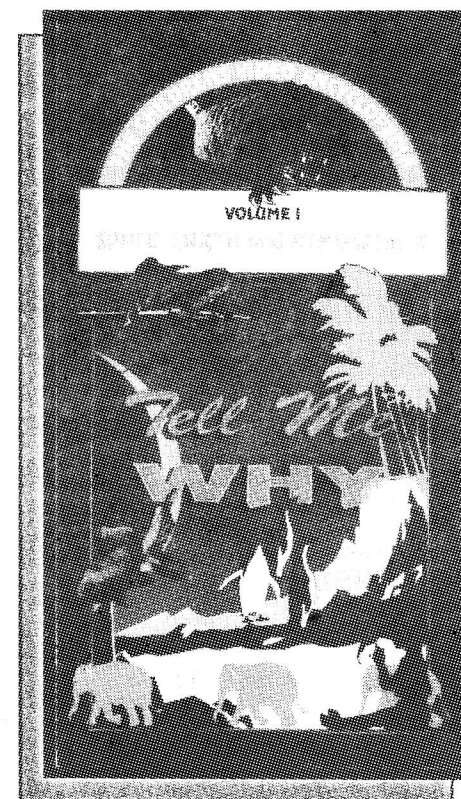


GLOSSARY

1. AIR-the elastic, invisible mixture of gases that surrounds the earth; atmosphere.
2. ASTEROID-any of the small planets with orbits between those of Mars and Jupiter.
3. ASTRONOMER-a person who studies the stars.
4. ASTRONOMY-the science of the stars and other heavenly bodies, dealing with their composition, motion, relative position, size, etc.
5. ATMOSPHERE-all the air surrounding the earth.
6. AURORA BOREALIS-the Northern Lights
7. AXIS-an imaginary or real straight line on which an object supposedly or actually rotates.
8. BASALT-found under the layer of granite, a hard, heavy, dark volcanic rock.
9. CHEMICAL COMPOSITION-the mixing of chemical elements.
10. CHROMOSPHERE-the reddish layer of incandescent gases around the sun, visible at a total eclipse.
11. COMET-a heavenly body having a starlike nucleus with a luminous mass around it, usually, a long, luminous tail.
12. COMPRESS-to squeeze together.
13. CONSTELLATION-an area in the sky where stars are grouped together.
14. CORONA-the outer layer of the sun.
15. CORONAGRAPH-a special telescope used to photograph the sun's corona.
16. CRUST-the outside layer of the earth made of rock about 10 to 30 miles thick.
17. ELECTRON-the negatively charged particle of an atom.
18. ENERGY-a force able to produce motion, heat, light, etc.
19. EQUATOR-an imaginary line bisecting the earth.
20. EXTRA-GALACTIC-outside a galaxy.
21. FALLING STAR-a meteor.
22. GALAXY-a grouping of millions of stars apparently merging into a luminous band that extends across the sky.
23. GRANITE-upper layer of the crust; grainy, igneous rock.
24. GRAVITY-the force that makes a body fall towards the center of the earth.
25. HORIZON-the line where the sky appears to meet the earth.
26. INTERSTELLAR-between or among the stars.
27. JET STREAM-part of the system of winds that surround the earth.
28. LAYER-a single thickness, coat, fold, or stratum.
29. LIGHT YEAR-the distance that light travels in one year, about 6,000,000,000,000 miles.
30. LUMINOUS-objects that give off their own light.
31. MANTLE-the silt, sand, and other loose material covering the solid bedrock of the earth.
32. MASS-the amount of matter in an object.
33. MATTER-anything that has weight and takes up space.
34. METEOR-a small, solid body which travels through space.
35. METEORITE-a solid body surviving a fall to earth.
36. MILKY WAY-the galaxy we live in.
37. MOISTURE-water or other liquid causing a slight wetness or dampness.
38. NEBULA-any mass of interstellar dust or gas or both.
39. NUCLEUS-center of an atom.
40. ORBIT-the path taken by a heavenly body during its periodic revolution around another body.
41. OXYGEN-a colorless, odorless, tasteless gaseous chemical element, the most abundant of all elements.
42. OZONE-a form of oxygen created by electric spark.
43. PALLASITE-the inside material of the earth's mantle.
44. PERIODITE-the outside material of the earth's mantle.
45. PHASE-any of the stages of variation in the illumination or appearance of the moon or a planet.
46. PROMINENCE-large clouds above the sun.
47. RADIO TELESCOPE-an instrument which records the strength of radio waves that comes from the stars.
48. SMOG-a mixture of fog and smoke.
49. SOLAR SYSTEM-the sun and all the bodies around it that are controlled by gravity.
50. SPECTROGRAPH-an instrument which studies the light rays from the stars.
51. SPECTRAHELIOGRAPH-a spectraheliastroscope with a camera added to it.
52. SPECTRAHELIOSCOPE-an instrument that allows astronomers to see how different substances are distributed by the sun.
53. SPECTROSCOPE-an instrument used to study the glowing gases of the sun.
54. STAR-a huge ball of bright hot gases.
55. TELESCOPE-an instrument for making far away objects appear closer.
56. ULTRA-VIOLET RAY-invisible light with wavelengths shorter than violet.
57. UNIVERSE-the world.

Tell Me
WHY
TEACHER'S GUIDE



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VOLUME I
SPACE, EARTH AND ATMOSPHERE

SUGGESTED TEACHING STRATEGIES

1. Obtain star charts and point out a selection of well-known constellations.
2. Contrast the pre-Copernican and Copernican models of the solar system.
3. Provide a diagram of the solar system to be labeled with planet names, locations, and asteroid belt.
4. Discuss the electromagnetic spectrum relating for students how radio waves are related to light.
5. Provide a map of the world that can be cut up into continental portions so as to illustrate Wegener's theory.
6. Discuss the recent laws regarding propellants and the ozone layer.



CONCEPTS AND TERMS TO LISTEN AND WATCH FOR

CONTINENTAL DRIFT	ASTEROID
SOLAR SYSTEM	RADIOTELESCOPE
GALAXY	ORBIT
UNIVERSE	ULTRAVIOLET
LIGHT YEAR	LUNAR DAY, NIGHT
CONSTELLATION	JET STREAM
CORONA	WEIGHTLESSNESS
SUNSPOT	METEORS
PLANET	NEBULA-GALACTIC
OZONE	NEBULA-EXTRA GALACTIC
GRAVITY	SOLAR WIND
SPECTROGRAPH	INFRA RED
MILKY WAY	ASTRONOMER
COMET	

QUESTIONS FOR THOUGHT, DISCUSSION AND FURTHER STUDY

1. Write an explanatory sentence in which you properly position these terms: Milky Way, universe, Earth, sun, galaxy, solar system.
2. What is a light year? How far is the nearest star (other than our sun)?
3. What is a nebula?
4. How were the constellations named?
5. When comets and the solar wind interact, what is formed?
6. What chemical reaction fuels our sun?
7. What are the colors called visible light?
8. What unusual phenomenon exists between Mars and Jupiter? How is this explained?
9. Why can't we see the moon's "other side"?
10. What discoveries prompted the location of Neptune and Pluto?
11. How far away from Earth is our sun?
12. About how old is the Earth?
13. Diagram a cross section of the Earth; label from the core to the crust.
14. What evidence, almost daily, proves the theory of continental drift?
15. On a bar graph, illustrate the relative percentage of the gaseous components of the atmosphere.
16. Where is the jet stream, and how might it save a jetliner time and fuel?
17. Of what protective importance is the Earth's ozone layer?
18. Why are sunsets red?

CAREER OPPORTUNITIES

ASTRONOMER	CHEMIST
GEOLOGIST	CARTOGRAPHER
PHYSICIST	EARTH SCIENCE TEACHER