

- B. 1. BALL 2. PIVOT 3. HINGE
4. SOCKET 5. GLIDING
- C. 1. movable joints can move
2. a joint is the meeting point of two bones
3. joints provide stability and flexibility to the body
4. hinge joint is present at the knee and elbow
5. the ball and socket joint is present at the hip and shoulder

Worksheet 4

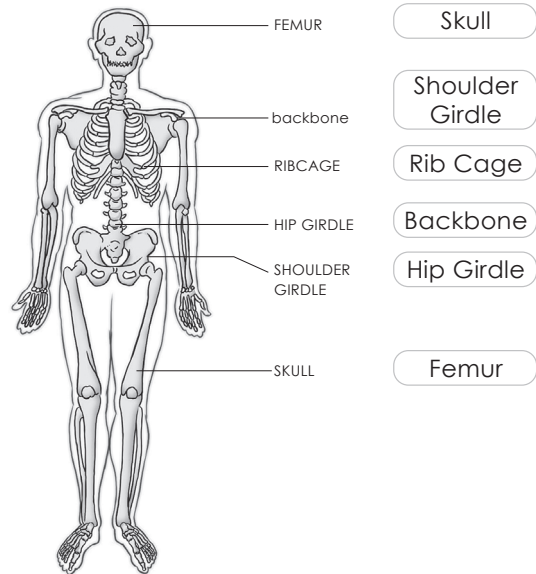
- A. 1. Muscles work by contraction and relaxation.
2. The muscular system is a system that is made up of voluntary and involuntary muscles.
3. Voluntary movements are movements that occur when we decide to move them.
4. Involuntary movements are movements that occur without our decision.
5. Skeletal, smooth and cardiac muscles.
- B. 1. voluntary 2. muscle
3. voluntary 4. involuntary
5. muscular
- C. 1. False 2. True 3. True
4. False 5. False

Teacher's Worksheets

Worksheet 1

- A. 1. an organ system
2. 22
3. vertebrae
4. 12
- B. 1. Skull 2. Backbone
3. Rib Cage 4. Rib Cage
- C. 1. It is always advised to wear a helmet while driving a motorcycle. In case of accident, the helmet will protect the brain, as brain is the most important organ of the body.
2. In that case, we will not be able to touch our knees as the backbone is made up of one single bone.

Worksheet 2



Theme 7: Keeping Us Strong Chapter 13: Our Nervous System

Main Coursebook

I am ready: NOSE; EYES; SKIN; EARS

Icebreaker: NOSE

In-text Question

1. True 2. False

In-text Question

1. No 2. No

I am a learner

- A. 1. a 2. a 3. b 4. b 5. c
- B. 1. Cerebrum 2. Medulla
3. spinal cord 4. optic nerves
5. skin
- C. 1. Nerves are thread-like structures that act as a messenger between the brain and the body.
2. Cerebrum is responsible for the working of the nose, eyes, tongue and ears. The cerebrum also helps us think, learn, remember, recall, speak and emot. In the absence of cerebrum thinking, learning, remembering, recalling and speaking will be affected.
3. Reflex action is the quick response of the body.

- D. 1. The brain consists of three parts namely, the cerebrum, cerebellum and medulla oblongata. The cerebrum is responsible for the working of the nose, eyes, tongue and ears. The cerebellum helps in coordinating muscle actions and balancing the body in proper posture. The medulla oblongata forms a connection between the brain and the spinal cord and regulates the involuntary activities of the body.
2. Accept all relevant responses.

I am a thinker

If a person lacks reflex action, then the body would be unable to respond timely to injury or shock.

I am an all-rounder

A. English:

1. smells 2. smoke

B. Maths: 33.5 degrees Celsius; 36.88 degrees Celsius

C. Social Studies: Sunderlal Bahuguna

Students' Worksheets

Worksheet 1

- A. 1. control 2. information
3. three 4. largest
5. 80%
- B. 1. True 2. True 3. False
4. False 5. False
- C. 1 →c 2. →d 3. →b 4. →a 5. →e

Worksheet 2

- A. 1. skull 2. Cerebrum
3. jerky 4. Medulla oblongata
5. Spinal cord
- B. 1. INFORMATION 2. SKULL
3. CEREBRUM 4. CEREBELLUM
5. MEDULLA
- C. 1. C 2. I 3. C 4. C 5. C

Worksheet 3

- A. 1. medulla 2. thread-like
3. Nerves 4. three
5. sensory
- B. 1. MESSENGER 2. NETWORK
3. SENSORY 4. MOTOR
5. MIXED
- C. 1. True 2. True 3. False
4. False 5. False

Worksheet 4

- A. 1. Brain 2. Skull 3. Cerebrum
4. Cerebellum 5. Medulla
- B. spinal cord, medulla, thread-like, Sensory, Motor
- C. 1. CORNEA 2. IRIS 3. PUPIL
4. RETINA 5. OPTIC NERVES

Teacher's Worksheets

Worksheet 1

- A. 1. F 2. F 3. F 4. T 5. F
- B. 1. cerebrum 2. motor nerves
3. sounds 4. thread-like
5. Reflex action
- C. 1. signal 2. heart 3. think

Worksheet 2

- A. 1. To protect ourselves from shocks and injuries, the body needs to respond rapidly. Such types of quick responses are processed by the spinal cord. These actions are called reflex actions. The brain is not usually involved in reflex actions.
2. A clear fluid is present within the space between the brain and the skull and also within the inside of the brain. This fluid acts as a cushion against various injuries and jerks.
3. The nervous system consists of:
- Brain
 - Spinal cord
 - Nerves and
 - Sense organs
4. Nerves are thread-like structures that act as a messenger between the brain and the body. They form a wide network that extends throughout the body. Some of them are directly connected to the brain and others are connected to the spinal cord.
5. The three types of nerves are sensory nerves, motor nerves and mixed nerves.
6. The brain is made up of three parts — the cerebrum, the cerebellum and the medulla oblongata.

Cerebrum: It is the largest part of our brain and constitutes around 80 percent of the weight of the brain. It is responsible for the working of our nose, eyes, tongue and ears. The cerebrum also helps us think, learn, remember, recall, speak and emote.

Worksheet 2

- A. 1. water 2. Moon 3. gravity
4. Sun 5. cold
- B. 1. NEW MOON
2. FULL MOON
3. WAXING GIBBOUS
4. WANING GIBBOUS
5. WAXING CRESCENT
- C. 1. True 2. True 3. False
4. True 5. True

Worksheet 3

- A. 1. The surface of the Moon is rough due to huge mountains, and some round and hollow structures called craters.
2. When the sunlight falls on the surface of the Earth and the Moon, their shadows form. These shadows are called eclipses.
3. A satellite is an object that revolves around a planet.
4. 4,500 million years old
5. 3,84,400 km
- B. one-sixth; heavy; atmosphere; Sun; sound
- C. 1. yes 2. yes 3. yes
4. yes 5. no

Worksheet 4

- A. Rakesh Sharma; in space; spacecrafts; spacesuit; atmosphere
- B. 1. LUNAR 2. SOLAR 3. ECLIPSE
4. APOLLO 5. CRATERS
- C. 1. no 2. yes 3. yes
4. no 5. yes

Teacher's Worksheets

Worksheet 1

- A. 1. F 2. F 3. T
4. F 5. F
- B. 1. Sputnik
2. communication
3. 1975
4. Major Yuri Gagarin
- C. Accept all relevant answers.

Worksheet 2

- A. 1. b 2. b 3. c 4. c
- B. Accept all relevant answers.

Theme 9: From/Signs to Signals Chapter 15: Artificial Intelligence

Main Coursebook

I am ready



Cannot eat
Cannot feel



Can eat
Can feel

Icebreaker

Accept all relevant responses.

In-text Question

1. No 2. Yes

I am a learner

- A. 1. c 2. a 3. c 4. c 5. c
- B. 1. True 2. True 3. True
4. False 5. True
- C. 1. Self-driving cars are the vehicles that uses AI to sense their surroundings and move safely with little or no human input.
2. Humanoids are robots that look and act like humans. However, these robots cannot feel, eat, move on its own and grow like the human beings.
3. Smart-speaker is a voice-activated speaker that uses AI to do everyday tasks.
- D. 1. When machines think, learn and act as humans, it is called Artificial intelligence. With the help of this some fascinating technologies are possible, namely, humanoids, futuristic space travel, self-driving cars and smart speakers.
2. Some of the technologies that uses AI are as follows:
- **Humanoids:** Humanoids are robots that look and act like humans. They are the most exciting innovation of AI. Some of the popular humanoids are Atlas, Asimo, Rashmi and Pepper.
 - **Futuristic space travel:** Futuristic space travel involves physical exploration of the space by human spaceflights or by robotic spacecrafts.

- **Self-driving cars:** A self-driving car is a vehicle that uses AI to sense its surroundings and move safely with little or no human input.
- **Smart speakers:** A smart speaker is a voice-activated speaker that uses AI to perform everyday tasks. For example, Alexa (a virtual-assistant system developed by an e-commerce company).

I am a thinker

Accept all relevant responses.

I am an all-rounder

A. English

1. future 2. feature

B. **Maths:** AI analyse the data which makes data handling easier.

C. Social Studies

AI analyse the data and change the way to make the speeches, content and various other modes of communication easier.

Students' Worksheets

Worksheet 1

- A. 1. Artificial intelligence
2. robots
3. space
4. humanoids
5. cheaper
- B. 1. False 2. True 3. False
4. True 5. True
- C. 1. →d 2. →a 3. →e 4. →c 5. →b

Worksheet 2

- A. 1. humanoid
2. Futuristic space travel
3. self-driving car
4. voice-activated
5. Alexa
- B. 1. DATA
2. SCIENTIFIC RESEARCH
3. SPACE EXPLORATION
4. GAMING
5. TECHNOLOGY
- C. 1. C 2. I 3. I 4. C 5. I

Worksheet 3

- A. understand, repetitive, rest, doctors, gaming
- B. 1. ROBOT 2. ATLAS 3. ASIMO
4. RASHMI 5. PEPPER

- C. 1. False 2. False 3. True
4. False 5. False

Teacher's Worksheets

Worksheet 1

A. Humanoids

They don't have family
They look and act like humans
They don't have muscles and nervous system
They cannot reproduce
They are made in laboratories
They cannot feel

Humans

They have family
Humans do not act like humanoids.
They have muscles and nervous system
They can reproduce
A human child grows in a mother's womb
They feel through their sense organs

- B. 1. v 2. iii 3. iv 4. ii 5. i
- C. Artificial intelligence is used in our day to day life. It is used in giving on-line shopping recommendations, playing music and also giving the routes having less traffic.

Worksheet 1

- A. 1. The ability to think and learn is called intelligence. When machines think, learn and act as humans, it is called Artificial Intelligence (AI).
2. Humanoids are robots that look and act like humans. They are the most exciting innovation of AI. Countries from all over the world have come up with different humanoid models. Some of the popular humanoids are Atlas, Asimo, Rashmi and Pepper.
3. The arrival of the concept of space tourism has made big companies use AI and work towards making space travel cheaper and safer even for common people.
Futuristic space travel involves physical exploration of the space by human spaceflights or by robotic spacecrafts. There are also attempts to find new planets which can be used for human settlement.
4. A self-driving car is a vehicle that uses AI to sense its surroundings and move safely with little or no human input
5. A smart speaker is a voice-activated

speaker that uses AI to perform everyday tasks. For example, Alexa (a virtual-assistant system developed by an e-commerce company) and Siri (a voice-assistant powered by a multinational corporation that specialises in gadgets).

Revision Worksheet

- A. 1. c 2. a 3. b 4. a 5. a
- B. 1. Moon
2. Pinna or outer ear
3. cartilage
4. blisters
5. Aerated
- C. 1. False 2. True 3. False
4. True 5. False
- D. 1. Major Yuri Gagarin
2. Optic nerves
3. Skeletal muscles
4. Sprain
5. Physical change
- E. 1. A solute is a substance that dissolves whereas a solvent is a substance in which the solute dissolves.

2. Keep the patient upright in such a case with their head held back. Press the bleeding side firmly and keep an ice pack or wet cloth on the nose and head of the patient. In case of heavy bleeding, consult the doctor.
3. Our backbone is made up of 33 small vertebrae. These 33 vertebrae together form our backbone.
4. The light that enters in our eyes travels from the pupil to the retina.
5. The different phases of the Moon are – full moon, waxing gibbous, first quarter, waxing crescent, new moon, waning crescent, third quarter and waning gibbous.

F.

