

Name: \_\_\_\_\_

TOPIC: READING



### Reading Passage: The Life Cycle of a Star

Stars, like living organisms, go through a life cycle. They are born, evolve, and eventually die. The process begins in vast clouds of gas and dust called nebulae. When gravity causes parts of these clouds to collapse, the material heats up and forms a protostar.

If the temperature and pressure in the protostar's core become high enough,

nuclear fusion begins, turning hydrogen into helium. This marks the birth of a true star.

During the longest stage of its life, known as the main sequence, a star shines steadily as it converts hydrogen into helium. Our Sun is currently in this stage and has been for about 4.6 billion years. Eventually, the hydrogen in the core begins to run out. The star then expands into a red giant or supergiant, depending on its mass.

For stars similar in size to the Sun, the outer layers are gradually lost, forming a glowing shell called a planetary nebula, while the core remains as a white dwarf. Over time, this white dwarf cools and fades. However, massive stars end their lives much more dramatically. After expanding into a supergiant, they explode in a supernova, releasing an enormous amount of energy. What remains can become either a neutron star or, if the original star was extremely massive, a black hole, where gravity is so strong that not even light can escape.

Thus, the life cycle of a star is a cosmic story of birth, transformation, and death—a process that creates the elements necessary for planets and life itself.

1. What causes a nebula to form a protostar?
- a) The explosion of a supernova      b) The cooling of hydrogen gas      c) The collapse of gas and dust due to gravity      d) The fusion of helium atoms
2. What marks the beginning of a true star's life?
- a) When it becomes a red giant      b) When nuclear fusion starts      c) When the nebula expands      d) When the core cools down
3. What is the main sequence stage?
- a) The period when a star first forms      b) The phase when a star shines steadily converting hydrogen to helium      c) The stage just before a star explodes      d) The time when a star cools into a white dwarf
4. What happens to the Sun after it leaves the main sequence?
- a) It will become a supernova      b) It will turn into a black hole      c) It will expand into a red giant and form a planetary nebula      d) It will collapse directly into a neutron star
5. What determines whether a dying star becomes a neutron star or a black hole?
- a) Its temperature      b) Its color      c) Its original mass      d) Its age

**TRUE or FALSE**

A white dwarf is the final stage for very massive stars. Supernova explosions create the heaviest elements in the universe.

The Sun is currently a main sequence star.

A black hole allows light to escape from it.

A planetary nebula is formed by the outer layers of small stars.

<b>TRUE</b>	<b>FALSE</b>
<b>TRUE</b>	<b>FALSE</b>
<b>TRUE</b>	<b>FALSE</b>
<b>TRUE</b>	<b>FALSE</b>

## Reading Passage: The Role of Bees in Ecosystems



Bees are among the most important insects on Earth. Their role in ecosystems goes far beyond producing honey. Bees are vital pollinators, meaning they transfer pollen from one flower to another, enabling plants to reproduce. Without bees, many plants would fail to produce fruits and seeds, leading to a major disruption in natural food chains.

Pollination is essential not only for wild plants but also for agricultural crops. About one-third of the food consumed by humans depends on pollination by bees and other insects. Crops such as apples, almonds, and blueberries rely heavily on bee activity. In economic terms, bees contribute billions of dollars to global agriculture every year.

However, bee populations are declining worldwide. Factors such as pesticide use, habitat loss, and climate change have reduced the number of both wild and domestic bees. The loss of flowers and nesting sites makes it difficult for them to survive. Additionally, modern farming practices often use chemicals that harm bees' nervous systems, affecting their ability to navigate and find food.

Scientists and farmers are working together to protect bees. Some solutions include planting more flowering plants, reducing pesticide use, and creating bee corridors—areas rich in flowers that allow bees to travel safely between habitats. Protecting bees means protecting the ecosystems that depend on them, including humans.

1. What is the main role of bees in ecosystems?
  - a) Producing honey for human consumption
  - b) Acting as pollinators that help plants reproduce
  - c) Spreading seeds through animal digestion
  - d) Controlling pest populations
2. According to the passage, what percentage of human food depends on pollination?
  - a) About one-third
  - b) About half
  - c) Less than ten percent
  - d) Nearly all of it
3. What is one major reason for the decline in bee populations?
  - a) The increase in natural predators
  - b) The rise in forest areas
  - c) The use of pesticides and loss of habitat
  - d) The decrease in human farming activity
4. What effect do pesticides have on bees?
  - a) They make bees reproduce faster
  - b) They damage bees' nervous systems
  - c) They help bees find food more easily
  - d) They increase honey production
5. What are "bee corridors"?
  - a) Tunnels built for bees to live in
  - b) Areas where farmers grow crops for bees
  - c) Flower-filled paths that connect bee habitats
  - d) Artificial hives designed for research

### True or False?

1. Bees only benefit humans through the honey they produce.
2. Apples and almonds are examples of crops that depend on bee pollination.
3. The destruction of natural habitats affects bee survival.
4. Reducing pesticide use can help protect bee populations.
5. Protecting bees has no impact on other ecosystems.

TRUE	FALSE
TRUE	FALSE
TRUE	FALSE
TRUE	FALSE
TRUE	FALSE