

Physical Science

Energy	2
Waves: Waves and Information	2
Batter Up!	4
Investigate Speed	6
Hit the Ball	8
Investigate Motion	10
Sounds of the Game	12
Investigate Sound	14
The Sun’s Light	16
Investigate Light	18
Heat It Up!	20
Investigate Heat	22
It’s Electric	24
Electric Currents	26
Investigate Electric Currents	28
Spin It!	30

NATIONAL GEOGRAPHIC LEARNING Think Like an Engineer Case Study T.H. Culhane	32
NATIONAL GEOGRAPHIC LEARNING Think Like an Engineer Design, Test, and Refine a Device	38
Nonrenewable Energy Resources	44
Renewable Energy Resources	46
Energy Resources and the Environment	48
NATIONAL GEOGRAPHIC LEARNING Think Like a Scientist Obtain and Combine Information	50
Waves	52
Wave Properties	54
Investigate Wavelength and Amplitude	56
Investigate How Waves Move Objects	58
Information Technology—GPS	60
Information Technology—Cell Phones	62
Investigate Using a Code	64
NATIONAL GEOGRAPHIC LEARNING Think Like an Engineer Compare Multiple Solutions	66
NATIONAL GEOGRAPHIC LEARNING Science Career Animal Tracker	68



Life Science

Structure, Function, and Information Processing	70
External Structures of a Wild Rose	72
Internal Structures of a Wild Rose	74
 Think Like a Scientist Construct an Argument	76
External Structures of an Elephant	78
Internal Organs of an Elephant	80
Bones and Muscles of an Elephant	82

 Think Like a Scientist Construct an Argument	84
Animal Senses	86
Light and Sight	88
 Investigate How We See	90
 Think Like a Scientist Use a Model	92
 Science Career Dog Whisperer	94

Earth Science

Earth's Systems: Processes that Shape Earth	98
Rainfall in the United States	100
Pacific Northwest Forest	102
Southwest Desert	104
Central Plains Grassland	106
Eastern Temperate Forest	108
Weathering	110
Erosion and Deposition	112
Wind Changes the Land	114
Water Changes the Land	116
Investigate Weathering and Erosion	118
Ice Changes the Land	120
Living Things Change the Land	122
Landslides Change Earth's Surface	124
NATIONAL GEOGRAPHIC LEARNING Think Like an Engineer Make Observations	126
Natural Hazards	130
Earthquakes	132
Investigate Earthquakes	134
Tsunamis	136
Volcanoes	138
Reducing the Impact of Hazards	140
Early Warning Systems	142
Tsunami Detection	144
Patterns of Land and Water Features	146
NATIONAL GEOGRAPHIC LEARNING Think Like a Scientist Analyze and Interpret Data	148
NATIONAL GEOGRAPHIC LEARNING Think Like an Engineer Case Study Building for the Future	150
NATIONAL GEOGRAPHIC LEARNING Think Like an Engineer Generate and Compare Solutions	154
The Badlands	158
Iceland	160
NATIONAL GEOGRAPHIC LEARNING Think Like a Scientist Identify Evidence	162
NATIONAL GEOGRAPHIC LEARNING Science Career Crisis Mapper	166
Glossary	168
Index	176
Consultants, Credits, and Copyright	186