

Minequest Task List: Power Connections

Big Question: What are the connections among the people, places, and processes of the systems that provide the energy to power our world?

Task #1: As a team, select a team leader to organize and direct your research. The best leader is someone who will be willing to listen to others and be listened to by others.

Task #2: As a team, preview the Mining, Processing and Product pages of this Minequest using the links below. Looking ahead to the tasks you will be completing will help you plan your research. When you have looked ahead, meet back here to continue getting organized.

Task #3: With your teammates, brainstorm strategies for taking notes at your assigned web pages. From your notes you will have to share the discoveries you make about your piece of the energy puzzle with classmates. Consider how organizing your notes will make you better prepared to share information with your classmates.

Task #4: Use this link to access the Department of Energy website. Once at this site, find the link or links to the content page or pages your teacher has assigned your team.

1. Coal & Natural Gas Power Systems, and Hydrogen & Other Clean Fuels
2. Carbon Sequestration
3. Oil & Gas Supply & Delivery
4. Natural Gas Regulation
5. Electricity Regulation
6. Petroleum Reserves

Task #5: Discuss the information you found. What facts, insights, and conclusions do you need to share with your classmates in order for them to look for connections among the systems that you are studying? Each team member needs a written list of significant ideas you will share with other teams.

Task #6: Move to the “Expert” group you have been assigned by your teacher.

In this group you will:

- 1) report your team discoveries to the experts from other teams, and
- 2) listen carefully and take notes on the other reports. What you learn from other experts will determine how well you and your team can draw your connections map.

Task #7: Return to your teammates. Discuss your notes and identify the connections you are discovering among the energy systems your class has been studying. Construct your connections map. (Later in the Minequest, each team member will need a copy of the map. Check with your teacher about your options for obtaining copies.)

Task #8: At the direction of your teacher, meet again with your Expert group. Take your map with you. Take your turn in presenting your map to your Expert group and listen as other maps are presented. Discuss the connections each team identified. Look for patterns and explore disagreements. Return to your team with other perspectives and insights into the connections among the systems you have been studying.

Task #9: With your team, make any adjustments to your connections map to show how you may have changed your thinking as a result of sharing ideas in Expert groups.

Task #10: Print a copy off the Minequest Problem Solving Matrix using this link or obtain a copy from your teacher. (See more problem solving matrix directions online.)

Task #11: As an individual, revisit your team's completed matrix and select any two separate scores. Identify the scores you choose by the cell they are in such as Change 3, Criterion 5. In a written explanation, make a case to support why your team chose these two ratings. Or instead you may write a "dissenting" opinion, explaining why you were in the minority and did not agree with your team's rating in this case.

Task #12: As an individual, write an explanation of how the connections among processes, places, and or people involved in turning natural resources into energy exemplifies a complex system. Discuss how this complexity complicates making decisions and taking action.

Task #13: Visit the Minequest Lobby and share your insights about discoveries you made in this learning journey. Think about the complexity of other systems that are a part of our daily lives. Are there other connections among energy systems that you didn't research in this Minequest that add to this complex puzzle?