

## Key MDP Project Components (NATURAL RESOURCES)

- **Science/Environmental Science:** Identify renewable and non-renewable resources, create lists of endangered/extinct species in India, and explain the need for conservation.
- **Social Science/Geography:** Explore policies and acts related to resource conservation in India (e.g., Environment Protection Act).
- **Mathematics:** Create bar graphs and line graph showing forest cover change over years .
- **Languages (English/Hindi/Sanskrit):** Prepare posters, slogans, or essays on "Save Water/Save Earth," conservation methods, or the impact of reducing, reusing, and recycling. [

## Suggested Project Structure (Example: Conserving Natural Resources)

1. **Title Page:** Project title, name, class, subject.
2. **Introduction:** Definition and types of natural resources.
3. **Core Content (Science/SST):**
  - Endangered wildlife list and causes.
  - Overview of water conservation (rainwater harvesting).
  - List of key natural resources (soil, coal, petroleum).
4. **Data Analysis (Maths):**
  - Bar graph: Consumption rate of resources.
  - Pie Chart: Percentage of renewable vs. non-renewable resources.
5. **Conclusion & Action Plan:** "Plant today, protect tomorrow" slogan, and steps to sustainable development.

## Key Concepts to Cover

- **Natural Resources:** Materials like sunlight, air, water, soil, and forests that support life.
  - **Conservation:** Protecting natural resources to ensure they are available for future generations.
  - **Types:** Inexhaustible (sunlight, air) vs. Exhaustible (coal, petroleum).
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# Worksheet – Squares and Cubes

## Section A: MCQs (1 mark each)

*(Choose the correct answer)*

1. What is the square of 15?
  - a) 225
  - b) 215
  - c) 235
  - d) 205
2. What is the cube of 5?
  - a) 15
  - b) 25
  - c) 125
  - d) 100
3. Which of the following is a perfect square?
  - a) 50
  - b) 64
  - c) 70
  - d) 90
4. The square root of 144 is:
  - a) 11
  - b) 12
  - c) 13
  - d) 14
5. Which number is a perfect cube?
  - a) 18
  - b) 27
  - c) 36
  - d) 45
6. What is the cube root of 64?
  - a) 2
  - b) 3
  - c) 4
  - d) 5
7. The square of 21 is:
  - a) 421
  - b) 441
  - c) 461
  - d) 481
8. Which of the following ends with digit 5 when squared?
  - a) 25
  - b) 15
  - c) 35
  - d) All of these
9. The cube of 10 is:
  - a) 100
  - b) 500

- c) 1000
  - d) 2000
10. The smallest perfect square number is:
- a) 0
  - b) 1
  - c) 2
  - d) 4

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**Section B: Short Answer Questions (3 marks each)**

1. Find the square of 38 using identity method.
2. Find the cube of 12.
3. Check whether 729 is a perfect cube. If yes, find its cube root.
4. Find the square root of 625 by prime factorization method.
5. Find the smallest number by which 200 must be multiplied to make it a perfect square
  
6. Find the smallest square number that is divisible by each of the following numbers: 4, 9, and 10.
  
7. Find the smallest number by which 9408 must be multiplied so that the product is a perfect square. Find the square root of the product.
  
8. How many numbers lie between the squares of the following numbers?  
(i) 16 and 17 (ii) 99 and 100
  
9. Find the cube roots of 27000 and 10648.
  
10. What are taxi cab numbers? Give any two examples.

**Case-Based Question (5 Marks)**

A school is planning to decorate its assembly ground for an event. The ground is square-shaped with an **area of 784 m<sup>2</sup>**. In the center, a **cubical stage** is built using wooden blocks, and the **volume of the stage is 512 m<sup>3</sup>**.

Based on this information, answer the following:

1. Find the **length of one side of the square ground**.
2. Find the **length of one edge of the cubical stage**.
3. If the stage is placed exactly at the center, how much distance is there from the edge of the stage to one side of the ground?

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