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Vocabulary Builder Reference from...

Craig Costello: In the war for information, will quantum computers defeat cryptographers? | TED Talk

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

Advanced Words Only

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Session 1: Word List

cryptography

n. the study of the techniques and methods used for secure communication and information processing, particularly using codes and ciphers

synonym: coding, steganography, encryption

(1) asymmetric **cryptography**, (2) digital **cryptography**

The software engineers developed a new **cryptography** algorithm to protect users' data.

scramble

v. to move or climb quickly and awkwardly, often using your hands to help you

synonym: jumble, disarrange

(1) **scramble** my mind, (2) **scramble** for support

Local business owners **scrambled** to find skilled workers.

creditor

n. a person, company, etc. to whom a debtor owes money

(1) the **creditor's** claims, (2) bankrupt **creditor**

I asked the lawyer to initiate **creditor** negotiations for voluntary liquidation.

saucy

adj. behavior or language that is bold, cheeky, or irreverent; having a spicy or piquant flavor or aroma

synonym: flirtatious, impertinent, bold

(1) **saucy** jokes, (2) a **saucy** dress

The **saucy** remark made by the comedian caused a stir in the audience.

selfie

n. a photograph that one has taken of oneself, typically one taken with a smartphone or webcam to share on social media

synonym: self-portrait, self-photo, self-snap

(1) **selfie** stick, (2) pose for a **selfie**

She took a **selfie** in front of the famous tower and shared it on the app.

smartphone

n. a mobile phone that functions as a computer and connects to the Internet

(1) **smartphone** app developer, (2) **smartphone** addict

Internet traffic volumes have increased significantly with the advent of **smartphones**.

encrypt

v. to convert information or data into a code, thereby making it unreadable without a key or password; to conceal or obscure information in a way that makes it inaccessible to unauthorized persons

synonym: encode, cipher, scramble

(1) **encrypt** data, (2) **encrypt** message

To protect their sensitive information, many businesses **encrypt** their files.

unbreakable

adj. not able to be broken or damaged

synonym: indestructible, durable, sturdy

(1) **unbreakable** bond, (2) **unbreakable** commitment

This titanium bike frame is advertised as **unbreakable**.

decipher

v. to read or understand something that is written in code or in a difficult or obscure way

synonym: interpret, decode, translate

(1) **decipher** code, (2) **decipher** message

He spent hours trying to **decipher** the ancient text.

decrypt

- v. to convert encoded or scrambled information or messages into a form that is intelligible or understandable; to reveal information that is hidden or obscured, such as data that has been encrypted for security purposes

synonym : decode, decipher, break

(1) **decrypt** a file with a private key, (2) **decrypt** data

I need to **decrypt** this important message before it falls into the wrong hands.

assassinate

- v. to kill someone, usually a prominent or important figure, through a surprise attack or deliberate act of violence

synonym : murder, kill, eliminate

(1) **assassinate** a leader, (2) plot to **assassinate**

The dictator's regime was known to **assassinate** political opponents who opposed his views.

chop

- v. to cut something into pieces with a sharp tool, such as a knife

synonym : cut, hack, slice

(1) **chop** wood, (2) **chop** a meet with a knife

The cook **chopped** the vegetables for the soup.

enigma

- n. a puzzling or mysterious person, place, or thing; something that is difficult or impossible to understand or explain; a riddle or mysterious puzzle that requires a solution

synonym : mystery, puzzle, riddle

(1) mysterious **enigma**, (2) artistic **enigma**

The ancient text remains an **enigma**, challenging scholars to unravel its meaning.

germ

- n. a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one

synonym :

bacterium, microbe, pathogen

(1) antibiotic-resistant **germ**, (2) a **germ-free** environment
The **germ** of his idea came from watching birds flying in flocks.

beforehand

adv. ahead of time; in advance

synonym: in advance, preceding, earlier

(1) take a seat **beforehand**, (2) three months **beforehand**
She packed her sunscreen **beforehand** to remember it on the beach trip.

supercomputer

n. a computer with a high level of computing power and speed, typically used for scientific or engineering computations that require immense amounts of data processing

synonym: high-performance computer, mainframe, giant computer

(1) **supercomputer** performance, (2) **supercomputer** technology

China has developed one of the world's fastest **supercomputers** for its space program.

physicist

n. a scientist who specializes in the field of physics

(1) talented **physicist**, (2) theoretical **physicist**

Einstein was an outstanding and famous **physicist** of the 20th century.

rev

n. a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute

synonym: revolution, RPM, speed

(1) low- **rev** engine, (2) **rev** up the crowd

He stepped on the gas pedal, and the engine released a loud **rev**.

clockwise

adv. in a circular direction that follows the course of a clock's hands or in a direction that is considered to be forward or positive

synonym : rightward, deasil

(1) rotate **clockwise**, (2) move **clockwise**

We need to turn the knob **clockwise** to lock the door.

counterclockwise

adv. in a direction opposite to the rotation of a clock's hands or opposite to the usual direction of movement or flow

synonym : anticlockwise, reversely

(1) move **counterclockwise**, (2) swirl **counterclockwise**

The carousel rotates **counterclockwise** at a slow pace.

instantaneous

adj. occurring or happening immediately or without delay; taking place in an instant or moment

synonym : immediate, prompt, rapid

(1) **instantaneous** reaction, (2) **instantaneous** message

The new software provides **instantaneous** results, making it much more efficient than the previous version.

teeny

adj. extremely small; tiny

synonym : tiny, mini, minuscule

(1) **teeny** bit, (2) so **teeny** tiny

The ring was so **teeny** that it almost looked like a toy.

proton

n. a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms

(1) **proton** decay, (2) **proton** conductivity

The solar wind is composed almost entirely of electrons and **protons**.

wacky

adj. funny in a slightly odd, peculiar, irregular way

synonym : absurd, eccentric, ludicrous

(1) **wacky** value, (2) **wacky** plan for selling more books

His friend was a pretty wild and **wacky** character.

abacus

n. a counting device consisting of a frame with rods or wires on which beads or stones are moved to perform arithmetic calculations

synonym : bead frame, counting frame

(1) **abacus** calculations, (2) wooden **abacus** beads

The child was learning how to use an **abacus** in her math class.

pandemic

n. an outbreak of a disease that affects many people over a very wide area

synonym : outbreak

(1) flu **pandemic**, (2) global **pandemic**

They fear a **pandemic** of a new type of virus.

superhuman

adj. possessing abilities or characteristics that exceed those of normal humans; beyond human capacity or capability

synonym : supernatural, inhuman, beyond human

(1) **superhuman** beings, (2) **superhuman** effort

The athlete's **superhuman** strength allowed him to lift twice his body weight.

distracted

adj. having one's attention diverted or divided; being unable to concentrate because of being preoccupied or worried

synonym : preoccupied, inattentive, absent-minded

(1) get **distracted** by an urgent matter, (2) **distracted** by a conversation

I was so **distracted** by my phone that I nearly walked into a lamppost.

spear

n. a weapon with a long shaft and a sharp metal point used for battle, hunting, and fishing in the past

synonym : javelin, pike, lance

(1) hunting **spear**, (2) sharp-pointed **spear**

Ancient people made **spears** with wood entirely.

nuke

v. (derived from "nuclear") to attack or destroy a place or target with a nuclear weapon; to cook food in a

microwave oven; (noun) a nuclear weapon, such as a nuclear bomb or missile

synonym : blast, bomb, attack

(1) **nuke** a city, (2) **nuke** missile

The government threatened to **nuke** the enemy territory if they didn't surrender.

indebted

adj. owing money or having financial obligations to another person or organization; feeling grateful or obligated to someone for their help, support, or kindness

synonym : owing, obligated, beholden

(1) **indebted** to creditors, (2) financially **indebted**

He felt **indebted** to his parents for all the sacrifices they had made for him.

ingenious

adj. showing inventiveness and ability or skill

synonym : creative, innovative, inventive

(1) **ingenious** device, (2) **ingenious** idea

I always look forward to reading his stories since they're so **ingenious**.

qubit

n. a unit of information used in quantum computing, equivalent to a single binary digit (or "bit") of classical computing, which can exist in multiple possible states simultaneously, offering greater information processing potential than classical bits

synonym : quantum bit

(1) quantum **qubit**, (2) **qubit** storage

Technology development for controlling **qubits** is a major research goal in quantum computing.

superposition

n. a principle in physics that describes the combination or overlaying of two or more waves or states of matter; (of geology) the process by which layers of rock or sediment are deposited on top of one another over time

synonym : overlay, overlap

(1) quantum **superposition**, (2) **superposition** theorem

The **superposition** of waves can result in either constructive or destructive interference.

amplify

v. to enhance something, particularly sound or brightness

synonym: intensify, boost, argument

(1) **amplify** a signal, (2) **amplify** the effect

You might need to **amplify** this point.

contemplate

v. to think about a possible future action or to think about something for a long time thoughtfully

synonym: think over, ponder, consider

(1) **contemplate** a marriage, (2) **contemplated** leaving school

I recently **contemplated** dropping out of school and getting a full-time job.

profoundly

adv. to a great or complete degree; deeply

synonym: deeply, greatly, completely

(1) **profoundly** insightful, (2) sleep **profoundly**

The novel affected her **profoundly**, causing her to question her beliefs and values.

pundit

n. an expert, authority, or knowledgeable commentator who frequently expresses opinions or gives analysis on a particular subject or issue

synonym: expert, commentator, punditry

(1) conservative **pundit**, (2) sports **pundit**

The political **pundit** provided analysis and commentary on the latest election results.

retroactive

adj. taking effect from a date in the past rather than the present; applying to a prior period or event

synonym: retrospective, backward-looking

(1) **retroactive** interference, (2) **retroactive** changes

The **retroactive** pay increase was a nice surprise for the employees.

urgently

adv. in a way that requires immediate action or attention, especially before anything else, because of being very important

synonym : promptly, immediately, swiftly

(1) tackle the problem **urgently**, (2) **urgently** required
I need to send this email **urgently**.

reinvent

v. to change something so drastically that it looks to be completely new

synonym : recreate, remake, revive

(1) **reinvent** local dishes, (2) **reinvent** our life
They have tried to **reinvent** their grocery stores.

depict

v. to illustrate someone or something in a photograph

synonym : illustrate, describe, express

(1) **depict** a scene, (2) **depict** a feeling of isolation
His son had accurately **depicted** the bloom.

excite

v. to make someone feel suddenly enthusiastic or eager

synonym : thrill, exhilarate, animate

(1) **excite** the crowd, (2) **excite** rebellion
The news of her promotion **excited** her.

Session 2: Spelling

1. tackle the problem ur____ly
adv. in a way that requires immediate action or attention, especially before anything else, because of being very important
2. con_____ted leaving school
v. to think about a possible future action or to think about something for a long time thoughtfully
3. pro_____ly insightful
adv. to a great or complete degree; deeply
4. de_____er code
v. to read or understand something that is written in code or in a difficult or obscure way
5. re_____nt local dishes
v. to change something so drastically that it looks to be completely new
6. sc_____le my mind
v. to move or climb quickly and awkwardly, often using your hands to help you
7. sleep pro_____ly
adv. to a great or complete degree; deeply
8. de____t a scene
v. to illustrate someone or something in a photograph
9. sc_____le for support
v. to move or climb quickly and awkwardly, often using your hands to help you
10. ret_____ve changes
adj. taking effect from a date in the past rather than the present; applying to a prior period or event
11. the cr_____or's claims
n. a person, company, etc. to whom a debtor owes money

ANSWERS: 1. urgently, 2. contemplate, 3. profoundly, 4. decipher, 5. reinvent, 6. scramble, 7. profoundly, 8. depict, 9. scramble, 10. retroactive, 11. creditor

12. swirl cou_____ise *adv.* in a direction opposite to the rotation of a clock's hands or opposite to the usual direction of movement or flow
13. dis_____ed by a conversation *adj.* having one's attention diverted or divided; being unable to concentrate because of being preoccupied or worried
14. de_____t a file with a private key *v.* to convert encoded or scrambled information or messages into a form that is intelligible or understandable; to reveal information that is hidden or obscured, such as data that has been encrypted for security purposes
15. re_____nt our life *v.* to change something so drastically that it looks to be completely new
16. sma_____ne app developer *n.* a mobile phone that functions as a computer and connects to the Internet
17. sup_____ter technology *n.* a computer with a high level of computing power and speed, typically used for scientific or engineering computations that require immense amounts of data processing
18. a g__m-free environment *n.* a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one
19. n__e a city *v.* (derived from "nuclear") to attack or destroy a place or target with a nuclear weapon; to cook food in a microwave oven; (noun) a nuclear weapon, such as a nuclear bomb or missile

ANSWERS: 12. counterclockwise, 13. distracted, 14. decrypt, 15. reinvent, 16. smartphone, 17. supercomputer, 18. germ, 19. nuke

20. con_____te a marriage *v.* to think about a possible future action or to think about something for a long time thoughtfully
21. unb_____le bond *adj.* not able to be broken or damaged
22. antibiotic-resistant g__m *n.* a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one
23. wa__y plan for selling more books *adj.* funny in a slightly odd, peculiar, irregular way
24. c__p wood *v.* to cut something into pieces with a sharp tool, such as a knife
25. theoretical ph_____st *n.* a scientist who specializes in the field of physics
26. quantum qu__t *n.* a unit of information used in quantum computing, equivalent to a single binary digit (or "bit") of classical computing, which can exist in multiple possible states simultaneously, offering greater information processing potential than classical bits
27. am_____y a signal *v.* to enhance something, particularly sound or brightness
28. digital cry_____phy *n.* the study of the techniques and methods used for secure communication and information processing, particularly using codes and ciphers
29. quantum sup_____ion *n.* a principle in physics that describes the combination or overlaying of two or more waves or states of matter; (of geology) the process by which layers of rock or sediment are deposited on top of one another over time

ANSWERS: 20. contemplate, 21. unbreakable, 22. germ, 23. wacky, 24. chop, 25. physicist, 26. qubit, 27. amplify, 28. cryptography, 29. superposition

30. unb_____le commitment *adj.* not able to be broken or damaged
31. conservative pu____t *n.* an expert, authority, or knowledgeable commentator who frequently expresses opinions or gives analysis on a particular subject or issue
32. en_____t message *v.* to convert information or data into a code, thereby making it unreadable without a key or password; to conceal or obscure information in a way that makes it inaccessible to unauthorized persons
33. in_____us device *adj.* showing inventiveness and ability or skill
34. ins_____ous reaction *adj.* occurring or happening immediately or without delay; taking place in an instant or moment
35. a sa__y dress *adj.* behavior or language that is bold, cheeky, or irreverent; having a spicy or piquant flavor or aroma
36. flu pa_____ic *n.* an outbreak of a disease that affects many people over a very wide area
37. n__e missile *v.* (derived from "nuclear") to attack or destroy a place or target with a nuclear weapon; to cook food in a microwave oven; (noun) a nuclear weapon, such as a nuclear bomb or missile
38. bankrupt cr_____or *n.* a person, company, etc. to whom a debtor owes money
39. in_____ed to creditors *adj.* owing money or having financial obligations to another person or organization; feeling grateful or obligated to someone for their help, support, or kindness

ANSWERS: 30. unbreakable, 31. pundit, 32. encrypt, 33. ingenious, 34. instantaneous, 35. saucy, 36. pandemic, 37. nuke, 38. creditor, 39. indebted

40. sa__y jokes *adj.* behavior or language that is bold, cheeky, or irreverent; having a spicy or piquant flavor or aroma
41. financially in____ed *adj.* owing money or having financial obligations to another person or organization; feeling grateful or obligated to someone for their help, support, or kindness
42. sup_____an effort *adj.* possessing abilities or characteristics that exceed those of normal humans; beyond human capacity or capability
43. wa__y value *adj.* funny in a slightly odd, peculiar, irregular way
44. r_v up the crowd *n.* a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute
45. c__p a meet with a knife *v.* to cut something into pieces with a sharp tool, such as a knife
46. ex___e rebellion *v.* to make someone feel suddenly enthusiastic or eager
47. take a seat bef_____nd *adv.* ahead of time; in advance
48. pr___n decay *n.* a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms
49. sports pu___t *n.* an expert, authority, or knowledgeable commentator who frequently expresses opinions or gives analysis on a particular subject or issue

ANSWERS: 40. saucy, 41. indebted, 42. superhuman, 43. wacky, 44. rev, 45. chop, 46. excite, 47. beforehand, 48. proton, 49. pundit

50. de____t data
- v. to convert encoded or scrambled information or messages into a form that is intelligible or understandable; to reveal information that is hidden or obscured, such as data that has been encrypted for security purposes
51. plot to ass____te
- v. to kill someone, usually a prominent or important figure, through a surprise attack or deliberate act of violence
52. pose for a se____e
- n. a photograph that one has taken of oneself, typically one taken with a smartphone or webcam to share on social media
53. pr____n conductivity
- n. a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms
54. ass____te a leader
- v. to kill someone, usually a prominent or important figure, through a surprise attack or deliberate act of violence
55. am____y the effect
- v. to enhance something, particularly sound or brightness
56. so te__y tiny
- adj. extremely small; tiny
57. en____t data
- v. to convert information or data into a code, thereby making it unreadable without a key or password; to conceal or obscure information in a way that makes it inaccessible to unauthorized persons

ANSWERS: 50. decrypt, 51. assassinate, 52. selfie, 53. proton, 54. assassinate, 55. amplify, 56. teeny, 57. encrypt

58. wooden ab___s beads *n.* a counting device consisting of a frame with rods or wires on which beads or stones are moved to perform arithmetic calculations
59. de___t a feeling of isolation *v.* to illustrate someone or something in a photograph
60. hunting sp___r *n.* a weapon with a long shaft and a sharp metal point used for battle, hunting, and fishing in the past
61. ins_____ous message *adj.* occurring or happening immediately or without delay; taking place in an instant or moment
62. move cou_____ise *adv.* in a direction opposite to the rotation of a clock's hands or opposite to the usual direction of movement or flow
63. get dis_____ed by an urgent matter *adj.* having one's attention diverted or divided; being unable to concentrate because of being preoccupied or worried
64. artistic en___a *n.* a puzzling or mysterious person, place, or thing; something that is difficult or impossible to understand or explain; a riddle or mysterious puzzle that requires a solution
65. low-r_v engine *n.* a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute
66. talented ph_____st *n.* a scientist who specializes in the field of physics

ANSWERS: 58. abacus, 59. depict, 60. spear, 61. instantaneous, 62. counterclockwise, 63. distracted, 64. enigma, 65. rev, 66. physicist

67. move cl_____se
adv. in a circular direction that follows the course of a clock's hands or in a direction that is considered to be forward or positive
68. mysterious en___a
n. a puzzling or mysterious person, place, or thing; something that is difficult or impossible to understand or explain; a riddle or mysterious puzzle that requires a solution
69. asymmetric cry_____phy
n. the study of the techniques and methods used for secure communication and information processing, particularly using codes and ciphers
70. se___e stick
n. a photograph that one has taken of oneself, typically one taken with a smartphone or webcam to share on social media
71. sup_____an beings
adj. possessing abilities or characteristics that exceed those of normal humans; beyond human capacity or capability
72. sup_____ter performance
n. a computer with a high level of computing power and speed, typically used for scientific or engineering computations that require immense amounts of data processing
73. sup_____ion theorem
n. a principle in physics that describes the combination or overlaying of two or more waves or states of matter; (of geology) the process by which layers of rock or sediment are deposited on top of one another over time

ANSWERS: 67. clockwise, 68. enigma, 69. cryptography, 70. selfie, 71. superhuman, 72. supercomputer, 73. superposition

74. sharp-pointed sp__r *n.* a weapon with a long shaft and a sharp metal point used for battle, hunting, and fishing in the past
75. three months bef_____nd *adv.* ahead of time; in advance
76. qu__t storage *n.* a unit of information used in quantum computing, equivalent to a single binary digit (or "bit") of classical computing, which can exist in multiple possible states simultaneously, offering greater information processing potential than classical bits
77. te__y bit *adj.* extremely small; tiny
78. sma_____ne addict *n.* a mobile phone that functions as a computer and connects to the Internet
79. ret_____ve interference *adj.* taking effect from a date in the past rather than the present; applying to a prior period or event
80. ex___e the crowd *v.* to make someone feel suddenly enthusiastic or eager
81. ur_____ly required *adv.* in a way that requires immediate action or attention, especially before anything else, because of being very important
82. de_____er message *v.* to read or understand something that is written in code or in a difficult or obscure way
83. rotate cl_____se *adv.* in a circular direction that follows the course of a clock's hands or in a direction that is considered to be forward or positive

ANSWERS: 74. spear, 75. beforehand, 76. qubit, 77. teeny, 78. smartphone, 79. retroactive, 80. excite, 81. urgently, 82. decipher, 83. clockwise

84. in_____us idea

adj. showing inventiveness and ability or skill

85. global pa_____ic

n. an outbreak of a disease that affects many people over a very wide area

86. ab____s calculations

n. a counting device consisting of a frame with rods or wires on which beads or stones are moved to perform arithmetic calculations

ANSWERS: 84. ingenious, 85. pandemic, 86. abacus

Session 3: Fill in the Blanks

1. His friend was a pretty wild and _____ character.
adj. funny in a slightly odd, peculiar, irregular way
2. This titanium bike frame is advertised as _____.
adj. not able to be broken or damaged
3. She packed her sunscreen _____ to remember it on the beach trip.
adv. ahead of time; in advance
4. You might need to _____ this point.
v. to enhance something, particularly sound or brightness
5. The ring was so _____ that it almost looked like a toy.
adj. extremely small; tiny
6. The _____ remark made by the comedian caused a stir in the audience.
adj. behavior or language that is bold, cheeky, or irreverent; having a spicy or piquant flavor or aroma
7. The _____ pay increase was a nice surprise for the employees.
adj. taking effect from a date in the past rather than the present; applying to a prior period or event
8. The news of her promotion _____ her.
v. to make someone feel suddenly enthusiastic or eager
9. We need to turn the knob _____ to lock the door.
adv. in a circular direction that follows the course of a clock's hands or in a direction that is considered to be forward or positive

ANSWERS: 1. wacky, 2. unbreakable, 3. beforehand, 4. amplify, 5. teeny, 6. saucy, 7. retroactive, 8. excited, 9. clockwise

10. I recently _____ dropping out of school and getting a full-time job.
v. to think about a possible future action or to think about something for a long time thoughtfully
11. She took a _____ in front of the famous tower and shared it on the app.
n. a photograph that one has taken of oneself, typically one taken with a smartphone or webcam to share on social media
12. He felt _____ to his parents for all the sacrifices they had made for him.
adj. owing money or having financial obligations to another person or organization; feeling grateful or obligated to someone for their help, support, or kindness
13. The ancient text remains an _____ challenging scholars to unravel its meaning.
n. a puzzling or mysterious person, place, or thing; something that is difficult or impossible to understand or explain; a riddle or mysterious puzzle that requires a solution
14. The government threatened to _____ the enemy territory if they didn't surrender.
v. (derived from "nuclear") to attack or destroy a place or target with a nuclear weapon; to cook food in a microwave oven; (noun) a nuclear weapon, such as a nuclear bomb or missile
15. The political _____ provided analysis and commentary on the latest election results.
n. an expert, authority, or knowledgeable commentator who frequently expresses opinions or gives analysis on a particular subject or issue
16. The novel affected her _____ causing her to question her beliefs and values.
adv. to a great or complete degree; deeply

ANSWERS: 10. contemplated, 11. selfie, 12. indebted, 13. enigma, 14. nuke, 15. pundit, 16. profoundly,

17. To protect their sensitive information, many businesses _____ their files.
- v.* to convert information or data into a code, thereby making it unreadable without a key or password; to conceal or obscure information in a way that makes it inaccessible to unauthorized persons
18. The athlete's _____ strength allowed him to lift twice his body weight.
- adj.* possessing abilities or characteristics that exceed those of normal humans; beyond human capacity or capability
19. His son had accurately _____ the bloom.
- v.* to illustrate someone or something in a photograph
20. Local business owners _____ to find skilled workers.
- v.* to move or climb quickly and awkwardly, often using your hands to help you
21. Technology development for controlling _____ is a major research goal in quantum computing.
- n.* a unit of information used in quantum computing, equivalent to a single binary digit (or "bit") of classical computing, which can exist in multiple possible states simultaneously, offering greater information processing potential than classical bits
22. Einstein was an outstanding and famous _____ of the 20th century.
- n.* a scientist who specializes in the field of physics
23. The carousel rotates _____ at a slow pace.
- adv.* in a direction opposite to the rotation of a clock's hands or opposite to the usual direction of movement or flow
24. China has developed one of the world's fastest _____ for its space program.
- n.* a computer with a high level of computing power and speed, typically used for scientific or engineering computations that require immense amounts of data processing

ANSWERS: 17. encrypt, 18. superhuman, 19. depicted, 20. scrambled, 21. qubits, 22.

physicist, 23. counterclockwise, 24. supercomputers

25. The _____ of his idea came from watching birds flying in flocks.

- n.* a very tiny living that causes the disease; a piece of something such as an organism, concept, etc., capable of growing into a new one or part of one

26. The cook _____ the vegetables for the soup.

- v.* to cut something into pieces with a sharp tool, such as a knife

27. He stepped on the gas pedal, and the engine released a loud _____.

- n.* a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute

28. They fear a _____ of a new type of virus.

- n.* an outbreak of a disease that affects many people over a very wide area

29. I was so _____ by my phone that I nearly walked into a lamppost.

- adj.* having one's attention diverted or divided; being unable to concentrate because of being preoccupied or worried

30. The _____ of waves can result in either constructive or destructive interference.

- n.* a principle in physics that describes the combination or overlaying of two or more waves or states of matter; (of geology) the process by which layers of rock or sediment are deposited on top of one another over time

31. I always look forward to reading his stories since they're so _____.

- adj.* showing inventiveness and ability or skill

32. The dictator's regime was known to _____ political opponents who opposed his views.

- v.* to kill someone, usually a prominent or important figure, through a surprise attack or deliberate act of violence

ANSWERS: 25. germ, 26. chopped, 27. rev, 28. pandemic, 29. distracted, 30. superposition, 31. ingenious, 32. assassinate

33. The new software provides _____ results, making it much more efficient than the previous version.

adj. occurring or happening immediately or without delay; taking place in an instant or moment

34. I asked the lawyer to initiate _____ negotiations for voluntary liquidation.

n. a person, company, etc. to whom a debtor owes money

35. I need to send this email _____.

adv. in a way that requires immediate action or attention, especially before anything else, because of being very important

36. I need to _____ this important message before it falls into the wrong hands.

v. to convert encoded or scrambled information or messages into a form that is intelligible or understandable; to reveal information that is hidden or obscured, such as data that has been encrypted for security purposes

37. The solar wind is composed almost entirely of electrons and _____.

n. a very small particle with a positive charge equal to the negative charge of an electron that forms part of the nucleus of all atoms

38. The child was learning how to use an _____ in her math class.

n. a counting device consisting of a frame with rods or wires on which beads or stones are moved to perform arithmetic calculations

39. They have tried to _____ their grocery stores.

v. to change something so drastically that it looks to be completely new

40. He spent hours trying to _____ the ancient text.

v. to read or understand something that is written in code or in a difficult or obscure way

ANSWERS: 33. instantaneous, 34. creditor, 35. urgently, 36. decrypt, 37. protons, 38. abacus, 39. reinvent, 40. decipher

41. Ancient people made _____ with wood entirely.
- n.* a weapon with a long shaft and a sharp metal point used for battle, hunting, and fishing in the past
42. Internet traffic volumes have increased significantly with the advent of _____.
- n.* a mobile phone that functions as a computer and connects to the Internet
43. The software engineers developed a new _____ algorithm to protect users' data.
- n.* the study of the techniques and methods used for secure communication and information processing, particularly using codes and ciphers

ANSWERS: 41. spears, 42. smartphones, 43. cryptography