

TOPIC	MINERALS AND ENERGY RESOURCES
LEARNING OBJECTIVES	➤ Define the term ‘mineral’. ➤ Explain the case study and discover the presence of social diversities in all types of formations in which minerals occur. ➤ Contrast the occurrence of minerals in India on the basis of areas or states. ➤ Classify the types of minerals with their characteristics and their availability. ➤ Examine the hazards of mining in India. ➤ Justify the importance of conservation of minerals in a sustainable manner. ➤ Identify the two types of sources of energy, characterize them and understand their limitations. ➤ Prioritize the importance of conservation of energy resources.
TEACHER’S ACT (Methodology)	➤ Recall from students the concepts related and establish the connection with the topic. ➤ Demonstrate the classifications through help of flow chart. ➤ Construct mind maps for revision purpose. ➤ Conduct discussion under his/her guidance for collaborative learning and organizing the ideas. ➤ Encourage debate to share thoughts and develop confidence with critical thinking. ➤ Develop the feeling of coordination and reflection of personality through assignments. ➤ Show the appropriate way of performing Map based questions.
STUDENT’S ACT	➤ New terms and phrases noted. ➤ Understand the explanation and identify problem areas. ➤ Analyze the situations and create the thoughts. ➤ Collect information and data related to the concerned topics. ➤ Develop critical thinking for better understanding. ➤ Apply the knowledge in appropriate situations of life. ➤ Modify various pre-defined thoughts and design their own for future generations.
PRACTISE QUESTIONS	Q 1. Distinguish between rocks and minerals. Give examples. Q 2. What is at-Hole Mining’? Q 3. “Mica is an indispensable mineral in the electronic industry.” Evaluate. Q 4. Explain the mode of occurrence of minerals in igneous and metamorphic rocks with examples. Q 5. Explain any three reasons for variation in the distribution of minerals in India. Q 6. “India is fortunate to have fairly rich and varied mineral resources.” Elaborate the statement.

	Q 7. How is the mining activity injurious to the health of the miners and environment? Explain. Q 8. 'The conventional sources of energy are fast getting depleted, if we are not careful, there will be an acute shortage.' Support the statement with examples. Q 9. What are the major sources of energy in rural household of India? Identify the major problems faced due to these sources. Give suggestions to solve these problems. Q 10. Why solar energy is called as the energy of future? Why solar energy has high scope in India?
EVALUATION	➤ Textual learning and understanding assessed through Pen-Paper Test (Formative and Summative) ➤ Assignments project the learning and clarity of topics. ➤ Classroom connection to be assessed through oral questionnaire. ➤ Peer coordination and collaboration to be assessed through debates and discussions. ➤ Practical approach and skill assessed through activity conducted.
LEARNING OUTCOMES	➤ Classify the types of mineral and energy resources. ➤ Identify the mineral rich areas of India. ➤ Analyze the importance of conservation of resources for future generation. ➤ Compare between the possibilities of conventional and non-conventional sources of energy. ➤ Criticize the way mining is being practiced and show concern. ➤ Construct thoughts of resolving the problem of hazards of mining and conservation of resources.

