

COMPACT SCIENCE 3

(Book Solution)

1. Living and Nonliving Things

Checkpoint 1

1. A mountain
2. Sunflower

Checkpoint 2

1. Touch-me-not plant
2. Stomata
3. Lungs

Exercises

- A.** 1. (a) 2. (b) 3. (b)

- B.** 1. eggs

2. food

3. nonliving

4. grow

5. gills

- C.** 1. Living things grow, move, breathe, need food, feel their surroundings, excrete and reproduce.
2. Living things like animals move by legs, birds by wings and fishes by fins.
3. We need food to live and grow.
4. Plants make their food in green leaves, in the presence of sunlight, by taking water from soil and carbon dioxide gas from air.
5. The removal of waste from the body is called excretion.

HOTS

1. A car does not move itself. It moves when it is charged and started.
2. Because it is a nonliving thing.
3. A plant without leaves cannot make its food and will die of hunger.

Activity Time



2. Structure and Functions of a Plant

Checkpoint 1

1. True 2. False 3. True

Checkpoint 2

1. Banyan
2. bud
3. papaya

Exercises

- A. 1. (c) 2. (b) 3. (c)

- B. 1. False 2. True 3. False

- C. 1. A plant has root, stem, leaves, flowers, fruits and seeds.
2. Fibrous roots are the bunch of thread-like roots that grow from the base of the stem, whereas tap root has one main root and many branches arising from it.
 3. Roots hold the plant in the soil and take water and nutrients from the soil.
 4. The stem keeps the plant straight and carries water from roots to leaves and food from leaves to other parts of plant.
 5. Stomata on the leaves help the plant breathe by taking in and giving out air.

HOTS

1. Because during breathing, plants also release carbon dioxide gas which would make the room suffocating.
2. Moss sticks hold the water sprinkled on them and provide sufficient amount of moisture to money plant trailing over them.
3. Seeds grow into baby plant.

3. Animals and their Feeding Habits

Checkpoint 1

1. Vulture
2. Sheep
3. Goat
4. Deer

Checkpoint 2

1. Chameleon
2. Mosquito
3. Snake

Exercises

- A. 1. (a) 2. (b) 3. (a)

- B. 1. swallowing 2. trunk 3. live; grow 4. plants

- C. 1. Animals eat food to live and grow.

2. Animals that eat plants only are called herbivorous animals.
3. A mosquito gets its food by piercing the skin and sucking the blood through its long, hollow tube-like mouthparts.
4. The sharp canines of carnivores help them tear the flesh while strong and flat teeth help them grind and chew the flesh.
5. The crocodile and snake swallow their food whole.

HOTS

1. Front teeth are required for biting the food. As carnivores eat much of their food by tearing, their front teeth are not much developed.
2. Mosquitoes and butterflies cannot eat solid food because they have tube-like hollow mouthparts which can suck food in liquid form only.

3. Snakes swallow their food whole because their teeth are not able to chew the food.

Activity

Bite — Deer, Monkey

Suck — Bed bug, Housefly

Lick — Cat, Dog

Nibble — Grasshopper, Parrot

Chew — Cow, Horse

Gnaw — Squirrel, Rat

4. World of Birds

Checkpoint 1

1. Down feathers
2. Oil glands
3. Boat-shaped or Streamlined

Checkpoint 2

1. shredder
2. flying
3. webbed
4. nests

Exercises

A. 1. (c) 2. (c) 3. (a)

B. 1. False 2. False 3. False 4. False 5. True

C. 1. streamlined 2. down; flight 3. water
4. perching 5. heron; flamingo

D. 1. (e) 2. (b) 3. (a) 4. (c) 5. (d)

E. 1. Swan, duck.

2. Aquatic birds have oil glands below their feathers. The swimming birds have webbed feet for swimming and wading birds have long wading type of feet for walking on soft surfaces and in muddy water.

3. Ostrich cannot fly because its bones are heavy and solid. It has smaller wing bones.

4. Birds build nests to lay eggs, bring up and keep safe their young ones.

5. The parent birds look after their young ones by feeding, keeping warm and protecting them from enemies and bad weather.

HOTS

1. An eagle has very strong and sharp claws to catch and hold its prey firmly.
2. A duck has a flat and broad beak for straining small plants and animals from the muddy water.
3. A crow cannot identify the baby cuckoo among its own babies because they all look alike.

5. Our Body

Checkpoint 1

1. (c) 2. (a) 3. (b)

Checkpoint 2

1. Blood
2. Brain
3. Heart

Exercises

- A. 1. (b) 2. (c) 3. (b) 4. (a)

- B. 1. bones
2. digestive juice
3. kidneys
4. windpipe 5. nose

- C. 1. (c) 2. (a) 3. (d) 4. (e) 5. (b)

- D. 1. blood 2. bone 3. muscle 4. stomach
5. heart 6. teeth 7. lungs 8. kidney

- E. 1. Heart, brain, lungs, kidneys, liver, stomach, etc.
2. Kidneys
3. Circulatory system supplies blood to all the parts of the body.
4. In mouth, the food is chewed and mixed with saliva.

HOTS

1. We do exercises and play outdoor games to make our muscles strong.
2. Brain is called the control centre of the body because it controls all the activities of the body.

Activity Time

S	K	U	L	L	A	B	L	T	T
Z	I	B	V	N	E	R	V	E	S
A	D	T	F	P	F	A	S	E	K
B	N	F	E	S	S	I	V	T	Q
H	E	A	R	T	N	N	F	H	N
N	Y	F	O	O	D	P	I	P	E
D	J	C	Q	M	O	U	T	H	J

6. Eat Healthy

Checkpoint 1

1. Vegetable group
2. Others
3. Meat group
4. Milk group
5. Fruit group

Checkpoint 2

1. (X)
2. (✓)
3. (✓)
4. (X)

Exercises

- A. 1. (a) 2. (b) 3. (d) 4. (b)
- B. 1. False 2. True 3. True 4. False
- C. 1. Fruit group
2. The food that protects us from diseases is called protective food.
 3. A diet containing the right amount of food from each food group is called a balanced diet.
 4. Liquids such as milk, lassi, milk shakes, fresh fruit juices, etc. in our daily diet clean our body systems.

HOTS

1. Junk food should be avoided because it is not good for our health.
2. Fruits and vegetables should be washed because they are sprayed with toxic chemicals to save from insects while grown.
3. Sportspersons need a lot of eggs, meat, nuts and butter because they need extra energy, strong muscles and good health to do many physical activities.

7. Keep Safe

Checkpoint 1

1. True 2. False

Checkpoint 2

1. At zebra crossing
2. Outdoor games keep us healthy and active

Exercises

- A. 1. (b) 2. (b) 3. (b)
- B. 1. True 2. True 3. False 4. True
- C. 1. wet 2. equipment 3. panic 4. first aid
- D. 1. An unexpected event that harms or injures us is called an accident.
2. (a) Walk on the footpath.
(b) Cross the road at zebra crossing.
(c) Be alert for sounds and horns of approaching vehicles.
 3. **Hint:** Ask students to write the names of their favourite outdoor games.

Safety rules:

- (a) Do not fight with others and break the rules.
- (b) Do not push or hit others.
- (c) Wait for your turn.
4. Stop, No U-turn, No Entry, No Horn, No Parking

HOTS

1. A car driver should not jump red light because it may cause an accident.
2. The bleeding cut is kept at higher level to slow down the flow of blood from the cut.

8. Housing and Clothing

Checkpoint 1

1. No 2. Yes 3. Yes

Checkpoint 2

1. RAYON 2. SILK 3. WOOL 4. COTTON

Exercises

- A. 1. (a) 2. (c) 3. (b) 4. (c)

- B. 1. building 2. cleaned 3. animals; plants
4. nylon 5. smooth

- C. 1. Jute
2. Sheep
3. Synthetic

- D. 1. House is a building in which people live together happily.
2. A house is made of bricks, stones, cement, sand, iron, steel, wood, glass, etc.
3. Doors and windows should have wiremesh to stop flies and mosquitoes from entering the house.
4. Cotton, wool, silk, nylon, rayon, polyester.
5. Polyester and nylon clothes are used during rainy season because they do not soak water and also they dry fast.

HOTS

1. Sunlight keeps the house dry and germ-free. It gives natural light and freshness.
2. A good drainage system carries out the waste smoothly and keeps the house clean.

9. Air and Water

Checkpoint 1

1. BREEZE 2. OXYGEN 3. STORM 4. POLLUTION

Checkpoint 2

1. Breeze 2. Dust 3. Atmosphere

Exercises

- A. 1. (a) 2. (d)

- B. 1. False 2. True 3. False 4. True

- C. 1. water

2. solid

3. water vapour

4. evaporate

- D. 1. (b) 2. (a) 3. (d) 4. (c)

- E. 1. A thick layer of air around the earth is called atmosphere.

2. (a) Animals and plants breathe in air.

(b) Footballs are filled with air.

(c) Air helps in drying clothes.

(d) Plants take carbon dioxide gas from air to make their food.

3. When we heat water, it turns into water vapour or steam.

4. We can save water by not wasting it such as:

(a) Keeping taps tightly closed after use.

(b) Using bucket and mug for taking a bath instead of using a shower.

(c) Getting repaired the leaky taps.

(d) Not leaving the tap running while brushing teeth or washing face or hands.

HOTS

1. Smoke from factories has harmful gases which can cause many diseases.

2. Swimming tube is filled with air and becomes light. It floats on the surface of water.

10. Weather and Seasons

Checkpoint 1

1. Moisture 2. Weather 3. Loo

Checkpoint 2

1. SNOWFALL 2. SPRING 3. HUMID 4. SUMMER

Exercises

- A. 1. (a) 2. (b) 3. (c)

- B. 1. False 2. True 3. False 4. True

- C. 1. Sun, Clouds, Wind and Rain

2. The condition of air at a particular place and time is called weather while change in weather is called season.
3. A cloudy day is cooler because clouds do not allow sunrays to reach us.
4. Morning is cooler than noon because at this time, the sunrays fall slanting.

HOTS

1. Plants get new leaves during spring season because they shed their leaves during autumn.
2. People wear cotton clothes in summer because cotton clothes soak sweat easily and keep the body cool.
3. We should eat freshly cooked food during rainy season because in this season, germs grow on stale food easily and spoil it.

11. Soil and Rocks

Checkpoint 1

1. No 2. Yes 3. Yes 4. Yes

Checkpoint 2

1. BEDROCK 2. SUBSOIL 3. HUMUS

Exercises

- A. 1. (b) 2. (d) 3. (a)

B. 1. True 2. False 3. True 4. False

- C.** 1. We get soil by breaking of rocks into fine particles.
2. Loamy soil is made up of equal amounts of sand and clay.
3. Humus makes the soil rich in nutrients for plants to grow well.
4. Soil is important to us because we depend on soil for food.

HOTS

1. We should water the plants daily because plants take minerals from soil that are mixed with water.
2. Diamond is the hardest form of rock, so it is used to cut hard materials.
3. Marble and granite are hard and smooth. They can be cleaned easily. Therefore, they are used in kitchen slabs and building floors.

Kitchen slabs cannot be made from wood because wood can catch fire easily.

12. Heavenly Bodies

Checkpoint 1

1. (b) 2. (d) 3. (a) 4. (c)

Checkpoint 2

1. Orbit 2. Revolution

Exercises

A. 1. (a) 2. (b) 3. (c) 4. (c)

B. 1. True 2. True 3. False 4. True 5. False

C. 1. third 2. water 3. star 4. satellite 5. orbit

D. 1. MOON 2. SUN 3. ORION 4. SATELLITE

E. 1. (b) 2. (a) 3. (d) 4. (e) 5. (c)

- F.** 1. The sun, the eight planets and their satellites and some other heavenly bodies revolving around the sun form the solar system.

2. Persons who travel into space are called astronauts.
3. Rotation and Revolution.
4. Presence of air, water and sunlight makes life possible on the earth.
5. Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.

HOTS

1. Sun; Sun is a star, others are planets.
2. Moon; Moon is a satellite, others are constellations.
3. Mountain; Mountain is a geographical feature of the earth, others are heavenly bodies.
4. Earth; Earth is a planet, others are names of seasons.

13. Light, Sound and Force

Checkpoint 1

1. No 2. Yes 3. No 4. Yes

Checkpoint 2

1. sound 2. good 3. Force

Exercises

- A. 1. (a) 2. (c) 3. (a)

- B. 1. False 2. False 3. False 4. True

- C. 1. A thing that gives out light is called a luminous object.
2. Noise is an unpleasant and irritating sound.
3. Candle, Torch, Bulb.
4. We can reduce noise pollution by playing music and TV at low volume and not using loudspeakers, etc.

HOTS

1. The moon shines by the light of the sun falling on it.
2. We should speak softly because if we speak louder, it would make noise.
3. Soft music calms down our mind.

14. Measurement

Checkpoint 1

1. No 2. Yes 3. No 4. Yes

Checkpoint 2

1. Kilolitre 2. Weight 3. Thermometer 4. Capacity

Exercises

- A. 1. (c) 2. (b) 3. (c)

- B. 1. (c) 2. (e) 3. (a) 4. (b) 5. (d)

- C. 1. 1000 2. 1000 3. 365 4. 24

- D. 1. Inch tape, metre scale.

2. We measure time with the help of a watch.

3. The amount of liquid that a container can hold in it is called its capacity.

4. The measure of hotness and coldness of a body is called its temperature.

HOTS

1. Thermometer; Thermometer is used to measure body temperature, others are used to measure lengths of objects.

2. Litre; Litre is a standard unit of capacity, others are units of time.

3. Kilometre; Kilometre is a unit of distance, others are units of mass.