reactions
38. Actuators convert _____ pulses into motion.
adj. relating to electricity
39. This book provides children with ideas and a _____ for outside recreation.
n. something that causes growth or arouses action
40. Your spinal _____ is located deep within your body.
n. a strong, thick, or thin thread or rope; a piece of plastic-coated wire used to transport electricity to a piece of equipment

ANSWERS: 33. release, 34. bind, 35. specialized, 36. mood, 37. chemistry, 38. electrical, 39. stimulus, 40. cord

41. One bad apple spoils the whole _____.
- n.* a grouping of several similar things which are growing or fastened together
42. Dietary intake can influence the body's _____ cascade, potentially impacting inflammation.
- n.* the salt or ester form of arachidonic acid (= a polyunsaturated omega-6 fatty acid which is an essential fatty acid in many mammals)
43. She has a minor curved _____ due to desk work for many years.
- n.* the series of bones running down the center of the back that protect the spinal cord and support the body; the backbone or vertebral column
44. I attempted to _____ him, but he ignored me.
- v.* to make someone aware of potential danger or difficulty, particularly one that may occur in the future
45. _____ inhibitors like aspirin and ibuprofen can help reduce inflammation and relieve pain.
- n.* a hormone-like substance produced in the body that regulates various physiological functions, including inflammation, blood pressure, and the contraction or relaxation of smooth muscles
46. A deficiency in the _____ can lead to a medical condition.
- n.* a substance produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction
47. During the surgery, the doctor had to be extremely cautious not to _____ a blood vessel.
- v.* to harm or cause injury to something or someone, often resulting in decreased value or functionality; to impair or negatively affect something, such as a reputation or relationship; (noun) harm or injury that is caused to a person, thing, or entity

ANSWERS: 41. bunch, 42. arachidonate, 43. spine, 44. warn, 45. Prostaglandin, 46. enzyme, 47. damage

48. I made plans to spend my _____ time beneficially.

adj. additional to what is necessary for ordinary use; (verb) to give time, money, space, etc. to someone

49. Over-the-counter _____ are less effective for patients who have taken many in the past.

n. medicine used to relieve physical pain

50. The _____ on the beach was warm and golden.

n. finely granulated particles of rock or mineral material typically found along beaches, deserts, or riverbeds; used in construction, landscaping, and other applications requiring drainage or abrasive action

51. You must _____ the software with a 16-digit key before you can use it.

v. make something start working, more active or dynamic

52. There was a chemical _____ of the lime with the groundwater.

n. a response that reveals a person's feelings or attitude; (in chemistry) a process in which one or more substances are changed into others

53. The firm has grown into a large _____ manufacturing.

adj. relating to or connected with chemistry;

54. The systems we have developed has accepted as industry _____.

n. something that is regarded as usual, typical, or standard

55. Her _____ manner relaxed everyone there.

adj. having or showing a kindly or tender nature; soft and mild

ANSWERS: 48. spare, 49. painkillers, 50. sand, 51. activate, 52. reaction, 53. chemical, 54. norms, 55. gentle

56. The _____ in the skin are activated by heat, cold, and pressure.
- n.* a sensory nerve ending that is capable of detecting harmful stimuli, such as heat, cold, pressure, or tissue damage, and transmitting this information to the brain
57. These infections have the potential to impact practically every _____ system.
- n.* a part of the body of an animal or plant that has a particular purpose and performs a specific job
58. The surgeon carefully confirmed how to remove the tumor to avoid damaging the _____ nerves.
- adj.* of or relating to the spine (= the long bone in the body's back)
59. The construction worker used a _____ saw to cut through the stubborn sheet metal.
- n.* a solid material that is typically hard, shiny, malleable, fusible, and ductile, with good electrical and thermal conductivity, and often used as a structural material, a conductor of heat or electricity, or for decorative purposes
60. Please _____ the soap off of those dishes well.
- v.* to wash off soap or remaining dirt with clean water; to gargle your mouth and throat with mouthwash
61. X-rays revealed a small tumor in his _____.
- n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
62. I will introduce some _____ on learning English in this class.
- n.* the top or extreme point of something slender or tapering, usually a mountain or hill; a piece of advice about something practical; a small amount of money given for services

ANSWERS: 56. nociceptors, 57. organ, 58. spinal, 59. metal, 60. rinse, 61. brain, 62. tips

ANSWERS: