**Mineral Resources**

1. Earth’s Mineral Resources
2. Rocks vs. Minerals
3. The mining process
4. Extracting metals from ores
5. Metal –

Examples of economically valuable metals:

1. Ore –

Example: Tantalite ore is mined, processed into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and used in electronic devices

1. Processing metals
2. General method:
3. Forming alloys:
4. Smelting:
5. “Costs” of Processing minerals
6. Water / energy use
7. Air pollution:
8. Tailings –

Example:

1. Mining non-metallic minerals and fuels
2. Sand/gravel used for…
3. Phosphates used for…
4. Gemstones such as…
5. Fuel resources include…
6. Mining Methods and Impacts
7. Strip mining –
8. Overburden –
9. Environmental impacts
10. Destruction of land:
11. Acid mine drainage:
12. Subsurface mining –
13. Most dangerous because….
14. Environmental Impacts:
15. Open Pit Mining –
16. Quarries –
17. Environmental Impacts:
18. Placer Mining –
19. Social impacts:
20. Environmental impacts:
21. Mountaintop Removal –
22. Reasons used:
23. Environmental Impacts:
24. Social Impacts:
25. Solution Mining (in-situ recovery) –
26. Less environmentally damaging
27. Environmental Impacts:
28. Undersea Mining
29. Techniques:
30. Seawater –
31. Dredging –
32. Environmental Impacts:
33. Restoration of Mining Sites
34. Reclamation –
35. Impacts of mining are severe and long-lasting
36. Reasons:
37. Example:
38. Legislation:
39. Surface Mining Control and Reclamation Act –
40. General Mining Act of 1872 –
41. Toward Sustainable Mineral Use
42. Minerals are non-renewable

Examples:

1. Factors affecting how long mineral deposits may last
2. Discovery of new reserves
3. New extraction technologies
4. Changing social and technological dynamics
5. Changing consumption patterns
6. Recycling
7. Recycling addresses…
8. E-waste