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Vocabulary Builder Reference from...

Brendan Rogers and Jessica Howard: What's hidden in Arctic ice? | TED Talk https://www.ted.com/talks/brendan_rogers_and_jessica_howard_what_s_hidden_in_arctic_ice



All Words

IMPORTANT

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Session 1: Word List

miner

n. a person who works in a mine (= excavation in the Earth from which ores and minerals are extracted), especially one who extracts coal, minerals, or precious metals from the Earth

synonym: digger, excavator, miner

(1) **miner** strike, (2) **miner** industry

The coal **miner** worked tirelessly to extract valuable minerals from deep underground.

remarkable

adj. worthy of attention because unusual or specialsynonym: outstanding, exceptional, extraordinary

(1) **remarkable** achievement, (2) the **remarkable** breadth of knowledge

The election was a **remarkable** success for the Whigs.

discovery

 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.

tradition

nation

 a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society

synonym: custom, practice, ritual

- (1) a **tradition** of a culture, (2) against **tradition**It is a **tradition** in many families to have a big Thanksgiving dinner with all their relatives.
- a large organized community of people living in a particular country or region and having a particular culture

synonym: country, state, sovereign entity

(1) **nation-state**, (2) a seafaring **nation**The **nation** of Japan is known for its unique culture and advanced technology.

uncover

v. to remove the cover from something; to discover something previously unseen or hidden

synonym: disclose, reveal, unveil

(1) **uncover** a potential problem, (2) **uncover** the truth He continued his investigation and soon **uncovered** another crime.

preserve

v. to keep or maintain a particular quality, feature, etc., especially to prevent it from decaying, being damaged, or being destroyed

synonym: conserve, care for, maintain

(1) **preserve** my strength, (2) **preserve** a country's heritage They worked hard to **preserve** the nature of their native lands.

woolly

adj. covered with thick, soft, and often curly hair or fibers; lacking clarity or precision

synonym: fuzzy, hairy, shaggy

(1) woolly lambs, (2) woolly hair

The sheep had a thick, **woolly** coat to keep it warm in the winter.

mammoth

adj. exceedingly large or extensive; (noun) any of numerous extinct elephants widely distributed in the Pleistocenesynonym: huge, large

(1) woolly mammoth, (2) a mammoth ship

The minister decided to review its **mammoth** public works projects.

calf

- n. a young cow, bull, or other domestic bovine animalssynonym: baby cow, heifer, yearling
- (1) baby calf, (2) a calf elephant

The newborn **calf** stood on wobbly legs, trying to find its mother's milk.

arctic

adj. of or relating to the region around the North Pole or the Arctic Ocean; very cold

synonym: cold, frozen, polar

(1) arctic ice, (2) high arctic

Cold temperatures and long, dark winters characterize the **arctic** climate.

bury

- v. to place a dead body in the ground, grave, or tomb synonym: entomb, sink, forget
- (1) **bury** in the earth, (2) **bury** emotion There is plenty of space to **bury** everyone.

hemisphere

- n. half of the terrestrial globe; half of a sphere
- (1) northern **hemisphere**, (2) cerebral **hemisphere**This weather pattern is unique to the southern **hemisphere**.

permafrost

- a layer of soil that is permanently below freezing, usually in polar regions
- (1) permafrost area, (2) thawing permafrostPermafrost is crucial to soil stability in arctic areas.

thaw

v. to become less rigid or hostile; to melt, soften, or become more friendly

synonym:

melt, defrost, unfreeze

(1) **thaw** out a glacier, (2) **thaw** relations between countries The sun was beginning to **thaw** the frozen ground.

typical

adj. having the usual characteristics or traits of a specific group of things

synonym: characteristic, usual, distinctive

(1) **typical** leader, (2) fairly **typical** symptoms

This artwork is **typical** of her work.

locate

 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.

biology

- the scientific study of life and the natural processes of living things
- (1) evolutionary **biology**, (2) cell and molecular **biology** In junior high school, we had to dissect a frog in **biology** class.

crystal

 a solid material with many even sides that is formed naturally when the substance becomes solid and has a highly regular atomic structure; clear and colorless glass made of almost pure silica

synonym: quartz

(1) liquid crystal, (2) crystal analyses

A vast crystal chandelier glittered brightly above us.

moisture

small amounts of liquid, especially water, that are present in or absorbed by a substance

synonym: dampness, humidity, wetness

(1) moisture level, (2) lot of moisture

My hair looks greasy because there is too much **moisture** in the air.

microorganism

 a very small living thing that may exist in its single-celled form or as a colony of cells and is too small to be seen without a microscope

synonym: germ, microbe, bacterium

(1) pathogenic **microorganism**, (2) **microorganisms** in his gut

This **microorganism** is a producer of respiratory disease.

decompose

v. to break down or cause to break down over time into simpler substances or elements

synonym: break down, rot, spoil

(1) **decompose** matter, (2) **decompose** into simpler molecules

After the earthquake, many of the buildings in the city were left in ruins and began to **decompose**.

tissue

n. an ensemble of similar cells of the animal or plant that together carry out a specific function

synonym: structure, texture, anatomy

(1) a facial tissue, (2) loss of muscle tissue

The researcher separated the nervous **tissue** for microscopic examinations.

operate

- v. to work in a particular way; to supervise something synonym: work, use, employ
- (1) **operate** 24 hours a day, (2) manually **operate** a machine

This machine is too difficult to **operate** for me.

metabolism

- the set of chemical reactions in cells or organisms that are necessary for life-sustaining
- (1) **metabolism** enzyme, (2) hemoglobin **metabolism** Better sleep leads to increased **metabolism**.

subfreezing

adj. below the freezing point (32 F or 0 C)

synonym: below-freezing, icy, frigid

(1) live in a **subfreezing** climate, (2) **subfreezing** temperature

The temperature outside was **subfreezing**, and I could feel the chill in my bones.

temperature

- n. the degree of hotness or coldness of a thing or placesynonym: climate, warmth, degree
- (1) extreme **temperatures**, (2) the atmospheric **temperature**

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

outcome

- *n*. the result or effect of an action, event, etc.
- *synonym*: result, consequence, effect
- (1) improved student **outcomes**, (2) a desirable **outcome** They awaited news of the **outcome** of the election.

rely

 to require a specific thing or the assistance and support of someone or something to continue, run properly, or succeed.

synonym: depend, count, lean

(1) **rely** on convenience stores, (2) **rely** entirely on him Babies heavily **rely** on others for food.

fossilized

adj. transformed into a fossil (= something preserved in rock for a very long period) or preserved in the form of a fossil; antiquated or inflexible

synonym: petrified, ossified, preserved

(1) obsolete **fossilized** ways, (2) a **fossilized** grove The dinosaur bones were so old that they had been wholly **fossilized**, turning to stone over millions of years.

skeleton

 the structure of bones in a human or animal body, or a framework of bones or other material that supports a plant

synonym: bones, frame, structure

(1) the steel **skeleton** of a building, (2) **skeleton** hand Scientists studied the ancient **skeleton** to learn more about the creature's anatomy.

extrapolate

v. to guess or think about what might happen or estimate something using the facts that you have now

synonym: deduce, reason, infer

(1) **extrapolate** the results, (2) **extrapolate** animal dose This predictive model mechanically **extrapolates** past trends into the future.

ancient

adj. relating to the long ago, particularly the historical period preceding the fall of the Western Roman Empire; very old

synonym: archaic, age-old, obsolete

pre-Christian ancient, (2) ancient stories
 They have been living near water since ancient times.

frame

- a strong border or structure of the wood, metal, etc. that surrounds something such as a picture, door, or window synonym: body, skeleton, scaffolding
- (1) a picture **frame**, (2) the **frame** of the policy The detective looked for fingerprints on the window **frame**.

pup

n. a young dog, seal, or other animalssynonym: puppy, whelp, cub

(1) a **feast** for the eyes, (2) a nightly **feast**

(1) **pup** company, (2) playful **pup**

The little **pup** was so cute, with big, floppy ears and a wagging tail.

feast

- n. a large meal, typically one served on a special occasion synonym: banquet, celebration, dinner
- The royal **feast** celebrated the harvest, and the community enjoyed it.

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salmon

 a type of fish that is commonly found in the North Atlantic and North Pacific oceans

synonym: fish, trout, salmonid

(1) salmon fishery, (2) salmon migration

Grilled **salmon** is a popular dish at summer barbecues.

den

 a wild animal's lair or hiding places, such as a fox or bear

synonym: lair, burrow, nest

(1) gambling den, (2) bear den

The fox had dug a **den** in the side of the hill, where it could rest and hide from predators.

nestle

v. to settle comfortably or cozily into a place

synonym: snuggle, cuddle, curl up

(1) **nestle** deeper against him, (2) **nestle** in a cozy spot The cat **nestled** in my lap and fell asleep.

collapse

v. to fall down or give way suddenly, often after breaking apart

synonym: tumble, spill, bankruptcy

(1) the stock market **collapsed**, (2) ready to **collapse**The roof finally **collapsed** after three days and three nights of heavy snowfall.

reindeer

 a large deer with branched antlers found in northern regions, often domesticated and used for transportation or as a source of food

synonym: caribou, elk, deer

red-nosed reindeer, (2) domesticated reindeer
 The Sami people have been herding reindeer in the Arctic for

centuries, using them for food, transportation, and clothing.

herder

 a person who takes care of and manages a herd of livestock, such as cows, sheep, or goats

synonym: shepherd, rancher, drover

(1) cattle **herder**, (2) seminomadic **herders**

The sheep **herder** led his flock through the hills, keeping a watchful eye on them at all times.

encounter

v. to face something, particularly something unpleasant or difficult, while attempting to do something else; to meet, especially unexpectedly

synonym: meet, run into, come across

(1) **encounter** a crisis, (2) **encounter** a storm

I'm prepared to **encounter** challenges throughout this adventure.

unmistakable

adj. clearly recognizable; impossible to mistake or misunderstand

synonym: apparent, clear, definite

(1) find **unmistakable** evidence, (2) **unmistakable** difference

His talent for singing is unmistakable.

cave

 a large hole in the side of a hill, cliff, mountain, or under the ground

synonym: cavern, grotto, burrow

(1) domiciliary **caves**, (2) the mouth of the **cave**Bats reside in sheltered **caves**.

extinct

adj. no longer in existence

synonym: dead, obsolete, abolished

(1) **extinct** by human activity, (2) long- **extinct** volcano Many species have become **extinct** due to habitat destruction and other human activities.

skeletal

adj. of, relating to, or forming a skeleton (= frame of bones);very thin or emaciated

synonym: bony, emaciated, gaunt

(1) skeletal system, (2) skeletal muscles

The older man was skinny and **skeletal** and not in good health.

incomplete

adj. not having all the necessary or appropriate parts; not yet finished

synonym: undone, unfinished, insufficient

(1) **incomplete** information, (2) customer with **incomplete** credit histories

The researcher criticized the study due to **incomplete** data.

yield

n. the total output of crops, profits, etc. that are produced;(verb) to produce or supply helpful something, such as a profit, an amount of food, or information

synonym: proceeds, harvest, output

(1) corn **yield**, (2) the **yield** on the bond

The company's stock gives a high yield.

incredible

adj. unbelievable; enormous

synonym: unbelievable, fantastical, inconceivable

(1) **incredible** amount, (2) at **incredible** speed Her response revealed **incredible** idiocy.

identify

v. to recognize someone or something and say or prove who or what they are

synonym: determine, specify, recognize

(1) **identify** handwriting, (2) **identify** gene sequences I will introduce you to how to **identify** the leading causes of the malfunction.

reconstruct

v. to build or form something again that has been damaged or destroyed

synonym: rebuild, revamp, reorganize

(1) **reconstruct** an image, (2) **reconstruct** the original text They've decided to **reconstruct** a ruined castle.

sequence

n. a series of related events, actions, numbers, etc., which have a particular order

synonym: arrangement, succession, series

(1) the **sequence** of the seasons, (2) the DNA **sequence**

We do move forward with those tasks in **sequence** next week.

extraordinary

adj. exceptional, unexpected, very unusual; surpassing the ordinary or usual

synonym: exceptional, noteworthy, astonishing

(1) **extraordinary** ability, (2) **extraordinary** weather He narrated the **extraordinary** story of his adventure.

kingdom

- n. the country ruled by a king or queensynonym: empire, realm, land
- (1) establish his **kingdom**, (2) a subordinate **kingdom**By remaining neutral, this **kingdom** continued to exist.

regenerate

- v. to improve or renew an area, institution, system, etc., especially by making it more active or successfulsynonym: renew, revive, improve
- (1) **regenerate** bone tissue, (2) a **regenerate** sinner The new CEO's primary mission is to **regenerate** the company on the verge of bankruptcy.

tundra

 a vast, treeless, and typically frozen plain in the Arctic regions, where the subsoil is permanently frozen

synonym: arctic plain, permafrost, polar desert

(1) the Siberian **tundra**, (2) **tundra** biome

The Arctic **tundra** is a vast and desolate landscape with few signs of life.

encase

 to enclose or cover something in a protective or decorative layer

synonym: encircle, enclose, enclasp

(1) encase in glass, (2) encase his feet

They **encased** the fragile vase in bubble wrap to protect it during shipping.

squirrel

 a small to medium-sized rodent with a bushy tail, found in almost every part of the world

synonym: rodent, chipmunk, tree-dweller

(1) agile squirrel, (2) gray squirrel

The **squirrels** in the park were very friendly and came right up to us looking for food.

burrow

- v. to excavate a hole or make a tunnel in the ground by digging, typically for use as a dwelling of an animal synonym: tunnel, dig, excavate
- (1) **burrow** through the forest, (2) **burrow** into a mystery You can't **burrow** through solid metal.

prehistoric

adj. belonging to or existing in times before recorded history; no longer fashionable

synonym: ancient, primitive, archaic

prehistoric settlements, (2) prehistoric times
 Scientists often fail to date archeological or prehistorical findings.

climate

 the weather in a particular location averaged over some long period

synonym: atmosphere, weather, environment

a cold climate, (2) effects of climate change
 Climate and weather have an impact on every part of our lifestyles.

frequency

 an ordered array of colors into which a light beam can be split

synonym: recurrence, repetition, regularity

frequency band, (2) high frequency
 The oscillator hunts for the correct frequency.

extreme

adj. very great in amount or degreesynonym: farthermost, outermost, fierce

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

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

lightning

 a flash, or several flashes, of light that accompanies an electric discharge in the atmosphere, or something resembling such a flash

synonym: bolt, electrical discharge

(1) streaks of **lightning**, (2) **lightning** air strike

The human eye is **lightning-fast** in recognizing objects.

wildfire

 a large, uncontrolled fire that spreads quickly through a natural area such as a forest, grassland, or mountain slope

synonym: blaze, bonfire, flame

(1) **wildfire** spread, (2) arson-caused **wildfire**The **wildfire** destroyed hundreds of homes and forced thousands of people to evacuate.

soil

- n. the top layer of Earth in which plants grow synonym: earth, ground, mud
- (1) **soils** retentive of moisture, (2) parched **soil Soil** moisture is another significant component controlling soil respiration.

far-reaching

- adj. having a wide or significant impact or influence synonym: extensive, widespread, broad
- (1) achieve **far-reaching** reform, (2) **far-reaching** consequences

The **far-reaching** effects of the policy change are still being felt.

fracture

 the breaking or cracking of a rigid material or object such as bone

synonym: break, crack, rupture

(1) fracture test, (2) risk of bone fracturesX-ray inspection revealed many fractures.

landscape

an expanse of scenery that can be seen in a single view;
 a large area of land, especially in the country and
 relating to its appearance

synonym: geography, terrain, topography

(1) a peaceful **landscape**, (2) **landscape** painting Recent electoral shocks have shaken the political **landscape** in Europe.

flood

n. a large amount of water flowing beyond its normal limits; an overwhelming number or amount

synonym: deluge, downpour, overflow

(1) **flood** advisory, (2) a **flood** of questions

These heavy rains caused flash **floods** on several islands.

erosion

 the wearing away of rock, soil, or land by natural processes such as wind or water

synonym: corrosion, weathering, decay

(1) erosion control, (2) wind erosion

The **erosion** of the coastline has accelerated due to rising sea levels.

stable

adj. firm and steady; not easily moved, disturbed, or changed

synonym: sturdy, unmoving, durable

(1) in **stable** condition, (2) have a **stable** job

Relations between the two countries have been relatively **stable** due to the summit meeting.

tilt

v. to incline or bend from a vertical position; (noun) the act of inclining or the state of being inclined or leaning to one side

synonym: incline, slant, lean

(1) on the **tilt**, (2) **tilt** a chair

She **tilted** her head to the side, indicating she was listening.

trigger

 to make something happen suddenly; to cause something such as a device, machine, etc. to function

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synonym: activate, spark, drive

(1) **trigger** a biochemical response, (2) **trigger** inflation The incident **triggered** a political controversy.

massive

adj. enormous amount; very heavy and solidsynonym: enormous, giant, immense

(1) massive amounts, (2) massive stars

The recent economic downturn has resulted in **massive** layoffs.

landslide

 a large, sudden movement of a mass of rock, earth, or other material down a slope

synonym: avalanche, mudslide, rockfall

(1) landslide victory, (2) prevent a landslide

The massive **landslide** buried the small village under a thick layer of rock and dirt.

threaten

 to utter intentions of injury or punishment against someone

synonym: endanger, terrorize, intimidate

(1) **threaten** a healthy relationship, (2) **threaten** national security

Various artificially induced causes are **threatening** our ecosystem.

infrastructure

 the basic systems, services, or features that are necessary for an organization or country, such as transport and power supplies

synonym: foundation, framework

(1) IT infrastructure, (2) infrastructure cost

Aging societies tend to require huge costs for **infrastructure** maintenance.

endanger

- v. to put someone or something in a risky situation synonym: threaten, imperil, jeopardize
- (1) endanger my health, (2) endanger a close relationship

Their actions **endangered** the lives of innocent people.

indigenous

adj. someone or something that is native to or occurring naturally in a particular place

synonym: domestic, endemic, primitive

(1) indigenous crop, (2) indigenous peoples

The **indigenous** plants need to be pollinated by local insects.

immemorial

adj. extending back beyond memory or record; very old synonym: ancient, age-old, time-honored

(1) **immemorial** relationship, (2) from **immemorial** times The ancient ruins had been there since **immemorial**, and their origin was mysterious.

decision

 the act or process of making up someone's mind about something; a choice or judgment reached after considering options

synonym: choice, determination, judgment

decision authority, (2) a selfish decision
 She was struggling to make a decision between two job

offers.

communal

adj. belonging to or used by a group rather than individuals; for common use

synonym: collaborative, combined, collective

(1) **communal** swimming pool, (2) **communal** combination of funds

Communal elections were held in several European countries.

extend

- v. to broaden in scope, range, or area synonym: prolong, lengthen, advance
- (1) **extend** the warranty, (2) **extend** a line Her visit will **extend** from Monday to Friday.

estimate

v. to guess or calculate the cost, size, value, etc. of something

synonym: calculate, gauge, evaluate

(1) **estimate** a fair value, (2) **estimate** this chicken to weigh three pounds

We **estimated** the season's total trade deficit at \$50 billion.

trillion

- *n.* the number 1,000,000,000,000; a million million
- (1) **trillion** cubic feet, (2) many **trillions** of dollars One light year is nearly 6 **trillion** miles.

carbon

- a chemical element that can be found in pure form as diamond or graphite, and it is also an essential part of coal and oil and is found in all plants and animals
- (1) **carbon** dioxide, (2) **carbon** emission

 Trees absorb **carbon** dioxide and give off oxygen.

atmosphere

- n. the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative worksynonym: air, ambiance, circumstances
- (1) carbon dioxide in the **atmosphere**, (2) a convivial **atmosphere**

The spaceship began to burn up as it approached the Earth's **atmosphere**.

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.

fossil

 any preserved remains, impression, or trace of any once-living thing that has become hard and turned into rock

synonym: relic, remnant, antediluvian

(1) burning of fossil fuels, (2) a fossil leaf

It was the **fossil** of a dinosaur tooth.

fuel

 a substance that is typically burned to generate heat or energy

synonym: energy, power, gas

(1) biomass fuel, (2) smokeless fuel

The **fuel** scarcity most severely impacted the manufacturing sector

reservoir

 a natural or artificial lake used to store water for community use; a large or extra supply of something

synonym: pool, supply, repertoire

(1) a reservoir of facts, (2) water reservoir

The machine pumps up crude oil from a deep underground reservoir.

organic

adj. of or derived from biological substance; producing plants and animals for food and other items without the use of synthetic chemicals

synonym: biological

(1) organic soils, (2) eat organic food

The kidney is an **organic** component of the body.

intact

adj. undamaged and complete

synonym: flawless, unchanged, entire

(1) intact brain, (2) intact forestland

Despite the scandals, his reputation remained intact.

sediment

n. the substance that forms a solid layer at the bottom of the liquid

synonym: deposition, residue

(1) sediment runoff, (2) gravel sediment

Heavy rain often washes away **sediments** of the river.

efficiently

adv. in a way that produces maximum output with minimum effort or expense

synonym: expeditiously, skillfully, ably

(1) **efficiently** combined, (2) develop software more **efficiently**

We can resolve support requests quickly and **efficiently** by utilization of AI.

oxide

- a chemical compound that contains at least one oxygen atom and one other element
- (1) silver oxide, (2) combined oxideThe blood's red coloring comes from iron oxide.

methane

- a chemical compound with the chemical formula CH4 with no smell or color, often used as a fuel
- (1) atmospheric **methane**, (2) reduce **methane** emissions The ignition of **methane** gas in the plant killed five employees.

loop

 a shape like a curve or a circle made by something long and thin, such as a piece of string, that bends round and crosses itself

synonym: circle, curl, spiral

(1) exit from a **loop**, (2) positive feedback **loop** Many people in this city use the **loop** railway for transportation.

greenhouse

- n. a building with walls and roof made chiefly of transparent material, such as glass, for growing plants in synonym: conservatory
- (1) exotic plants in a **greenhouse**, (2) emissions of **greenhouse** gases

The **greenhouse** effect is a phenomenon that happens naturally.

snapshot

- n. an informal photograph, especially one taken quickly synonym: photo, picture, print
- take a snapshot, (2) developed snapshot
 There were framed snapshots of family and friends in her

room.

planet

 any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star

synonym: earth, world, globe

(1) **planet** like the Earth, (2) save the **planet** Mercury is the closest **planet** to the sun.

tread

v. to step or walk on something

synonym: step, walk, pace

(1) **tread** water, (2) **tread** a similar path He **treads** carefully on the slippery ice.

terrain

 the physical features of a piece of land, including hills, valleys, rivers, and forests

synonym: land, geography, topography

(1) terrain map, (2) permafrost terrain

The mountainous terrain was rough and rocky.

diversity

 the quality or fact of many different types of things or people being included in something; a range of different things or people

synonym: variety, multiplicity, variousness

(1) the **diversity** policy of the university, (2) lingual **diversity** He was impressed by the range and **diversity** of the collection.

Session 2: Spelling

a person who works in a mine (= 1. mi r strike n. excavation in the Earth from which ores and minerals are extracted), especially one who extracts coal, minerals, or

effects of cl___e change the weather in a particular location n. averaged over some long period

reduce me___e emissions a chemical compound with the chemical n. formula CH4 with no smell or color, often used as a fuel

to make something happen suddenly; to ν. cause something such as a device, machine, etc. to function

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

precious metals from the Earth

an ordered array of colors into which a n. light beam can be split

a shape like a curve or a circle made by n. something long and thin, such as a piece of string, that bends round and crosses itself

to enclose or cover something in a ν. protective or decorative layer

adj. relating to the long ago, particularly the historical period preceding the fall of the Western Roman Empire; very old

2.

3.

4. tr____r inflation

5. the atmospheric tem____re

fr____cy band 6.

7. positive feedback I p

8. en e in glass

an t stories 9.

ANSWERS: 1. miner, 2. climate, 3. methane, 4. trigger, 5. temperature, 6. frequency, 7. loop, 8. encase, 9. ancient

10.	combined oxe	n.	a chemical compound that contains at least one oxygen atom and one other element
11.	save the plt	n.	any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star
12.	immal relationship	adj.	extending back beyond memory or record; very old
13.	live in a subng climate	adj.	below the freezing point (32 F or 0 C)
14.	gravel sent	n.	the substance that forms a solid layer at the bottom of the liquid
15.	ext by human activity	adj.	no longer in existence
16.	preic times	adj.	belonging to or existing in times before recorded history; no longer fashionable
17.	ope 24 hours a day	<i>v</i> .	to work in a particular way; to supervise something
18.	developed snot	n.	an informal photograph, especially one taken quickly
19.	mae stars	adj.	enormous amount; very heavy and solid
20.	woy lambs	adj.	covered with thick, soft, and often curly hair or fibers; lacking clarity or precision
21.	in ste condition	adj.	firm and steady; not easily moved, disturbed, or changed
22.	develop software more effly	adv.	in a way that produces maximum output with minimum effort or expense
23.	incte information	adj.	not having all the necessary or appropriate parts; not yet finished

ANSWERS: 10. oxide, 11. planet, 12. immemorial, 13. subfreezing, 14. sediment, 15. extinct, 16. prehistoric, 17. operate, 18. snapshot, 19. massive, 20. woolly, 21. stable, 22. efficiently, 23. incomplete

24. id fy gene sequences to recognize someone or something ν. and say or prove who or what they are a chemical compound that contains at 25. silver ox e n. least one oxygen atom and one other element 26. the mouth of the c e a large hole in the side of a hill, cliff, n. mountain, or under the ground a vast, treeless, and typically frozen 27. the Siberian tu a n. plain in the Arctic regions, where the subsoil is permanently frozen 28. a selfish de____on the act or process of making up someone's mind about something; a choice or judgment reached after considering options an informal photograph, especially one 29. take a sn ot n. taken quickly 30. extreme tem res the degree of hotness or coldness of a n. thing or place the breaking or cracking of a rigid 31. risk of bone fr res n. material or object such as bone 32. wi____re spread a large, uncontrolled fire that spreads n. quickly through a natural area such as a forest, grassland, or mountain slope a substance that is typically burned to 33. smokeless f I n. generate heat or energy 34. eff_____ly combined adv. in a way that produces maximum output with minimum effort or expense

ANSWERS: 24. identify, 25. oxide, 26. cave, 27. tundra, 28. decision, 29. snapshot, 30. temperature, 31. fracture, 32. wildfire, 33. fuel, 34. efficiently, 35. locate

ν.

35. lo___e a tumor

to specify or determine the exact

position of someone or something

36.	a tron of a culture	n.	a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society
37.	agile sqel	n.	a small to medium-sized rodent with a bushy tail, found in almost every part of the world
38.	frre test	n.	the breaking or cracking of a rigid material or object such as bone
39.	skon hand	n.	the structure of bones in a human or animal body, or a framework of bones or other material that supports a plant
40.	have a ste job	adj.	firm and steady; not easily moved, disturbed, or changed
41.	establish his kim	n.	the country ruled by a king or queen
42.	unr the truth	<i>v</i> .	to remove the cover from something; to discover something previously unseen or hidden
43.	ry entirely on him	<i>v</i> .	to require a specific thing or the assistance and support of someone or something to continue, run properly, or succeed.
44.	the fre of the policy	n.	a strong border or structure of the wood, metal, etc. that surrounds something such as a picture, door, or window
45.	int brain	adj.	undamaged and complete
46.	tron cubic feet	n.	the number 1,000,000,000,000; a million million

ANSWERS: 36. tradition, 37. squirrel, 38. fracture, 39. skeleton, 40. stable, 41. kingdom, 42. uncover, 43. rely, 44. frame, 45. intact, 46. trillion

47.	ern control	n.	the wearing away of rock, soil, or land by natural processes such as wind or water
48.	metsm enzyme	n.	the set of chemical reactions in cells or organisms that are necessary for life-sustaining
49.	woy hair	adj.	covered with thick, soft, and often curly hair or fibers; lacking clarity or precision
50.	este this chicken to weigh three pounds	<i>v</i> .	to guess or calculate the cost, size, value, etc. of something
51.	dese into simpler molecules	ν.	to break down or cause to break down over time into simpler substances or elements
52.	int forestland	adj.	undamaged and complete
53.	woolly mah	adj.	exceedingly large or extensive; (noun) any of numerous extinct elephants widely distributed in the Pleistocene
54.	subng temperature	adj.	below the freezing point (32 F or 0 C)
55.	domesticated reer	n.	a large deer with branched antlers found in northern regions, often domesticated and used for transportation or as a source of food
56.	pre-Christian ant	adj.	relating to the long ago, particularly the historical period preceding the fall of the Western Roman Empire; very old
57.	nee deeper against him	<i>v</i> .	to settle comfortably or cozily into a place
58.	extary ability	adj.	exceptional, unexpected, very unusual; surpassing the ordinary or usual

ANSWERS: 47. erosion, 48. metabolism, 49. woolly, 50. estimate, 51. decompose, 52. intact, 53. mammoth, 54. subfreezing, 55. reindeer, 56. ancient, 57. nestle, 58. extraordinary

59. tr d a similar path to step or walk on something ν. 60. a picture fr e a strong border or structure of the n. wood, metal, etc. that surrounds something such as a picture, door, or window 61. find unm_____ble evidence adj. clearly recognizable; impossible to mistake or misunderstand 62. ca___n dioxide a chemical element that can be found in pure form as diamond or graphite, and it is also an essential part of coal and oil and is found in all plants and animals a large organized community of people 63. na n-state living in a particular country or region and having a particular culture 64. a reg____te sinner to improve or renew an area, institution, ν. system, etc., especially by making it more active or successful 65. a peaceful la pe an expanse of scenery that can be seen in a single view; a large area of land, especially in the country and relating to its appearance 66. ready to co____se to fall down or give way suddenly, often after breaking apart to make something happen suddenly; to 67. tr___r a biochemical response cause something such as a device, machine, etc. to function 68. ar___c ice adj. of or relating to the region around the North Pole or the Arctic Ocean; very cold

ANSWERS: 59. tread, 60. frame, 61. unmistakable, 62. carbon, 63. nation, 64. regenerate, 65. landscape, 66. collapse, 67. trigger, 68. arctic

69.	at incle	e speed	adj.	unbelievable; enormous
70.	ten map		n.	the physical features of a piece of land, including hills, valleys, rivers, and forests
71.	mici	sms in his gut	n.	a very small living thing that may exist in its single-celled form or as a colony of cells and is too small to be seen without a microscope
72.	faring	g consequences	adj.	having a wide or significant impact or influence
73.	exe spo	rts	adj.	very great in amount or degree
74.	burning of fo_	I fuels	n.	any preserved remains, impression, or trace of any once-living thing that has become hard and turned into rock
75.	parched sl		<i>n</i> .	the top layer of Earth in which plants grow
76.	nee in a d	cozy spot	<i>v</i> .	to settle comfortably or cozily into a place
77.	hemoglobin m	netsm	n.	the set of chemical reactions in cells or organisms that are necessary for life-sustaining
78.	the yid on t	the bond	n.	the total output of crops, profits, etc. that are produced; (verb) to produce or supply helpful something, such as a profit, an amount of food, or information
79.	customer with histories	n incte credit	adj.	not having all the necessary or appropriate parts; not yet finished
80.	water re	_ir	n.	a natural or artificial lake used to store water for community use; a large or extra supply of something

ANSWERS: 69. incredible, 70. terrain, 71. microorganism, 72. far-reaching, 73. extreme, 74. fossil, 75. soil, 76. nestle, 77. metabolism, 78. yield, 79. incomplete, 80. reservoir

81.	the steel skon of a building	n.	the structure of bones in a human or animal body, or a framework of bones or other material that supports a plant
82.	exd the warranty	<i>v</i> .	to broaden in scope, range, or area
83.	p_p company	n.	a young dog, seal, or other animals
84.	biomass fI	n.	a substance that is typically burned to generate heat or energy
85.	the dity policy of the university	n.	the quality or fact of many different types of things or people being included in something; a range of different things or people
86.	then national security	<i>v</i> .	to utter intentions of injury or punishment against someone
87.	perst area	n.	a layer of soil that is permanently below freezing, usually in polar regions
88.	red-nosed reer	n.	a large deer with branched antlers found in northern regions, often domesticated and used for transportation or as a source of food
89.	recct the original text	<i>v</i> .	to build or form something again that has been damaged or destroyed
90.	skal system	adj.	of, relating to, or forming a skeleton (= frame of bones); very thin or emaciated
91.	a reir of facts	n.	a natural or artificial lake used to store water for community use; a large or extra supply of something
92.	sls retentive of moisture	n.	the top layer of Earth in which plants grow

ANSWERS: 81. skeleton, 82. extend, 83. pup, 84. fuel, 85. diversity, 86. threaten, 87. permafrost, 88. reindeer, 89. reconstruct, 90. skeletal, 91. reservoir, 92. soil

- adj. of or derived from biological substance; producing plants and animals for food and other items without the use of synthetic chemicals
- adj. very great in amount or degree
- n. the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work

ANSWERS: 93. terrain, 94. herder, 95. crystal, 96. mammoth, 97. tread, 98. calf, 99. lightning, 100. organic, 101. extreme, 102. atmosphere

101. ex___e weather events

102. carbon dioxide in the atm re

103. fld advisory	<i>n</i> .	a large amount of water flowing beyond its normal limits; an overwhelming number or amount
104. deon authority	n.	the act or process of making up someone's mind about something; a choice or judgment reached after considering options
105. a subordinate kim	n.	the country ruled by a king or queen
106. indus crop	adj.	someone or something that is native to or occurring naturally in a particular place
107. manually ope a machine	ν.	to work in a particular way; to supervise something
108. ener a crisis	v.	to face something, particularly something unpleasant or difficult, while attempting to do something else; to meet, especially unexpectedly
109. long-ext volcano	adj.	no longer in existence
110. a fld of questions	n.	a large amount of water flowing beyond its normal limits; an overwhelming number or amount
111. liquid crl	n.	a solid material with many even sides that is formed naturally when the substance becomes solid and has a highly regular atomic structure; clear and colorless glass made of almost pure silica
112. coal combination of funds	adj.	belonging to or used by a group rather than individuals: for common use

ANSWERS: 103. flood, 104. decision, 105. kingdom, 106. indigenous, 107. operate, 108. encounter, 109. extinct, 110. flood, 111. crystal, 112. communal

- 113. a desirable ou____e
- 114. a convivial atm____re
- 115. gray sq____el
- 116. high ar___c
- 117. a fe t for the eyes
- 118. a facial ti___e
- 119. a seafaring na___n
- 120. t__t a chair
- 121. domiciliary c__es
- 122. id____fy handwriting
- 123. ca n emission

- *n.* the result or effect of an action, event, etc.
- the mass of air that surrounds the Earth; the pervading tone or mood of a place, situation, or creative work
- a small to medium-sized rodent with a bushy tail, found in almost every part of the world
- adj. of or relating to the region around the North Pole or the Arctic Ocean; very cold
- n. a large meal, typically one served on a special occasion
- an ensemble of similar cells of the animal or plant that together carry out a specific function
- a large organized community of people living in a particular country or region and having a particular culture
- v. to incline or bend from a vertical position; (noun) the act of inclining or the state of being inclined or leaning to one side
- a large hole in the side of a hill, cliff, mountain, or under the ground
- v. to recognize someone or something and say or prove who or what they are
- a chemical element that can be found in pure form as diamond or graphite, and it is also an essential part of coal and oil and is found in all plants and animals

ANSWERS: 113. outcome, 114. atmosphere, 115. squirrel, 116. arctic, 117. feast, 118. tissue, 119. nation, 120. tilt, 121. cave, 122. identify, 123. carbon

124. exotic plants in a grese	n.	a building with walls and roof made chiefly of transparent material, such as glass, for growing plants in
125. loe a missing pet	<i>v</i> .	to specify or determine the exact position of someone or something
126. ene his feet	<i>v</i> .	to enclose or cover something in a protective or decorative layer
127. arson-caused wire	n.	a large, uncontrolled fire that spreads quickly through a natural area such as a forest, grassland, or mountain slope
128. atmospheric mee	n.	a chemical compound with the chemical formula CH4 with no smell or color, often used as a fuel
129. playful p_p	n.	a young dog, seal, or other animals
130. obsolete fosed ways	adj.	transformed into a fossil (= something preserved in rock for a very long period) or preserved in the form of a fossil; antiquated or inflexible
131. the DNA sece	n.	a series of related events, actions, numbers, etc., which have a particular order
132. wind ern	n.	the wearing away of rock, soil, or land by natural processes such as wind or water
133. extte the results	<i>v</i> .	to guess or think about what might happen or estimate something using the facts that you have now
134. seminomadic hers	n.	a person who takes care of and manages a herd of livestock, such as cows, sheep, or goats

ANSWERS: 124. greenhouse, 125. locate, 126. encase, 127. wildfire, 128. methane, 129. pup, 130. fossilized, 131. sequence, 132. erosion, 133. extrapolate, 134. herder

135. on the tt	<i>v</i> .	to incline or bend from a vertical position; (noun) the act of inclining or the state of being inclined or leaning to one side
136. prve a country's heritage	<i>v</i> .	to keep or maintain a particular quality, feature, etc., especially to prevent it from decaying, being damaged, or being destroyed
137. northern hemre	n.	half of the terrestrial globe; half of a sphere
138. prevent a lade	n.	a large, sudden movement of a mass of rock, earth, or other material down a slope
139. baby cf	n.	a young cow, bull, or other domestic bovine animals
140. recct an image	v.	to build or form something again that has been damaged or destroyed
141. coal swimming pool	adj.	belonging to or used by a group rather than individuals; for common use
142. unmble difference	adj.	clearly recognizable; impossible to mistake or misunderstand
143. indus peoples	adj.	someone or something that is native to or occurring naturally in a particular place
144. the remle breadth of knowledge	adj.	worthy of attention because unusual or special
145. then a healthy relationship	<i>v</i> .	to utter intentions of injury or punishment against someone

ANSWERS: 135. tilt, 136. preserve, 137. hemisphere, 138. landslide, 139. calf, 140. reconstruct, 141. communal, 142. unmistakable, 143. indigenous, 144. remarkable, 145. threaten

146. tu a biome a vast, treeless, and typically frozen n. plain in the Arctic regions, where the subsoil is permanently frozen 147. en____er my health to put someone or something in a risky ν. situation 148. loss of muscle ti___e an ensemble of similar cells of the n. animal or plant that together carry out a specific function 149. t w relations between countries to become less rigid or hostile; to melt, soften, or become more friendly 150. ext____ary weather adj. exceptional, unexpected, very unusual; surpassing the ordinary or usual 151. sa___n fishery a type of fish that is commonly found in n. the North Atlantic and North Pacific oceans small amounts of liquid, especially 152. mo____re level n. water, that are present in or absorbed by a substance 153. streaks of li____ng a flash, or several flashes, of light that n. accompanies an electric discharge in the atmosphere, or something resembling such a flash the total output of crops, profits, etc. 154. corn yi d that are produced; (verb) to produce or supply helpful something, such as a profit, an amount of food, or information 155. a cold cl____e the weather in a particular location averaged over some long period 156. re___e CO2 into the air to set free or allow to escape from ν.

ANSWERS: 146. tundra, 147. endanger, 148. tissue, 149. thaw, 150. extraordinary, 151. salmon, 152. moisture, 153. lightning, 154. yield, 155. climate, 156. release

confinement

157. emissions of grese gases	n.	a building with walls and roof made chiefly of transparent material, such as glass, for growing plants in
158. ree a prisoner	v.	to set free or allow to escape from confinement
159. the stock market cosed	v.	to fall down or give way suddenly, often after breaking apart
160. tw out a glacier	<i>v</i> .	to become less rigid or hostile; to melt, soften, or become more friendly
161. a fosed grove	adj.	transformed into a fossil (= something preserved in rock for a very long period) or preserved in the form of a fossil; antiquated or inflexible
162. ener a close relationship	<i>v</i> .	to put someone or something in a risky situation
163. preic settlements	adj.	belonging to or existing in times before recorded history; no longer fashionable
164. lape painting	n.	an expanse of scenery that can be seen in a single view; a large area of land, especially in the country and relating to its appearance
165. by in the earth	ν.	to place a dead body in the ground, grave, or tomb
166. san migration	n.	a type of fish that is commonly found in the North Atlantic and North Pacific oceans
167. mae amounts	adj.	enormous amount; very heavy and solid
168. cell and molecular biy	n.	the scientific study of life and the natural processes of living things

ANSWERS: 157. greenhouse, 158. release, 159. collapse, 160. thaw, 161. fossilized, 162. endanger, 163. prehistoric, 164. landscape, 165. bury, 166. salmon, 167. massive, 168. biology

- 169. pr____ve my strength
- 170. many tr___ons of dollars
- 171. en____er a storm
- 172. lot of mo____re
- 173. exit from a l p
- 174. high fr cy
- 175. de se matter
- 176. a nightly fe__t
- 177. r__y on convenience stores
- 178. a fo I leaf

- v. to keep or maintain a particular quality, feature, etc., especially to prevent it from decaying, being damaged, or being destroyed
- n. the number 1,000,000,000,000; a million million
- v. to face something, particularly something unpleasant or difficult, while attempting to do something else; to meet, especially unexpectedly
- small amounts of liquid, especially water, that are present in or absorbed by a substance
- n. a shape like a curve or a circle made by something long and thin, such as a piece of string, that bends round and crosses itself
- n. an ordered array of colors into which a light beam can be split
- v. to break down or cause to break down over time into simpler substances or elements
- n. a large meal, typically one served on a special occasion
- v. to require a specific thing or the assistance and support of someone or something to continue, run properly, or succeed.
- any preserved remains, impression, or trace of any once-living thing that has become hard and turned into rock

ANSWERS: 169. preserve, 170. trillion, 171. encounter, 172. moisture, 173. loop, 174. frequency, 175. decompose, 176. feast, 177. rely, 178. fossil

179. skal muscles	adj.	of, relating to, or forming a skeleton (= frame of bones); very thin or emaciated
180. bear d_n	n.	a wild animal's lair or hiding places, such as a fox or bear
181. regte bone tissue	v.	to improve or renew an area, institution, system, etc., especially by making it more active or successful
182. thawing perst	n.	a layer of soil that is permanently below freezing, usually in polar regions
183. lade victory	n.	a large, sudden movement of a mass of rock, earth, or other material down a slope
184. plt like the Earth	n.	any of the nine large celestial bodies that circle in the solar system; any celestial body that revolves around a star
185. pathogenic mic	_ism n.	a very small living thing that may exist in its single-celled form or as a colony o cells and is too small to be seen without a microscope
186. improved student ou	es n.	the result or effect of an action, event, etc.
187. este a fair value	v.	to guess or calculate the cost, size, value, etc. of something
188. IT infure	n.	the basic systems, services, or features that are necessary for an organization or country, such as transport and power supplies
189. achieve faring re	eform <i>adj</i> .	having a wide or significant impact or influence

ANSWERS: 179. skeletal, 180. den, 181. regenerate, 182. permafrost, 183. landslide, 184. planet, 185. microorganism, 186. outcome, 187. estimate, 188. infrastructure, 189. far-reaching

190. lingual dity	n.	the quality or fact of many different types of things or people being included in something; a range of different things or people
191. eat orc food	adj.	of or derived from biological substance; producing plants and animals for food and other items without the use of synthetic chemicals
192. extte animal dose	ν.	to guess or think about what might happen or estimate something using the facts that you have now
193. buw into a mystery	ν.	to excavate a hole or make a tunnel in the ground by digging, typically for use as a dwelling of an animal
194. unr a potential problem	ν.	to remove the cover from something; to discover something previously unseen or hidden
195. sent runoff	n.	the substance that forms a solid layer at the bottom of the liquid
196. remle achievement	adj.	worthy of attention because unusual or special
197. a scientific diry	n.	the act or process of finding information, a place, or an object, or learning about something that was previously not known
198. gambling d_n	n.	a wild animal's lair or hiding places, such as a fox or bear
199. exd a line	<i>v</i> .	to broaden in scope, range, or area
200. evolutionary biy	n.	the scientific study of life and the natural processes of living things

ANSWERS: 190. diversity, 191. organic, 192. extrapolate, 193. burrow, 194. uncover, 195. sediment, 196. remarkable, 197. discovery, 198. den, 199. extend, 200. biology

201. from immal times	adj.	extending back beyond memory or record; very old
202. incle amount	adj.	unbelievable; enormous
203. cerebral hemre	n.	half of the terrestrial globe; half of a sphere
204. buw through the forest	ν.	to excavate a hole or make a tunnel in the ground by digging, typically for use as a dwelling of an animal
205. tyI leader	adj.	having the usual characteristics or traits of a specific group of things
206. against tron	n.	a belief, custom, or way of doing something that has been passed down from generation to generation within a group or society
207. fairly tyI symptoms	adj.	having the usual characteristics or traits of a specific group of things
208. mir industry	n.	a person who works in a mine (= excavation in the Earth from which ores and minerals are extracted), especially one who extracts coal, minerals, or precious metals from the Earth
209. the sece of the seasons	n.	a series of related events, actions, numbers, etc., which have a particular order
210. the great diry 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
211. by emotion	ν.	to place a dead body in the ground, grave, or tomb

ANSWERS: 201. immemorial, 202. incredible, 203. hemisphere, 204. burrow, 205. typical, 206. tradition, 207. typical, 208. miner, 209. sequence, 210. discovery, 211. bury

Vocab-Builder Ref from	"Brendan Rogers and Jessica Howard: What's hidden in Arctic ice?	TED Talk" ((106 words)

212. inf____ure cost

 the basic systems, services, or features that are necessary for an organization or country, such as transport and power supplies

ANSWERS: 212. infrastructure

Session 3: Fill in the Blanks

1.	He continued his investigation and soon another crime.
<i>v</i> .	to remove the cover from something; to discover something previously unseer or hidden
2.	The machine pumps up crude oil from a deep underground
n.	a natural or artificial lake used to store water for community use; a large or extra supply of something
3.	Aging societies tend to require huge costs for maintenance.
n.	the basic systems, services, or features that are necessary for an organization or country, such as transport and power supplies
4.	The company's stock gives a high
n.	the total output of crops, profits, etc. that are produced; (verb) to produce or supply helpful something, such as a profit, an amount of food, or information
5.	The researcher criticized the study due to data.
adj	not having all the necessary or appropriate parts; not yet finished
6.	The older man was skinny and and not in good health.
adj	of, relating to, or forming a skeleton (= frame of bones); very thin or emaciated
7.	Many species have become due to habitat destruction and other human activities.
adj	no longer in existence
8.	In junior high school, we had to dissect a frog in class.
n.	the scientific study of life and the natural processes of living things
	SWERS: 1. uncovered, 2. reservoir, 3. infrastructure, 4. yield, 5. incomplete, 6. letal, 7. extinct, 8. biology

ANSWERS: 9. hemisphere, 10. sediments, 11. identify, 12. temperatures, 13. tissue, 14. locate, 15. lightning-fast, 16. feast, 17. pup

adj. someone or something that is native to or occurring naturally in a particular place

77. The _____ plants need to be pollinated by local insects.

ANSWERS: 70. frequency, 71. reconstruct, 72. terrain, 73. extrapolates, 74. regenerate, 75. caves, 76. floods, 77. indigenous