

**GLENCOE CORRELATION**  
**THE NATURE OF MATTER (K)**  
**CHEMISTRY (L)**  
**MOTION, FORCES, AND ENERGY (M)**  
**ELECTRICITY AND MAGNETISM (N)**  
**WAVES, SOUND, AND LIGHT (O)**  
**LOUISIANA**  
**New Orleans Public Schools**  
**Physical Science Work Plan Grade 7**

SCIENCE BENCHMARKS GRADES 5-8		PAGE REFERENCES	
FIRST QUARTER PACING GUIDE			
SI-M-A8	utilizing safety procedures during scientific investigations.	(K)	<i>Reference Handbook A 159</i> <i>Activity 30, 117</i> QD 110
		(L)	<i>Activity 86</i> <i>Design Your Own Experiment 54</i> QD 39
		(N)	<i>Activity 56</i> C 26
		(O)	<i>Design Your Own Experiment 86</i>
SI-M-A3	using mathematics and appropriate tools and techniques to gather, analyze, and interpret data;	(K)	<i>Design Your Own Experiment 62-63</i> <i>Activity 77</i>
		(L)	<i>Activity 116-117</i>
		(M)	<i>Design Your Own Experiment 116-117</i> ACT 45
		(N)	CC 39 E 39
		(O)	<i>Design Your Own Experiment 26-27</i> CC 98 E 104
SI-M-A1	identifying questions that can be used to design a scientific investigation;	(K)	<i>Design Your Own Experiment 88-89</i>
		(M)	<i>Design Your Own Experiment 116-117, 174-175</i> <i>Use the Internet 88-89</i> SJ 4
		(N)	A 7
		(O)	<i>Design Your Own Experiment 26-27, 86-87</i>
SI-M-B1	recognizing that different kinds of questions guide different kinds of scientific investigations;	(K)	<i>Science Skill Handbook 139</i>
		(M)	<i>The Nature of Science 4</i> <i>You Do It 5</i> SJ 4
SI-M-B2	communicating that current scientific knowledge guides scientific investigations;	(K)	9-17 R 17 MM 9
		(N)	<i>The Nature of Science 2-5</i> CC 4

SCIENCE BENCHMARKS GRADES 5-8		PAGE REFERENCES	
SI-M-B6	communicating that scientific investigations can result in new ideas, new methods or procedures, and new technologies;	(K)	<i>The Nature of Science</i> 2-3 <i>You Do It</i> 5 R 17 AE 65 CC 108
		(L)	E 22
		(M)	<i>Life Science Integration</i> 37
		(N)	<i>The Nature of Science</i> 3-5
		(O)	<i>The Nature of Science</i> 2-3 <i>You Do It</i> 5
SI-M-B7	understanding that scientific development/technology is driven by societal needs and funding.	(K)	<i>The Nature of Science</i> 2-5
		(L)	<i>Science and Society</i> 118-119
		(M)	<i>Science and Society</i> 118-119 E 134
		(N)	<i>Science and Society</i> 86-87 HS 31
		(O)	<i>Science and History</i> 88-89 <i>Oops! Accidents in Science</i> 120-121 AE 121 E 24
SI-M-A2	designing and conducting a scientific investigation;	(K)	<i>Design Your Own Experiment</i> 88-89
		(L)	<i>Design Your Own Experiment</i> 54-55 R 52
		(M)	<i>Design Your Own Experiment</i> 174-175 ACT 4, 59 INV 177
		(N)	ACT 12
		(O)	<i>Design Your Own Experiment</i> 26-27, 86-87
SI-M-A3	using mathematics and appropriate tools and techniques to gather, analyze, and interpret data;	(K)	<i>Design Your Own Experiment</i> 62-63 <i>Activity</i> 77
		(L)	<i>Activity</i> 116-117
		(M)	<i>Design Your Own Experiment</i> 116-117 ACT 45
		(N)	CC 39 E 39
		(O)	<i>Design Your Own Experiment</i> 26-27 CC 98 E 104
SI-M-B3	understanding that mathematics, technology, and scientific techniques used in an experiment can limit or enhance the accuracy of scientific knowledge;	(K)	CD 10
		(M)	<i>The Nature of Science</i> 5 <i>Science Skill Handbook</i> 200, 203 CC 4
		(N)	EA 29 SJ 4

SCIENCE BENCHMARKS GRADES 5-8		PAGE REFERENCES
SI-M-A3	using mathematics and appropriate tools and techniques to gather, analyze, and interpret data;	(K) <i>Design Your Own Experiment</i> 62-63 Activity 77 (L) <i>Activity</i> 116-117 (M) <i>Design Your Own Experiment</i> 116-117 ACT 45 (N) CC 39 E 39 (O) <i>Design Your Own Experiment</i> 26-27 CC 98 E 104
SI-M-B3	understanding that mathematics, technology, and scientific techniques used in an experiment can limit or enhance the accuracy of scientific knowledge;	(K) CD 10 (M) <i>The Nature of Science</i> 5 <i>Science Skill Handbook</i> 200, 203 CC 4 (N) EA 29 SJ 4
SI-M-A3	using mathematics and appropriate tools and techniques to gather, analyze, and interpret data;	(K) <i>Design Your Own Experiment</i> 62-63 Activity 77 (L) <i>Activity</i> 116-117 (M) <i>Design Your Own Experiment</i> 116-117 ACT 45 (N) CC 39 E 39 (O) <i>Design Your Own Experiment</i> 26-27 CC 98 E 104
SI-M-B3	understanding that mathematics, technology, and scientific techniques used in an experiment can limit or enhance the accuracy of scientific knowledge;	(K) CD 10 (M) <i>The Nature of Science</i> 5 <i>Science Skill Handbook</i> 200, 203 CC 4 (N) EA 29 SJ 4
SI-M-A4	developing descriptions, explanations, and graphs using data;	(K) <i>Activity</i> 77 (L) <i>Activity</i> 53 <i>Design Your Own Experiment</i> 54-55 CYD 55 (M) <i>Activity</i> 103 <i>Design Your Own Experiment</i> 174-175 A 130 C 18 INV 177 (N) A 27

<b>SCIENCE BENCHMARKS GRADES 5-8</b>		<b>PAGE REFERENCES</b>	
SI-M-A5	developing models and predictions using the relationships between data and explanations;	(K)	<i>Section Assessment</i> 111 MM 9
		(L)	<i>Design Your Own Experiment</i> 26-27 <i>Skill Builder Activities</i> 102
		(M)	<i>Skill Builder Activities</i> 24 MM 164
		(N)	<i>MiniLAB</i> 46 A 26
		(O)	MM 98 A 87
SI-M-B6	communicating that scientific investigations can result in new ideas, new methods or procedures, and new technologies;	(K)	<i>The Nature of Science</i> 2-3 <i>You Do It</i> 5 R 17 AE 65 CC 108
		(L)	E 22
		(M)	<i>Life Science Integration</i> 37
		(N)	<i>The Nature of Science</i> 3-5
		(O)	<i>The Nature of Science</i> 2-3 <i>You Do It</i> 5
SI-M-A6	comparing alternative explanations and predictions;	(K)	<i>Science and History</i> 32-33 <i>Communicating Your Data</i> 77 E 14
		(M)	<i>Design Your Own Experiment</i> 26-27 CYD 149 ACT 166
		(N)	<i>Explore Activity</i> 65 CD 98 QD 68
		(O)	<i>Life Science Integration</i> 76
SI-M-B4	using data and logical arguments to propose, modify, or elaborate on principles and models;	(K)	<i>Explore Activity</i> 7 <i>Problem-Solving Activity</i> 103 <i>Design Your Own Experiment</i> 62-63
		(L)	MM 4
		(M)	<i>Design Your Own Experiment</i> 116-117 <i>Activity</i> 103 MM 164
		(N)	A 27 MM 21
		(O)	ACT 121
SI-M-A7	communicating scientific procedures, information, and explanations;	(K)	<i>Design Your Own Experiment</i> 63, 89 C 17 A 119
		(M)	<i>Design Your Own Experiment</i> 175 A 103, 164
		(N)	<i>MiniLAB</i> 22
		(O)	<i>Skill Builder Activities</i> 117 ACT 4

SCIENCE BENCHMARKS GRADES 5-8		PAGE REFERENCES
SI-M-A8	utilizing safety procedures during scientific investigations.	(K) <i>Reference Handbook A 159</i> <i>Activity 30, 117</i> QD 110 (L) <i>Activity 86</i> <i>Design Your Own Experiment 54</i> QD 39 (N) <i>Activity 56</i> C 26 (O) <i>Design Your Own Experiment 86</i>
SI-M-B5	understanding that scientific knowledge is enhanced through peer review, alternative explanations, and constructive criticism;	(K) 9-17, 98-99 R 17 VL 75 (L) <i>Communicating Your Data 55</i> (M) <i>The Nature of Science 4</i> E 5 CYD 55 (N) CYD 72 (O) <i>Communicating Your Data 27, 55</i>
PS-M-A1	investigating, measuring, and communicating the properties of different substances which are independent of the amount of the substance;	(K) 72-75 <i>Activity 53, 77</i> <i>Math Skills Activity 59</i> A 71 LD 74 VL 75 (L) IS 11 (M) 78 (N) ACT 4
PS-M-A1	investigating, measuring, and communicating the properties of different substances which are independent of the amount of the substance;	(K) 72-75 <i>Activity 53, 77</i> <i>Math Skills Activity 59</i> A 71 LD 74 VL 75 (L) IS 11 (M) 78 (N) ACT 4
PS-M-A3	grouping substances according to similar properties and/or behaviors;	(K) 22-23, 105-110 <i>MiniLAB 74</i> SJ 101 C 23 (L) 78, 81 R 85 (N) 12 ACT 12

<b>SCIENCE BENCHMARKS GRADES 5-8</b>		<b>PAGE REFERENCES</b>	
PS-M-A2	understanding that all matter is made up of particles called atoms and that atoms of different elements are different;	(K)	8-9, 18 <i>Chapter Study Guide 34</i> A 15 UA 9 E 100
		(L)	8-11 <i>Design Your Own Experiment 26-27</i>
PS-M-A4	understanding that atoms and molecules are perpetually in motion;	(K)	45-46 <i>Chapter Study Guide 66</i>
		(M)	158-159
		(O)	74
PS-M-A5	investigating the relationships among temperature, molecular motion, phase changes, and physical properties of matter;	(K)	40-44, 45-52 QD 44 ACT 48 IM 47
		(L)	49
		(M)	158-159, 163
<b>SECOND QUARTER PACING GUIDE</b>			
PS-M-A6	investigating chemical reactions between different substances to discover the new substances have new physical and chemical properties;	(K)	80, 85 ACT 65 QD 83
		(L)	36 <i>National Geographic 37</i> <i>Explore Activity 35</i> <i>MiniLAB 38</i> QD 39
PS-M-A6	investigating chemical reactions between different substances to discover the new substances have new physical and chemical properties;	(K)	80, 85 ACT 65 QD 83
		(L)	36 <i>National Geographic 37</i> <i>Explore Activity 35</i> <i>MiniLAB 38</i> QD 39
PS-M-C7	understanding that energy is involved in chemical reactions;	(K)	82 SJ 82
		(L)	42-45, 47, 113 <i>Design Your Own Experiment 54-55</i> SJ 44 E 47
		(M)	SJ 129 E 129
PS-M-A8	discovering and recording how factors such as temperature influence chemical reactions;	(L)	48-52 <i>Section Assessment 52</i> QD 49 ACT 49 D 48 LD 51 C 52

SCIENCE BENCHMARKS GRADES 5-8	PAGE REFERENCES
PS-M-A7 understanding that during a chemical reaction in a closed system, the mass of the products is equal to that of the reactants;	(K) 87 (L) 40-41 <i>Math Skills Activity 42</i> <i>Section Assessment 45</i> <i>Chapter Assessment 60</i> VL 40 IS 41
PS-M-A9 identifying elements and compounds found in common foods, clothing, household materials, and automobiles.	(K) 105-111, 112-116 ACT 19 E 110 (L) 96-99, 103-106, 108-115 E 98 C 106 QD 110
PS-M-B1 describing and graphing the motions of objects;	(M) 8-13, 14-18 <i>Explore Activity 7</i> <i>Skill Builder Activities 13, 18</i> A 13, 18 ACT 9 E 12 C 18
PS-M-B2 recognizing different forces and describing their effects (gravity, electrical, magnetic);	(M) 43, 74-77 ACT 77 (N) 11, 39 <i>Explore Activity 7, 37</i> D 41 E 11 CC 39
PS-M-B4 describing how forces acting on an object will reinforce or cancel one another, depending upon their direction and magnitude;	(M) 37, 44-45, 47 VL 44
PS-M-B1 describing and graphing the motions of objects;	(M) 8-13, 14-18 <i>Explore Activity 7</i> <i>Skill Builder Activities 13, 18</i> A 13, 18 ACT 9 E 12 C 18
PS-M-B2 recognizing different forces and describing their effects (gravity, electrical, magnetic);	(M) 43, 74-77 ACT 77 (N) 11, 39 <i>Explore Activity 7, 37</i> D 41 E 11 CC 39
PS-M-B4 describing how forces acting on an object will reinforce or cancel one another, depending upon their direction and magnitude;	(M) 37, 44-45, 47 VL 44

SCIENCE BENCHMARKS GRADES 5-8		PAGE REFERENCES	
THIRD QUARTER PACING GUIDE			
PS-M-C2	understanding the different kinds of energy transformations and the fact that energy can be neither destroyed nor created;	(M)	131-137, 139 <i>Activity</i> 138 <i>Science Online</i> 132 <i>National Geographic</i> 171 LD 132 A 137 SJ 129 IM 153
		(O)	R 85
PS-M-B3	understanding that, when an object is not being subjected to a force, it will continue to move at a constant speed and in a straight line;	(M)	38 <i>Activity</i> 55 <i>National Geographic</i> 51 ACT 51 QD 38
PS-M-B3	understanding that, when an object is not being subjected to a force, it will continue to move at a constant speed and in a straight line;	(M)	38 <i>Activity</i> 55 <i>National Geographic</i> 51 ACT 51 QD 38
PS-M-B4	describing how forces acting on an object will reinforce or cancel one another, depending upon their direction and magnitude;	(M)	37, 44-45, 47 VL 44
PS-M-B5	understanding that unbalanced forces will cause changes in the speed or direction of an object's motion.	(M)	37, 44-45, 75 <i>Design Your Own Experiment</i> 56-57 <i>Skill Builder Activities</i> 48 SJ 47 QD 129 IM 44
PS-M-B4	describing how forces acting on an object will reinforce or cancel one another, depending upon their direction and magnitude;	(M)	37, 44-45, 47 VL 44
PS-M-B5	understanding that unbalanced forces will cause changes in the speed or direction of an object's motion.	(M)	37, 44-45, 75 <i>Design Your Own Experiment</i> 56-57 <i>Skill Builder Activities</i> 48 SJ 47 QD 129 IM 44
PS-M-B4	describing how forces acting on an object will reinforce or cancel one another, depending upon their direction and magnitude;	(M)	37, 44-45, 47 VL 44

<b>SCIENCE BENCHMARKS GRADES 5-8</b>		<b>PAGE REFERENCES</b>
PS-M-C1	identifying and comparing the characteristics of different types of energy;	(K) 45 <i>Physics Integration</i> 46 (M) 127-130 <i>Skill Builder Activities</i> 130 R 130, 137 LD 132 (N) 15-16 (O) 70
PS-M-C3	understanding that the sun is a major source of energy and that energy arrives at the Earth's surface as light with a range of wavelengths;	(M) 139, 143 <i>Science Stats</i> 150 (O) 75 <i>National Geographic</i> 78
<b>FOURTH QUARTER PACING GUIDE</b>		
PS-M-C6	describing the types of energy that can be involved, converted, or released in electrical circuits;	(M) 136-137 (N) 16, 17, 18, 24 A 19
PS-M-C6	describing the types of energy that can be involved, converted, or released in electrical circuits;	(M) 136-137 (N) 16, 17, 18, 24 A 19
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PS-M-C6	describing the types of energy that can be involved, converted, or released in electrical circuits;	(M) 136-137 (N) 16, 17, 18, 24 A 19
PS-M-C6	describing the types of energy that can be involved, converted, or released in electrical circuits;	(M) 136-137 (N) 16, 17, 18, 24 A 19
PS-M-C4	observing and describing the interactions of light and matter (reflection, refraction, absorption, transmission, scattering);	(O) 19-21, 97-98, 101-106, 108-111 <i>Explore Activity</i> 95 <i>Activity</i> 107 QD 20 E 99 LD 110 MM 102
PS-M-C5	investigating and describing the movement of heat and the effects of heat in objects and systems;	(K) 45-52 <i>Activity</i> 53 SJ 46 (M) 162-167, 169-173 <i>Design Your Own Experiment</i> 174-175 A 167 E 164 LD 166

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PS-M-C5 investigating and describing the movement of heat and the effects of heat in objects and systems;	(K) 45-52 <i>Activity 53</i> SJ 46 (M) 162-167, 169-173 <i>Design Your Own Experiment 174-175</i> A 167 E 164 LD 166 R 167
PS-M-C5 investigating and describing the movement of heat and the effects of heat in objects and systems;	(K) 45-52 <i>Activity 53</i> SJ 46 (M) 162-167, 169-173 <i>Design Your Own Experiment 174-175</i> A 167 E 164 LD 166 R 167
PS-M-C8 comparing the uses of different energy resources and their effects upon the environment.	(M) 139-147 <i>Use the Internet 148-149</i> <i>Chapter Assessment 155</i> D 144 CYD 149 ACT 150 R 147

### Codes Used for TWE Pages

A	Assessment
ACT	Activity
AE	Analyze the Event
C	Challenge
CC	Curriculum Connection
CD	Cultural Diversity
CYD	Communicating Your Data
D	Discussion
E	Extension
EA	Error Analysis
HS	Historical Significance
IM	Identifying Misconceptions
INV	Investigate the Issue
IS	Inclusion Strategies
LD	Lab Demonstration
MM	Make a Model
QD	Quick Demo
R	Reteach
SJ	Science Journal
UA	Use an Analogy
VL	Visual Learning