

UNIT 9: LIFE, LIGHT, & LOVE



| Root Word | Meaning | Origin |
|-----------|---------|--------|
| bio | life | Greek |
| photo | light | Greek |
| phil | love | Greek |



- biology** (n) - a science that deals with things that are alive, such as plants and animals; the study of life
*I have learned so much about living things in my **biology** class.*
- biodegradable** (adj) - capable of being slowly destroyed and broken down into very small parts by natural processes, bacteria, etc.
*Most paper goods are **biodegradable** and can be broken down by living things called decomposers.*
- biography** (n) - the story of a real person's life written by someone other than that person
*I will write a **biography** about Abraham Lincoln because I know so many fascinating details about his life.*
- photography** (n) - the art, process, or job of taking pictures with a camera; named after the original process that used light to expose an image on special paper
*Before digital cameras, **photography** required artists to develop their prints in dark rooms that prevented light from ruining their pictures.*
- photosynthesis** (n) - the process by which a green plant turns water and carbon dioxide into food when the plant is exposed to light
***Photosynthesis** within a plant can only occur in the presence of light.*
- photon** (n) - a tiny particle of light or electromagnetic radiation
*All light is made up of **photons**, which are so small that you cannot see them individually.*
- Philadelphia** (n) - a US city founded by William Penn, a Quaker who believed in peace
*The literal translation of **Philadelphia** is "the city of brotherly love."*
- philanthropist** (n) - a wealthy person who gives money and time to help make life better for other people
*Steven was a **philanthropist** who cared deeply about homeless children; he held many fund raisers and donated a lot of money to help them.*
- philosophy** (n) - the study of ideas about knowledge, truth, the nature and meaning of life; your personal beliefs or opinions related to life
*My **philosophy** is that you must always treat others with love and respect.*
- bibliophile** (n) - a person who loves or collects books
*It's pretty evident from my huge library that I am a **bibliophile**.*

9A: SENTENCE COMPLETION

DIRECTIONS: Complete the following sentences with the correct word from your list. Each word will be used only once.



biology

biodegradable

biography

photography

photosynthesis

photons

Philadelphia

philanthropist

philosophy

bibliophile

1. The founder of _____ was strongly opposed to violence.
2. You can read about Eleanor Roosevelt's life in a _____.
3. In order for _____ to occur, there must be light, carbon dioxide, and water.
4. In _____ class we learned about how animals adapt to survive in the world.
5. William Penn's _____ about war and weapons made him a peaceful and gentle leader.
6. _____ are all around us anytime there is light, but you can't see them individually because they are so small.
7. The earthworms and bacteria in the compost pile are breaking down our _____ trash.
8. Mai's heart is full of love, which is why she is a _____, donating much of her time and money to people in need.
9. I am such a _____ that I could live in a library.
10. _____ depends on light to capture images.

9B: YES OR NO?

DIRECTIONS: Respond to the following statements by circling "Yes" or "No."

1. **Yes No** A **philanthropist** is stingy and greedy.
2. **Yes No** You can't see **photons**.
3. **Yes No** **Biology** is the study of rocks and minerals.
4. **Yes No** If you are a **bibliophile** you probably like to read.
5. **Yes No** A **biography** is considered fiction.
6. **Yes No** Light is an important factor in **photography**.
7. **Yes No** If something is **biodegradable** it can harm plants and animals.
8. **Yes No** People can have different **philosophies**.
9. **Yes No** **Photosynthesis** only takes place at night.
10. **Yes No** **Philadelphia's** founder believed in peace and love.

9C: CHOOSE TWO

DIRECTIONS: Choose two words that BEST explain or define the bold root word.

- | | | | | |
|--------------------------|-------------|---------------|----------------|-------------|
| 1. biology | a. plants | b. animals | c. gravity | d. planets |
| 2. biodegradable | a. forever | b. disappears | c. dissolves | d. harmful |
| 3. biography | a. magic | b. life | c. events | d. fantasy |
| 4. photography | a. pictures | b. camera | c. painting | d. clay |
| 5. photosynthesis | a. food | b. light | c. metal | d. rocks |
| 6. photon | a. large | b. tiny | c. visible | d. numerous |
| 7. Philadelphia | a. city | b. love | c. war | d. guns |
| 8. philanthropist | a. needy | b. generous | c. selfish | d. helpful |
| 9. philosophy | a. beliefs | b. values | c. contract | d. reckless |
| 10. bibliophile | a. books | b. videos | c. electronics | d. reading |

9D: ANALOGIES

DIRECTIONS: Circle the analogy that BEST matches the bold words.

- | | | |
|--|---|---|
| 1. PAPER : BIODEGRADABLE a) cold : ice b) fire : hot c) plants : animals d) break : down | 2. PHOTON : LIGHT a) small : invisible b) molecule : visible c) home : kitchen d) page : book | 3. PHILOSOPHY : IDEAS a) neighborhood : homes b) states : county c) truth : knowledge d) love : hope |
| 4. PHOTOSYNTHESIS : FOOD a) water : light b) artist : paintings c) flowers : leaves d) bread : baker | 5. BIOLOGY : SCIENCE a) dessert : cake b) life : study c) cat : pet d) plants : water | 6. BIBLIOPHILE : READS a) athlete : trains b) library : books c) pages : words d) cooks : chef |
| 7. BIOGRAPHY : FICTION a) car : vehicle b) life : person c) events : important d) nonfiction : novel | 8. PHILADELPHIA : PENNSYLVANIA a) California : Sacramento b) Quaker : William Penn c) brain : head d) brotherly : love | |
| 9. PHILANTHROPIST : GIVES a) heals : doctor b) donates : money c) helps : poor d) firefighter : rescues | 10. PHOTOGRAPHY : ART a) flower : rose b) fern : plant c) car : camry d) photos : paintings | |



©ha2

9E: TIME TO EXPLORE

DIRECTIONS: Sort the words from this lesson into the table below. Then find additional words with the same roots and place them in the appropriate columns/rows.

| root | verb | noun | adjective | adverb |
|-------|------|------|-----------|--------|
| bio | | | | |
| photo | | | | |
| phil | | | | |

9F: APPLY WHAT YOU KNOW

DIRECTIONS: Answer the questions below.

1. How are **photosynthesis** and **biology** related? _____

2. If you were a **philanthropist** what cause would you support? Why? _____

3. How does the name **Philadelphia** relate to William Penn? _____

4. What's one of your personal **philosophies**? _____

5. Who would you write a **biography** about ? Why? _____

UNIT 9: WORD & DEFINITION MATCH

DIRECTIONS: Cut out the pieces below and match the words with the correct definitions.

biography

a tiny particle of light or electromagnetic radiation

photosynthesis

a person who loves or collects books

biology

the study of ideas about knowledge, truth, the nature and meaning of life; your personal beliefs or opinions related to life

photon

the art, process, or job of taking pictures with a camera; named after the original process that used light to expose an image on special paper

Philadelphia

capable of being slowly destroyed and broken down into very small parts by natural processes, bacteria, etc.

photography

a wealthy person who gives money and time to help make life better for other people

biodegradable

a US city founded by William Penn, a Quaker who believed in peace

philanthropist

the story of a real person's life written by someone other than that person

philosophy

the process by which a green plant turns water and carbon dioxide into food when the plant is exposed to light

bibliophile

a science that deals with things that are alive, such as plants and animals; the study of life