***Do not write on these sheets of paper!***

***Turn this packet of questions back into the teacher before leaving class!***

**Directions:** Answer the questions from the passage “**Why Humans Can’t Live Off Sunlight**” on a piece of loose leaf notebook paper to turn in today. You may work with your partner to complete this assignment.

Be sure to include:

1. Heading (Name, date, p-#)

2. Name of Passage to separate each section

3. Write the questions on your paper with your answer in the format shown below in the example.

**Example: As part of an experiment, what did Naveena Shine limit her diet to?**

 **Answer: \_\_\_X\_\_\_\_ (Write your answer choice in a capital letter)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1. As part of an experiment, what did Naveena Shine limit her diet to?**

**A.** sunlight, water, and tea **B.** sunlight, sugar, and water **C.** sunlight, water, and fruit **D.** water, fruit, and tea

**2. This text is organized into two main parts. The first part describes Naveena Shine’s experiment and its results. What does the second part mostly describe?**

**A.** how Naveena Shine has reacted to criticism of her experiment

**B.** the process by which plants produce energy

**C.** the long-term and short-term symptoms of organ failure

**D.** the process by which humans extract energy from the plants we eat

**3. Even after her experiment, Shine believed that humans could live on sunlight. What evidence from the text best supports this conclusion?**

**A.** “What was Shine’s mistake? Well, she made several. Most importantly, she misunderstood how energy is produced in plants

 versus how it’s produced in humans.”

**B.** “So, Shine set out to test her hypothesis. In May, she declared that, for the next six months, she would not eat food.”

**C.** “Shine appears to have escaped from the experiment without permanent damage—although she did sustain a steep drop in her

 weight and some credit card debt.”

**D.** “Shine did not rule the experiment a failure. Instead, she blamed the early termination on several other, more practical factors.”

**4. How can the tone of this article best be described?**

A. confused and slightly annoyed B. explanatory and slightly condescending

C. sarcastic and very goofy D. enthusiastic and excited

**5. What is the main idea of this text?**

**A.** Many people have claimed to live off only sunlight, but none of these claims have been proven true.

**B.** Because plants can live off sunlight and water, they are further along in the evolutionary process than humans.

**C.** A woman tried to live off sunlight like plants do, but failed because humans and plants produce energy differently.

**D.** Plants produce food through a process called photosynthesis, using sunlight, water, carbon dioxide, and minerals.

**6. Shine’s experiment received a lot of criticism. \_\_\_\_\_\_\_\_\_\_, many of her detractors pointed out that, even if her theory was valid, famously cloudy Seattle might not have been the best place to test it out.**

**A.** As a result **B.** Meanwhile **C.** However **D.** For example

**Directions:** Answer the questions from the passage “**Naturally Selected to Survive**”

**1. According to the passage, what happens when organisms cannot adapt to changes in their environment?**

 A. They move to another environment.

 B. They risk dying out.

 C. Nothing happens

 D. They wait for the environment to change again.

**2. What does the author mainly describe in the passage?**

 A. how natural selection changed the population of peppered moths

 B. how the Industrial Revolution improved the lives of workers

 C. how Charles Darwin devised his theory of natural selection

 D. how humans influence organisms via artificial selection

**3. Smoke given off by the factories threatened the survival of the light grey peppered moths. What evidence from the text best supports this conclusion?**

 A. Soot is a black substance that collects on a surface that comes into contact with smoke.

 B. When coal burns, it gives off a lot of dark colored smoke.

 C. Predators could see the light grey peppered moths on the black trees covered by soot and easily hunt them down.

 D. The trees began to blacken with soot because of all the smoke in the air from the factories.

**4. What conclusion can be drawn from the change in population of the light grey peppered moths and dark colored peppered moths?**

 A. The color change had nothing to do with the change in the environment.

 B. There were previously no dark colored peppered moths.

 C. The lighter peppered moths migrated to a new environment.

 D. Darker coloring is currently better for the peppered moths’ survival.

**5. What is the passage mostly about?**

 A. Charles Darwin

 B. the Industrial Revolution

C. natural selection

D. global warming

**6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the smoke given off by coal burned in the factories, the nearby trees became blackened with soot.**

 A. On the other hand

 B. Primarily

 C. As an illustration

 D. As a result

**7. What is natural selection?**

**8. How did the peppered moth population become mostly dark-colored?**

**Directions**: Answer the questions from the passage **“Genetics Basis of Butterflies”**

**1. What does genetic information dictate, or control?**

A. what characteristics an organism will have

B. where an organism will live and die

C. which predators will eat the organism

D. who the organism’s parents were

**2. The passage describes the sequence of a butterfly’s life. Which of the following shows the life cycle of a butterfly in the correct order?**

A. egg, pupa, adult, caterpillar B. pupa, egg, caterpillar, adult

C. egg, caterpillar, pupa, adult D. egg, pupa, caterpillar, adult

**3. Monarch butterflies are protected by their bright coloration. What evidence from the passage supports this conclusion?**

A. Their bright coloration makes monarch butterflies easily noticeable to predators.

B. The monarch’s color warns predators that they are poisonous, so they don’t get eaten.

C. Unlike other butterflies, monarchs do not blend into their surroundings to protect themselves.

D. If a predator eats a monarch, it can taste the poison and will spit the butterfly out.

**4. Butterfly A is blue with black markings. Butterfly B is green with brown spots. What conclusion can you make about these two butterflies?**

A. Both butterflies protect themselves by blending into their surroundings.

B. The two butterflies have different life cycles.

C. Both butterflies have the same genetic information.

D. The two butterflies have different genetic information.

**5. What is this passage mostly about?**

A. monarch butterflies B. viceroy butterflies C. milkweed toxins D. caterpillars and pupae

**6. Read the following sentences: “Inside the chrysalis, the pupa grows the legs, wings, and other parts of an adult butterfly. Once the butterfly is fully developed, the chrysalis splits apart, and the butterfly emerges.” What does the word “developed” mean?**

A. young and small B. changed and grown C. safe and protected D. soft and vulnerable

**7. Monarch butterflies are brightly colored; \_\_\_\_\_\_\_\_\_\_, they are highly visible to predators.**

A. however B. for example C. as a result D. initially

**8. Why are monarch butterflies poisonous?**

**9. How do predators know that monarch butterflies are poisonous?**

**10. How does the monarch’s coloration help both the butterfly and its predators?**