

Chemistry & Physics

Lesson 1	Start Time	Length	End Time
Chemistry and Physics Matter	0:00:00	0:02:35	0:02:35
In the Beginning	0:02:35	0:03:10	0:05:45
Forming the World	0:05:45	0:01:56	0:07:41
Everything Matters (1/2)	0:07:41	0:02:00	0:09:41
Try This! Pg. 17	0:09:41	0:00:08	0:09:49
Everything Matters (2/2)	0:09:49	0:00:17	0:10:06
Matter Matters	0:10:06	0:01:30	0:11:36
Turn Up the Volume (1/2)	0:11:36	0:04:02	0:15:38
Try This! Pg. 19	0:15:38	0:00:08	0:15:46
Turn Up the Volume (2/2)	0:15:46	0:00:28	0:16:14
Mass Matters	0:16:14	0:02:24	0:18:38
Narration Prompt Pg. 29	0:18:38	0:00:17	0:18:55
Density Matters (1/3)	0:18:55	0:00:17	0:19:12
Try This! Pg. 20	0:19:12	0:00:08	0:19:20
Density Matters (2/3)	0:19:20	0:03:14	0:22:34
Try This! Pg. 22	0:22:34	0:00:08	0:22:42
Density Matters (3/3)	0:22:42	0:00:54	0:23:36
Narration Prompt Pg. 23	0:23:36	0:00:17	0:23:53
Try This! Pg. 23 #1	0:23:53	0:00:08	0:24:01
Buoyancy Basics	0:24:01	0:01:18	0:25:19
Try This! Pg. 23 #2	0:25:19	0:00:08	0:25:27
Narration Prompt Pg. 24	0:25:27	0:00:21	0:25:48
More on Matter	0:25:48	0:00:50	0:26:38
The Golden Rule	0:26:38	0:00:58	0:27:36
Luster Matters	0:27:36	0:01:01	0:28:37
Color May Matter	0:28:37	0:01:38	0:30:15
Try This! Pg. 25	0:30:15	0:00:08	0:30:23
The Shape of Matter	0:30:23	0:01:14	0:31:37
Hardness Matters	0:31:37	0:02:24	0:34:01
Try This! Pg. 26	0:34:01	0:00:08	0:34:09
Smell Matters	0:34:09	0:00:54	0:35:03
More Properties Matter (1/2)	0:35:03	0:01:10	0:36:13
Try This! Pg. 27	0:36:13	0:00:08	0:36:21
More Properties Matter (2/2)	0:36:21	0:01:40	0:38:01
Final Matters	0:38:01	0:00:37	0:38:38
What Do You Remember?	0:38:38	0:00:50	0:39:28

Lesson 2	Start Time	Length	End Time
Moving Matter	0:00:00	0:01:29	0:01:29
Moving Atoms	0:01:29	0:00:32	0:02:01
Solid Sleep	0:02:01	0:00:32	0:02:33
Liquid Motion	0:02:33	0:00:37	0:03:10
Going Gas	0:03:10	0:01:32	0:04:42
Solid Matter	0:04:42	0:02:26	0:07:08
Try This! Pg. 32	0:07:08	0:00:08	0:07:16

Narration Prompt Pg. 32	0:07:16	0:00:14	0:07:30
Liquid Matter	0:07:30	0:00:54	0:08:24
Try This! Pg. 33 #1	0:08:24	0:00:08	0:08:32
Solid Liquids and Liquid Solids (1/2)	0:08:32	0:01:07	0:09:39
Try This! Pg. 33 #2	0:09:39	0:00:10	0:09:49
Solid Liquids and Liquid Solids (2/2)	0:09:49	0:00:21	0:10:10
Surface Tension	0:10:10	0:00:40	0:10:50
Try This! Pg. 34	0:10:50	0:00:09	0:10:59
Viscosity Values	0:10:59	0:01:58	0:12:57
Heating Up (1/2)	0:12:57	0:01:58	0:14:55
Try This! Pg. 35 #1	0:14:55	0:00:09	0:15:04
Heating Up (2/2)	0:15:04	0:00:50	0:15:54
Narration Prompt Pg. 35	0:15:54	0:00:21	0:16:15
Gas Matter	0:16:15	0:00:13	0:16:28
Try This! Pg. 35 #2	0:16:28	0:00:09	0:16:37
In the Air	0:16:37	0:03:07	0:19:44
Atoms Together and Apart	0:19:44	0:01:32	0:21:16
Voluminous Expanding Gas (1/2)	0:21:16	0:01:28	0:22:44
Try This! Pg. 37	0:22:44	0:00:07	0:22:51
Voluminous Expanding Gas (2/2)	0:22:51	0:00:46	0:23:37
Narration Prompt Pg. 37	0:23:37	0:00:14	0:23:51
Try This! Pg. 38	0:23:51	0:00:07	0:23:58
Bubble Power	0:23:58	0:00:26	0:24:24
Expanding and Escaping Air	0:24:24	0:02:03	0:26:27
Compressed Gas	0:26:27	0:01:12	0:27:39
Gas to Liquid to Solid to Liquid to Gas	0:27:39	0:01:34	0:29:13
Try This! Pg. 41	0:29:13	0:00:07	0:29:20
Final Matters	0:29:20	0:00:37	0:29:57
What Do You Remember?	0:29:57	0:01:11	0:31:08

Lesson 3	Start Time	Length	End Time
Building Blocks of Creation	0:00:00	0:04:40	0:04:40
Variety of Atoms	0:04:40	0:04:10	0:08:50
Attaching Atoms (1/2)	0:08:50	0:02:50	0:11:40
Narration Prompt Pg. 46	0:11:40	0:00:20	0:12:00
Try This! Pg. 46	0:12:00	0:00:08	0:12:08
Attaching Atoms (2/2)	0:12:08	0:00:31	0:12:39
Atom Anatomy	0:12:39	0:01:14	0:13:53
Charged Up	0:13:53	0:01:10	0:15:03
Pluses and Minuses	0:15:03	0:02:04	0:17:07
Primary Positives (1/2)	0:17:07	0:01:42	0:18:49
Try This! Pg. 49	0:18:49	0:00:08	0:18:57
Primary Positives (2/2)	0:18:57	0:00:26	0:19:23
Neutral News	0:19:23	0:01:54	0:21:17
Narration Prompt Pg. 49	0:21:17	0:00:17	0:21:34
Electric Electrons	0:21:34	0:02:05	0:23:39
Try This! Pg. 50	0:23:39	0:00:08	0:23:47

Electron Energy	0:23:47	0:02:20	0:26:07
Clouds, Shells, and Orbitals	0:26:07	0:02:52	0:28:59
Valence Valor	0:28:59	0:02:24	0:31:23
Narration Prompt Pg. 53	0:31:23	0:00:19	0:31:42
The Periodic Table of Elements	0:31:42	0:04:09	0:35:51
Try This! Pg. 54	0:35:51	0:00:09	0:36:00
The Key to Remember	0:36:00	0:02:00	0:38:00
Try This! Pg. 55	0:38:00	0:00:08	0:38:08
Narration Prompt Pg. 55	0:38:08	0:00:14	0:38:22
Bonding Basics	0:38:22	0:00:16	0:38:38
Noble Gentlemen	0:38:38	0:01:52	0:40:30
Reactive Reactions	0:40:30	0:01:18	0:41:48
Experiment Explained	0:41:48	0:00:58	0:42:46
Busy Bonds	0:42:46	0:00:47	0:43:33
Valence Bonding (1/2)	0:43:33	0:01:19	0:44:52
Try This! Pg. 57	0:44:52	0:00:08	0:45:00
Valence Bonding (2/2)	0:45:00	0:00:34	0:45:34
Ionic Bonding (1/2)	0:45:34	0:05:14	0:50:48
Try This! Pg. 59	0:50:48	0:00:08	0:50:56
Ionic Bonding (2/2)	0:50:56	0:00:42	0:51:38
Final Matters	0:51:38	0:00:27	0:52:05
What Do You Remember?	0:52:05	0:01:30	0:53:35

Lesson 4	Start Time	Length	End Time
Compound Chemistry	0:00:00	0:01:32	0:01:32
Crystallized Creations	0:01:32	0:02:03	0:03:35
Try This! Pg. 63	0:03:35	0:00:08	0:03:43
Common Crystals	0:03:43	0:01:56	0:05:39
Precious Gemstones	0:05:39	0:01:24	0:07:03
Diamonds	0:07:03	0:01:45	0:08:48
Pressure and Perseverance	0:08:48	0:01:06	0:09:54
Diamond Mines	0:09:54	0:01:00	0:10:54
The Four Cs	0:10:54	0:02:30	0:13:24
Narration Prompt Pg. 66	0:13:24	0:00:19	0:13:43
Putty, Plastics, and Pencil Erasers (1/3)	0:13:43	0:04:00	0:17:43
Try This! Pg. 68	0:17:43	0:00:08	0:17:51
Putty, Plastics, and Pencil Erasers (2/3)	0:17:51	0:01:12	0:19:03
Try This! Pg. 69	0:19:03	0:00:09	0:19:12
Putty, plastics, and Pencil Erasers (3/3)	0:19:12	0:00:46	0:19:58
Silly Surprise!	0:19:58	0:01:56	0:21:54
The Bad News	0:21:54	0:02:04	0:23:58
Try This! Pg. 70	0:23:58	0:00:08	0:24:06
The Good News	0:24:06	0:01:02	0:25:08
Plastic Codes (1/2)	0:25:08	0:01:46	0:26:54
Try This! Pg. 72	0:26:54	0:00:08	0:27:02
Plastic Codes (2/2)	0:27:02	0:00:30	0:27:32
Narration Prompt Pg. 72	0:27:32	0:00:22	0:27:54

Acidic Acid (1/2)	0:27:54	0:02:07	0:30:01
Try This! Pg. 73	0:30:01	0:00:08	0:30:09
Acidic Acid (2/2)	0:30:09	0:01:48	0:31:57
Narration Prompt Pg. 73	0:31:57	0:00:16	0:32:13
Strong and Weak	0:32:13	0:03:22	0:35:35
Basic Bases	0:35:35	0:01:56	0:37:31
Neutral News	0:37:31	0:01:04	0:38:35
Potential pH	0:38:35	0:02:24	0:40:59
Try This! Pg. 76	0:40:59	0:00:09	0:41:08
Narration Prompt Pg. 76	0:41:08	0:00:22	0:41:30
Chemical Chaos	0:41:30	0:00:58	0:42:28
Chemical or Physical Reactions (1/3)	0:42:28	0:01:57	0:44:25
Try This! Pg. 77 #1	0:44:25	0:00:08	0:44:33
Chemical or Physical Reactions (2/3)	0:44:33	0:00:44	0:45:17
Try This! Pg. 77 #2	0:45:17	0:00:09	0:45:26
Chemical or Physical Reactions (3/3)	0:45:26	0:00:46	0:46:12
Narration Prompt Pg. 78	0:46:12	0:00:15	0:46:27
Reactants Releasing and Retaining	0:46:27	0:04:58	0:51:25
Final Matters	0:51:25	0:00:28	0:51:53
What Do You Remember?	0:51:53	0:01:20	0:53:13

Lesson 5	Start Time	Length	End Time
Multitude of Mixtures	0:00:00	0:03:04	0:03:04
Heterogeneous Mixtures	0:03:04	0:01:10	0:04:14
Try This! Pg. 83	0:04:14	0:00:09	0:04:23
Suspensions and Emulsions (1/2)	0:04:23	0:02:08	0:06:31
Try This! Pg. 84	0:06:31	0:00:08	0:06:39
Suspensions and Emulsions (2/2)	0:06:39	0:01:14	0:07:53
Narration Prompt Pg. 84	0:07:53	0:00:12	0:08:05
Homogeneous Mixtures	0:08:05	0:00:58	0:09:03
Salute the Solute	0:09:03	0:01:40	0:10:43
Polar Bonds in Water	0:10:43	0:03:35	0:14:18
Soapy Solutions (1/2)	0:14:18	0:00:26	0:14:44
Try This! Pg. 87	0:14:44	0:00:08	0:14:52
Soapy Solutions (2/2)	0:14:52	0:01:22	0:16:14
Try This! Pg. 88	0:16:14	0:00:09	0:16:23
Narration Prompt Pg. 88	0:16:23	0:00:18	0:16:41
Alloys (1/2)	0:16:41	0:05:48	0:22:29
Try This! Pg. 90	0:22:29	0:00:08	0:22:37
Alloys (2/2)	0:22:37	0:00:38	0:23:15
Narration Prompt Pg. 90	0:23:15	0:00:14	0:23:29
Colloids (1/2)	0:23:29	0:03:27	0:26:56
Try This! Pg. 91	0:26:56	0:00:08	0:27:04
Colloids (2/2)	0:27:04	0:01:22	0:28:26
Try This! Pg. 92	0:28:26	0:00:08	0:28:34
Diluted Versus Concentrated	0:28:34	0:02:03	0:30:37
Separating Mixtures (1/2)	0:30:37	0:03:04	0:33:41

Try This! Pg. 93	0:33:41	0:00:08	0:33:49
Separating Mixtures (2/2)	0:33:49	0:00:16	0:34:05
Final Matters	0:34:05	0:00:22	0:34:27
What Do You Remember?	0:34:27	0:00:40	0:35:07

Lesson 6	Start Time	Length	End Time
Mechanics in Motion	0:00:00	0:01:12	0:01:12
Mechanical Mechanics	0:01:12	0:01:12	0:02:24
Always in Motion	0:02:24	0:02:21	0:04:45
Newton's First Law of Motion (1/3)	0:04:45	0:03:06	0:07:51
Try This! Pg. 99	0:07:51	0:00:08	0:07:59
Newton's First Law of Motion (2/3)	0:07:59	0:00:24	0:08:23
Try This! Pg. 100	0:08:23	0:00:09	0:08:32
Newton's First Law of Motion (3/3)	0:08:32	0:00:14	0:08:46
Inertia in Motion	0:08:46	0:04:54	0:13:40
Roller Coaster	0:13:40	0:02:18	0:15:58
Narration Prompt Pg. 102	0:15:58	0:00:22	0:16:20
Newton's Second Law of Motion (1/2)	0:16:20	0:03:45	0:20:05
Try This! Pg. 103	0:20:05	0:00:08	0:20:13
Newton's Second Law of Motion (2/2)	0:20:13	0:01:10	0:21:23
Narration Prompt Pg. 103	0:21:23	0:00:14	0:21:37
Newton's Third Law of Motion (1/2)	0:21:37	0:00:56	0:22:33
Try This! Pg. 104	0:22:33	0:00:08	0:22:41
Newton's Third Law of Motion (2/2)	0:22:41	0:03:07	0:25:48
Newton's Third Law in Space	0:25:48	0:02:14	0:28:02
Narration Prompt Pg. 106	0:28:02	0:00:22	0:28:24
Sir Isaac Newton	0:28:24	0:01:54	0:30:18
Final Matters	0:30:18	0:00:34	0:30:52
What Do You Remember?	0:30:52	0:00:56	0:31:48

Lesson 7	Start Time	Length	End Time
Dynamics of Motion	0:00:00	0:01:34	0:01:34
Feeling the Friction (1/3)	0:01:34	0:02:10	0:03:44
Try This! Pg. 110	0:03:44	0:00:09	0:03:53
Feeling the Friction (2/3)	0:03:53	0:02:12	0:06:05
Try This! Pg. 111	0:06:05	0:00:08	0:06:13
Feeling the Friction (3/3)	0:06:13	0:00:30	0:06:43
Increasing Friction	0:06:43	0:03:06	0:09:49
Narration Prompt Pg. 112	0:09:49	0:00:16	0:10:05
Adhesion	0:10:05	0:02:51	0:12:56
Try This! Pg. 113	0:12:56	0:00:08	0:13:04
Narration Prompt Pg. 113	0:13:04	0:00:14	0:13:18
Reducing Friction (1/2)	0:13:18	0:02:26	0:15:44
Try This! Pg. 114	0:15:44	0:00:08	0:15:52
Reducing Friction (2/2)	0:15:52	0:00:14	0:16:06
Narration Prompt Pg. 114	0:16:06	0:00:19	0:16:25
Air and Water Friction (1/2)	0:16:25	0:02:46	0:19:11

Try This! Pg. 115	0:19:11	0:00:08	0:19:19
Air and Water Friction (2/2)	0:19:19	0:01:30	0:20:49
Narration Prompt Pg. 116	0:20:49	0:00:14	0:21:03
Grasping Gravity	0:21:03	0:06:42	0:27:45
Distance Dynamics	0:27:45	0:03:31	0:31:16
Narration Prompt Pg. 119	0:31:16	0:00:16	0:31:32
Accelerating Action (1/2)	0:31:32	0:00:22	0:31:54
Try This! Pg. 119	0:31:54	0:00:09	0:32:03
Accelerating Action (2/2)	0:32:03	0:02:32	0:34:35
Free Falling	0:34:35	0:02:06	0:36:41
Diving from the Sky	0:36:41	0:02:04	0:38:45
Narration Prompt Pg. 121	0:38:45	0:00:18	0:39:03
Centripetal Force (1/3)	0:39:03	0:00:29	0:39:32
Try This! Pg. 121	0:39:32	0:00:08	0:39:40
Centripetal Force (2/3)	0:39:40	0:01:50	0:41:30
Try This! Pg. 122	0:41:30	0:00:08	0:41:38
Centripetal Force (3/3)	0:41:38	0:00:35	0:42:13
David and Goliath	0:42:13	0:02:14	0:44:27
Final Matters	0:44:27	0:00:28	0:44:55
What Do You Remember?	0:44:55	0:01:28	0:46:23

Lesson 8	Start Time	Length	End Time
Work in the World	0:00:00	0:02:44	0:02:44
Finding Energy	0:02:44	0:01:09	0:03:53
Kinds of Energy	0:03:53	0:00:28	0:04:21
Connecting Kinetics	0:04:21	0:01:12	0:05:33
Potential Power	0:05:33	0:03:14	0:08:47
Try This! Pg. 128	0:08:47	0:00:09	0:08:56
Conserving Energy	0:08:56	0:01:52	0:10:48
Narration Prompt Pg. 129	0:10:48	0:00:16	0:11:04
Creation Confirmation (1/4)	0:11:04	0:01:02	0:12:06
Try This! Pg. 129	0:12:06	0:00:09	0:12:15
Creation Confirmation (2/4)	0:12:15	0:00:20	0:12:35
Try This! Pg. 130 #1	0:12:35	0:00:08	0:12:43
Creation Confirmation (3/4)	0:12:43	0:00:18	0:13:01
Try This! Pg. 130 #2	0:13:01	0:00:09	0:13:10
Creation Confirmation (4/4)	0:13:10	0:01:02	0:14:12
Narration Prompt Pg. 131	0:14:12	0:00:22	0:14:34
Forms of Energy	0:14:34	0:01:07	0:15:41
Chemical Energy	0:15:41	0:02:30	0:18:11
Energy over Time	0:18:11	0:03:48	0:21:59
Fossil Fuels	0:21:59	0:01:44	0:23:43
Oceans of Oil (1/2)	0:23:43	0:03:52	0:27:35
Try This! Pg. 134	0:27:35	0:00:08	0:27:43
Oceans of Oil (2/2)	0:27:43	0:00:32	0:28:15
Narration Prompt Pg. 135	0:28:15	0:00:14	0:28:29
Countless Coal	0:28:29	0:01:41	0:30:10

Nature's Natural Gas	0:30:10	0:02:24	0:32:34
Creation Confirmation	0:32:34	0:01:36	0:34:10
Narration Prompt Pg. 136	0:34:10	0:00:19	0:34:29
Nuclear Energy	0:34:29	0:06:30	0:40:59
Narration Prompt Pg. 138	0:40:59	0:00:18	0:41:17
Renewable Energy	0:41:17	0:04:23	0:45:40
Hydropower	0:45:40	0:02:54	0:48:34
Wind Energy	0:48:34	0:04:42	0:53:16
Narration Prompt Pg. 141	0:53:16	0:00:20	0:53:36
Solar Energy (1/2)	0:53:36	0:04:52	0:58:28
Try This! Pg. 142	0:58:28	0:00:09	0:58:37
Narration Prompt Pg. 142	0:58:37	0:00:14	0:58:51
Solar Energy (2/2)	0:58:51	0:00:18	0:59:09
Biofuels	0:59:09	0:00:48	0:59:57
Geothermal Energy	0:59:57	0:01:49	1:01:46
Hydrogen	1:01:46	0:01:12	1:02:58
Final Matters	1:02:58	0:00:30	1:03:28
What Do You Remember?	1:03:28	0:00:54	1:04:22

Lesson 9	Start Time	Length	End Time
Sound of Energy	0:00:00	0:01:40	0:01:40
Sound Essentials (1/5)	0:01:40	0:01:06	0:02:46
Try This! Pg. 147	0:02:46	0:00:09	0:02:55
Sound Essentials (2/5)	0:02:55	0:03:54	0:06:49
Sound Essentials (3/5)	0:06:49	0:00:34	0:07:23
Try This! Pg. 148	0:07:23	0:00:08	0:07:31
Try This! Pg. 149 #1	0:07:31	0:00:08	0:07:39
Sound Essentials (4/5)	0:07:39	0:00:21	0:08:00
Try This! Pg. 149 #2	0:08:00	0:00:08	0:08:08
Sound Essentials (5/5)	0:08:08	0:00:26	0:08:34
Narration Prompt Pg. 149	0:08:34	0:00:20	0:08:54
3-D Dynamics	0:08:54	0:01:44	0:10:38
Directing Waves	0:10:38	0:00:40	0:11:18
Try This! Pg. 150	0:11:18	0:00:09	0:11:27
Echoes	0:11:27	0:00:38	0:12:05
Conductor of Sound (1/2)	0:12:05	0:02:44	0:14:49
Try This! Pg. 152	0:14:49	0:00:08	0:14:57
Conductor of Sound (2/2)	0:14:57	0:01:50	0:16:47
Narration Prompt Pg. 152	0:16:47	0:00:17	0:17:04
Speedy Sound	0:17:04	0:03:20	0:20:24
Measuring Mach	0:20:24	0:03:22	0:23:46
Bullwhip Boom	0:23:46	0:00:34	0:24:20
Narration Prompt Pg. 155	0:24:20	0:00:14	0:24:34
Loud Waves	0:24:34	0:01:56	0:26:30
Frequent Frequency	0:26:30	0:01:46	0:28:16
Measuring Frequency	0:28:16	0:00:31	0:28:47
Low Frequency	0:28:47	0:01:42	0:30:29

High Frequency (1/2)	0:30:29	0:02:46	0:33:15
Try This! Pg. 158	0:33:15	0:00:08	0:33:23
Try This! Pg. 159	0:33:23	0:00:09	0:33:32
High Frequency (2/2)	0:33:32	0:00:56	0:34:28
Pitch	0:34:28	0:00:20	0:34:48
Sound Quality	0:34:48	0:01:38	0:36:26
Narration Prompt Pg. 159	0:36:26	0:00:21	0:36:47
Technology and Sound	0:36:47	0:00:16	0:37:03
Sonar	0:37:03	0:02:10	0:39:13
Ultrasound	0:39:13	0:00:58	0:40:11
Bioacoustics	0:40:11	0:00:34	0:40:45
If a Tree Falls	0:40:45	0:01:15	0:42:00
Sounds in Space	0:42:00	0:01:18	0:43:18
Final Matters	0:43:18	0:00:32	0:43:50
What Do You Remember?	0:43:50	0:01:04	0:44:54

Lesson 10	Start Time	Length	End Time
Light of the World	0:00:00	0:01:52	0:01:52
Let There Be Light!	0:01:52	0:01:14	0:03:06
Fire in the Sky	0:03:06	0:00:51	0:03:57
Hydrogen and Helium Explosion	0:03:57	0:02:10	0:06:07
Creation Confirmation	0:06:07	0:00:42	0:06:49
Narration Prompt Pg. 165	0:06:49	0:00:14	0:07:03
Radiating Race	0:07:03	0:03:29	0:10:32
Sources of Light	0:10:32	0:00:58	0:11:30
Electrifying Light	0:11:30	0:04:36	0:16:06
Narration Prompt Pg. 167	0:16:06	0:00:14	0:16:20
Just Passing Through	0:16:20	0:01:47	0:18:07
Shadows	0:18:07	0:01:06	0:19:13
Beams and Waves	0:19:13	0:02:44	0:21:57
Spectrum of Colors	0:21:57	0:02:28	0:24:25
Try This! Pg. 170 #1	0:24:25	0:00:09	0:24:34
Colorful White	0:24:34	0:01:20	0:25:54
Try This! Pg. 170 #2	0:25:54	0:00:08	0:26:02
Wavelength	0:26:02	0:01:06	0:27:08
Very Violet	0:27:08	0:02:12	0:29:20
You're Getting Warmer	0:29:20	0:01:21	0:30:41
Animal Vision	0:30:41	0:02:29	0:33:10
Narration Prompt Pg. 172	0:33:10	0:00:14	0:33:24
Eye See	0:33:24	0:02:51	0:36:15
Blue Skies	0:36:15	0:02:23	0:38:38
Try This! Pg. 174 #1	0:38:38	0:00:08	0:38:46
Primary Colors (1/3)	0:38:46	0:00:30	0:39:16
Try This! Pg. 174 #2	0:39:16	0:00:08	0:39:24
Primary Colors (2/3)	0:39:24	0:00:23	0:39:47
Try This! Pg. 175	0:39:47	0:00:08	0:39:55
Primary Colors (3/3)	0:39:55	0:02:26	0:42:21

Beams of Monochromatic Light	0:42:21	0:02:12	0:44:33
Try This! Pg. 176	0:44:33	0:00:08	0:44:41
Narration Prompt Pg. 176	0:44:41	0:00:14	0:44:55
Bouncing Light (1/5)	0:44:55	0:00:26	0:45:21
Try This! Pg. 177 #1	0:45:21	0:00:09	0:45:30
Bouncing Light (2/5)	0:45:30	0:00:44	0:46:14
Try This! Pg. 177 #2	0:46:14	0:00:08	0:46:22
Bouncing Light (3/5)	0:46:22	0:01:45	0:48:07
Try This! Pg. 178 #1	0:48:07	0:00:08	0:48:15
Bouncing Light (4/5)	0:48:15	0:01:19	0:49:34
Try This! Pg. 178 #2	0:49:34	0:00:08	0:49:42
Bouncing Light (5/5)	0:49:42	0:00:30	0:50:12
Try This! Pg. 179 #1	0:50:12	0:00:09	0:50:21
Narration Prompt Pg. 179	0:50:21	0:00:16	0:50:37
Bending Light (1/3)	0:50:37	0:00:46	0:51:23
Try This! Pg. 179 #2	0:51:23	0:00:08	0:51:31
Bending Light (2/3)	0:51:31	0:00:52	0:52:23
Try This! Pg. 180	0:52:23	0:00:09	0:52:32
Bending Light (3/3)	0:52:32	0:02:28	0:55:00
Final Matters	0:55:00	0:00:26	0:55:26
What Do You Remember?	0:55:26	0:00:46	0:56:12

Lesson 11	Start Time	Length	End Time
Thermal Energy	0:00:00	0:01:24	0:01:24
Thermodynamics	0:01:24	0:01:28	0:02:52
The Zeroth Law of Thermodynamics	0:02:52	0:01:08	0:04:00
The First Law of Thermodynamics	0:04:00	0:01:36	0:05:36
Creation Confirmation	0:05:36	0:02:15	0:07:51
Narration Prompt Pg. 185	0:07:51	0:00:18	0:08:09
The Second Law of Thermodynamics	0:08:09	0:03:48	0:11:57
Narration Prompt Pg. 186	0:11:57	0:00:16	0:12:13
The Third Law of Thermodynamics	0:12:13	0:03:51	0:16:04
Narration Prompt Pg. 187	0:16:04	0:00:18	0:16:22
The Heat of the Moment	0:16:22	0:03:18	0:19:40
Source or Sink	0:19:40	0:00:54	0:20:34
Narration Prompt Pg. 188	0:20:34	0:00:16	0:20:50
Traveling Heat	0:20:50	0:00:34	0:21:24
Radiation	0:21:24	0:01:18	0:22:42
Try This! Pg. 189	0:22:42	0:00:08	0:22:50
Convection (1/3)	0:22:50	0:03:41	0:26:31
Try This! Pg. 190	0:26:31	0:00:08	0:26:39
Convection (2/3)	0:26:39	0:00:24	0:27:03
Try This! Pg. 191 #1	0:27:03	0:00:08	0:27:11
Convection (3/3)	0:27:11	0:00:39	0:27:50
Conduction (1/2)	0:27:50	0:00:48	0:28:38
Try This! Pg. 191 #2	0:28:38	0:00:08	0:28:46
Conduction (2/2)	0:28:46	0:01:36	0:30:22

Heating Our World	0:30:22	0:02:30	0:32:52
Narration Prompt Pg. 193	0:32:52	0:00:22	0:33:14
Insulators	0:33:14	0:01:14	0:34:28
Try This! Pg. 193	0:34:28	0:00:09	0:34:37
Set on Fire	0:34:37	0:02:30	0:37:07
Try This! Pg. 194 #1	0:37:07	0:00:08	0:37:15
Combustion (1/3)	0:37:15	0:00:42	0:37:57
Try This! Pg. 194 #2	0:37:57	0:00:09	0:38:06
Combustion (2/3)	0:38:06	0:00:28	0:38:34
Try This! Pg. 195	0:38:34	0:00:08	0:38:42
Combustion (3/3)	0:38:42	0:00:22	0:39:04
Triangle Truths	0:39:04	0:01:53	0:40:57
Narration Prompt Pg. 195	0:40:57	0:00:16	0:41:13
Measuring Heat	0:41:13	0:02:18	0:43:31
Fahrenheit	0:43:31	0:00:44	0:44:15
Celsius	0:44:15	0:00:35	0:44:50
Kelvin	0:44:50	0:01:22	0:46:12
Thermometer (1/2)	0:46:12	0:01:12	0:47:24
Try This! Pg. 197	0:47:24	0:00:08	0:47:32
Thermometer (2/2)	0:47:32	0:00:19	0:47:51
Narration Prompt Pg. 197	0:47:51	0:00:16	0:48:07
Thermal Expansion	0:48:07	0:02:10	0:50:17
Ways of Wonderful Water (1/2)	0:50:17	0:01:08	0:51:25
Try This! Pg. 198	0:51:25	0:00:09	0:51:34
Try This! Pg. 199	0:51:34	0:00:12	0:51:46
Ways of Wonderful Water (2/2)	0:51:46	0:01:12	0:52:58
Narration Prompt Pg. 199	0:52:58	0:00:16	0:53:14
Final Matters	0:53:14	0:00:22	0:53:36
What Do You Remember?	0:53:36	0:01:28	0:55:04

Lesson 12	Start Time	Length	End Time
Electrifying Our World	0:00:00	0:00:52	0:00:52
All Charged Up	0:00:52	0:01:26	0:02:18
Attraction	0:02:18	0:00:48	0:03:06
Electron Electricity (1/2)	0:03:06	0:01:28	0:04:34
Try This! Pg. 202	0:04:34	0:00:09	0:04:43
Electron Electricity (2/2)	0:04:43	0:02:40	0:07:23
Static Electricity (1/3)	0:07:23	0:01:34	0:08:57
Try This! Pg. 204 #1	0:08:57	0:00:08	0:09:05
Static Electricity (2/3)	0:09:05	0:01:30	0:10:35
Try This! Pg. 204 #2	0:10:35	0:00:14	0:10:49
Static Electricity (3/3)	0:10:49	0:02:00	0:12:49
Narration Prompt Pg. 205	0:12:49	0:00:18	0:13:07
Current Events	0:13:07	0:01:42	0:14:49
It's Great to Insulate	0:14:49	0:02:12	0:17:01
Electrical Ions	0:17:01	0:01:44	0:18:45
Circling Power	0:18:45	0:00:58	0:19:43

Lines of Power	0:19:43	0:01:12	0:20:55
Electrical Grid	0:20:55	0:01:04	0:21:59
Planting Power (1/2)	0:21:59	0:03:38	0:25:37
Try This! Pg. 209	0:25:37	0:00:09	0:25:46
Planting Power (2/2)	0:25:46	0:04:30	0:30:16
Generators	0:30:16	0:00:54	0:31:10
Narration Prompt Pg. 211	0:31:10	0:00:16	0:31:26
Loading the Circuit	0:31:26	0:00:58	0:32:24
Battery Power (1/2)	0:32:24	0:02:42	0:35:06
Try This! Pg. 212	0:35:06	0:00:09	0:35:15
Battery Power (2/2)	0:35:15	0:01:08	0:36:23
Current Flowing	0:36:23	0:01:12	0:37:35
Circuit Central (1/2)	0:37:35	0:00:16	0:37:51
Try This! Pg. 213	0:37:51	0:00:08	0:37:59
Circuit Central (2/2)	0:37:59	0:00:18	0:38:17
Try This! Pg. 214 #1	0:38:17	0:00:09	0:38:26
Try This! Pg. 214 #2	0:38:26	0:00:16	0:38:42
Narration Prompt Pg. 214	0:38:42	0:00:20	0:39:02
Switching Things Around (1/2)	0:39:02	0:01:26	0:40:28
Try This! Pg. 215 #1	0:40:28	0:00:08	0:40:36
Try This! Pg. 215 #2	0:40:36	0:00:16	0:40:52
Switching Things Around (2/2)	0:40:52	0:00:42	0:41:34
Narration Prompt Pg. 215	0:41:34	0:00:16	0:41:50
Series Circuits	0:41:50	0:01:40	0:43:30
Parallel Circuits (1/3)	0:43:30	0:00:28	0:43:58
Try This! Pg. 216	0:43:58	0:00:09	0:44:07
Parallel Circuits (2/3)	0:44:07	0:01:24	0:45:31
Narration Prompt Pg. 216	0:45:31	0:00:12	0:45:43
Parallel Circuits (3/3)	0:45:43	0:00:16	0:45:59
Circuit Symbols	0:45:59	0:01:26	0:47:25
Final Matters	0:47:25	0:00:32	0:47:57
What Do You Remember?	0:47:57	0:01:10	0:49:07

Lesson 13	Start Time	Length	End Time
Mysterious Magnetism	0:00:00	0:01:24	0:01:24
Magnetic History	0:01:24	0:01:20	0:02:44
Magnetite	0:02:44	0:01:22	0:04:06
Magnets Everywhere	0:04:06	0:02:08	0:06:14
Narration Prompt Pg. 222	0:06:14	0:00:14	0:06:28
North and South (1/4)	0:06:28	0:00:42	0:07:10
Try This! Pg. 222	0:07:10	0:00:08	0:07:18
North and South (2/4)	0:07:18	0:01:20	0:08:38
Try This! Pg. 223 #1	0:08:38	0:00:08	0:08:46
North and South (3/4)	0:08:46	0:00:54	0:09:40
Try This! Pg. 223 #2	0:09:40	0:00:09	0:09:49
North and South (4/4)	0:09:49	0:00:28	0:10:17
My Magnetic Domain	0:10:17	0:01:22	0:11:39

Narration Prompt Pg. 224	0:11:39	0:00:16	0:11:55
Magnetic Materials (1/2)	0:11:55	0:00:40	0:12:35
Try This! Pg. 224	0:12:35	0:00:08	0:12:43
Magnetic Materials (2/2)	0:12:43	0:00:18	0:13:01
Magnetic Atoms (1/3)	0:13:01	0:03:20	0:16:21
Try This! Pg. 226	0:16:21	0:00:09	0:16:30
Magnetic Atoms (2/3)	0:16:30	0:02:02	0:18:32
Try This! Pg. 227 #1	0:18:32	0:00:08	0:18:40
Magnetic Atoms (3/3)	0:18:40	0:00:36	0:19:16
Narration Prompt Pg. 227	0:19:16	0:00:18	0:19:34
Compass Points (1/2)	0:19:34	0:01:08	0:20:42
Try This! Pg. 227 #2	0:20:42	0:00:08	0:20:50
Compass Points (2/2)	0:20:50	0:00:30	0:21:20
Northward Facing	0:21:20	0:03:42	0:25:02
Narration Prompt Pg. 229	0:25:02	0:00:16	0:25:18
Shielding Magnet	0:25:18	0:02:04	0:27:22
Upside-Down Poles	0:27:22	0:01:02	0:28:24
Pole Jumping	0:28:24	0:00:56	0:29:20
Off-Center Poles	0:29:20	0:00:52	0:30:12
Iron Earth	0:30:12	0:00:38	0:30:50
Electrifying Magnet (1/3)	0:30:50	0:01:38	0:32:28
Try This! Pg. 231	0:32:28	0:00:09	0:32:37
Electrifying Magnet (2/3)	0:32:37	0:01:30	0:34:07
Try This! Pg. 232	0:34:07	0:00:08	0:34:15
Electrifying Magnet (3/3)	0:34:15	0:01:20	0:35:35
Narration Prompt Pg. 232	0:35:35	0:00:16	0:35:51
Motor Moments (1/2)	0:35:51	0:01:40	0:37:31
Try This! Pg. 233	0:37:31	0:00:09	0:37:40
Motor Moments (2/2)	0:37:40	0:01:18	0:38:58
Final Matters	0:38:58	0:00:38	0:39:36
What Do You Remember?	0:39:36	0:00:52	0:40:28

Lesson 14	Start Time	Length	End Time
Simple Machines	0:00:00	0:03:48	0:03:48
Archimedes	0:03:48	0:03:40	0:07:28
Narration Prompt Pg. 238	0:07:28	0:00:16	0:07:44
Six Simple Machines	0:07:44	0:00:50	0:08:34
Inclined Planes (1/2)	0:08:34	0:04:04	0:12:38
Try This! Pg. 240	0:12:38	0:00:08	0:12:46
Inclined Planes (2/2)	0:12:46	0:01:06	0:13:52
Narration Prompt Pg. 241	0:13:52	0:00:18	0:14:10
Twisting Planes (1/3)	0:14:10	0:00:18	0:14:28
Try This! Pg. 241	0:14:28	0:00:08	0:14:36
Twisting Planes (2/3)	0:14:36	0:02:06	0:16:42
Try This! Pg. 242	0:16:42	0:00:09	0:16:51
Twisting Planes (3/3)	0:16:51	0:00:52	0:17:43
Narration Prompt Pg. 242	0:17:43	0:00:12	0:17:55

Wedging In	0:17:55	0:01:40	0:19:35
Levers (1/2)	0:19:35	0:00:14	0:19:49
Try This! Pg. 243	0:19:49	0:00:08	0:19:57
Levers (2/2)	0:19:57	0:01:20	0:21:17
First-Class Levers (1/3)	0:21:17	0:01:24	0:22:41
Try This! Pg. 244	0:22:41	0:00:08	0:22:49
First-Class Levers (2/3)	0:22:49	0:00:56	0:23:45
Try This! Pg. 245	0:23:45	0:00:08	0:23:53
First-Class Levers (3/3)	0:23:53	0:01:51	0:25:44
Narration Prompt Pg. 245	0:25:44	0:00:16	0:26:00
Second-Class Levers (1/2)	0:26:00	0:00:12	0:26:12
Try This! Pg. 246	0:26:12	0:00:08	0:26:20
Second-Class Levers (2/2)	0:26:20	0:01:48	0:28:08
Third-Class Levers	0:28:08	0:01:10	0:29:18
Narration Prompt Pg. 247	0:29:18	0:00:14	0:29:32
Pulling Pulleys (1/2)	0:29:32	0:01:52	0:31:24
Try This! Pg. 248	0:31:24	0:00:09	0:31:33
Pulling Pulleys (2/2)	0:31:33	0:02:12	0:33:45
Narration Prompt Pg. 249	0:33:45	0:00:18	0:34:03
Wheels and Axles (1/2)	0:34:03	0:01:30	0:35:33
Try This! Pg. 250	0:35:33	0:00:08	0:35:41
Wheels and Axles (2/2)	0:35:41	0:00:14	0:35:55
Belting Belts (1/2)	0:35:55	0:01:50	0:37:45
Try This! Pg. 251 #1	0:37:45	0:00:08	0:37:53
Belting Belts (2/2)	0:37:53	0:00:10	0:38:03
Narration Prompt Pg. 251	0:38:03	0:00:14	0:38:17
Gears (1/2)	0:38:17	0:01:12	0:39:29
Try This! Pg. 251 #2	0:39:29	0:00:09	0:39:38
Gears (2/2)	0:39:38	0:01:20	0:40:58
Final Matters	0:40:58	0:02:22	0:43:20
What Do You Remember?	0:43:20	0:00:56	0:44:16