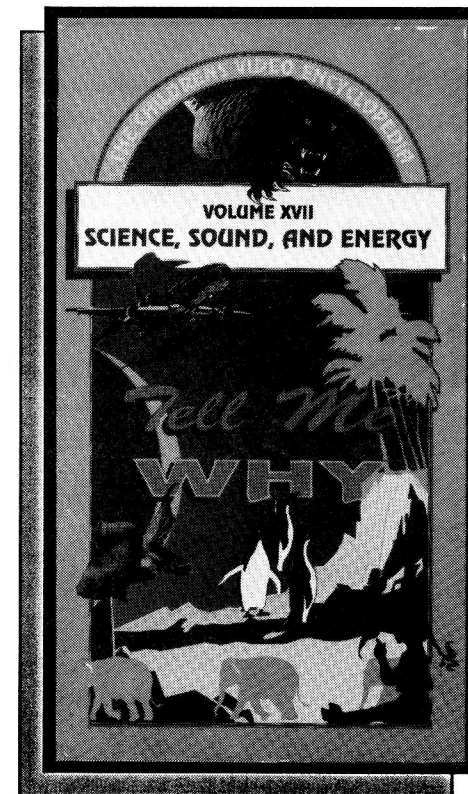


# GLOSSARY

1. ALCHEMY-medieval chemistry.
2. AMPLITUDE-distance the vibrating body moves in its to-and-fro motion.
3. ANCESTOR-a person from whom one is descended.
4. ANTHROPOLOGY-science of mankind.
5. ANTHROPOMETRY-the part of anthropology having to do with measurement of the human body to determine differences in races, individuals, etc.
6. ARCHAEOLOGY-the study of past cultures from artifacts.
7. ATOM- smallest unit making up chemical element.
8. BARYON-one of a class of heavy atomic particles, including the proton, neutron, and the hyperons.
9. BIOLOGY-the science of living matter.
10. BOTANY-the science of plant life.
11. CHEMISTRY-the science of composition of substances.
12. COAL-black, mineral burned as fuel.
13. CURRENTS-rivers of water flowing through the ocean that are warmer or colder than water through which they pass.
14. ECHO-sound repeated by reflection.
15. ECOLOGY-science of relationship between organisms and environment.
16. ELECTRON-minute particle supposed to be or contain a unit of negative electricity.
17. ENERGY-the ability to do work.
18. ENVIRONMENT-surrounding things, conditions, etc.
19. ETHNOLOGY-science dealing with physical differences between the various human races.
20. EVOLUTION-the development of a species, organism, or organ from its original rudimentary state to its present or completed state.
21. EXCAVATION-something unearthed by digging.
22. EXPERIMENT-a test or trial of something.
23. FOSSIL-petrified remains of animal or plant.
24. FREQUENCY-speed of vibration of the sounding object.
25. FUEL-substance that maintains fire.
26. GASOLINE-inflammable liquid from petroleum used especially as motor fuel.
27. GEOLOGICAL TIME-history of the earth.
28. GEOLOGY-science of earth's structure.
29. HEAT-form of energy raising temperature.
30. HYPERON-any of a class of baryons which are heavier than nucleons.
31. KEROSENE-a type of oil.
32. KINETIC ENERGY-that energy of a body which results from its motion.
33. MATTER-what a thing is made of.
34. MEDIUM-something that carries sound from its source to the hearer.
35. MESON-an unstable particle, first observed in cosmic rays, having a mass between that of the electron and the proton.
36. MOLECULE-smallest physical unit of a chemical element.
37. NATURAL GAS-mixture of combustible gases and vapors, chiefly methane.
38. NEUTRINO-a hypothetical neutral particle smaller than a neutron.
39. NEUTRON-particle in nucleus of atom.
40. NOISE-sound, especially loud or harsh.
41. OCEANOGRAPHY-study of oceans.
42. OVERTONE-musical tone added to basic tone.
43. PALAEOBOTANY-study of fossil plants.
44. PETROLEUM-oily liquid occurring naturally; source of gasoline, kerosene, paraffin, etc.
45. PITCH-highness or lowness of a sound.
46. PLANT ANATOMY-structure of plants and how they might be related.
47. PLANT PATHOLOGY-study of plant disease.
48. PLANT PHYSIOLOGY-study of the way plants breathe and make food.
49. POROUS-permeable by water.
50. POSITRON-the positive counterpart of an electron, having approximately the same mass and magnitude of charge.
51. POTENTIAL ENERGY-energy that is the result of relative position instead of motion.
52. PROTON-part of an atom bearing positive charge.
53. RADIUM-radioactive metallic element.
54. SCIENCE-systematic knowledge, especially of physical world.
55. SEACOAST-borderline between land and sea.
56. SEDIMENTARY ROCK-rock formed by deposit of any matter or mass by water or wind.
57. SHALE-kind of layered rock.
58. SOUND-sensation affecting organs of hearing, produced by vibrations.
59. TIDES-regular movements of the waters caused by pull of the moon and sun.
60. TIMBRE-characteristic quality of a sound.
61. VIBRATION-moving back and forth of some object.
62. ZOOLOGY-science of animals.

# *Tell Me* **WHY** *TEACHER'S GUIDE*



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## VOLUME XVII SCIENCE, SOUND, AND ENERGY

## SUGGESTED TEACHING STRATEGIES

1. Discuss how anthropology relates to the sciences of anatomy, physiology, psychology, ethics, sociology. See if you can think of any other field related to anthropology.
2. Describe the three (3) basic divisions of anthropology.
3. Discuss what you would expect to find on an archeological excavation.
4. Discuss the importance of studying ecology.
5. Discuss the practical sides of geology.
6. Research various elements and who discovered them.
7. Diagram the study of oceanography. Research its branches and determine their relationships to each other as well as to man's survival.
8. Diagram how we hear various types of sounds.
9. Discuss the advantages of sonar for animals as well as for man.
10. Determine why energy is not lost or created, only changed.
11. Compare and contrast various sources of energy.
12. Discuss how the discovery of the atom has changed man's way of thinking.

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### CONCEPTS AND TERMS TO LISTEN AND WATCH FOR:

SCIENCE	SEACOAST
BIOLOGY	TONE
ECOLOGY	ECHO
GEOLOGY	FUEL
OCEANOGRAPHY	ELECTRON
PITCH	ARCHAEOLOGY
SONAR	GENETICS
COAL	CHEMISTRY
ATOM	FOSSIL
NEUTRON	VIBRATIONS
ANTHROPOLOGY	COMPRESSION
BOTANY	POTENTIAL ENERGY
ZOOLOGY	NATURAL GAS
SEDIMENTARY ROCK	PROTON

## QUESTIONS FOR THOUGHT, DISCUSSION AND FURTHER STUDY

1. Is anthropology merely the study of man? Why?
2. What were the earlier purposes for the study of botany? How have they changed? How have they remained the same?
3. What can we learn from studying fossils of animals and plants?
4. What factors affect tides?
5. What would you find on the bottom of the ocean floor?
6. What are the mediums that carry sound?
7. What affects the amplitude of sound?
8. What is pitch?
9. Through which medium does sound travel fastest?
10. How does temperature affect the speed of sound?
11. What types of surfaces are best for producing echoes?
12. What is potential energy?
13. What is kinetic energy?
14. Why is energy neither created nor destroyed?
15. What was the first source of fuel first used in mass quantities?
16. What are the advantages to using coal over wood?
17. What are natural gases?
18. Who discovered the atom?
19. What is an atom composed of?

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### CAREER OPPORTUNITIES .....

ARCHAEOLOGIST	GEOLOGIST
BIOLOGIST	ENGINEER
LAB TECHNICIAN	COAL MINER
SOUND ENGINEER	BOTANIST
PHYSICIST	CHEMIST
ANTHROPOLOGIST	OCEANOGRAPHER
PALEONTOLOGIST	SONAR TECHNICIAN