Leaf-Mimicking Sea Slug

Name: ANSWER KEY Date: _____

Vocabulary Words: Match the definition to each word.

1. Young sea slugs seek out Algae, which convert sunlight into food.
2. The green pigment found in the algae's food supply is called Chlorophyll.
3. The tiny food-manufacturing structures stolen from algae cells are called Chloroplasts.
4. While the sea slug eats algae, it does not Digest or break down the chloroplasts.
5. Evolutionary Mutations destroy genetic information rather than creating new.

Word bank: Chloroplasts, Chlorophyll, Algae, Digest, Mutations

Multiple Choice: Choose the correct answer from the choices for each question.

1. What physical appearance does the adult sea slug adopt?
   a) A piece of floating ocean coral
   b) A green leaf
   c) A strand of dark seaweed
   d) A small round pebble

2. How does the young sea slug obtain its chloroplasts?
   a) It makes them using its own organs.
   b) It absorbs them directly from the water.
   c) It breaks into algae and sucks them out.
   d) It inherits them from its parent sea slugs.

3. Where does the sea slug spend the rest of its life after acquiring chloroplasts?
   a) In deep ocean trenches
   b) Hidden under dark rocks
   c) In the sunshine
   d) Buried in the sand

4. What conclusion can we draw regarding complex biological systems?
   a) They develop through random chance.
   b) They demonstrate the presence and work of a creator.
   c) They prove that software engineering is based on natural processes.
   d) They show that algae and sea slugs compete.

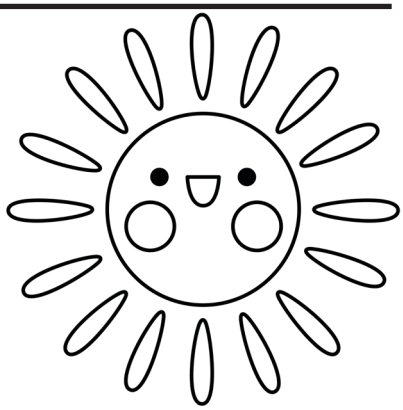
Discussion & Reflection: Answer the following questions in complete sentences

1. Describe how the sea slug uses stolen chloroplasts to survive for the remainder of its life.

After extracting chloroplasts from algae, the sea slug stores them in a special section of its body. It shapes its body like a leaf and stays in the sunshine, using those stored chloroplasts to produce sugar and food for itself for the rest of its life.

2. How does software engineering concepts dispute the idea that the sea slug's abilities resulted from evolution? **Software engineers recognize programming changes do not occur by random chance. They argue that evolution relies on mutations, which destroy information rather than adding or improving code, meaning two organisms could not start working together through random evolutionary processes.**

3. This shows me that God is (Circle the word):

Wise Powerful Caring Creative All of the above

Explain your choice: