Englist.me

Vocabulary Builder Reference from...

Juna Kollmeier: The most detailed map of galaxies, black holes and stars ever made | TED Talk https://www.ted.com/talks/juna_kollmeier_the_most_d etailed_map_of_galaxies_black_holes_and_stars_ev er_made



All Words

IMPORTANT

This material is a commentary and does not contain any copyrighted material of the reference source. We strongly recommend accessing/buying the reference source at the same time.

Session 1: Word List

monster

 an imaginary creature that is large and has various human and animal parts; someone or something large and powerful

synonym: giant, freak, behemoth

horde of monsters, (2) monster film
 This car has a monster engine.

curiosity

- n. a strong desire to know or learn about somethingsynonym: interest, inquisitiveness, novelty
- (1) boundless **curiosity**, (2) satisfy my intellectual **curiosity** We are motivated by **curiosity** rather than necessity.

fascinate

v. to attract and hold the attention of someone deeply and irresistibly

synonym: captivate, intrigue, mesmerize

(1) **fascinate** the public, (2) **fascinate** the young The magic tricks **fascinated** the children.

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

(1) pre-Christian **ancient**, (2) **ancient** stories

They have been living near water since **ancient** times.

relic

 an object from a previous era, especially one of historical value

synonym: whiff, vestige, antique

(1) historical relic, (2) holy relics

This bronze sword is a **relic** of ancient times.

attempt

 an act or effort of trying to do something, especially something difficult

synonym: endeavor, effort, try

(1) the **attempt** to rescue the hostages, (2) a reckless **attempt**

The third **attempt** was far more successful.

tusk

 a long, pointed tooth, usually found in animals such as elephants, walruses, or wild boars, which protrudes from the mouth and is used as a weapon or for digging

synonym: ivory, tush, horn

(1) **tusk** of an elephant, (2) **tusk-like** tooth

The ivory poacher was arrested for possession of illegal **tusks**.

carving

n. the act or process of cutting or shaping a hard material, such as wood or stone, into a specific form or design

synonym: sculpture, engraving, sculpture

(1) a wood carving, (2) carving instrument

The intricate **carving** on the wooden box was the work of a master craftsman.

neolithic

adj. (also called New Stone Age) the period of human history that followed the end of the last ice age and that is characterized by the development of agriculture and the use of polished stone tools

synonym: ancient, old, primitive

(1) the **neolithic** age, (2) **neolithic** society

The **neolithic** village was located near a river.

tomb

 a large stone structure or underground chamber in which the dead are buried

synonym: grave, burial site, mausoleum

(1) bury in **tomb**, (2) the ancient **tomb**

The **tomb** of the unknown soldier honored the bravery and sacrifice of those who lost their lives in battle.

pile

a collection of objects positioned one on top of another;
 a large sum of something, such as money

synonym: accumulation, heap, stack

(1) a sand pile, (2) the height of a pile

After the party, they had to clean up **piles** of dirty dishes.

clam

- a marine mollusk that burrows and lives on sand or mud, the shell closes with viselike firmness
- (1) giant clam, (2) shuck a clam

The **clam** digs through the sand to a significant depth.

underneath

adv. under or below something else

synonym: below, under, beneath

(1) **underneath** the surface of the water, (2) **underneath** the laughter

The penny fell underneath the piano.

suppose

- v. to think that something is likely to be actual or possible synonym: guess, assume, presume
- (1) **suppose** you're right, (2) **suppose** beforehand What do you **suppose** the culprit's motive was?

dip

v. to put something into a liquid for a short time and take it out again

synonym: dunk, dive, plunge

(1) **dip** a pen in ink, (2) **dip** a chip in the sauce Please **dip** up a bucketful of water from the well.

disk

 a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music

synonym: record, platter, plate

(1) disk drive, (2) disk space

The computer's hard **disk** was full, so she had to delete some files.

controversial

adj. causing a lot of hot public discussion and dispute synonym: contentious, disputed, questionable

(1) **controversial** book, (2) **controversial** policy The issue of the death penalty is highly **controversial**.

astronomer

- n. a physicist who studies astronomysynonym: stargazer, cosmologist, astrophysicist
- amateur astronomer, (2) solar astronomer
 This question has fascinated solar astronomers for decades.

phase

- n. any stage in a series of events, change, or development synonym: degree, stage, step
- (1) enter on the last **phase**, (2) two- **phase** structure The era of the industrial revolution was a crucial **phase** of history.

eclipse

an obscuring of one celestial body by another, often used to describe a lunar or solar eclipse; a period of obscurity or decline, often used to describe a decline in popularity or influence; (verb) to surpass, overshadow, or outshine someone or something

synonym: overshadow, blockout, decadence

(1) partial **eclipse**, (2) **eclipse** a competitor People across the country gathered to watch the solar **eclipse** in wonder and amazement.

galaxy

- n. an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
 synonym: star cluster, nebula, star system
- (1) elliptic galaxy, (2) a galaxy of famous actors

The Milky Way galaxy has numerous water-bearing planets.

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.

disease

 a disorder or illness that affects the body or mind, often characterized by specific symptoms or abnormal functioning of organs or systems

synonym: illness, ailment, affliction

(1) **disease** prevention, (2) **disease** control

The doctor diagnosed him with a rare **disease** that had no known cure.

universe

 everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy

synonym: cosmos, macrocosm

(1) theory of the **universe**, (2) expansion of the **universe** The **universe** is about 13.8 billion years old.

unrelenting

 adj. not easing or slackening in intensity; persistent and unwavering in pursuit of a goal

synonym: relentless, persistent, unyielding

(1) **unrelenting** pressure, (2) **unrelenting** pursuit The **unrelenting** heat made it difficult to sleep.

vary

v. to become different in terms of size, shape, etc.

synonym: alter, contrast, differ

(1) **vary** according to the age, (2) **vary** directly with the price Maximum heart rates **vary** a lot for each individual.

engage

 to attract and keep someone's attention and interest; to participate in or obtain services of something synonym: confront, employ, amuse

- (1) **engage** in environmental protection activities,
- (2) engage a new employee

Many multinational companies are **engaged** in the reconstruction of that country.

battlefield

- n. a place where a battle or conflict is foughtsynonym: warzone, front line, combat area
- (1) **battlefield** casualties, (2) tactics on the **battlefield**The general reviewed the plans for the upcoming battle on the **battlefield**.

core

- n. the most essential or fundamental part of somethingsynonym: center, basis, heart
- (1) the **core** of an apple, (2) **core** business activity
 These gas nebulas are merely newborn galactic **cores**.

involve

- v. to include or affect someone or something as a necessary part of something else
- synonym: implicate, include, engage
- (1) **involve** a lot of paperwork, (2) **involve** a high degree of risk

The investigation **involves** several government agencies and is expected to take several months.

essential

- adj. indispensable; fundamentalsynonym: critical, crucial, basic
- (1) **essential** amino acid, (2) **essential** commodities of life Trial and error is an **essential** part of education.
- a device like a tube in shape containing lenses used to magnify and observe distant objects
- (1) a binocular **telescope**, (2) look through a **telescope** This facility has the largest astronomical **telescope** in the country.

telescope

instrument

 an object used to make musical sounds, such as a piano, guitar, or drum; a tool or device used for a specific activity, particularly in specialist or scientific work

synonym: apparatus, tool, device

(1) musical **instruments**, (2) surgical **instruments**This electronic **instrument** is required to undergo periodic inspections to ensure precision.

brain

 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**.

buddy

- n. a close friend; a partner, especially one of a pair or team synonym: mate, peer, associate
- (1) my golf buddy, (2) buddy movieHe was the first buddy in the military training camp.

precise

adj. sharply exact or accurate or delimited synonym: accurate, exact, distinct

precise analyses, (2) estimate precise costs
 The content is precise and informative for me.

assistant

someone who helps or supports someone else to do a job

synonym: aide, helper, associate

(1) an unwilling **assistant**, (2) **assistant** professor An executive **assistant** director administers each branch.

infinite

adj. unlimited or very great; impossible to measuresynonym: boundless, countless, limitless

infinite appetite, (2) infinite in supply
 The battle had an infinite impact on the nation.

observable

adj. that can be noticed or seen

synonym: visible, perceptible, detectable

(1) observable change, (2) experimentally observable

Any theorem relies on both **observable** fact and assumption.

finite

adj. having a limit or restriction of size, time, etc.

synonym: delimited, defined, limited

(1) finite resources, (2) finite decimal

Human beings have a **finite** lifespan, so we yearn for the idea of immortality.

bestie

 a term of endearment used to describe one's closest friend, a term that connotes a deep and unbreakable bond between the two friends

synonym: friend, pal, buddy

(1) **bestie** bond, (2) longtime **bestie**

I love having a loyal and supportive **bestie** like her in my life.

creative

adj. relating to or involving the use of skill and original and unusual ideas to create something

synonym: imaginative, innovative, inventive

(1) creative writing, (2) barren of creative spirit

All the supervisor has to do is assign tasks that make his subordinates more **creative**.

craftsman

 a skilled worker who creates handmade objects, especially one who works with wood, metal, or other materials

synonym: artisan, mechanic, workman

(1) craftsman skill, (2) a subtle craftsman

The adept **craftsman** carefully carved the wooden figurine with precision and skill.

accomplish

v. to finish or achieve something successfully

synonym: achieve, complete, execute

(1) accomplish a goal, (2) accomplish military operations

Humankind took centuries to **accomplish** true democracy.

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.

digital

adj. processing or storing information as a succession of 1 and 0 to show that a signal is present or missing; relating to the use of computer technology, especially the internet

synonym: numerical, computerized, cyber

(1) a **digital** watch, (2) **digital** electronic signature Sensors convert physical phenomena into **digital** signals.

survey

 an investigation of the opinions, behavior, etc. of a particular group of people, made by asking people questions

synonym: study, examination, poll

(1) a comprehensive **survey**, (2) recent **survey**That **survey** shows that people are accepting the tax increase to some extent.

shepherd

 a person who tends and guards sheep, especially in a rural area

synonym: herder, flock-keeper, sheepdog

(1) **shepherd** boy, (2) sheep without a **shepherd**The **shepherd's** dog helped keep the sheep in line and protect them from predators.

individual

- n. a single person or thing, as distinct from a groupsynonym: person, being, self
- (1) a private **individual**, (2) **individual** freedom
 As an **individual**, he had the right to make his own decisions and live his life as he saw fit.

industrial

adj. of or relating to or resulting from industry synonym: manufacturing, mechanical

(1) beginning of the **industrial** revolution, (2) **industrial** alcohol

Industrial design has become more focused on human nature aspect than ever before.

preserve

 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.

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.

machinery

 a group of large machines or the components of a machine that make it work; social institution functions or structure for doing something

synonym: apparatus, appliance, equipment

(1) heavy **machinery**, (2) inactive **machinery**The **machinery** of audit formally issued a business improvement order.

advance

- v. to go or move forward; to develop in a positive way synonym: progress, boost, come along
- (1) **advance** the technology, (2) **advance** a cooperative relationship

Scientific knowledge will advance significantly with the power

of Al.

frontier

 a border that separates two countries, or the area near this line

synonym: border, boundary, borderland

(1) **frontier** disputes, (2) the Italian **frontier** with Switzerland He worked at the **frontier** of behavioral economics.

divide

- v. to separate or cause to separate into parts or groups synonym: separate, disconnect, split
- (1) **divide** the cake into two pieces, (2) **divide** money equally

Can you divide 123321 by eleven?

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**.

spectrograph

 an instrument that separates light into its component wavelengths and records the distribution of intensities as a graph, used for chemical analysis or to determine the properties of stars and galaxies

synonym: spectrometer, spectroscope, instrument

(1) **spectrograph** analysis, (2) acoustic **spectrograph** The **spectrograph** data showed that the element was composed of multiple spectral lines.

minus

adj. subtracting or taking away; having a value less than zero

synonym: without, lacking, negative

(1) minus sign, (2) minus temperature

The recipe calls for four cups of flour **minus** one tablespoon.

practical

adj. of or connected with actual use or real situation rather than with theory and ideas

synonym: applicable, functional, realistic

(1) practical English, (2) gain practical experience

Her concept is highly **practical** and helpful.

nowhere

adv. not in, at, or to any place; not anywhere

(1) **nowhere** else to go, (2) come out of **nowhere** I've been thinking all day and getting **nowhere**.

unravel

- v. undo twisted, knitted, or woven threads by separating it synonym: separate, unknot, ravel
- (1) **unravel** a knit, (2) **unravel** a plot Detectives are still attempting to **unravel** the mystery of his death.

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.

chase

v. to pursue something or someone to catch or capture them; to go after something vigorously or with determination; (noun) a pursuit or a hunt; a narrow groove or channel cut into a surface, often used for decorative purposes

synonym: pursue, hunt, track

(1) chase a dream, (2) wild goose chase

The police officer **chased** the suspect through the crowded streets until they finally caught him.

perplexing

adj. causing confusion or uncertainty; difficult to understand or explain; puzzling or mystifying

synonym: puzzling, confusing, baffling

(1) **perplexing** situation, (2) **perplexing** problem

The novel's ambiguous ending left readers with a **perplexing** message.

mathematics

n. the science dealing with the logic of quantities, shapes, spaces, and arrangement

synonym: arithmetic, calculation, calculus

(1) a good grounding in **mathematics**, (2) **mathematics** competition

He has a flair for mathematics.

incarnate

adj. in bodily form; embodiedsynonym: embodied, personified, manifested

(1) incarnate spirit, (2) a devil incarnate

The ancient people worshiped the **incarnate** deity.

animate

- v. to make something full of interest and energy synonym: invigorate, energize, enliven
- (1) **animate** the body, (2) **animate** his soul

 The positive attitude of the supervisor **animated** the discussion.

corridor

- a hallway or passageway, especially one connecting rooms or areas within a building or structure
- synonym: hallway, passageway, aisle(1) walk along a corridor, (2) air corridor

The long **corridor** was filled with people rushing to get to their rooms before the meeting began.

weird

adj. extraordinary, unexpected, or difficult to explain *synonym*: bizarre, creepy, peculiar

a weird dress,
 the state of being weird
 computer has been acting weird recently.

smoosh

v. to crush or flatten something; to press or squeeze something into a soft or shapeless mass

synonym: squash, mash, flatten

(1) **smooshed** my sandwich, (2) **smoosh** the delicate flowers

She had to **smoosh** the berries to make a jam, but it was

worth it for the delicious taste.

dense

adj. containing a large number of people or something with little space between them

synonym: heavy, thick, idiotic

(1) nutrient- dense foods, (2) dense forests

The entire mountain is covered in **dense** rainforest.

emit

v. to give off or send out something such as light, heat, sound, gas, etc.

synonym: give off, radiate, expel

(1) emit a gamma ray, (2) emit air pollution

During the unloading, the container box **emits** a clicking sound.

X-ray

 a type of electromagnetic radiation that has a wavelength shorter than visible light allowing hidden objects such as bones and organs inside the body to be photographed

synonym: roentgenogram, photon radiography

(1) X-ray scan, (2) an X-ray of arteries

The doctor ordered an **X-ray** to see if there was any damage to the bones.

optical

adj. of or relating to or light or the ability to see; (noun) the science of light and vision, and to instruments and techniques used in the study and application of light

synonym: visual, ocular

(1) new optical glasses, (2) optical fiber

The **optical** illusion made it appear like the building was floating in midair.

massive

adj. enormous amount; very heavy and solid

synonym: enormous, giant, immense

(1) **massive** amounts, (2) **massive** stars

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

disturb

v. to interrupt someone who is trying to work, sleep, etc.

synonym: agitate, bother, intrude

(1) disturb the peace, (2) disturb his sleep

Tourists frequently **disturb** the island's delicate natural balance.

punk

 a type of a loud, fast-moving, and aggressive form of rock music originating in the 1970s; an aggressive and violent young man or boy

synonym: hoodlum, bully, thug

(1) **punk** rock, (2) clothes of the **punk** style

We are never intimidated when dealing with young punks.

bizarre

adj. very strange or unusual

synonym: abnormal, freaky, outlandish

(1) the story is **bizarre**, (2) **bizarre** behavior

The truth was more **bizarre** than expected.

tremendous

adj. very great in degree or extent or amount or impact; extremely good

synonym: enormous, giant, immense

(1) **tremendous** amount, (2) **tremendous** popularity

We had a **tremendous** time yesterday.

transformation

 a complete change in form, nature, or appearance of someone or something

synonym: change, conversion, renewal

(1) the **transformation** of a tadpole into a frog, (2) cast a **transformation** spell

Understanding unitary **transformations** of a normal matrix require considerable mathematical sophistication.

belly

n. the front part of the body below the chest, containing the stomach and bowels; the rounded or curved part of an object, such as a ship or aircraft

synonym: stomach, abdomen, gut

(1) the **belly** of the ship, (2) with an empty **belly**

She had a tattoo just above her belly button.

zoom

v. to move along very quickly; (noun) the act of rising upward into the air

synonym: move quickly, dive, buzz

(1) **zoom** in on a photo, (2) **zoom** lens

He **zoomed** back in time to the soccer game.

process

n. a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products

synonym: procedure, method, system

(1) **process** improvement, (2) decision-making **process**The **process** for applying for a visa can be lengthy and complicated.

vicious

adj. having or showing a desire to cause harm to others;having the nature of vice

synonym: malicious, spiteful, malevolent

(1) **vicious** attack, (2) **vicious** deflationary spiral
The **vicious** dog barked and growled at anyone who came
near its territory.

ward

- n. a room in a hospital for patients requiring special caresynonym: room, division, unit
- (1) a children's ward, (2) ward nurse

The patient was moved to the intensive care **ward** for further treatment.

cleave

 to split or divide something into two parts, often with force; to adhere or cling to something closely and cohesively

synonym: split, sever, cleave

(1) **cleave** meat, (2) **cleave** the party

He swung the axe with all his might to cleave the wood in

half.

arsenal

 a collection of weapons or military equipment stored in preparation for war or conflict; a collection of resources or tools available for use in a particular field or endeavor

synonym: storage, stockpile, armory

(1) **arsenal** of knowledge, (2) political **arsenal**The police found a hidden **arsenal** of weapons in the suspect's house.

observatory

- a building designed and equipped to observe the planets, the stars, the weather, etc.
- (1) space **observatory**, (2) a meteorological **observatory** That astronomical **observatory** stands at the top of the mountain.

meter

a device used to measure the amount of a particular substance or attribute, such as length, volume, or time; (prosody) the accent in a metrical foot of verse

synonym: gauge, indicator, rhythm

(1) a gas meter, (2) poetic meter

The **meter** on the wall showed that the room was three meters long.

capture

v. to catch a person or an animal and confine them in an area which they cannot escape

synonym: catch, arrest, imprison

(1) **capture** a glimpse, (2) **capture** customers' hearts I was able to **capture** the moment on film.

aperture

 an opening or hole, especially one that is narrow or slitlike

synonym: opening, hole, gap

(1) small- **aperture** telescope, (2) an automatic **aperture** The camera's **aperture** controls how much light enters the lens.

focal

adj. relating to an important or central point or area; sharp or precise in focus or detail

synonym: central, main, primary

(1) **focal** neurological deficit, (2) **focal** length

The photographer adjusted the camera to focus on the image's **focal** point.

entirely

adv. completely

synonym: completely, fully, totally

(1) **entirely** satisfied with the meal, (2) he was **entirely** to blame

Later, his claim was found to be **entirely** false.

robotic

adj. of or relating to mechanical robots; (robotics) the interdisciplinary branch of computer science and engineering with the practical use of robots

synonym: automated, mechanical, laborsaving

(1) **robotic** arm, (2) **robotic** guide operation

The surgeon removed the tumor using **robotic** video assistance.

fierce

adj. severe and violent in a way that is frightening

synonym: ferocious, convulsive, forceful

(1) fierce competition, (2) a fierce animal

The **fierce** thunders echoed across the plain.

terrifying

adj. very frightening or intimidating

synonym: frightening, intimidating, alarming

(1) **terrifying** experience, (2) **terrifying** events

Large earthquakes often generate terrifying tsunamis.

breath

the air that is taken into and expelled from your lungs;
 the process of taking into and expelling air from your lungs

synonym: air, puff, whiff

(1) hold your **breath**, (2) **breath** of wind

He bated his **breath** when talking about this affair.

trigger

- v. to make something happen suddenly; to cause something such as a device, machine, etc. to functionsynonym: activate, spark, drive
- (1) **trigger** a biochemical response, (2) **trigger** inflation The incident **triggered** a political controversy.

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.

apology

 an act of saying or writing that you are sorry for something that has been done wrong or that causes a trouble

synonym: regret, excuse, plea

(1) genuine **apology**, (2) accept his **apology**She wrote a letter of **apology** to the renter.

blade

 the flat part of a knife, weapon, or machine with a very thin edge used for cutting

synonym: knife, sword, cutter

a blade of grass, (2) the blade of a turbine
 The blade of the katana itself is still in excellent condition.

explode

v. to burst or break open violently and noisily; to cause something to burst or break open

synonym: detonate, blast, rupture

(1) **explode** in anger, (2) **explode** in popularity The old building **exploded** in a fiery inferno.

cosmic

- adj. relating to the universe or cosmos; vast or limitless synonym: astronomical, celestial, outer-space
- (1) second **cosmic** velocity, (2) **cosmic** background radiation

Cosmic rays are high-energy particles that originate from outside the solar system.

backyard

- n. a whole space behind and belonging to a housesynonym: courtyard, garden
- (1) play in the **backyard**, (2) **backyard** barbecue He grows vegetables in his **backyard**.

encode

 to convert information into a code or format suitable for storage or transmission

synonym: transcribe, convert

(1) **encode** data, (2) **encode** information

The software can **encode** and decode encrypted messages.

physics

- *n.* the science of matter and energy and their interactions
- (1) nuclear physics, (2) laws of physicsHe studied the physics of radiation.

mow

 to cut down and trim grass or other vegetation, usually with a machine such as a lawnmower; to cut down or harvest crops

synonym: cut, trim, clip

(1) mow the field, (2) mow a yard

My father likes to mow the lawn early on Saturday mornings.

recap

v. to repeat or summarize what has been said, decided, etc.

synonym: outline, summarize, abstract

(1) **recap** key points, (2) **recap** briefly

Let me quickly **recap** these results.

genius

someone who has exceptional intellectual ability and originality

synonym: brilliance, brainiac, acumen

a person of **genius**,
 a **genius** for music
 mozart was a musical **genius**.

Page 20 / 65

analyze

 to think about in-depth and evaluate to discover essential features or meaning

synonym: explore, examine, investigate

(1) **analyze** a chemical compound, (2) **analyze** your real motives

The teacher attempted to **analyze** the root cause of our mistake.

incredibly

 adv. in a way that is very difficult to believe; exceedingly or extremely

synonym: enormously, exceptionally, extraordinarily

(1) **incredibly** cheerful character, (2) get **incredibly** insecure

Several cities are experiencing **incredibly** high unemployment rates.

mandate

- an official or authoritative instruction or command; a commission or authority to carry out a particular task
 synonym: command, instruction, authority
- (1) **mandate** obligation, (2) an Imperial **mandate**The **mandate** given to the new government is to improve the economy.

foundation

n. the lowest load-bearing part of a building, typically below ground level; a fundamental basis or principle upon which something is built or established; an organization that provides funding or support for charitable or educational purposes

synonym: base, support, groundwork

(1) foundation course, (2) weak foundation

The **foundation** of the building was cracked and needed to be repaired.

publicly

adv. in a manner accessible to or observable by the public;by the government

synonym: candidly, openly, honestly

(1) publicly accessible record, (2) publicly financed

schools

She **publicly** denounced the government's mishandling of the economic crisis.

broad

adj. very wide; general

synonym: wide, expansive, comprehensive

(1) attract broad attention, (2) a broad mind

He accumulated wealth across a **broad** spectrum of assets.

clap

v. to hit your hands together and make a short and loud noise, mainly to show your approval or praise

synonym: applaud, spat, acclaim

(1) clap my hands, (2) clap a book shut

We clapped along with the singer's song.

warrior

n. a person who engaged in or experienced warfare, especially in the past

synonym: fighter, soldier, combatant

(1) armored warrior, (2) warrior spirit

The poem depicts the heroics of a legendary warrior.

fancy

v. to want to do or have something; (noun) something that many people believe but that is false, or that does not exist; imagination or fantasy

synonym: imagine, visualize, (noun) fantasy

(1) fancy a cup of coffee, (2) a flight of fancy

I don't **fancy** acting in such an important role.

astrophysics

- the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe
- (1) **astrophysics** research, (2) neutrino **astrophysics**He was studying **astrophysics** in an attempt to understand the origins of the universe.

participate

v. to take part in something

synonym: take part, partake, enter

(1) **participate** fully in conversation, (2) **participate** in the program

The majority of students actively **participated** in the college's intramural sports program.

hypothesis

 a proposed idea or explanation that is based on a few known facts but has not yet been proven to be true or accurate

synonym: assumption, conjecture, theory

(1) test my **hypothesis**, (2) a bold **hypothesis**. This evidence supports the big-bang **hypothesis**.

creature

n. a living being, especially an animal synonym: being, animal, organism

(1) creature of habit, (2) artificial creature

The deep sea **creature** was unlike anything the scientists had ever seen before.

rubble

n. fragments of rock, stone, or other materials that remain after a building or other structure has been destroyed or demolished; the remains of something that has been broken down or destroyed

synonym: debris, ruins, wreckage

clear away rubble, (2) rubble-strewn road
 After the earthquake, the city was left in a pile of rubble.

dot

- n. a very small circular mark, especially one that is printed synonym: drop, dab, fleck
- (1) connecting the **dots**, (2) **dot** blot method

 The wallpaper had a pattern of pink **dots** on a white surface.

arrange

- v. to plan, prepare for, and carry out something synonym: set up, order, organize
- (1) arrange the meeting, (2) the list was arranged

Page 23 / 65

alphabetically

I need to arrange plans with him for the celebration.

relative

adj. considered and evaluated through comparison with something else

synonym: comparative, proximate, congeneric

(1) a remote relative, (2) relative factors

Most countries prohibit sexual activity between certain close **relatives**.

Session 2: Spelling

1.	expansion of the unse	n.	everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy
2.	conial book	adj.	causing a lot of hot public discussion and dispute
3.	prs improvement	n.	a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
4.	a wed dress	adj.	extraordinary, unexpected, or difficult to explain
5.	a subtle cran	n.	a skilled worker who creates handmade objects, especially one who works with wood, metal, or other materials
6.	bard barbecue	n.	a whole space behind and belonging to a house
7.	astics research	n.	the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe
8.	cag instrument	n.	the act or process of cutting or shaping a hard material, such as wood or stone, into a specific form or design

ANSWERS: 1. universe, 2. controversial, 3. process, 4. weird, 5. craftsman, 6. backyard, 7. astrophysics, 8. carving

ANSWERS: 9. robotic, 10. aperture, 11. battlefield, 12. arsenal, 13. fascinate, 14. precise, 15. vary, 16. bestie, 17. disturb, 18. creative, 19. instrument

ANSWERS: 20. divide, 21. belly, 22. foundation, 23. advance, 24. fancy, 25. planet, 26. instrument, 27. core

36. connecting the d ts

38. ca___e a glimpse

37. un____I a plot

a very small circular mark, especially n. one that is printed

undo twisted, knitted, or woven threads ν. by separating it

to catch a person or an animal and ν. confine them in an area which they cannot escape

ANSWERS: 28. hemisphere, 29. perplexing, 30. suppose, 31. individual, 32. shepherd, 33. capture, 34. rubble, 35. monster, 36. dot, 37. unravel, 38. capture

ANSWERS: 39. animate, 40. buddy, 41. clam, 42. mandate, 43. industrial, 44. warn, 45. relic, 46. warrior, 47. perplexing, 48. vicious, 49. bizarre, 50. disk

ANSWERS: 51. arrange, 52. controversial, 53. X-ray, 54. observable, 55. essential, 56. terrifying, 57. fascinate, 58. creature, 59. apology, 60. participate, 61. finite, 62. encode, 63. robotic

smoosh, 70. pile, 71. meter, 72. nowhere, 73. brain

physics, 80. weird, 81. emit, 82. relative, 83. engage, 84. spectrograph

ANSWERS: 85. meter, 86. cleave, 87. engage, 88. participate, 89. optical, 90. dip, 91. astronomer, 92. bestie, 93. individual, 94. mathematics

ANSWERS: 115. underneath, 116. emit, 117. cosmic, 118. survey, 119. unrelenting, 120. accomplish, 121. corridor, 122. clam, 123. unrelenting, 124. extraordinary, 125. industrial

ANSWERS: 126. machinery, 127. physics, 128. breath, 129. tomb, 130. infinite, 131. pile, 132. fierce, 133. minus, 134. neolithic, 135. foundation

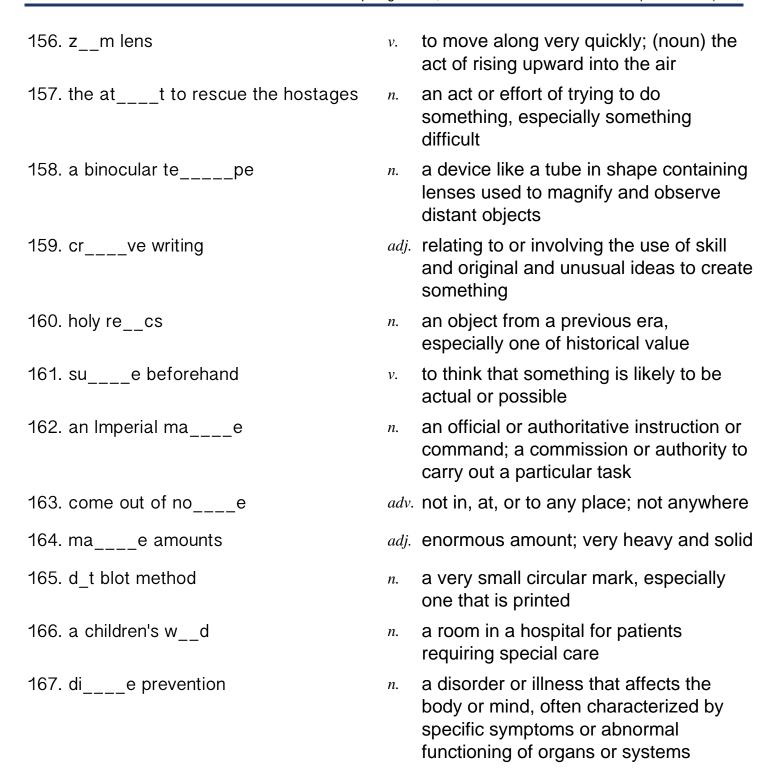
purposes

an organization that provides funding or

support for charitable or educational

ANSWERS: 136. backyard, 137. chase, 138. hemisphere, 139. apology, 140. breath, 141. mow, 142. broad, 143. belly, 144. arrange, 145. phase

ANSWERS: 146. machinery, 147. practical, 148. assistant, 149. punk, 150. publicly, 151. involve, 152. discovery, 153. craftsman, 154. unravel, 155. optical



ANSWERS: 156. zoom, 157. attempt, 158. telescope, 159. creative, 160. relic, 161. suppose, 162. mandate, 163. nowhere, 164. massive, 165. dot, 166. ward, 167. disease

ANSWERS: 168. incarnate, 169. disk, 170. assistant, 171. tusk, 172. curiosity, 173. focal, 174. attempt, 175. bizarre, 176. tremendous, 177. fossil, 178. ancient

179. my golf buy	n.	a close friend; a partner, especially one of a pair or team
180. two-phe structure	n.	any stage in a series of events, change, or development
181. burning of foI fuels	n.	any preserved remains, impression, or trace of any once-living thing that has become hard and turned into rock
182. trr a biochemical response	v.	to make something happen suddenly; to cause something such as a device, machine, etc. to function
183. accsh military operations	v.	to finish or achieve something successfully
184. satisfy my intellectual cuty	n.	a strong desire to know or learn about something
185. diI electronic signature	adj.	processing or storing information as a succession of 1 and 0 to show that a signal is present or missing; relating to the use of computer technology, especially the internet
186. a diI watch	adj.	processing or storing information as a succession of 1 and 0 to show that a signal is present or missing; relating to the use of computer technology, especially the internet
187. ane a chemical compound	<i>v</i> .	to think about in-depth and evaluate to discover essential features or meaning
188. prve a country's heritage	v.	to keep or maintain a particular quality, feature, etc., especially to prevent it from decaying, being damaged, or being destroyed

ANSWERS: 179. buddy, 180. phase, 181. fossil, 182. trigger, 183. accomplish, 184. curiosity, 185. digital, 186. digital, 187. analyze, 188. preserve

terrifying, 202. transformation, 203. core, 204. infinite, 205. astronomer, 206. precise, 207. rubble, 208. entirely

209. reve factors	adj.	considered and evaluated through comparison with something else
210. clothes of the p_k style	n.	a type of a loud, fast-moving, and aggressive form of rock music originating in the 1970s; an aggressive and violent young man or boy
211. cp a book shut	<i>v</i> .	to hit your hands together and make a short and loud noise, mainly to show your approval or praise
212. nutrient-dee foods	adj.	containing a large number of people or something with little space between them
213. sheep without a shrd	n.	a person who tends and guards sheep, especially in a rural area
214. a devil inte	adj.	in bodily form; embodied
215. tactics on the batld	n.	a place where a battle or conflict is fought
216. a good grounding in matcs	n.	the science dealing with the logic of quantities, shapes, spaces, and arrangement
217. the ble of a turbine	n.	the flat part of a knife, weapon, or machine with a very thin edge used for cutting
218. ane the body	<i>v</i> .	to make something full of interest and energy
219. walk along a coor	n.	a hallway or passageway, especially one connecting rooms or areas within a building or structure

ANSWERS: 209. relative, 210. punk, 211. clap, 212. dense, 213. shepherd, 214. incarnate, 215. battlefield, 216. mathematics, 217. blade, 218. animate, 219. corridor

\sim					
232.	\sim	hr	\sim	mir	าฝ
/.7/	_	[][(1	111111	1(1
	S.	~ .	O.		
			_		

233. a bl__e of grass

234. space obs____ry

235. ec___e a competitor

236. ad____e the technology

237. z m in on a photo

238. pre-Christian an____t

239. cl___e meat

240. fi___e decimal

241. tr r inflation

adj. very wide; general

- n. the flat part of a knife, weapon, or machine with a very thin edge used for cutting
- a building designed and equipped to observe the planets, the stars, the weather, etc.
- an obscuring of one celestial body by another, often used to describe a lunar or solar eclipse; a period of obscurity or decline, often used to describe a decline in popularity or influence; (verb) to surpass, overshadow, or outshine someone or something
- v. to go or move forward; to develop in a positive way
- v. to move along very quickly; (noun) the act of rising upward into the air
- adj. relating to the long ago, particularly the historical period preceding the fall of the Western Roman Empire; very old
- v. to split or divide something into two parts, often with force; to adhere or cling to something closely and cohesively
- adj. having a limit or restriction of size, time, etc.
- v. to make something happen suddenly; to cause something such as a device, machine, etc. to function

ANSWERS: 232. broad, 233. blade, 234. observatory, 235. eclipse, 236. advance, 237. zoom, 238. ancient, 239. cleave, 240. finite, 241. trigger

242. Xy scan	n.	a type of electromagnetic radiation that has a wavelength shorter than visible light allowing hidden objects such as bones and organs inside the body to be photographed
243. neutrino astics	n.	the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe
244. small-apre telescope	n.	an opening or hole, especially one that is narrow or slitlike
245. treus popularity	adj.	very great in degree or extent or amount or impact; extremely good
246. d_p a pen in ink	<i>v</i> .	to put something into a liquid for a short time and take it out again
247. a wood cag	n.	the act or process of cutting or shaping a hard material, such as wood or stone, into a specific form or design
248. a gay of famous actors	n.	an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity
249. ine a high degree of risk	ν.	to include or affect someone or something as a necessary part of something else
250. mis sign	adj.	subtracting or taking away; having a value less than zero
251. the neic age	adj.	(also called New Stone Age) the period of human history that followed the end of the last ice age and that is characterized by the development of agriculture and the use of polished stone tools

ANSWERS: 242. X-ray, 243. astrophysics, 244. aperture, 245. tremendous, 246. dip, 247. carving, 248. galaxy, 249. involve, 250. minus, 251. neolithic

252. tk-like tooth	n.	a long, pointed tooth, usually found in animals such as elephants, walruses, or wild boars, which protrudes from the mouth and is used as a weapon or for digging
253. a comprehensive suy	n.	an investigation of the opinions,

behavior, etc. of a particular group of people, made by asking people questions

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

ANSWERS: 252. tusk, 253. survey, 254. extraordinary

Session 3: Fill in the Blanks

1. v.	Detectives are still attempting to the mystery of his death. undo twisted, knitted, or woven threads by separating it
2. n.	He was the first in the military training camp. a close friend; a partner, especially one of a pair or team
3. n.	He worked at the of behavioral economics. a border that separates two countries, or the area near this line
4. v.	We along with the singer's song. to hit your hands together and make a short and loud noise, mainly to show your approval or praise
5. <i>v</i> .	The software can and decode encrypted messages. to convert information into a code or format suitable for storage or transmission
n.	The Milky Way has numerous water-bearing planets. an independent group of stars, interstellar gas, dark matter, etc., in the universe, bound together by gravity He grows vegetables in his
n.	a whole space behind and belonging to a house
8. v.	Please up a bucketful of water from the well. to put something into a liquid for a short time and take it out again
9. v.	My father likes to the lawn early on Saturday mornings. to cut down and trim grass or other vegetation, usually with a machine such as a lawnmower; to cut down or harvest crops
	SWERS: 1. unravel, 2. buddy, 3. frontier, 4. clapped, 5. encode, 6. galaxy, 7. ckyard, 8. dip, 9. mow

10. The issue of the death penalty is highly adj. causing a lot of hot public discussion and dispute
11. Later, his claim was found to be false. adv. completely
12. She wrote a letter of to the renter.n. an act of saying or writing that you are sorry for something that has been done wrong or that causes a trouble
13. The of the unknown soldier honored the bravery and sacrifice of those who lost their lives in battle.
n. a large stone structure or underground chamber in which the dead are buried
14. As an he had the right to make his own decisions and live his life as he saw fit.
n. a single person or thing, as distinct from a group
15. We are motivated by rather than necessity.n. a strong desire to know or learn about something
16. The incident a political controversy.
v. to make something happen suddenly; to cause something such as a device, machine, etc. to function
17. This weather pattern is unique to the southern
n. half of the terrestrial globe; half of a sphere
18. The police found a hidden of weapons in the suspect's house.
 a collection of weapons or military equipment stored in preparation for war or conflict; a collection of resources or tools available for use in a particular field or endeavor
ANSWERS: 10. controversial, 11. entirely, 12. apology, 13. tomb, 14. individual, 15. curiosity, 16. triggered, 17. hemisphere, 18. arsenal

ler Ref from "Juna Kollmeier: The most detailed map of galaxies, black holes and stars ever made TED Talk" (127 words
It was the of a dinosaur tooth.
any preserved remains, impression, or trace of any once-living thing that has become hard and turned into rock
During the unloading, the container box a clicking sound.
to give off or send out something such as light, heat, sound, gas, etc.
What do you the culprit's motive was?
to think that something is likely to be actual or possible
The general reviewed the plans for the upcoming battle on the
a place where a battle or conflict is fought
He was studying in an attempt to understand the origins of the universe.
the branch of physics concerned with the study of the properties and behavior of celestial objects and the physical processes that govern the behavior and evolution of the universe
The adept carefully carved the wooden figurine with precision and skill.
a skilled worker who creates handmade objects, especially one who works with wood, metal, or other materials
Scientific knowledge will significantly with the power of AI.
to go or move forward; to develop in a positive way
The novel's ambiguous ending left readers with a message.
 causing confusion or uncertainty; difficult to understand or explain; puzzling or mystifying

27.	The old building in a fiery inferno.	
<i>v</i> .	to burst or break open violently and noisily; to cause something to burst or break open	
28.	This electronic is required to undergo periodic inspections to ensur precision.	е
n.	an object used to make musical sounds, such as a piano, guitar, or drum; a too or device used for a specific activity, particularly in specialist or scientific work	
29.	Several cities are experiencing high unemployment rates.	
adı	v. in a way that is very difficult to believe; exceedingly or extremely	
30.	This car has a engine.	
n.	an imaginary creature that is large and has various human and animal parts; someone or something large and powerful	
31.	He bated his when talking about this affair.	
n.	the air that is taken into and expelled from your lungs; the process of taking int and expelling air from your lungs	to
32.	We are never intimidated when dealing with young	
n.	a type of a loud, fast-moving, and aggressive form of rock music originating in the 1970s; an aggressive and violent young man or boy	
33.	My computer has been acting recently.	
adj	j. extraordinary, unexpected, or difficult to explain	
34.	She denounced the government's mishandling of the economic crisis	
adv	v. in a manner accessible to or observable by the public; by the government	
Λ Ν Ι	ICMEDC: 27 granded 20 instrument 20 installable 20 monster 24 breeth 20	^
	ISWERS: 27. exploded, 28. instrument, 29. incredibly, 30. monster, 31. breath, 32 nks, 33. weird, 34. publicly	∠.

cab-Builder	Ref from "Juna Kollmeier: The most detailed map of galaxies, black holes and stars ever made TED Talk" (127 words
35. L	et me quickly these results.
v.	to repeat or summarize what has been said, decided, etc.
36. T	he patient was moved to the intensive care for further treatment.
n.	a room in a hospital for patients requiring special care
37. W	Ve had a time yesterday.
adj.	very great in degree or extent or amount or impact; extremely good
	luman beings have a lifespan, so we yearn for the idea of immortality. having a limit or restriction of size, time, etc.
39. I	was able to the moment on film.
	to catch a person or an animal and confine them in an area which they cannot escape
40. H	ler concept is highly and helpful.
	of or connected with actual use or real situation rather than with theory and ideas
41. S	ensors convert physical phenomena into signals.
-	processing or storing information as a succession of 1 and 0 to show that a signal is present or missing; relating to the use of computer technology, especially the internet
	Inderstanding unitary of a normal matrix require onsiderable mathematical sophistication.
n.	a complete change in form, nature, or appearance of someone or something
	NERS: 35. recap, 36. ward, 37. tremendous, 38. finite, 39. capture, 40. practical, igital, 42. transformations

-Build	er Ref from "Juna Kollmeier: The most detailed map of galaxies, black holes and stars ever made TED Talk" (127 words
43.	These gas nebulas are merely newborn galactic
n.	the most essential or fundamental part of something
44.	The teacher attempted to the root cause of our mistake.
v.	to think about in-depth and evaluate to discover essential features or meaning
45.	He back in time to the soccer game.
v.	to move along very quickly; (noun) the act of rising upward into the air
46.	They have been living near water since times.
adj.	relating to the long ago, particularly the historical period preceding the fall of the Western Roman Empire; very old
47.	He has a flair for
n.	the science dealing with the logic of quantities, shapes, spaces, and arrangement
48.	The doctor ordered an to see if there was any damage to the bones.
n.	a type of electromagnetic radiation that has a wavelength shorter than visible light allowing hidden objects such as bones and organs inside the body to be photographed
49.	She had a tattoo just above her button.
n.	the front part of the body below the chest, containing the stomach and bowels; the rounded or curved part of an object, such as a ship or aircraft
50.	They worked hard to the nature of their native lands.
ν.	to keep or maintain a particular quality, feature, etc., especially to prevent it from decaying, being damaged, or being destroyed
v.	to keep or maintain a particular quality, feature, etc., especially to prevent it

60.	The camera's controls how much light enters the lens.
n.	an opening or hole, especially one that is narrow or slitlike
61.	The data showed that the element was composed of multiple spectral lines.
n.	an instrument that separates light into its component wavelengths and records the distribution of intensities as a graph, used for chemical analysis or to determine the properties of stars and galaxies
62.	Trial and error is an part of education.
adj	. indispensable; fundamental
33.	Most countries prohibit sexual activity between certain close
adj	considered and evaluated through comparison with something else
3 4.	The ancient people worshiped the deity.
adj	. in bodily form; embodied
65.	The positive attitude of the supervisor the discussion.
v.	to make something full of interest and energy
66.	I don't acting in such an important role.
<i>v</i> .	to want to do or have something; (noun) something that many people believe but that is false, or that does not exist; imagination or fantasy
67.	The doctor diagnosed him with a rare that had no known cure.
n.	a disorder or illness that affects the body or mind, often characterized by specific symptoms or abnormal functioning of organs or systems
	SWERS: 60. aperture, 61. spectrograph, 62. essential, 63. relatives, 64. incarnate, animated, 66. fancy, 67. disease

101.	The deep sea was unlike anything the scientists had ever seen before.
n.	a living being, especially an animal
102.	The is about 13.8 billion years old.
n.	everything that exists, especially all physical matter, including planets, stars, galaxies, and all other forms of matter and energy
103.	An executive director administers each branch.
n.	someone who helps or supports someone else to do a job
104.	I need to plans with him for the celebration.
<i>v</i> .	to plan, prepare for, and carry out something
105.	The on the wall showed that the room was three meters long.
n.	a device used to measure the amount of a particular substance or attribute, such as length, volume, or time; (prosody) the accent in a metrical foot of verse
106.	The of the building was cracked and needed to be repaired.
n.	the lowest load-bearing part of a building, typically below ground level; a fundamental basis or principle upon which something is built or established; an organization that provides funding or support for charitable or educational purposes
107.	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
108.	The ivory poacher was arrested for possession of illegal
n.	a long, pointed tooth, usually found in animals such as elephants, walruses, or wild boars, which protrudes from the mouth and is used as a weapon or for digging
	WERS: 101. creature, 102. universe, 103. assistant, 104. arrange, 105. meter, foundation, 107. discovery, 108. tusks

Vocab-Builder Ref from "Juna Kollmeier: The most detailed map of galaxies, black holes and stars ever made TED Talk" (127 wor
125 rays are high-energy particles that originate from outside the solar system.
adj. relating to the universe or cosmos; vast or limitless
126. Tourists frequently the island's delicate natural balance.
v. to interrupt someone who is trying to work, sleep, etc.
127. After the earthquake, the city was left in a pile of
fragments of rock, stone, or other materials that remain after a building or other structure has been destroyed or demolished; the remains of something that has been broken down or destroyed
ANSWERS: 125. Cosmic, 126. disturb, 127. rubble