



BLUE PLANET BOOK 6

UNIT 1

P.5

- 1) Its function is to regulate what happens in the cell itself.
- 2) The cell membrane controls what goes in and out of a cell.
- 3) The watery substance is called Cytoplasm.
- 4) Organelles are any part of a cell with a specific job to do. For example, mitochondria which supplies the cell with the energy that it needs. Another organelle are the vacuoles, open spaces that hold food, water and wastes.

P.7

- 1) The plant cell has a square like shape.
- 2) Plant cells have chloroplasts.
- 3) Animal cells have a thin membrane.
- 4) Photosynthesis takes place in plant cells.
- 5) Mitochondria supply a cell with the energy it needs.
- 6) The command center of the cell is the nucleus.
- 7) Chromosomes are found in the nucleus.
- 8)
 1. Plant cells have a thick cell wall that covers the cell membrane. Animal cells only have a thin membrane.
 2. Plant cells are green, animal cells are not. This is because plant cells have chloroplast.
 3. Plant cells have a square-like shape, animals cells can be any shape.

P.9

		4
	3	
2		1

P.16

- 1) learned
- 2) inherited
- 3) instinct
- 4) learned
- 5) inherited
- 6) instinct
- 7) inherited
- 8) learned

- 9) instinct
- 10) inherited
- 11) inherited
- 12) learned
- 13) learned
- 14) inherited

P.26

- An adult has between 20,000,000 and 30,000,000 red blood cells.
- An adolescent has between 16,000,000 and 24,000,000 red blood cells. A small child has between 8,000,000 and 12,000,000 red blood cells.

P.28

- 1) red blood cells
- 2) white blood cells
- 3) covering cells
- 4) smooth muscle cells
- 5) skeletal muscle cells
- 6) heart muscle cells
- 7) neurons
- 8) bone cells

P.30

What I learned...

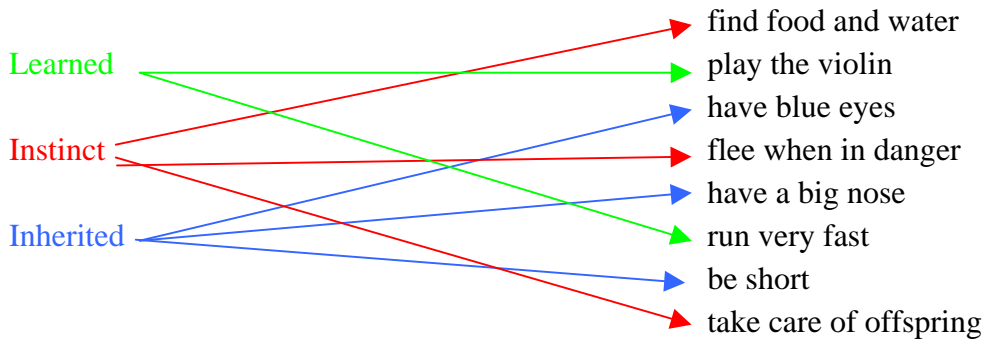
A.

- 1) F
- 2) T
- 3) T
- 4) F
- 5) T (inside bones)
- 6) T
- 7) F
- 8) T
- 9) T

B.

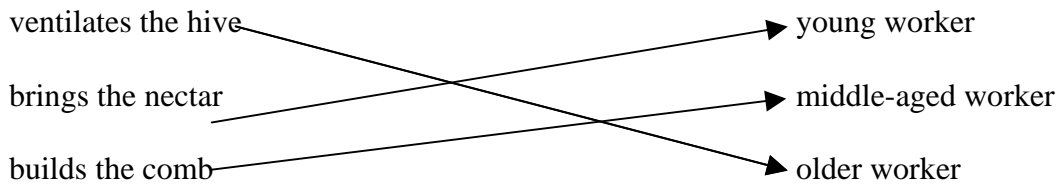
- 1) cells
- 2) organs
- 3) Skin
- 4) skeleton
- 5) stamens
- 6) pistil
- 7) female
- 8) stamen

C.



UNIT 2

P.39



P.45

- 1) The queen bee's main function is to lay eggs.
- 2) After mating with several drones and receiving around 90 million sperm, the queen needs to store a mixture of these (about 7 million sperm) in a special pouch called the spermatheca. So the queen grows bigger than other bees.
- 3) It is a hexagon.
- 4) Their function is to mate with the queen.
- 5) Honeycombs are made of beeswax. They are made by worker bees.

P.50

- 1) Loudly
- 2) Quietly
- 3) Sweet

P.51

- 1) It is important to them that blossoms are pollinated in order to produce seeds for fruits and vegetables.
- 2) (information not given in textbook)

P.55-57

What I learned...

A.

1)

a. they are invertebrates

b. they have three main body parts: head, thorax and abdomen

c. they have an exoskeleton
d. they have six legs
e. they have two pairs of wings (only adults)
f. they have two antennae
g. they have two large compound eyes
h. they have sensory hairs that cover their body
i. they have a stinger

- 2) They have a long tongue to suck the nectar.
- 3) Pollen baskets are made up of stiff hairs.
- 4) a. (draw a picture)
b. egg, larva, pupa, adult
- 5) They are responsible for guarding the colony and cleaning the cells.
- 6) The only function of drones is to mate with the queen. The only function of the queen is to lay eggs.

B.

- 1) T
- 2) F
- 3) F
- 4) T
- 5) T
- 6) F
- 7) F
- 8) T
- 9) T
- 10) T

C.

- 1) A mixture of honey and pollen is called **bee bread**.
- 2) Cells for queens look like **peanuts**.
- 3) The hive has a specific **odor** that helps the bees distinguish the colony members from intruders.
- 4) The **undertaker** bees remove the dead bees from the hive.
- 5) The temperature of the hive is important for the developing young bees.
- 6) The bees retain heat by staying together in **clumps**.
- 7) The sweet smell and bright color of the flowers help to **attract** the bees.
- 8) The bee performs a special **dance** to communicate the flower source to its companions.
- 9) Three separate locator points determine the bees dance:
a. **the sun** b. **the hive** c. **flowers**
- 10) Chewing gum, **crayons (or candles)** and lipstick are made from beeswax.

D.

- The beekeeper must wear protective clothing such as long sleeves and pants that fit tightly around the ankles and wrists; long gloves; and a hat with a net that cover both the face and neck.

UNIT 3

P.65

- 1) They are many-celled. They have nucleus and organelles. They do not move from place to place.
- 2) Protists, fungi, plants and animals all have cells that contain nucleus and organelles.
- 3) Monerans, protists, and animals all move from place to place.

P.69

What I learned...

A.

- 1) Charles Darwin
- 2) All creatures once belonged to one great family and over millions of years this family became differentiated. Individual organisms produced heritable variations, known as mutations that gave rise to the next generation. Thus, in any given environment there will be individuals who are better adapted to their way of life. These better adapted individuals will be more likely to survive and reproduce. Therefore natural selection is when nature selects the strongest to survive and continue.
- 3)
 1. **grow and develop**
 2. **use energy** they acquire by eating or making food
 3. **reproduce** or make more of their own kind
 4. **respond** to their environment
 5. **get rid** of their wastes
- 4)
 1. it allows us to keep track of organisms
 2. it helps people to use one common naming system
 3. it helps organize information about organisms
- 5) They can be classified in seven groups: Kingdom, Phylum, Class, Order, Family, Genus and Species.
- 6) The five major kingdoms are Monerans, Protists, Fungi, Plants and Animals.

P.77

What I learned...

A.

- 1)
 1. they are carnivorous
 2. they aren't good hunters
 3. they are social cats
- 2) The male lion's role is to defend the pride and guard their territory. The female lion's role is to hunt and raise the cubs.
- 3) The females take care of the cubs.
- 4)
 - cubs like to wrestle
 - cubs accompany their mothers on hunting expeditions
 - male cub mortality is high

- cubs can run well at 4 to 6 weeks old

B. What advantages does a lion's mane provide?

- it makes the lion look bigger and more ferocious to its opponents.
- it adds attractiveness during mating.
- its sex, vigor and age are apparent from far away distances.
- its mane protects it from the claws and teeth of opponents.

P.85

What I learned...

A.

- 1) Jaguars prefer to live near freshwater.
- 2) Jaguars are found in Mexico and Central and South America.
- 3) A Jaguar may drag its prey to a secluded spot, usually high in a tree, before eating it.
- 4) The cubs must leave their mother after two years to establish territories of their own.

P.94-95

Name of Felidae	Lion	Tiger	Jaguar	Leopard	Cheetah
Description: (color of skin, spots?)	golden brown	orange-red coat with black stripes	golden brown and yellowish skin with black ring spots and one to four dark spots at the center of each one	golden brown with black ring spots	yellowish-brown coat covered in medium to dark spots
Size, weight	140-250 cm long, 120-250 kgs	2.75-3.5 m long, 65-306 kgs	90-190 cm long, 28-90 kgs	91-190 cm long, 28-90 kgs	112-115 cm long, 35-72 kgs
Where it lives	Africa and India	India, Pakistan, Siberia, Malay Peninsula and Sumatra	Mexico, Central and South America	Africa, Asia Minor, the Middle East, India, Pakistan, China, Siberia, Java and Sri Lanka	Africa and Asia
Prey	zebras, antelopes and gazelles	deer, wild boar and buffalo	they hunt all creatures	they hunt all creatures	gazelles, impalas, hares, birds and other small

					animals
Gestation period	105 days	X	95-105 days	90-105 days	90-95 days
Number of cubs	2 to 4	X	1 to 4	2	3-5
Sociable?	yes	no	no	no	no
Description of claws	they may pull in they claws	they may pull in they claws	they may pull in they claws	they may pull in they claws	their claws are always extended
Hour of hunting	they hunt in the darkness	they hunt at night	X	X	late in the morning and early in the afternoon
Predators	humans, other meat eaters	humans, other meat eaters	humans, other meat eaters	humans, other meat eaters	humans, other meat eaters

B.

1. they are carnivorous
2. they aren't good hunters
3. they are social cats

C.

- 1) No, lions are not lazy.
- 2) There are no panthers in the cat family because panthers are actually leopards.
- 3) They leave claw marks and urine scent markings to mark their territory.

E.

- 1) You can recognize a cheetah by its slim body and **yellowish-brown coat with medium to dark spots.**
- 2) A cheetah hunts its prey by **strangulation.**

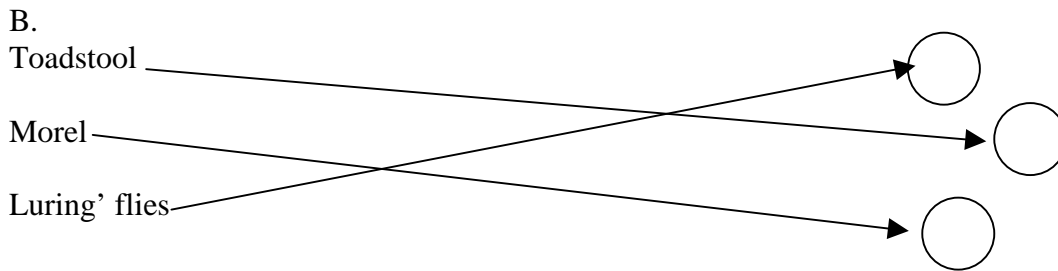
UNIT 4

P.120-121

What I learned

A.

- 1) Fungus is an organism made up of thread-like structures called **hyphae.**
- 2) Fungus **reproduces** by forming spores.
- 3) Fungus cannot produce their own **food.**
- 4) The hyphae take in liquid nutrients by **absorption.**
- 5) Fungi spread their spores through **air** and **attracting visitors.**



- 1) They all produce spores
- 2) They all spread spores
- 3) They attract visitors

C.

- 1) Decomposers break down living and dead matter into simple chemicals that they use for food.
- 2) Mold is the wooly surface growth of fungus that is found on damp or decaying matter. Mold develops when something living or dead is contained and moist. It can be green, white, yellow or black fuzz.
- 3) He was a bacteriologist from Scotland. He discovered penicillin.
- 4) The difference is that yeast can move around and fungi can't.
- 5) Beer, bread and bubble gum all use yeast.

D.

- 1) Eating mushrooms can be healthy. What is very important to know is which mushrooms are good to eat and which are poisonous.
(Answers may vary with the students.)
- 2) Drinking high levels of alcohol causes the brain centers that control muscles, speech, ability to walk, talk clearly, and vision to shut down. Other organs are also affected by alcohol. Smoking causes 85% of all lung cancers. Nicotine also narrows the blood vessels, which boosts blood pressure and increases the risk of heart disease and strokes.
(Answers may vary with the students.)

UNIT 5

What I learned...

P.137-139

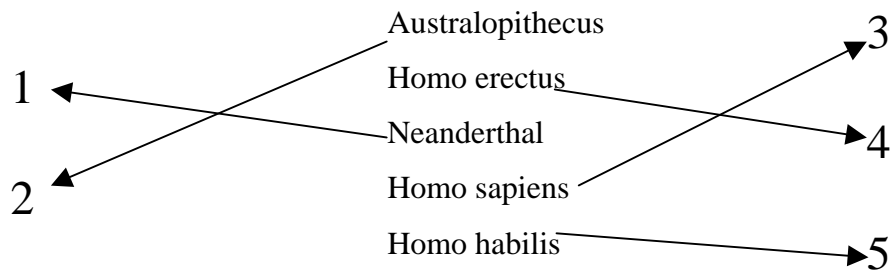
A.

- 1) Africa
- 2) An artifact is any piece of stone that was given its shape by a human being and made for a specific purpose.
- 3) They transported fire by carrying torches.
- 4) (opinion question)
- 5) Humans walk on two feet and have larger brains. (choose of the two answers)

B.

1		4	
2	3	5	

C.



D.

- 1) Australopithecus: it comes from the Latin australis, meaning south, and pithecus, meaning ape.
- 2) Homo Erectus: name meaning erect or straight man.
- 3) Neanderthal: ***not from Latin*** named Neanderthal because fossils of the species were found in the Neander Valley in Germany.
- 4) Homo Sapiens: name meaning wise man.
- 5) Homo Habilis: name meaning able or handy man.

P.147

- 1) mice
- 2) rabbits
- 3) dogs
- 4) cats
- 5) frogs
- 6) fish
- 7) snakes
- 8) turtles
- 9) cockroaches
- 10) chickens

P.148

- 1) elephants
- 2) lions
- 3) bears
- 4) humans
- 5) gorillas
- 6) tigers
- 7) cows
- 8) horses

- 9) whales
- 10) rhinos

P.157-158

- 1) The first civilization developed between the Tigris and Euphrates rivers in a land called Sumer.
- 2) They were creative and intelligent.
- 3) Habitats with more rain and sunlight have more organisms.
- 4) It is important to check an animal's population to
- 5) An example of natural control is when the reindeer of Alaska starved to death after the lichen died due to the harsh winter.
- 6) R strategy is a measure of how fast a population can grow. K strategy
- 7) Extinction is when a species dies because their habitat and food sources are destroyed.
- 8)
 - 1. they are hunted for products that can be made from them
 - 2. they are hunted for food
 - 3. they are hunted for their fur and skin or for their tusks and horns
- 9) We can do actions such as soil conservation, replacement of our forests and jungles, water management, create laws that protect animals and don't buy animal products.

10)

Extinct	Endangered
1. Quagga	1. Blue whale
2. Dodo	2. Tiger
3. Passenger pigeon	3. Lion
	4. Whooping Crane
	5. Grizzly Bear