

CONTENTS

INTRODUCTION	1
TEACHING SCIENCE	2
WHERE TO START.....	2
TEACHING TIPS	4
SCIENTIFIC SKILLS	7
OBSERVING	7
CLASSIFYING.....	8
MEASURING	10
PREDICTING.....	11
INFERRING.....	11
CONTROLLING VARIABLES.....	12
INTERPRETING DATA.....	13
FORMULATING AN HYPOTHESIS	13
DEFINING OPERATIONALLY.....	14
EXPERIMENTING.....	15
RESEARCHING	16
LIFE SCIENCE	17
ANIMALS	17
<i>Categories: Living and Nonliving</i>	17
Primary - Intermediate.....	17
Junior High - High School.....	17
<i>Distinguishing Characteristics</i>	18
Primary, Intermediate - Junior High.....	18
<i>Classifications</i>	19
Primary	19
Primary - Intermediate.....	20
Intermediate - Junior High.....	21
High School.....	24
<i>Reference Chart - Vertebrates / Invertebrates</i>	25
<i>Life Cycles</i>	26
Primary	26
Intermediate - High School.....	26
Junior High - High School.....	26
<i>Habitats</i>	27
Primary - Intermediate.....	27
Junior High - High School.....	28
<i>Ecosystems/Biomes</i>	28
Primary	28
Intermediate - Junior High.....	28
<i>Activities</i>	29
Junior High - High School.....	29
CYCLES: WATER, CARBON DIOXIDE - OXYGEN, NITROGEN	32
PLANTS	33
<i>Categories: Living and Nonliving</i>	33
Primary	33
Intermediate - High School.....	33
Junior High - High School.....	33

<i>Distinguishing Characteristics</i>	34
Primary	34
Intermediate - Junior High.....	35
Junior High - High School.....	35
<i>Habitats</i>	36
Primary	36
Intermediate.....	36
Junior High - High School.....	37
<i>Uses</i>	37
Primary	37
Intermediate - Junior High.....	37
<i>Growth</i>	39
Primary	39
<i>Activities</i>	39
Intermediate - High School.....	40
Junior High - High School.....	41
<i>Reproduction</i>	41
Primary	41
<i>Activities</i>	41
Intermediate - Junior High.....	41
High School.....	45
<i>Response to Stimuli</i>	46
Junior - Senior High	46
THE HUMAN BODY	46
<i>Anatomy: Parts of the Body</i>	46
Primary	46
<i>Activity</i>	47
<i>Anatomy: The Five Senses</i>	47
Primary	47
Intermediate.....	47
Junior High - High School.....	47
<i>Anatomy: Ears and Sound</i>	48
Primary	48
Intermediate - Junior High.....	48
<i>Anatomy: Eye, Sight, and Light</i>	50
Primary	50
Intermediate - Junior High.....	50
<i>Activities helpful for understanding sight:</i>	50
<i>Anatomy: Teeth</i>	52
Primary	52
Intermediate - Junior High.....	52
Junior High - High School.....	52
<i>Anatomy: Cell</i>	53
Intermediate - High School.....	53
Junior High - High School.....	54
<i>Genetics / Heredity</i>	54
<i>Anatomy: Skin</i>	55
Intermediate - High School.....	55
<i>Anatomy: Blood / Circulatory System</i>	56
Intermediate - High School.....	56
<i>Anatomy: Digestive and Excretory Systems</i>	57
Intermediate.....	57
Junior High - High School.....	58
<i>Anatomy: Endocrine System</i>	58
Junior High - High School.....	58
<i>Anatomy: Skeletal and Muscular Systems</i>	59
Primary	59

Intermediate - High School.....	59
<i>Anatomy: Nervous System</i>	61
Intermediate - High School.....	61
<i>Anatomy: Reproductive System</i>	62
Junior High - High School.....	62
High School.....	62
<i>Anatomy: Respiratory System</i>	64
Intermediate - High School.....	64
<i>Health: Care of the Body</i>	64
Primary - Intermediate.....	64
<i>Activities</i>	65
Intermediate - High School.....	66
<i>Health: Causes, Prevention, and Treatment of Illness</i>	67
Intermediate.....	67
Junior High - High School.....	67
<i>Activity</i>	68
Drugs.....	69
EARTH SCIENCE	70
AIR AND WATER	70
<i>Weather</i>	70
Primary.....	70
<i>Activities</i>	72
Intermediate.....	72
<i>Weather and Climate</i>	74
Junior High - High School.....	74
<i>Atmosphere</i>	77
Junior - High School.....	77
<i>Solar System</i>	78
Primary.....	78
Intermediate - Junior High.....	78
Intermediate - High School.....	80
High School.....	81
<i>Water</i>	82
Intermediate - Junior High.....	82
High School.....	82
THE LAND: COMPOSITION, CHANGES, AND USE	83
Primary.....	83
Intermediate - Junior High.....	83
Junior High - High School.....	85
PHYSICAL SCIENCE	89
FORCE	89
<i>Motion</i>	89
Primary.....	89
Intermediate - Junior High.....	89
High School.....	90
<i>Gravity</i>	91
Intermediate - Junior High.....	91
Junior High - High School.....	91
<i>Work</i>	92
High School.....	92
<i>Work Using Machines</i>	92
Primary.....	92
Intermediate.....	92
Junior High - High School.....	93

<i>Simple Machine: Wheel and Axle</i>	93
Primary - Intermediate.....	93
<i>Simple Machine: Inclined Plane</i>	94
Primary - Intermediate.....	94
Junior High - High School.....	94
<i>Simple Machine: Levers</i>	94
Primary - Intermediate.....	94
Junior High - High School.....	95
<i>Water</i>	95
Primary.....	95
Intermediate - High School.....	95
<i>Air</i>	96
Primary.....	96
Intermediate.....	96
<i>Magnetism</i>	97
Intermediate - Junior High.....	97
High School.....	97
ENERGY	98
<i>Heat Energy</i>	98
Primary.....	98
Intermediate - Junior High.....	98
Junior High - High School.....	99
<i>Radiant Energy</i>	100
Junior - Senior High.....	100
<i>Electricity</i>	101
Intermediate - Junior High.....	101
Junior High - High School.....	101
<i>Waves</i>	102
Junior High - High School.....	102
CHEMISTRY	103
<i>Matter</i>	103
Primary - Intermediate.....	103
Junior High - High School.....	104
<i>Atoms, Elements, and Compounds</i>	106
Junior High - High School.....	106
High School.....	110
<i>Gas</i>	110
Junior High - High School.....	110
<i>Water</i>	111
Intermediate - High School.....	111
<i>Solids: Metals, Nonmetals, Crystals</i>	112
Intermediate - High School.....	112
<i>Periodic Table</i>	113
TECHNOLOGY	116
<i>Electronics</i>	116
Junior High - High School.....	116
<i>Engineering</i>	116
Junior High - High School.....	116
<i>Flight</i>	116
Junior High - High School.....	116
CHECKLIST	118
