NCERT Solutions for Class 6 Science Chapter 8: Detailed Solutions With Explanations

NCERT Solutions for Class 6 Science Chapter 8 *have been discussed in detail in the article below for CBSE Class 6 science students. Students can find the detailed solutions for chapter 8 on this page!*

NCERT Solutions for Class 6 Science Chapter 8: NCERT Solutions for Class 6 Science Chapter 8, Body Movements, serve as a comprehensive guide for students to grasp the concepts effectively. The study material offers detailed answers and explanations, aiding in the understanding of various aspects of body movements, crucial for comprehending Anatomy in future classes.

NCERT Solutions for Class 6 Science Chapter 8 Overview

Learning may sometimes pose challenges, making comprehension tougher. However, with NCERT Solutions for Class 6 Science Chapter 8, students find it easier to navigate through the material. Expert teachers at PW simplify the learning process, offering understandable notes for Body Movements Class 6, available in PDF files on the site.

Chapter 8 of NCERT Solutions for Class 6 Science delves into the knowledge of bones, cartilage, and the formation of the skeleton in the human body. It covers details about the skull, backbone, alternate contraction, and locomotion in insects, fish, earthworms, and snails.

Students can opt to download the files for a smoother learning experience. The notes, aligned with Class 6 Science Chapter 8, are kept concise for easy recall. PW ensures that every NCERT Solution is presented to simplify and make the study interesting.

NCERT Solutions for Class 6 Science Chapter 8 Body Movements

The NCERT Solutions for Class 6 Science Chapter 8 feature a variety of questions, including fill-in-the-blanks, match the following, true or false, and descriptive answer questions. All responses are crafted by subject experts from PhysicsWallah, supporting students in their CBSE Class 6 exam preparation.

1. Fill in the blanks.

(a) Joints of the bones help in the ——————— of the body.

(b) A combination of bones and cartilages forms the _____ of the body.

(c) The bones at the elbow are joined by a _____ joint.

(d) The contraction of the _____ pulls the bones during movement.

Solution:

(a) Joints of the bones help in the **movement** of the body.

(b) A combination of bones and cartilages forms the **skeleton** of the body.

(c) The bones at the elbow are joined by a **hinge** joint.

(d) The contraction of the **muscles** pulls the bones during movement.

2. Indicate true (T) and false (F) among the following sentences.

(a) The movement and locomotion of all animals are exactly the same. ( )

(b) The cartilages are harder than bones. ( )

(c) The finger bones do not have joints. ( )

(d) The forearm has two bones. ( )

(e) Cockroaches have an outer skeleton. ( )

Solution:

a) False

b) False

c) False

d) True

e) True

3. Match the items in Column I with one or more items of Column II.

Solution:

Column I	Column II

Upper jaw	**Have fins on the body**
Fish	**Has an outer skeleton**
Ribs	**Can fly in the air**
Snail	**Is an immovable joint**
Cockroach	**Protect the heart**
	Shows very slow movement
	Have a streamlined body

Solution:

Column I	**Column II**
Upper jaw	Is an immovable joint
Fish	Have fins on the body, have a streamlined body
Ribs	Protect the heart
Snail	Has an outer skeleton and Shows very slow movement
Cockroach	Has an outer skeleton and Can fly in the air

4. Answer the following.

(a) What is a ball and socket joint?

(b) Which of the skull bones are movable?

(c) Why can our elbows not move backwards?

Solution:

a) The rounded end of one bone fits into the cavity (hollow space) of the other bone. Such a joint allows movements in all directions, which is called a ball and socket joint.

b) Lower jaw

c) Our elbow cannot move backwards because it has hinge joints which only allow back-and forth-movement.

NCERT Class 6 Science Chapter 8 Topic-Wise Discussion

Here's a detailed topic-wise discussion of the topics that the Class 6 science chapter 8 covers for students to learn:

8.1 Human Body and its Movements

The human body consists of many parts, each with a specific job. Organs are formed by groups of tissues that work together to keep the body functioning properly. Our body has a framework inside made of cartilages and bones, known as the skeletal system. This system gives us stability and enables movement. The skeletal system includes various parts such as the backbone, skull, shoulder and hip bones, chest bone, arm bones, and shinbone.

Socket and Ball Joints
In the lessons on Body Movements for Class 6, it's mentioned that the body has different types of joints. A ball and socket joint is formed when the rounded end of one bone connects with another bone through a cavity. This joint allows movement in various directions. Examples of ball and socket joints are found in the upper arm and shoulder.

Pivotal Joints
A joint that resembles a ball on a stick is called a pivotal joint. It allows rotation in diagonal and vertical directions. An example of a pivotal joint is the one between the backbone and the skull, enabling rotation.

Hinge Joints
Hinge joints resemble the hinges on doors. They enable bending and straightening in a specific direction, like the elbow joint. Hinge joints operate on a set axis.

Fixed Joints
In the study of Body Movements in Class 6, the cranium serves as an illustration of fixed joints. When two bones connect, preventing movement, it's termed a fixed joint. Attempting to move your upper jaw reveals that only the lower jaw moves, while the upper one remains fixed. The skull is also a fixed joint example, with connected plates but no permitted movement.

8.2 Gait of Animals

Get NCERT Solutions for Class 6 Science Chapter 8 to understand deeply about how animals walk and move. To simplify Class 6th Science Chapter 8, a gait is how limbs move when an animal walks on a solid surface. Animals use different gaits based on body structure, terrain, speed, manoeuvring needs, and energy efficiency.

Earthworm
Earthworms move using setae. Their body consists of connected rings without bones. Muscles, not bones, help them stretch and contract, allowing movement. Muscle expansion and contraction let earthworms move short distances forward.

Snail
A snail relies on its shell, the outer skeleton. Surprisingly, the shell isn't bone. The snail moves using its head, with a muscular foot for support. Beneath the muscles, mucus provides lubrication for smooth movement, reducing the risk of injury when navigating sharp objects.

Cockroach
Cockroaches move similar to many other insects. They can climb, fly, and have six legs in total, with three pairs on each side. These legs aid them in moving quickly. The outer part of their body has a tough skeleton composed of various units, all connected, which facilitates their movement.

Fish
Fishes have a streamlined body that enables them to swim easily through the water. The body shape also contributes to their movement. The tails and heads of fishes are shorter and narrower compared to the middle part of their bodies, helping them navigate through water and move forward.

Birds
Birds possess legs and a set of wings that assist them in walking and flying, respectively. Some birds are also capable swimmers. The ability of birds to fly is attributed to their lightweight and hollow bones, making them well-suited for flight. Additionally, birds lack a urinary bladder, further contributing to their overall body lightness.

How Do Snakes Move?
Snakes navigate in loops resembling "S" shapes or zigzag patterns. With a limited number of bones in their bodies, snakes rely on muscular strength to propel themselves forward. Each loop functions like steps, propelling the snake in a forward direction. The muscles connect the ribs, backbone, and skin to facilitate movement.

Points Discussed in this Chapter

- The human skeleton is made up of bones and cartilage, providing the body with a frame and shape while also assisting in movement and protecting internal organs.

- The human skeleton consists of the head, backbone, ribs, breastbone, shoulder and hip bones, as well as the bones in the hands and legs.
- Muscles work in pairs to contract and relax, allowing bones to move.
- Different types of bone joints vary in structure and the direction of movement they allow.
- Birds utilise strong muscles and lightweight bones for flying, flapping their wings to ascend into the air.
- Fish swim by creating loops on both sides of their bodies.
- Snakes slither sideways on the ground, propelled forward by numerous bones and muscles.
- Cockroaches have a tough outer skeleton on their bodies and legs. They walk and fly using breast muscles connected to three pairs of legs and two pairs of wings.
- Earthworms move by expanding and contracting their bodies with muscles, using tiny bristles on the bottom to grip the ground.
- Snails move with the help of a robust foot.

Benefits of NCERT Solutions for Class 6 Science Chapter 8

Here are the benefits of NCERT solutions for class 6 science chapter 8:

1. **Aligned with Curriculum:** NCERT solutions are developed by experts in the field, ensuring alignment with the prescribed curriculum. This means that the content is structured in a way that complements what students are expected to learn.
2. **Clear and Concise Explanations:** The solutions provided in NCERT books are known for their clear and concise explanations. This clarity helps students understand the concepts better, making the learning process more effective.
3. **In-depth Understanding:** The solutions often provide in-depth explanations of concepts, helping students develop a thorough understanding of the topics covered in Chapter 8. This deeper comprehension is essential for building a strong foundation in science.
4. **Accurate and Reliable Information:** NCERT is a government body that ensures the accuracy and reliability of the information provided in their textbooks and solutions. Students can trust the content to be factually correct and up-to-date.
5. **Helpful for Homework and Assignments:** NCERT solutions are valuable resources for students when working on homework or assignments related to Chapter 8. They serve as a guide to solving problems and answering questions, facilitating independent learning.
6. **Practice Material:** The solutions often include a variety of practice questions and exercises. This allows students to apply the knowledge gained from Chapter 8 and reinforce their learning through practical application.
7. **Exam Preparation:** NCERT solutions are instrumental in exam preparation. By going through the solutions, students can get an idea of the types of questions that may appear in exams, enhancing their preparedness.
8. **Support for Self-Study:** NCERT solutions are designed to be student-friendly, making them suitable for self-study. Students can use these resources independently, which is particularly beneficial for reinforcing concepts outside the classroom.
9. **Promotion of Critical Thinking:** The solutions often encourage critical thinking by presenting problems and questions that require analytical skills. This approach helps students develop problem-solving abilities, an essential aspect of scientific inquiry.

10. **Free Availability:** NCERT solutions are freely available online, making them easily accessible to students. This accessibility ensures that students from diverse backgrounds can benefit from quality educational resources.

How to Prepare With NCERT Solutions for Class 6 Science Chapter 8?

Preparing for Class 6 Science Chapter 8 using NCERT solutions can be an effective way to grasp the concepts thoroughly. Here's a detailed guide on how to prepare:

Step 1: Acquire the NCERT Textbook

Start by obtaining the Class 6 Science textbook published by NCERT for Chapter 8 - "Body Movements." Read through the chapter carefully, paying attention to concepts, explanations, and examples provided.

Step 2: Understand the Chapter's Structure

Break down the chapter into sections to understand its structure. Identify key topics and sub-topics, as this will help you organise your study plan effectively.

Step 3: Read the NCERT Solutions

After reading the chapter, turn to the NCERT solutions for Class 6 Science Chapter 8. The solutions provide answers to the textbook questions, aiding in a better understanding of the concepts.

Step 4: Take Notes

While going through the solutions, take notes of important points, definitions, and examples. This will serve as a quick reference during revision. Ensure that you understand the reasoning behind each solution.

Step 5: Solve Exercise Questions

Engage actively with the chapter by solving the exercise questions provided in the NCERT solutions. Work on them systematically, and don't hesitate to revisit the chapter if you encounter difficulties.

Step 6: Verify Your Answers

Once you've solved the exercise questions, cross-verify your answers with the solutions provided. Pay attention to any mistakes or misconceptions and understand the correct approach to solving each problem.

Step 7: Practise Additional Questions

For a more comprehensive preparation, seek additional practice questions related to the chapter. This can be from other textbooks or online resources. The goal is to reinforce your understanding and enhance problem-solving skills.

Step 8: Engage in Practical Applications

Science is often better understood when applied practically. Look for real-life examples or conduct simple experiments related to the concepts in Chapter 8. This hands-on approach can make the learning experience more enjoyable and memorable.

Step 9: Clarify Doubts

If you encounter any doubts or uncertainties while studying, don't hesitate to seek clarification from your teachers, classmates, or online resources. Understanding the fundamentals is crucial for building a strong foundation.

Step 10: Regular Revision

Consistent revision is key to retaining information. Periodically revisit the chapter, review your notes, and solve practice questions to reinforce what you've learned.

NCERT Solutions for Class 6 Science Chapter 8 FAQs

1. **Statement – Two muscles are needed to move a bone. True or False.**
   False. Typically, muscles work in pairs, with one contracting and the other relaxing to move a bone.
2. **How Does a Fish Move in Water?**
   Fish move in water by contracting and relaxing their muscles in a rhythmic pattern, creating a side-to-side motion.
3. **What are body movements?**
   Body movements refer to the actions or motions of various body parts, facilitated by muscles and joints.
4. **What do you mean by movement according to Chapter 8 of Class 6 Science?**
   In Class 6 Science, movement, as discussed in Chapter 8, pertains to the change in position of objects or living organisms.
5. **What makes the bones move according to Chapter 8 of Class 6 Science?**
   According to Chapter 8 of Class 6 Science, muscles attached to bones contract and pull, allowing the bones to move.