Honey bees are highly intellectual and astounding creatures. They are essential to the ecosystem and pollinate flowers, fruits and vegetables, while also producing honey. Many plants rely solely on honey bees for survival, and without them many plant species would be extinct. Honey bees transfer pollen between the male and female plants to allow them to grow seeds or fruit. As pollen is the male reproductive part of the plant, this transfer acts as a form of plant reproduction: pollination. Bees use pollen for protein and nourishment for the larvae in the hive. Nectar is the liquid which plants produce and the substance used to make honey. Bees have furry bodies and ‘bee pockets’ designed to collect pollen and long mouths to collect the nectar.

People often refer to a group of honey bees as a “hive”, “a beehive” or a “swarm”, however this is incorrect. A colony of bees is a community and functions as a single organism. As social creatures, each bee is codependent on the other bees for survival. They engage in complex tasks and operate in organised family groups, with each bee carrying out a different role within the hive. The members of the hive are divided into three types:

**The queen**

There is only one queen in a hive. She is the ruler of the hive and her role is to give birth to the new generation of honey bees. From birth, she is fed ‘royal jelly’, a substance rich in minerals reserved only for the queen, to help differentiate her from the others. As the queen, she releases powerful pheromones into the hive to influence the mood of the bees and maintain the social structure and communication within the hive. Her main function within the colony is procreation. In summer, she can lay up to 1,000 eggs a day. Eggs production normally stops around the month of October and commences again in Spring. Queens can produce up to 250,000 eggs a year and sometimes more than one million in her lifetime. The lifespan of a queen is considerably longer than the other members of the hive and she can live for up to five years until a new queen is spawned. Workers and drones have significantly shorter lifespans, with the latter living only fifty five days. The lifespan of a worker bee depends on the season it is born.

**The worker bees**

The hardest workers and arguably most essential member of the colony is the worker bee. They constitute the majority of the colony and consist of infertile females whose job it is to keep the hive in order. When they are born, they immediately clean their birth cell in preparation for the new larvae. It is then their job to nurse and feed the new larvae. The worker will then go on to wax production and honey sealing. It is their job to feed the colony so they attend to the queen and the drones. Other jobs include; remove debris from the hive, build the honeycomb, ventilate the hive and forage for nectar. On average they live for six weeks and fail to see the fruits of their labour. In special conditions, like when the colony needs a new queen, they can live for four or six months.

**Drones**

Drones are the only male bees in the colony and sometimes dubbed the ‘auxiliary’ members of the colony. Their numbers multiply within the hive when it is time to fertilise the queen. They perform no tasks within the hive and rely entirely on the worker bees for food and protection. The drones are ineffective and therefore expendable. When food is scarce and the population too high, worker bees will expel drones from the hive, leaving them to perish. These ill-fated members of the colony have a maximum life expectancy of ninety days and what is more, when they achieve their one goal of mating with the queen, they die. They are fed and protected within the hive until it is time to mate with the queen. They are essential for the growth of the colony and new populations of honey bees.

**Bees and The World**

Honey bees are very important members of the food chain and crucial for the survival of many life forms. Sadly, over the past 10 years their numbers have been dwindling which could pose a threat for the environment. Pesticides, climate change and Colony collapse disorder (a phenomenon in which all the worker bees disappear from the hive). To help honey bees you can grow bee friendly plants like lavender and lilac which are rich in nectar. Furthermore, herbs like rosemary, chives and basil are also beneficial. It is crucial to protect their habits so you can build homes and protect their natural environment. Education is everything, so be an eco-citizen and inform others about the importance of honey bees in the natural world.

ANSWERS:

D, B, C, A

C, C, D, A

A, C, C, B

B, B, C, D

B, C, B, C

|  | question | options |
| --- | --- | --- |
| 1 | What does the word “astounding” (line 1) mean? | Insignificant  Ordinary  Surprising  **Remarkable** |
| 2 | What word could replace “rely” (line X) in the text? | Give  **Depend**  Need  Survive |
| 3 | Complete the sentence. “Pollen is\_\_\_” | Made by honey bees  A type of flower  **The reproductive part of a plant**  Fruits and vegetables |
| 4 | What makes honey? | **Nectar**  Pollen  Bees  Protein |
| 5 | What is the collective noun of bees called? | 1. Swarm 2. Community 3. **Colony** 4. It is not mentioned |
| 6 | The bees are described to function “as a single organism” (line X). What does this mean? | 1. All the bees are the same 2. All the bees do the same job 3. **All the bees need each other to survive** 4. All the bees live in the same hive |
| 7 | According to the passage, which of these statements is true? | 1. Bees are antisocial animals 2. Bees change roles within the hive 3. Bees can live alone 4. **Bees are organised in groups** |
| 8 | According to the text, what is the purpose of the queen? | 1. **Lay eggs** 2. Make honey 3. Make pheromones 4. Collect pollen |
| 9 | 6. A queen can: | 1. **Influence the other bees** 2. Live for several years 3. Lay one million eggs a year 4. Lay eggs in Spring |
| 10 | According to the text, how many eggs can a queen produce in one week? | 1. One thousand 2. Five thousand 3. **Seven thousand** 4. Two hundred and fifty thousand |
| 11 | Worker bees are..  According to the author, which members of the hive are most essential ? | 1. The male bees 2. The bees who lay eggs 3. **The bees who find pollen** 4. The minority in the colony |
| 12 | The author says that the worker bees “constitute the majority of the colony” (line X). What does this mean? | They allow the majority of the colony  **They form the majority of the colony**  They provide the majority of the colony  They mean the majority of the colony |
| 13 | The author states that the bees “fail to see the fruits of their labour” (line X). What does this refer to? | 1. The hard working bees 2. **The bees who die** 3. The fruit the bees get pollen from 4. The work it takes to find pollen |
| 14 | Drones can: | 1. Feed the colony 2. **Reproduce** 3. Remove debris from the hive 4. Help maintain the hive |
| 15 | In the passage, the drones are described as “expendable” (line X). What does this tell the reader? | 1. Lazy 2. Significant 3. Inessential 4. Crucial   They are lazy  They are significant  **They are inessential**  They are crucial |
| 16 | Honey bee communities are: | 1. Thriving 2. Growing 3. Limited 4. **Endangered** |
| 17 | To help honey bees you can: | 1. Plant trees 2. **Build homes** 3. Make bigger gardens 4. Find honey bee communities |
| 18 | Which statement is FALSE | 1. Worker bees live for two months 2. Drones live for five to six months 3. **The queen can live for five or more years** 4. Worker bees can live for more than two months |
| 19 | According to the text, which statement is false | 1. Worker bees are considered superior to drones. 2. **Drones are completely nonfunctional** 3. The queen is superior to the other members. 4. The queen directly affects the lifespan of worker bees and drones. |
| 20 | Using your knowledge of the text, what could be a possible consequence of honey bee extinction? | 1. Herbs like rosemary, chives and basil will no longer grow 2. Pollen will no longer exist 3. **Extinction of some animals** 4. Climate change will worsen |
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