EL-MOASSER
SERIES

SCIENCE

Guide Answers

By A Group of Supervisors



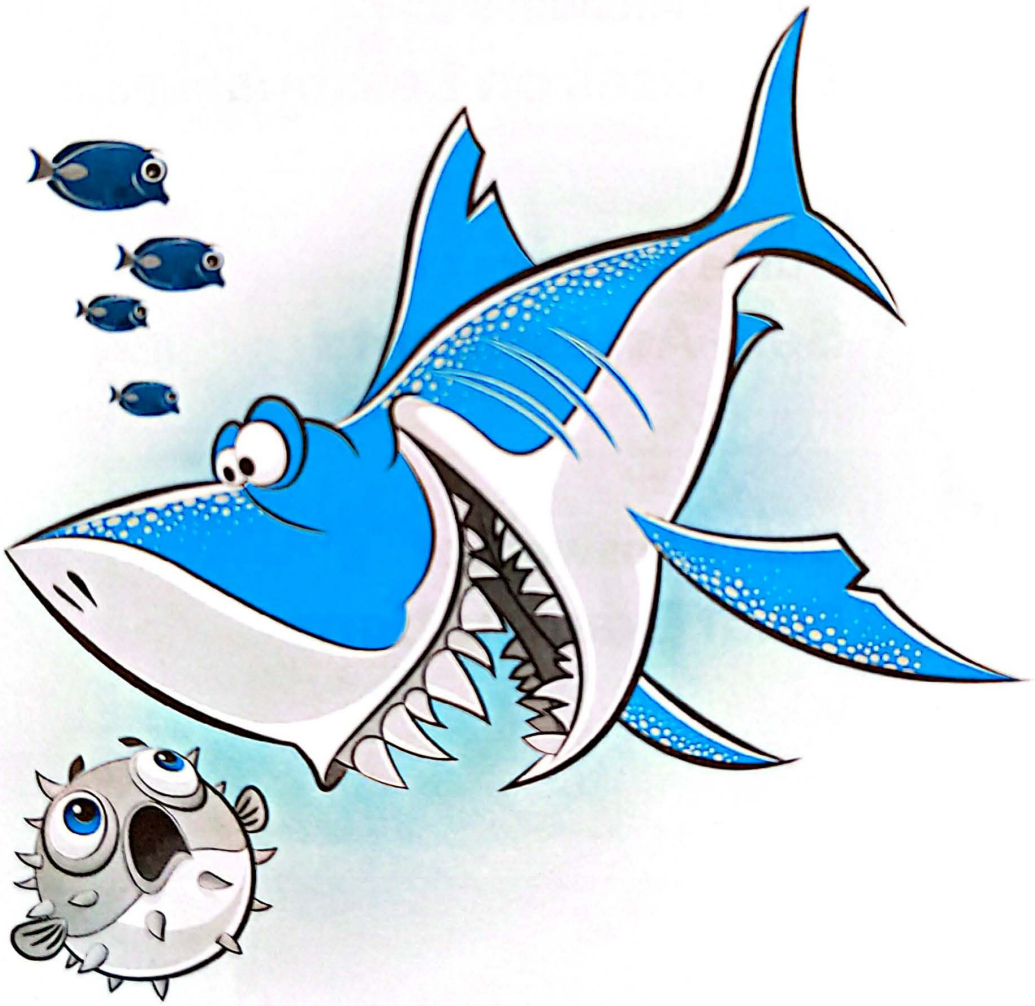
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SECOND TERM

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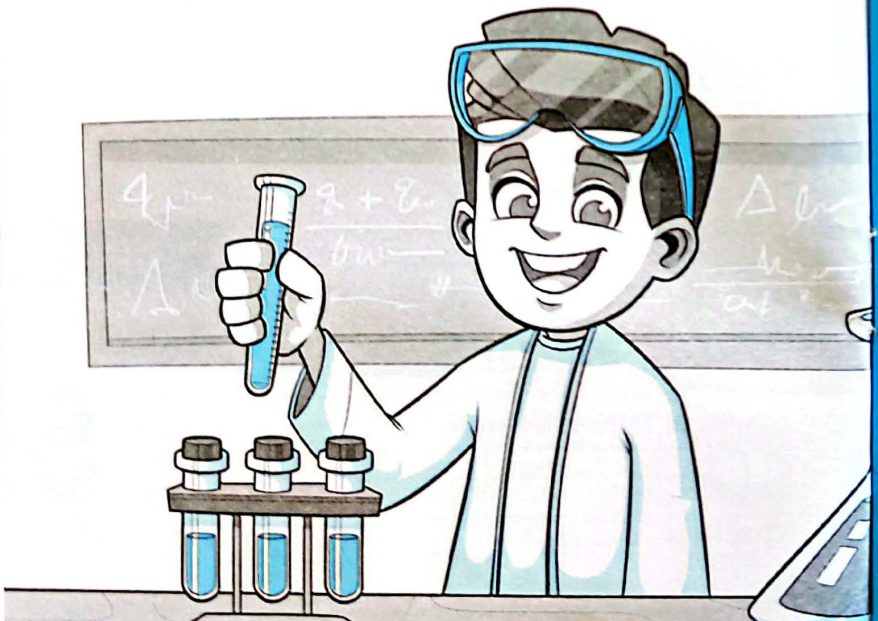
SECOND TERM

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Part 1

Guide Answers of Exercises on Lessons



PART 1

UNIT Three : Natural Resources on Earth's Surface

Concept (3.1)

Exercises on Lesson 1

1 1. a 2. d 3. b 4.d
5. c 6. c 7. b

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

3 1. (✗) 2. (✗) 3. (✓) 4. (✓)
5. (✗) 6. (✓) 7. (✓)

4 1. Weathering. 2. Erosion.

5 1. biosphere.
2. weathering – erosion
3. solid – gas

6 1. Because all plants need water to grow, and some of them live in water.
2. Because water can cause weathering and erosion of rocks.
3. Because about 71% of Earth is covered by water.

7 It will be changed into solid state (ice).

8 (a) Carbon dioxide.
(b) Water. (c) Plants.
(d) Soil.

Exercises on Lesson 2

1 1. b 2. b 3. a 4.d
5. c 6. c

2 1. b 2. a 3. c 4. e

3 1. (✓) 2. (✗) 3. (✓) 4. (✗)
5. (✓) 6. (✗) 7. (✗)

4 1. Lake. 2. Water cycle.

5 1. rivers – salt
2. clouds – rains.
3. hydrosphere – geosphere.
4. biosphere
5. hydrosphere – biosphere.
6. atmosphere – biosphere

6 1. Because water can be replaced in nature through the water cycle.
2. Because worms belong to biosphere, while soil belongs to geosphere.

7 1. (✓) 2. (✗) 3. (✓)

Exercises on Lesson 3

1 1. a 2. d 3. a 4. c
5. b 6. d 7. b 8. d

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

3 1. (✗) 2. (✓) 3. (✓) 4. (✗)
5. (✗) 6. (✓) 7. (✓) 8. (✗)

4 1. Geosphere. 2. Hydrosphere.
3. Atmosphere. 4. Biosphere.
5. Biome.

5 1. 96.5 % – 3.5 %
2. geosphere – hydrosphere.
3. less 4. fresh – salt
5. geosphere. 6. lithosphere.

6 1. Because plants take in carbon dioxide gas from air during photosynthesis process.
2. Because most of fresh water on Earth are in the form of frozen water.

7 They will not be able to make their food by photosynthesis process.

8 1. (✗) 2. (✓) 3. (✓) 4. (✓)

9 1. geosphere. 2. hydrosphere.
3. atmosphere.

Exercises on Lesson 4

1 1. c 2. d 3. a 4. d
5. d

2 1. (✗) 2. (✓) 3. (✗) 4. (✓)
5. (✗) 6. (✓) 7. (✗) 8. (✓)

3 1. Oceans.
2. Shallow areas.
3. Intertidal zone.

4 1. hydrosphere – biosphere.
2. freshwater – saltwater
3. high – low 4. sunlight
5. summer 6. Lake Nasser.

5 1. Because when the temperature increases in summer, water evaporates faster.
2. Because the abyssal zones don't receive sunlight, which is important for making food in plants.

6 They have to adapt to the changes that happen, or they will die.

Exercises on Lesson 5

1 1. a 2. c 3. a 4. c

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

3 1. (✗) 2. (✓) 3. (✓)

4 1. geosphere.
2. still – running 3. oceans

5 1. a 2. d

Model Exam (1) on Concept (3.1)

1 (A) 1. d 2. c 3. a 4. a
(B) Because when the temperature increases in summer, water evaporates faster.

2 (A) 1. (✗) 2. (✗) 3. (✓) 4. (✓)
(B) It will be changed into solid state (ice).

3 (A) 1. weathering – erosion
2. biosphere – humans.
3. biosphere – geosphere.
4. fresh – salt
(B) Gulfs. (All items contain fresh water, while gulfs contain salt water).

Model Exam (2) on Concept (3.1)

1 (A) 1. b 2. c 3. a 4. d
(B) Because most of fresh water on Earth are in the form of frozen water.

2 (A) 1. running 2. 71 %
3. four 4. Atmosphere
(B) They will not be able to make their food by photosynthesis process.

3 (A) 1. Geosphere.
2. Oceans.
3. Biome. 4. Shallow areas.
(B) 1. geosphere. 2. hydrosphere.

Concept (3.2)

Exercises on Lesson 1

1 1. b 2. d 3. a 4. d
5. d 6. a 7. d 8. c
9. b 10. a 11. b 12. a

2 1. (✓) 2. (✗) 3. (✓) 4. (✓)
5. (✗) 6. (✗) 7. (✓) 8. (✓)
9. (✓) 10. (✓) 11. (✓)

3 1. Water. 2. Fresh water.
3. River. 4. Lake.
5. Oceans. 6. wetland.
7. Estuary. 8. Groundwater.

4 1. electricity. 2. fresh – salt
3. fresh 4. fresh water.
5. wetland. 6. estuary
7. groundwater

5 1. Because there is a limited amount of fresh water on Earth.
2. To conserve fresh water.
3. Because it is stored in the cracks and spaces of underground rocks.

6 1. The amount of fresh water on the Earth will decrease.
2. A lake is formed.
3. An estuary is formed.

7 1. F 2. S 3. F 4. S
5. F 6. S

8 1. (B) – (A) 2. (B). 3. (A).
4. (B) – it has a limited amount on the Earth.

Exercises on Lesson 2

1 1. d 2. d 3. b 4. c
5. d 6. a

2 1. (✗) 2. (✗) 3. (✓) 4. (✗)
5. (✗)

3 1. Watershed. 2. Flood.
3. Drought.

4 1. quality 2. fresh
3. decrease – drought.

5 1. Because poor quality of fresh water leads to death of thousands of living organisms and extinction of some species live in this water.
2. Because the amount of fresh water is limited on Earth.

6 1. It leads to death of living organisms and extinction of some species live in fresh water.
2. The level of water in this river will increase causing flooding.

Exercises on Lesson 3

1 1. c 2. b 3. d 4. c

2 1. (✗) 2. (✓) 3. (✓) 4. (✓)

3 1. Tributaries. 2. Dam.

4 1. creeks – streams – bays – seas.
2. chemical fertilizers.
3. dams

5 Due to using of chemical fertilizers that cause water pollution.

6 The litter of the trash dump will be blown into the water of tributary then into the river causing water pollution.

7 1. d 2. c 3. b 4. a

Exercises on Lesson 4

1 1. c 2. c 3. a 4. c
5. d 6. c 7. b

2 1. c 2. a 3. b

3 1. (✓) 2. (✓) 3. (✓) 4. (✓)
5. (✓) 6. (✗)

4 1. Preservation.
2. Sustainability.

5 1. rains. 2. groundwater
3. oil products – trees.
4. animal – plant 5. sustainability
6. decrease

6 1. To preserve natural resources.
2. To conserve fresh water.

7 1. d 2. c 3. b 4. a

Exercises on Lesson 5

1 1. b 2. b 3. d 4. a
5. b 6. a 7. c 8. b
9. d

2 1. (✓) 2. (✓) 3. (✗) 4. (✓)
5. (✗) 6. (✗) 7. (✓) 8. (✗)
9. (✓)

3 1. Wastewater.
2. Wastewater engineers.
3. Water treatment plants.

4 1. charcoal – sand
2. harmful
3. water treatment – water.
4. water – pollutants
5. wastewater – treated
6. wastewater
7. floods.

5 1. Because fresh water is a limited renewable natural resource which is important for all living organisms to survive.
2. To make sure it is safe before the water is released to rivers and lakes or used by human.

6 It will become dirty water.

7 **A.** 1. Wastewater. 2. Sand.
3. Charcoal. 4. Cotton.
5. Filtered water.

B. water filter – harmful

8 1. water cycle
2. water treatment
3. wastewater engineers.

Model Exam (1) on Concept (3.2)

1 (A) 1. a 2. c 3. c 4. b
(B) Because the amount of fresh water is limited on Earth.

2 (A) 1. Oceans. 2. Sustainability.
3. Tributaries. 4. Wetland.
(B) 1. F 2. S 3. F 4. S

3 (A) 1. dam 2. quality
3. electricity. 4. rains.
(B) **1.** 1. Wastewater.
2. Sand. 3. Charcoal.
4. Cotton. 5. Filtered water.
2. water filter – harmful

Model Exam (2) on Concept (3.2)

1 (A) 1. b 2. d 3. a 4. a
(B) To conserve fresh water.

2 (A) 1. (✗) 2. (✗) 3. (✓) 4. (✓)
(B) An estuary is formed.

3 (A) 1. water – pollutants
2. decrease – drought.
3. animal – plant
4. charcoal – sand
(B) 1. Fresh water.
2. River.

Concept (4.1)

Exercises on Lesson 1

1 1. b 2. b 3. d
4. a 5. d

2 1. (✗) 2. (✓) 3. (✓)
4. (✓) 5. (✓)

3 1. Gravity.
2. Tides.

4 1. Earth's gravity. 2. Earth
3. center 4. tides.

5 Because gravity between the Sun and objects in the solar system keeps the planets revolve in fixed orbits.

6 a. gravity of Earth.
b. Earth's center.

Exercises on Lesson 2

1 1. b 2. c 3. d 4. b
5. b 6. b 7. a 8. a

2 1. d 2. a 3. b

3 1. (✗) 2. (✗) 3. (✓) 4. (✓)
5. (✓) 6. (✗) 7. (✗) 8. (✗)
9. (✓)

4 1. Force. 2. Magnetism.
3. Gravity of Earth.

5 1. decreases. 2. increase.
3. force 4. pull
5. smaller 6. magnetism.
7. push – gravity

6 1. Due to the gravitational attraction between Earth and the moon.
2. Because when the distance between them decreases, the gravity increases and vice versa.
3. Due to the force of magnetism.
4. Because the mass of Earth is greater than the mass of the moon.

7 1. The gravitational attraction between them would become smaller.
2. The gravitational force between Earth and the moon increases, so the moon comes closer to Earth and it might crash into Earth.
3. The moon would have less gravity.

8 1. b 2. a

9 (A) 1. The apple that has a mass of 80 gm.
2. Because gravity increases by increasing the mass.
(B) C

Exercises on Lesson 3

1 1. a 2. a 3. b
4. d 5. c 6. c

2 1. (✓) 2. (✗) 3. (✗)
4. (✓) 5. (✗) 6. (✗)
7. (✗) 8. (✓) 9. (✗)

3
1. center
2. pulling – direction
3. gravity
4. gravity.
5. bigger – bigger
6. direction – gravity

4
1. Because Earth pulls you by the effect of gravity.
2. Because gravity force always pulls it downwards.

5
1. All objects on Earth will move upward away from the Earth's surface.
2. All objects on its surface will float off into space.

6

Gravity will cause a change in direction	Gravity will not cause a change in direction
2. A ball thrown up into the air.	1. A pencil rolling on a table.
4. A paper airplane is thrown through the air.	3. A car moves a long a straight road.

7 (A) 1. gravity. 2. A, B and C
(B) 1. (✗) 2. (✓)

8 1. An egg. 2. Bowling ball.
3. Truck. 4. The moon.
5. Earth. 6. The Sun.

Exercises on Lesson 4

1
1. a 2. c 3. d
4. d 5. a 6. d
7. c 8. c 9. a
10. c 11. b 12. b

2
1. (✗) 2. (✗) 3. (✗)
4. (✗) 5. (✓) 6. (✗)
7. (✓) 8. (✓) 9. (✓)
10. (✓) 11. (✗) 12. (✓)
13. (✗) 14. (✓) 15. (✓)
16. (✗) 17. (✓)

3
1. gravity. 2. magnetism
3. air resistance – gravity
4. brake 5. friction
6. friction 7. air resistance
8. bigger – bigger

4
1. Air resistance.
2. Magnetism.
3. Air resistance. 4. Parachute.

5
1. To slow down his speed on landing due to air resistance.
2. Because the brake produces friction force which slows the movement of the bicycle.
3. Because magnetism force pulls them to the magnet.
4. Because it slows down the movement of an object during its falling.
5. Because the paper sheet has more surface area, so it has more air resistance and takes longer time than paper clips.

6
1. They will leave their orbits and float off into space.
2. The speed of skydiver decreases gradually.
3. The gravity force will decrease.
4. The metal ball will reach the ground first.
5. They will reach the ground at the same time.
6. They will reach the ground at the same time.

7 (A) 1. (✓) 2. (✓)
(B) 1. b 2. c

8 (A) 1. c 2. a 3. d
(B) 1. (✗) 2. (✓) 3. (✗)

Exercises on Lesson 5

1 1. c 2. c 3. a
4. a 5. b

2 1. (✗) 2. (✗) 3. (✗)
4. (✓) 5. (✗) 6. (✓)

3
1. the solar system.
2. orbits.
3. gravitational force.
4. Earth – Sun. 5. Planets
6. oval

4 Due to the great gravitational pulling force between the Sun and the planets.

5 They will float off into space.

6 1. a 2. a 3. c 4. b

Model Exam (1) on Concept (4.1)

1 (A) 1. (✓) 2. (✗)
3. (✗) 4. (✓)
(B) Because the mass of Earth is greater than the mass of the moon.

2 (A) 1. tides. 2. brake
3. gravity.
4. decreases.
(B) They will reach the ground at the same time.

3 (A) 1. Magnetism.
2. Parachute.
3. Friction.
4. Law of Motion.
(B) the Sun

Model Exam (2) on Concept (4.1)

1 (A) 1. Earth
2. magnetism
3. pulling – direction
4. constant
(B) They will float off into space.

2 (A) 1. (✓) 2. (✓)
3. (✗) 4. (✓)
(B) moon

3 (A) 1. d 2. a 3. b 4. e
(B) Due to the gravitational attraction between Earth and the moon.

Concept (4.2)

Exercises on Lesson 1

1
1. b 2. a 3. a 4. b
5. a 6. c 7. c 8. c
9. c 10. d

2
1. Day and night.
2. Earth's axis.
3. Earth's rotation.
4. Earth's revolution.
5. Day. 6. Night.

3
1. (✗) 2. (✓) 3. (✓) 4. (✗)
5. (✗) 6. (✗) 7. (✗) 8. (✗)
9. (✓) 10. (✓) 11. (✗) 12. (✗)

4
1. Due to the rotation of Earth on its axis.
2. Because it doesn't receive sunlight.
3. Due to the rotation of Earth on its axis.

5
1. Phenomenon of day and night will not happen.
2. This half has day.
3. Day and night phenomenon happens in 12 hours only.

6
1. day time. 2. night time.
3. Earth's axis. 4. rotation.
5. east to west. 6. one day.

Exercises on Lesson 2

1
1. a 2. b 3. a 4. b
5. c 6. d 7. d 8. c
9. d 10. a

2 1. c 2. d 3. b

3
1. (✗) 2. (✗) 3. (✓) 4. (✗)
5. (✓) 6. (✗) 7. (✗) 8. (✓)
9. (✓) 10. (✓) 11. (✗) 12. (✓)
13. (✗)

4
1. Sun. 2. day and night
3. an elliptical (oval)
4. 24

5
1. Jupiter. 2. Day.
3. Four seasons.
4. The solar system.
5. Cycle.

6
1. the Sun – planets
2. day and night – axis.
3. the Sun – tilt.
4 . cycle.

7
1. Due to the revolution of Earth around the Sun.
2. Because Earth is slightly tilted on its axis and it revolves around the Sun in an oval orbit.

8
1. The phenomenon of day and night will not happen.
2. Sunrise and sunset times will be similar each day on Earth.
3. The time of day and night in both of them will be the same.

9
1. day and night
2. four seasons
3. rotation – 24 hours.
4. revolution – year.

Exercises on Lesson 3 Part A

1
1. b 2. a 3. d 4. d
5. d 6. a 7. c 8. b

2
1. (✗) 2. (✗) 3. (✓) 4. (✗)
5. (✗) 6. (✗) 7. (✓) 8. (✓)
9. (✗)

3
1. its axis – east – west
2. shadows – the Sun
3. sundial.
4. the length – angles
5. afternoon 6. shorter

4
1. Because we are moving with the same speed of Earth.
2. Due to the change in the position of the Sun in the sky.
3. Due to Earth's rotation on its axis.

5
1. It will be the shortest shadow of that object.
2. The shadow of the object will be the longest.

6 1. d 2. a 3. b 4. c

Exercises on Lesson 3 Part B

1
1. c 2. a 3. a 4. c
5. b 6. b 7. c

2
1. (✗) 2. (✗) 3. (✓) 4. (✗)
5. (✗) 6. (✗) 7. (✓) 8. (✓)
9. (✗) 10. (✗) 11. (✗)

3
1. Stars 2. Orion – hunter.
3. rotation 4. moons
5. hot gases.
6. constellations – the main directions

4
1. Due to Earth's rotation on its axis.
2. Because it reflects the sunlight.
3. Because the location of the constellations in the sky during the year, help us to determine the main directions on Earth.

5
1. Stars can't make their own light.
2. The moon seems bright.

6
1. Orion – hunter.
2. stars.
3. Earth's revolution around the Sun.

Exercises on Lesson 4

1
1. b 2. c 3. d 4. c
5. a 6. c 7. b 8. c
9. c 10. c 11. a 12. a

2
1. (✗) 2. (✗) 3. (✗) 4. (✗)
5. (✓) 6. (✗) 7. (✓) 8. (✗)
9. (✓)

3
1. star 2. reflects
3. The Sun 4. month

4
1. The Sun. (all items don't give off light while the Sun is a star that gives off light).
2. Earth (all items are moon phases, except Earth).

5 1. The moon. 2. The planets.
3. Full moon phase.
4. New moon phase.
5. Crescent phase.

6 1. the Sun. 2. phases
3. lunar month.
4. Earth – the Sun.
5. full moon 6. crescent
7. new moon 8. crescent

7 1. Because it reflects the sunlight.
2. Because they don't give off their own light.
3. Due to :
- Earth's revolution around the Sun.
- The moon's revolution around Earth.
- Both Earth and the moon revolve together around the Sun.

8 1. The phases of the moon are formed.
2. This half will appear bright.

9 1. the moon. 2. new moon.
3. full moon.
4. positions B and D.

10 1. First quarter. 2. Full moon.
3. Second gibbous.

Exercises on Lesson 5

1 1. b 2. c 3. a 4. d
5. b 6. c 7. b 8. c
9. c 10. c 11. d 12. d
13. b 14. d

2 1. (✗) 2. (✗) 3. (✓) 4. (✓)
5. (✓) 6. (✓) 7. (✓) 8. (✗)
9. (✗) 10. (✓) 11. (✗) 12. (✓)
13. (✗) 14. (✓)

3 1. The solar system.
2. Copernicus.
3. The Sun. 4. Stars.
5. Galaxy. 6. The universe.
7. The atmosphere.

4 1. the solar system.
2. thermal
3. planets – moons
4. the Sun 5. medium
6. hydrogen – helium.
7. atmosphere

5 1. Because the Sun is the closest star to Earth.
2. Because atmosphere allows some light waves to pass to the Earth and blocks others.
3. Because stars produce light.

6 The gravity of the Sun will decrease.

7 1. The Sun 2. The moon
3. The moon

Exercises on Lesson 6

1 1. b 2. a 3. c 4. c

2 1. (✗) 2. (✗) 3. (✓) 4. (✓)
5. (✓) 6. (✗) 7. (✓)

3 1. planets – constellations – planetarium.
2. directors
3. a projector
4. scientists – properties

4 1. Planetarium.
2. Planetarium directors.

5 Because we can see images of stars, planets, constellations and other celestial bodies in it.

6 (A) 1. (✗) 2. (✓) 3. (✓)
(B) 1. planetarium directors.
2. making amazing realistic show outer space.

Model Exam (1) on Concept (4.2)

1 (A) 1. c 2. c 3. d 4. d
(B) Because they don't give out their own light.

2 (A) 1. Day and night.
2. Planetarium directors.
3. The moon.
4. The revolution.
(B) 1. The Sun. (all items are dark bodies that don't give off light, while the Sun is a star that gives off light).
2. Hubble Space Telescope. (all items are moon phases, while Hubble Space Telescope is a tool used to see distant space objects).

3 (A) 1. Jupiter. 2. Sundial
3. Projector 4. Orion
(B) 1. d 2. a
3. b 4. c

Model Exam (2) on Concept (4.2)

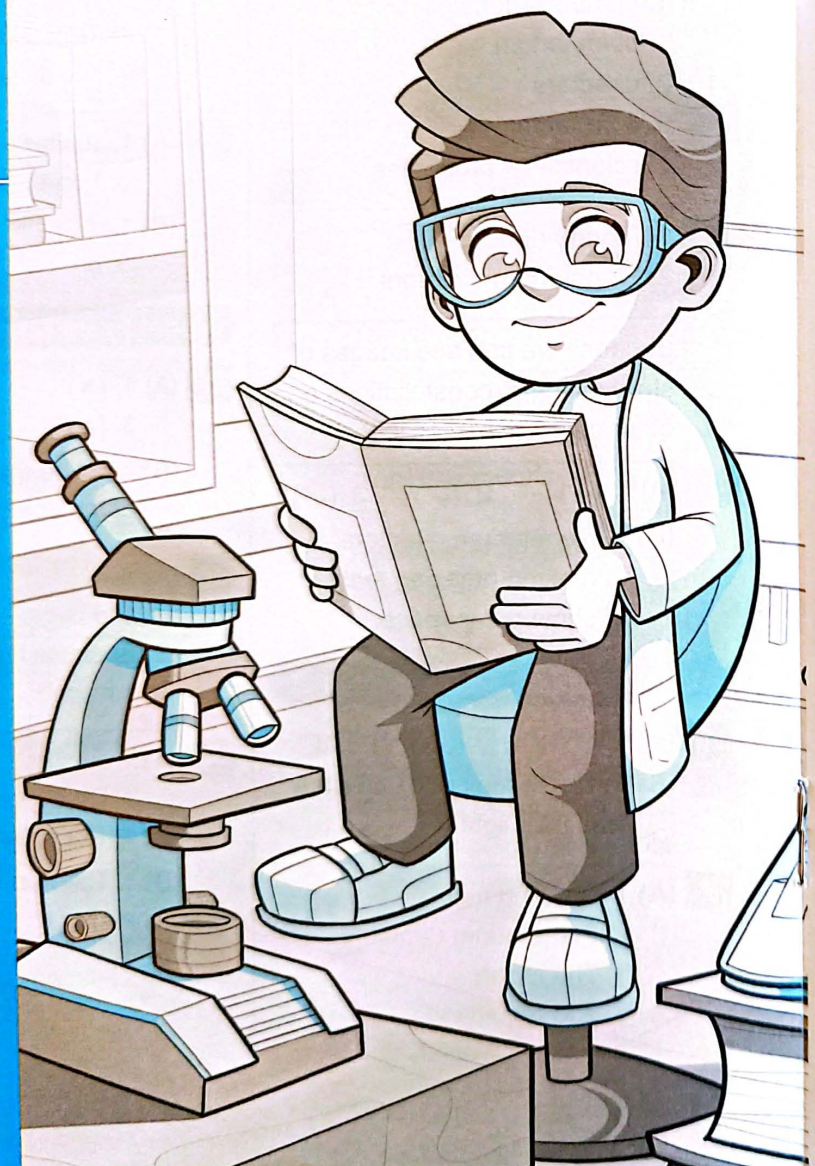
1 (A) 1. (✗) 2. (✗)
3. (✗) 4. (✓)
(B) It will be the shortest shadow of the object.

2 (A) 1. c 2. a
3. d 4. b
(B) Because it reflects the sunlight.

3 (A) 1. Jupiter. 2. Day.
3. Four seasons.
4. The solar system.
(B) 1. The Sun.
2. Moon.

Part 2

Guide Answers of Self-Assessments



Concept (3.1)

Self-Assessment 1

1 (A) 1. b 2. c 3. d
(B) It changes from liquid to gas.

2 (A) 1. blue 2. Weathering
3. biosphere.
(B) Because all plants need water to grow and some of them live in water.

3 1. (3) 2. (1) 3. (2)

Self-Assessment 2

1 (A) 1. biosphere
2. hydrosphere.
3. clouds.
(B) Because rocks belong to geosphere, while flood water belongs to hydrosphere.

2 (A) 1. (✗) 2. (✓) 3. (✓)
(B) Water. (All items belong to atmosphere, while water belongs to hydrosphere).

3 1. biosphere – atmosphere.
2. hydrosphere – geosphere.
3. biosphere.

Self-Assessment 3

1 (A) 1. hydrosphere
2. atmosphere.
3. lake.
(B) Because most of fresh water on Earth are in the form of frozen water.

2 (A) 1. (✓) 2. (✓) 3. (✗)
(B) 1. Gulfs. (All items contain fresh water, while gulfs contain salt water).
2. Rocks. (All items belong to hydrosphere, while rocks belong to geosphere).

3 (1) Biosphere – Atmosphere.
(2) Biosphere – Geosphere.
(3) Biosphere – Hydrosphere.

Self-Assessment 4

1 (A) 1. (✗) 2. (✓) 3. (✓)
(B) Because ants belong to biosphere, while soil belongs to geosphere.

2 (A) 1. hydrosphere.
2. Lake Bardawil
3. 96.5 %
(B) They have to adapt to the changes that happen, or they will die.

3 1. (✓) 2. (✗) 3. (✗) 4. (✓)

Self-Assessment 5

1 (A) 1. (✓) 2. (✓) 3. (✗)
(B) (1) frog (2) water lily
(3) catfish (4) salmon
(5) starfish (6) kelp

2 (A) 1. freshwater
2. hydrosphere
3. 3.5 %
(B) It will be changed into solid state (ice).

3 1. (✗) 2. (✗) 3. (✓) 4. (✗)

Model Exam on Concept (3.1)

1 (A) 1. b 2. a 3. d 4. c
(B) Because oceans contain salt water, while rivers contain fresh water.

2 (A) 1. weathering – erosion
2. oceans (or seas) – streams.
3. Assal – Bardawil
4. water – Earth.
(B) Water. (All items belong to geosphere, while water belongs to hydrosphere).

3 (A) 1. Water cycle.
2. Geosphere. 3. River.
4. Intertidal zone.
(B) 1. (✓) 2. (✗)

Concept (3.2)

Self-Assessment 6

1 (A) 1. Salt water.
2. Wetland. 3. Estuary.
(B) To conserve fresh water.

2 (A) 1. Oceans (All items are examples of freshwater sources, while oceans are saltwater sources).
2. Nile River (All items are examples of saltwater sources, while Nile River is a freshwater source).
(B) Groundwater will be formed.

3 1. b 2. c 3. a

Self-Assessment 7

1 (A) 1. c 2. a 3. d
(B) Because poor quality of fresh water leads to death of thousands of living organisms and extinction of some species live in this water.

2 (A) 1. (✓) 2. (✓) 3. (✓)
(B) The other water bodies that connect with this river may dry up causing drought.

3 1. F 2. S 3. F 4. S
5. F 6. S

Self-Assessment 8

1 (A) 1. fresh – 3.5%
2. downstream
3. salt – 96.5%
(B) Becuase dams hold the water behind them and this causes a change in the amount of water in other water bodies.

2 (A) 1. (✓) 2. (✓) 3. (✗)

(B) The factory waste will affect the water of tributary and the river causing water pollution.

3 1. (✗) 2. (✓) 3. (✗) 4. (✓)

Self-Assessment 9

1 (A) 1. oil 2. Pollution
3. rains.
(B) Because it leads to deforestation, so water and wind can carry away soil causing soil erosion.

2 (A) 1. Fresh water. 2. Watershed.
3. Oceans.
(B) Fish become rare and fishing will decrease.

3 Picture (B), because planting trees does not negatively affect the amount of trees in future, but increases them.

Self-Assessment 10

1 (A) 1. (✓) 2. (✗) 3. (✗)
(B) To recycle polluted water to be used again in some other purposes.

2 (A) 1. sand 2. oil.
3. Sustainability
(B) Harmful waste materials will be removed from it and becomes filtered water.

3 1. (B) 2. (A) 3. (B) – (A).

Model Exam on Theme (3)

1 (A) 1. a 2. c 3. d 4. c
(B) To make sure it is safe before the water is released to rivers and lakes or used by human.

2 (A) 1. Water (All items belong to atmosphere, while water belongs to hydrosphere).
2. Nile River (All items contain salt water, while Nile River contains fresh water).
3. Ponds (All items contain running water, while ponds contain still water).
4. Oil (All items are renewable resources, while oil is nonrenewable resource).
(B) They have to adapt to the changes that happen on they will die.

3 (A) 1. decrease 2. geosphere.
3. fresh 4. filter
(B) Family (A), because family (A) uses less amount of water than family (B).

Assess Your Learning on Theme (3)

1. d 2. b 3. a 4. d 5. b
6. c 7. c 8. a 9. b 10. d
11. b 12. b 13. b 14. c

Concept (4.1)

Self-Assessment 11

1 (A) 1. the Sun
2. Earth.
3. moon

(B) Due to the Earth's gravity which pulls them down toward the ground.

2 (A) 1. (✗)
2. (✓)
3. (✓)

(B) It would float off into space.

3 1. (✗)
2. (✓)

Self-Assessment 12

1 (A) 1. (✗) 2. (✓) 3. (✗)

(B) It will attract paper clips.

2 (A) 1. more
2. magnetism
3. gravity.

(B) Due to the force of magnetism.

3 b

Self-Assessment 13

1 (A) 1. Magnetism.
2. Force.
3. Gravity.

(B) Due to the gravitational pulling force between the planets and the Sun.

2 (A) 1. moon
2. increases
3. less than

(B) Its gravity force will decrease.

3 c

Self-Assessment 14

1 (A) 1. air resistance
2. magnetism.
3. air resistance – gravity.

(B) The speed of the bicycle decreases until it stops.

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

(B) Due to the Earth's gravity.

3 a. the Sun.
b. Earth – oval
c. the moon.

Self-Assessment 15

1 (A) 1. the Sun.
2. oval
3. increases.

(B) Because a feather has more surface area, so it has more air resistance and reaches Earth's surface before a paper clip.

2 (A) 1. (✗)
2. (✓)
3. (✗)

(B) The Sun (all items are types of force, while the Sun is a star).

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

Model Exam on Concept (4.1)

1 (A) 1. increase.
2. magnetism.
3. air resistance – gravity
4. the solar system.

(B) The metal ball will reach the ground first.

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

(B) Because it keeps the planets revolving around the Sun in fixed orbits.

3 (A) 1. Air resistance.
2. Gravity.
3. Tides.
4. Magnetism.

(B) 1. b
2. a

Concept (4.2)

Self-Assessment 16

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

(B) Due to Earth's rotation on its axis.

2 (A) 1. (✗) 2. (✗) 3. (✓)

(B) This part of Earth has night.

3 1. Earth – axis. 2. 24 hours.
3. east – the center of the sky.

Self-Assessment 17

1 (A) 1. (✗) 2. (✓) 3. (✓)

(B) The cycle of four seasons will not happen.

2 (A) 1. axes – speeds. 2. east
3. Earth's revolution – axis

(B) Because Earth revolves around the Sun.

3 1. axis 2. the Sun.
3. day and night.
4. four seasons.

Self-Assessment 18

1 (A) 1. 24 2. west
3. the Sun – orbits.

(B) Due to Earth's rotation on its axis.

2 (A) 1. (✓) 2. (✓) 3. (✗)

(B) This part of Earth will be shiny and has day.

3 1. b 2. d 3. a

Self-Assessment 19

1 (A) 1. (✗) 2. (✗) 3. (✓)
(B) Due to Earth's revolution around the Sun.

2 (A) 1. stars 2. east.
3. an oval
(B) They form a constellation.

3 1. the Sun. 2. Earth – vertical.
3. Orion.

Self-Assessment 20

1 (A) 1. Constellation Orion.
2. Earth's axis.
3. Earth's rotation.
(B) The moon appears in different phases in the night sky.

2 (A) 1. (✗) 2. (✗) 3. (✓)
(B) Because it reflects sunlight but doesn't give its own light.

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

Self-Assessment 21

1 (A) 1. (✓) 2. (✓) 3. (✗)
(B) Because the Sun has a huge mass, which produce a great gravitational pulling force.

2 (A) 1. a 2. c 3. b
(B) The thermal and light energy that reach the Earth will decrease

3 (A) – Number (1) → the Sun
– Number (2) → the Earth
– Number (3) → the moon
(B) b

Self-Assessment 22

1 (A) 1. c 2. c 3. a
(B) Due to Earth revolution around the Sun.

2 (A) 1. (✗) 2. (✓) 3. (✓)
(B) The phenomenon of day and night happens.

3 1. Jupiter. 2. sundial
3. Projector 4. Orion

Model Exam on Theme (4)

1 (A) 1. a 2. b 3. b 4. a
(B) Because it reflects sunlight.

2 (A) 1. Constellation.
2. Full moon. 3. Planetarium.
4. Force.
(B) 1. Galileo binoculars. (all items are moon phases, while Galileo binocular is a tool used to see distant space objects).
2. the Sun (all items are types of forces, while the Sun is a star).

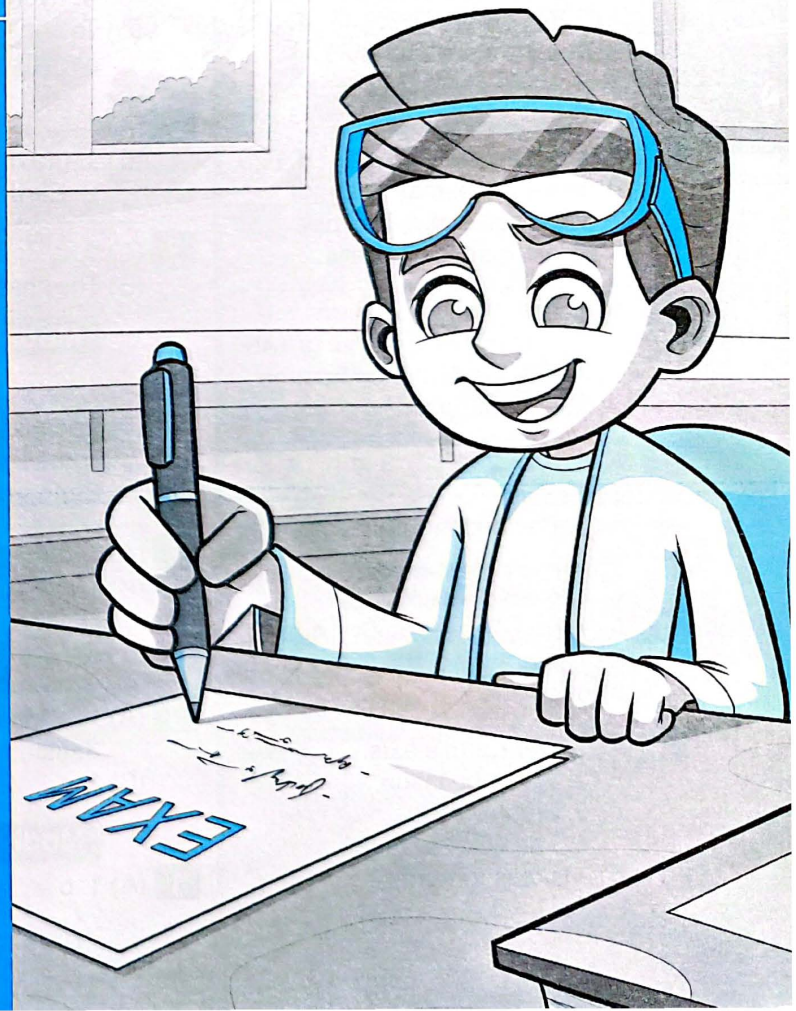
3 (A) 1. (✗) 2. (✓) 3. (✗) 4. (✗)
(B) All objects on Earth will move upward away from the Earth's surface.

Assess Your Learning on Theme (4)

1. a	2. a	3. c	4. a	5. b
6. d	7. b	8. a	9. d	10. a
11. a	12. a	13. c	14. a	15. a

Part 3

Guide Answers of Final Examinations



PART 3 Model Examinations

El-Moasser Final Examination Models

Model Exam 1

1 (A) 1. c 2. d 3. a 4. b
(B) Because the Sun is the closest star to the Earth.

2 (A) 1. geosphere. 2. center
3. wetland. 4. gravity
(B) Plants can't make their food by photosynthesis process.

3 (A) 1. (✓) 2. (✗) 3. (✗) 4. (✓)
(B) 1. (✓) 2. (✗) 3. (✓)

Model Exam 2

1 (A) 1. (✓) 2. (✗) 3. (✗) 4. (✓)
(B) Because humans cannot drink salt water, but they drink fresh water only.

2 (A) 1. Preservation. 2. Stars.
3. The moon. 4. The gravity.
(B) Day and night phenomenon will not happen.

3 (A) 1. b 2. a 3. d 4. c
(B) 1. Sun.
2. day and night

Model Exam 3

1 (A) 1. b 2. a 3. c 4. a
(B) The gravity of the Sun will decrease.

2 (A) 1. The Earth's axis.
2. Water pollution.
3. Fresh water.
4. The solar system.
(B) A lake is formed.

3 (A) 1. biosphere. 2. gravity.
3. constellation.
4. wastewater
(B) 1. (B) – (A) 2. (B).
3. (A).

Model Exam 4

1 (A) 1. electricity. 2. groundwater
3. atmosphere.
4. hydrosphere
(B) To conserve fresh water because it is limited on Earth.

2 (A) 1. (✓) 2. (✗) 3. (✗) 4. (✗)
(B) 1. gravity of Earth.
2. Earth's center.

3 (A) 1. c 2. a 3. b
(B) The shadow will be the longest.

Model Exam 5

1 (A) 1. (✓) 2. (✓) 3. (✗) 4. (✓)
(B) Because atmosphere allows some light waves to pass to Earth and it blocks others.

2 (A) 1. d 2. c 3. b 4. a
(B) They have to adapt to the changes that happen or they will die.

3 (A) 1. elliptical 2. dome
3. estuary 4. 24 hours.
(B) 1. c 2. a 3. d

Model Exam 6

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

(B) Because about 71% of Earth is covered by water.

2 (A) 1. fresh water. 2. floods.
3. lunar month. 4. pulling
(B) Phenomenon of day and night will not happen.

3 (A) 1. (✗) 2. (✓) 3. (✗) 4. (✗)
(B) 1. Orion – hunter.
2. stars.
3. Earth's revolution around the Sun.

Model Exam 7

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

2 (A) 1. River.
2. Erosion process.
3. Galaxy. 4. Force.
(B) It will be changed into solid state (ice).

3 (A) 1. (✓) 2. (✗) 3. (✓) 4. (✓)
(B) 1. Wastewater. 2. Sand.
3. Charcoal. 4. Cotton.
5. Filtered water.

Model Exam 8

1 (A) 1. a 2. d
(B) 1. Law of Motion.
2. Earth's revolution.
3. Shallow areas.

2 (A) 1. lithosphere.
2. air resistance.
3. decrease
4. friction.

(B) An estuary is formed.

3 (A) 1. (✗) 2. (✗) 3. (✓) 4. (✓)
(B) Due to the rotation of Earth on its axis.

Model Exam 9

1 (A) 1. clouds.
2. oil products.
3. The Sun
4. hydrosphere
(B) Because it is stored in the cracks and spaces of underground rocks.

2 (A) 1. b 2. a 3. d 4. c
(B) Because stars produce light.

3 (A) 1. streams. 2. gravity.
3. float 4. orbit
(B) 1. d 2. a 3. b

Model Exam 10

1 (A) 1. (✗) 2. (✓) 3. (✓) 4. (✓)
(B) Because the moon reflects the light of the Sun.

2 (A) 1. night. 2. pull
3. pollution
4. sustainability.
(B) They have to adapt to the changes that happen, or they will die.

3 (A) 1. a 2. d 3. a 4. c
(B) 1. the moon.
2. new moon.
3. full moon.

Final Examinations of Some Governorates

Cairo Governorate

1 East Nasr City Edu. Zone

1 (A) 1. estuary 2. geosphere.
3. gravity.
4. light and heat.

(B) The gravitational force between Earth and the moon increases, so the moon comes closer to Earth and it might crash into Earth.

2 (A) 1. (✗) 2. (✓)
3. (✗) 4. (✗)

(B) Due to revolution of Earth around the Sun.

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

(B) The Sun (All items are types of force, while the Sun is a star).

2 New Cairo Edu. Zone

1 (A) 1. the solar system.
2. friction
3. the east – the center of the sky.
4. Earth

(B) Due to revolution of Earth around the Sun.

2 (A) 1. (✗) 2. (✓) 3. (✗) 4. (✓)

(B) An estuary is formed.

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

(B) 1. Water (All items belong to geosphere, while water belongs to hydrosphere).
2. Sand (All items belong to atmosphere, while sand belong to geosphere).

3 Rod El Farag Edu. Zone

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

(B) Due to rotation of Earth on its axis.

2 (A) 1. (✗) 2. (✓)
3. (✓) 4. (✓)

(B) The gravitational attraction between them would become smaller.

3 (A) 1. Lake. 2. Force.
3. Stars. 4. Biosphere.

(B) Formation of lakes.

4 El Nozha Edu. Zone

1 (A) 1. rivers.
2. gravity.
3. fresh water.
4. constellation.

(B) Because about 71% of Earth is covered by water.

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

(B) This half has day.

3 (A) 1. (✗) 2. (✗)
3. (✗) 4. (✓)

(B) 1. Drinking.
2. Agriculture.

Giza Governorate

5 Dokki Edu. Zone

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

(B) Because all plants need water to grow and some of them live in water.

2 (A) 1. (✗) 2. (✓)
3. (✗) 4. (✗)

(B) Water (All items belong to atmosphere, while water belongs to hydrosphere).

3 (A) 1. biosphere. 2. estuary
3. increase. 4. Sun.

(B) (B) – (A)

6 North Giza Edu. Zone

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

(B) Due to rotation of Earth on its axis.

2 (A) 1. less 2. pull
3. metal 4. Fresh water

(B) The gravity of the Sun will decrease.

3 (A) 1. (✗) 2. (✗)
3. (✓) 4. (✓)

(B) 1. Oceans (All items are examples of freshwater sources, while oceans are saltwater sources).
2. The Sun (All items are types of force, while the Sun is a star).

Alexandria Governorate

7 Borg El Arab Edu. Zone

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

(B) The gravity of the Sun will decrease.

2 (A) 1. biosphere. 2. gravity.
3. constellation. 4. wetland.

(B) Due to rotation of Earth on its axis.

3 (A) 1. Oceans. 2. Magnetism.
3. Biome. 4. Galaxy.

(B) 1. air resistance and gravity.
2. gravity only.

Qalyoubia Governorate

8 Science Inspectorate

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

(B) Ocean (All items are examples of freshwater sources, while ocean is saltwater source).

2 (A) 1. (✗) 2. (✗)
3. (✓) 4. (✓)

(B) An estuary is formed.

3 (A) 1. Biosphere
2. Watershed
3. Solar system
4. Force

(B) Due to gravitational attraction (force) between Earth and the moon.

Menoufia Governorate

9 Shebeen El-Koum Edu. Zone

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

(B) 1. Occurrence of day and night.
2. The Sun and stars appear as they move across the sky.

2 (A) 1. (✗) 2. (✓)
3. (✓) 4. (✓)

(B) gravity (gravitational force).

3 (A) 1. estuary.
2. medium
3. Friction
4. seas

(B) The force of gravity increases.

El-Gharbia Governorate

10 Science Inspectorate

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

(B) Because when the distance between two objects increases, the gravitational force decreases and vice versa.

2 (A) 1. (✓) 2. (✗)
3. (✗) 4. (✗)

(B) The ball will go up into the air and then fall down back to the ground due to the gravity force.

3 (A) 1. Geosphere. 2. Copernicus.
3. Law of Motion.
4. Recycle wastewater.

(B) air resistance – gravitational

Dakahlia Governorate

11 Science Inspectorate

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

(B) Due to revolution of Earth around the Sun.

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

(B) They will leave their orbits and float off into space.

3 (A) 1. (✓) 2. (✗)
3. (✗) 4. (✓)

(B) Rocks. (All items belong to hydrosphere, while rocks belong to geosphere).

Kafr El-Sheikh Governorate

12 Science Inspectorate

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

(B) To slow down their speed during landing due to the air resistance.

2 (A) 1. (✗) 2. (✗)
3. (✓) 4. (✗)

(B) Intertidal zone.

3 (A) 1. hydrosphere.
2. oval 3. galaxy.
4. geosphere.

(B) phenomenon of day and night will happen.

Sohag Governorate

13 Science Inspectorate

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

(B) An estuary is formed.

2 (A) 1. geosphere. 2. center
3. more 4. moons

(B) Ocean tides.

3 (A) 1. Deepest 2. streams
3. oval 4. gases.

(B) Due to rotation on its axis.

Luxor Governorate

14 Science Inspectorate

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

(B) Due to rotation of Earth on its axis.

2 (A) 1. (✗) 2. (✓)
3. (✓) 4. (✗)

(B) The speed of skydiver decreases gradually.

3 (A) 1. estuary 2. fresh water.
3. magnetism. 4. The Sun

(B) Because we are moving with Earth at the same speed of it.

Aswan Governorate

15 Edfu Edu. Zone

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

(B) The phenomenon of seasons.

2 (A) 1. (✗) 2. (✓)
3. (✗) 4. (✓)

(B) The mass of two objects and the distance between them.

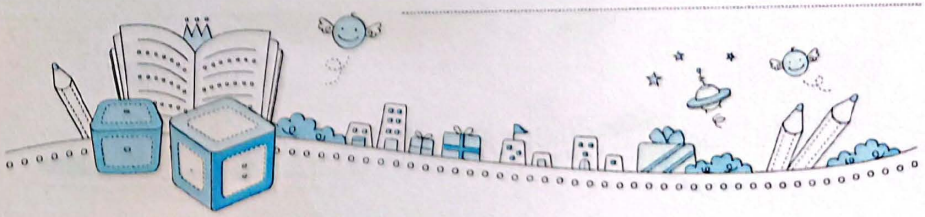
3 (A) 1. Lake.
2. Earth's axis.
3. Biosphere.
4. Constellation.

(B) Due to the gravitational force of Earth.

NOTES



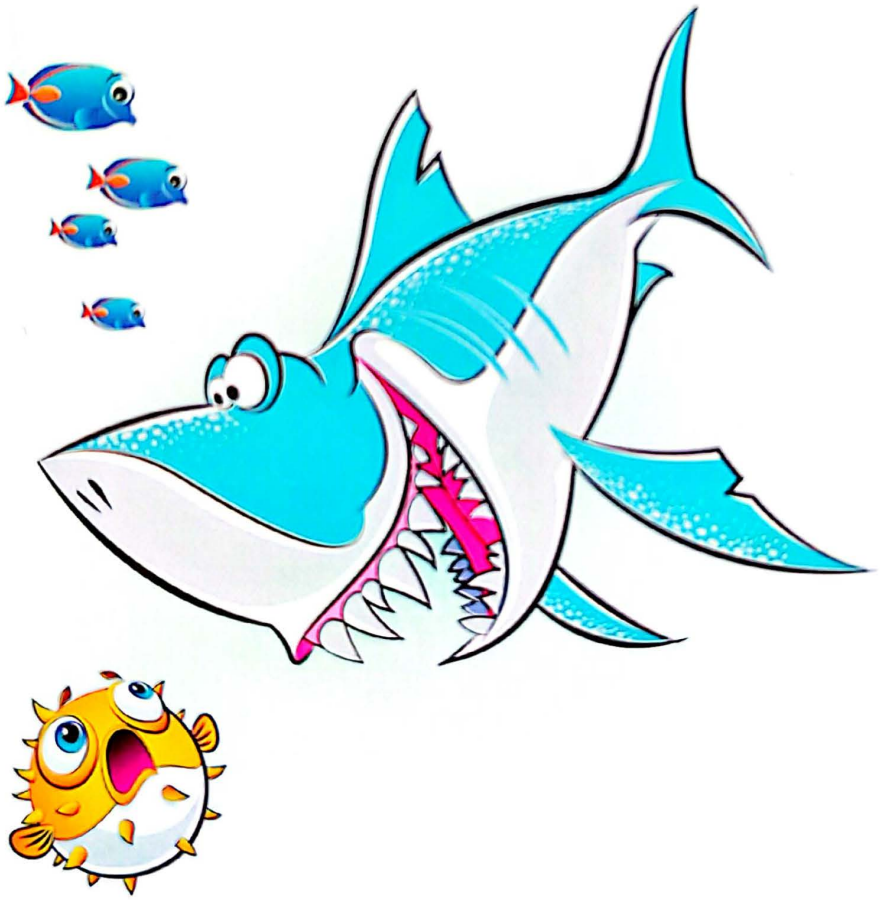
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