



## LAB-AIDS CORRELATIONS FOR THE IDAHO MIDDLE LEVEL SCIENCE STANDARDS

GRADES 6-9

*With Assessment Guidelines information*

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This document was prepared by Mark Koker, Ph D, Director of Curriculum and Training at LAB-AIDS, with assistance from Donna Markey, LAB-AIDS Senior Consultant.

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## ***Key to SEPUP Core Science Programs:***

SEPUP programs are available as full year courses, or separately, as units, each taking 3-9 weeks to complete, as listed below.

### ***Issues and Earth Science, Second Edition (IAES)***

<b>Unit Title</b>	<b>Activity Number</b>
Studying Soil Scientifically	1-11
Rocks and Minerals	12-23
Erosion and Deposition	24-35
Plate Tectonics	36-49
Weather and Atmosphere	50-70
The Earth in Space	71-84
Exploring Space	85-98

### ***Issues and Life Science, Second Edition (IALS)***

<b>Unit Title</b>	<b>Activity Number</b>
Experimental Design: Studying People Scientifically	1-10
Body Works	11-29
Cell Biology and Disease	30-53
Genetics	54-71
Ecology	72-88
Evolution	89-101
Bioengineering	102-109

### ***Issues and Physical Science, Second Edition (IAPS)***

<b>Unit Title</b>	<b>Activity Number</b>
Studying Materials Scientifically	1-11
The Chemistry of Materials	12-29
Water	30-52
Energy	53-72
Force and Motion	73-88
Waves	89-99

Each of the full year programs begins with a “starter” unit sequence on the scientific method in the context of each particular discipline. For example, the Issues and Life Science (IALS) course contains a ten-activity unit called “Experimental Design: Studying People Scientifically,” which uses the science behind clinical trials on human subjects, to frame the study of the life sciences. These are listed first in each course.

<i>SEPUP Course/Activity Numbers</i>	<i>Main Unit Issue</i>
<b>IAES Issues and Earth Science</b>	
Studying Soils Scientifically, 1-11	Why don't plants grow in the school garden?
Rocks and Minerals, 12-23	How do diamonds made in a lab compare to diamonds mined from the earth?
Erosion and Deposition, 24-35	Where should Boomtown construct the new buildings?
Plate Tectonics, 36-49	Which site would you recommend for storing nuclear waste?
Weather and Atmosphere, 50-70	Is the growth of Sunbeam City affecting its weather, atmosphere, and water availability?
The Earth in Space, 71-84	Why are there many different calendars?
Earth and the Solar System, 85-98	What kinds of future space missions should we conduct?
<b>IALS Issues and Life Science</b>	
Studying People Scientifically, 1-10	Which proposals have an experimental design worth funding?
Body Works, 11-29	How can you convince people to make choices that reduce their level of heart disease risk?
Cell Biology and Disease, 30-53	How is an emerging disease spread? What can you do to stop it?
Genetics, 54-71	What are the ethical issues involved in using genetic information?
Ecology, 72-88	What are the trade-offs of introducing a species into a new environment?
Evolution, 89-101	What are the trade-offs in deciding whether to save an endangered species or to re-create an extinct one?
Bioengineering, 102-108	How are new solutions to problems in life science developed?
<b>IAPS Issues and Physical Science</b>	
Studying Materials Scientifically, 1-11	How should unidentified materials be handled?
The Chemistry of Materials, 12-29	When you buy a new product, do you think about what materials it is made of? What will happen to it when you no longer have a use for it?
Water, 30 - 52	What does your community do to make its water safe to drink? Whose responsibility is it?
Energy, 53-72	Can you help a family decide what energy improvements they should invest in?
Force and Motion, 73-88	Should noncommercial vehicles be more alike?
Waves, 89-99	Are there situations in which some waves are harmful to your health?

## SEPUP Support for Engineering Design

The Next Generation Science Standards (NGSS) note that science and engineering are somewhat parallel practices and have many similar elements. Scientists ask questions, make observations, and collect and analyze data, in an attempt to make sense of the natural world. Similarly, engineers create, test, and redesign as they respond with solutions to human needs. And just as we use scaffolds in teaching of scientific inquiry to improve student learning and practice, so do we use scaffolds in teaching about engineering for our students. The NGSS emphasize three major phases of the engineering design process.

- DESIGN: Creates design, prototype or plan, noting constraints of proposed use
- TEST: Tests design, prototype or plan, collecting qualitative or quantitative data
- REDESIGN: Evaluates prototype, design or plan, suggests further changes as needed

In addition, the NGSS emphasize the role of design in solving human problems, and of designers in developing criteria for solutions, evaluating solutions, and determining the tradeoffs involved in a design or solution.

The table below shows SEPUP activities that support major elements of engineering design. Some support the initial stages of design, criteria development, and evaluation that precede the full design cycle by suggesting or evaluating scientific or technological solutions to real-world problems. Others involve students in one or all steps of the design cycle as they build, test, and/or redesign prototypes.

### Engineering and Design Practices in SEPUP

Course activity with description	Students suggest or evaluate a solution	Students engage in the engineering process		
		Design	Test	Re-design
IAES11: Recommend a soil improvement plan	X			
IAES 32: Design a coastal breakwater		X	X	X
IAES 35: Recommend a site plan for housing development		X		
IAES 49: Evaluate sites for nuclear waste disposal	X			
IAES 67: Design/build wind vane/anemometer		X	X	X
IAES 98: Recommend a space	X			

mission				
IALS 48: Design an improved hand-washing procedure		X	X	X
IALS 88: Suggest a plan for preventing zebra mussel spread	X			
IALS 104: Design artificial heart valve		X		
IALS 105: Design an artificial bone		X	X	X
IALS 107: Design an energy bar		X	X	X
IALS 108: Design a prosthetic limb		X	X	X
IAPS 12: Recommend a material for a drink container	X			
IAPS 13: Construct a product life cycle for a drink container	X			
IAPS 29: Evaluate options to recommend a "green" computer	X			
IAPS 60: Design an ice preservation chamber		X	X	X
IAPS 63: Improve a calorimeter design			X	X
IAPS 69: Design a better solar collector		X	X	X
IAPS 70: Design a warm & cool home		X		
IAPS 72: Recommend an energy-improvement plan for a home	X	X	X	X
IAPS 73: Evaluate vehicle safety features		X		
IAPS 85: Design a crash test dummy		X		

## Key to SEPUP Assessment System:

SEPUP materials include research-based assessment system developed by SEPUP and the Berkeley Evaluation and Assessment Research Group (BEAR) in the University of California Graduate School of Education. Forming the core of the SEPUP Assessment System are the **assessment variables** (content and process skills to be assessed), **assessment questions or tasks** used to gather evidence and **scoring guides** for interpreting students' responses (correspond to assessment variables).

The nine assessment variables are:

Designing Investigations (DI)  
Organizing Data (OD)  
Analyzing Data (AD)  
Understanding Concepts (UC)  
Recognizing Evidence (RE)  
Evidence and Trade-offs (ET)  
Communication Skills (CS)  
Organizing Scientific Ideas (SI)  
Group Interaction (GI)

### *Types of assessment:*

Quick Checks (✓) present opportunities for informal formative assessment and may be used prior to instruction to find out what students know or think. They may also be used to help teachers track students' knowledge of key information or progress in understanding a concept.

Some embedded questions and tasks and all item bank questions are all suitable for summative assessment. Analysis questions are included at the end of each activity.

*Citations included in the correlation document are as follows:*

IAES 40, 41, 42	40 Q1, 3, 4
IALS 2, 3, 37	41 Q3 UC; [IB] D2
IAPS 1, 2, 3	42 [IB] D4, 6, 8-10, 16

**IAES 40, 41, 42**

**40 Q1, 3, 4**

**41 Q3 UC; [IB] D2**

**42 [IB] D4, 6, 8-10, 16**

means that the standard or benchmark may be assessed using Issues and Earth Science (IAES) Activity 40 Analysis Questions 1, 3 and 4, IAES Activity 41 Analysis Question 3 using the Understanding Concepts scoring guide and Item Bank Questions D2, 4, 6, 8-10, and 16 from Unit D Plate Tectonics.

For more information on program assessment and using SEPUP rubrics, consult the Teacher's Guide, TR part III Assessment section.

GRADE 6

SCIENCE STANDARDS 6	SEPUP	
	LOCATION	ASSESSMENT
<b>Standard 1: Nature of Science</b>		
<b>Goal 1.1: Understand Systems, Order, and Organization</b>		
6.S.1.1.1 Analyze different systems. (618.01.a)	IAES 27, 79 IALS 18, 78 IAPS 13, 75	(27) OD, Quick check (18) Q5b: SI (78) Quick check (75) Q2: UC
<b>Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations</b>		
6.S.1.2.1 Explain how observations and data are used as evidence on which to base scientific explanations and predictions. (618.02.a)	IAES 20, 72 IALS 47, 94 IAPS 14, 41	(72) DI, Quick check (47) Q2: AD, Q3: SI (94) Q3: UC (41) OD, Q2:AD
6.S.1.2.2 Use observations to make inferences. (618.02.b)	IAES 20, 57 IALS 2, 32 IAPS 3, 40	(57) Quick check (2) Q2b: RE (32) Q2: RE, Q5: ET, Quick check
6.S.1.2.3 Use models to explain or demonstrate a concept. (618.02.c)	IAES 28, 43 IAPS 17, 36 IALS 18, 65	(17) Q6: UC (36) Q8: UC (18) Q5b: SI (65) Q8: UC, Quick check



SCIENCE STANDARDS 6	SEPUP	
	LOCATION	ASSESSMENT
<b>Goal 1.3: Understand Constancy, Change, and Measurement</b>		
6.S.1.3.1 Analyze changes that occur in and among systems. (618.03.b)	IAES 29, 48  IALS 78, 79  IAPS 72, 78	(29) Q2: UC  (48) Q4: UC  (78) Quick check (79) Q2: SI  (72) Q1: ET
6.S.1.3.2 Measure in both U.S. Customary and International System of Measurement (metric system) units with an emphasis on the metric system. (618.03.c)	IAES 1, 55  IALS 17, 48  IAPS 3, 51  Science Skills Student Sheet 5	(55) Proc: DI  [IB] A: 1, 13  (17) Proc: OD  (48) Proc: DI  (3) Proc: DI  (51) Proc: DI  [IB] A: 16, B: 19-21
<b>Goal 1.4: Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State</b>		
No objectives at this grade level.		
<b>Goal 1.5: Understand Concepts of Form and Function</b>		
6.S.1.5.1 Analyze how the shape or form of an object or system is frequently related to its use and/or function. (618.05.a)	IAES 47, 48  IALS 16, 38  IAPS 79, 85	(47) Quick check  (48) Q4: UC  (16) Q6: UC, Q7: UC, Quick check  (79) Quick check

SCIENCE STANDARDS 6	SEPUP	
	LOCATION	ASSESSMENT
		(85) Proc: CS
<b>Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills</b>		
6.S.1.6.1 Write and analyze questions that can be answered by conducting scientific experiments. (619.02.a)	IAES 16, 67  IALS 86, 109  IAPS 28, 65	(16) Proc: DI, Q3: RE  (67) Proc: DI [IB] A: 1  (86) Q1: CS  (109) Proc: DI, SI [IB] A: 1-3 [IB] G: 24-25  (28) Q3 :ET  (65) Proc :DI [IB] A:16, 17
6.S.1.6.2 Conduct scientific investigations using a control and variables. Repeat same experiment using alternate variables. (619.02.b)	IAES 32, 67  IALS 6, 8  IAPS 8, 38	(67) Proc: DI  (6) Quick check  (8) Proc: DI, Quick check  (8) Quick check, Q6: UC  (38) Proc: DI, Q1-3: AD
6.S.1.6.3 Select and use appropriate tools and techniques to gather and display data. (619.02.c)	IAES 4, 55  IALS 19, 36  IAPS 9, 81	(4) Quick check  (55) Proc: DI  (19) Q4: OD, Q3b: AD

SCIENCE STANDARDS 6	SEPUP	
	LOCATION	ASSESSMENT
	TR II: Science Skills Sheet 1, 2	
6.S.1.6.4 Use evidence to analyze data in order to develop descriptions, explanations, predictions, and models. (619.2.d)	IAES 28, 43 IALS 18, 65  IAPS 17, 36	(18) Q5b: SI  (65) Q8: UC, Quick check  (17) Q6: UC (36) Q8: UC
6.S.1.6.5 Test a hypothesis based on observations. (619.02.e)	IAES 67, 72  IALS 5, 48  IAPS 51, 65	(67) Proc: DI  (72) Proc: DI, Quick check  (5) Q7: DI, SI (48 ) Proc: DI, Q4: UC  (51) Q4: DI, SI, Q5: ET (65 ) Proc: DI
6.S.1.6.6 Communicate scientific procedures and explanations. (619.02.g)	IAES 3, 72 IALS 1, 39 IAPS 1, 51  TR: Literacy Transparency 2, Literacy Student Sheet 1a, 1b	(72) DI, Quick check  (39) OD, Q2: AD, SI  (51) Q4: DI, SI, Q5: ET
<b>Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors</b>		

SCIENCE STANDARDS 6	SEPUP	
	LOCATION	ASSESSMENT
No objectives at this grade level.		
<b>Goal 1.8: Understand Technical Communication</b>		
6.S.1.8.1 Read, give, and execute technical instructions. (628.01a)	IAES 67 IALS 24, 109 IAPS 51, 69	(67) Proc: DI (24) Q2: UC (109) Proc: DI, SI (51) Q4: DI, Q4: SI
<b>Standard 2: Physical Science</b>		
<b>Goal 2.1: Understand the Structure and Function of Matter and Molecules and Their Interactions</b>		
6.S.2.1.1 Compare and contrast the differences among elements, compounds and mixtures. (620.01.a)	IAPS 15, 16, 17	(15) Q6: UC [IB] B: 7-11 (17) Q3: AD
6.S.2.1.2 Define the properties of matter. (620.01.b)	IAPS 15, 16, 18	(15) Q5: UC [IB] B: 7-11 (18) Q3: AD
6.S.2.1.3 Compare densities of equal volumes of a solid, a liquid, or a gas. (619.01.c)	IAPS 7, 9, 14	(7) Q1: AD (9) Quick check, Q3e: UC [IB] A: 7, 8
6.S.2.1.4 Describe the effect of temperature on density. (620.01.c)	Not covered	
<b>Goal 2.2: Understand Concepts of Motion and Forces</b>		
6.S.2.2.1 Describe the effects of different forces (gravity and friction) on the	IAPS 74, 75, 81	(74) Proc: DI

SCIENCE STANDARDS 6	SEPUP	
	LOCATION	ASSESSMENT
movement, speed, and direction of an object. (620.03.d)		(75) Q2: UC [IB] E: 13, 14
<b>Goal 2.3: Understand the Total Energy in the Universe is Constant</b>		
No objectives at this grade level.		
<b>Goal 2.4: Understand the Structure of Atoms</b>		
No objectives at this grade level.		
<b>Goal 2.5: Understand Chemical Reactions</b>		
No objectives at this grade level.		
<b>Standard 3: Biology</b>		
<b>Goal 3.1: Understand the Theory of Biological Evolution</b>		
No objectives at this grade level.		
<b>Goal 3.2: Understand the Relationship between Matter and Energy in Living Systems</b>		
No objectives at this grade level.		
<b>Goal 3.3: Understand the Cell is the Basis of Form and Function for All Living Things</b>		
6.S.3.3.1 Identify the different structural levels of which an organism is comprised (cells, tissues, organs, organ systems, and organisms). (621.01.a)	IALS 15, 16, 18	(15) Q3: UC, Quick check (16) Q6: UC, Q7: UC Quick check (18) Q5b: SI

SCIENCE STANDARDS 6	SEPUP	
	LOCATION	ASSESSMENT
<b>6.S.3.3.2 Analyze the structural differences between plant and animal cells. (621.01.b)</b>	IALS 16, 38, 42	(16) Q6: UC, Q7: UC Quick check (42) Quick check
<b>6.S.3.3.3 Describe how traits are passed from parents to offspring. (621.01.c)</b>	IALS 59, 61, 65	(59) Proc: OD, Q7: UC (65) Q8: UC, Quick check [IB] D: 23-26
<b>Standard 4: Earth and Space Systems</b>		
<b>Goal 4.1: Understand Scientific Theories of Origin and Subsequent Changes in the Universe and Earth Systems</b>		
6.S.4.1.1 Explain the interactions among the solid earth, oceans, atmosphere, and organisms. (624.01.a)	IAES 65 IALS 78, 79, 86	(78) Quick check (79) Q2: SI (86) Q1: CS
6.S.4.1.2 Explain the water cycle and its relationship to weather and climate. (624.01.b)	IAES 57, 60, 62	(57) Quick check (60) Quick check (62) Q4: SI
6.S.4.1.3 Identify cumulus, cirrus, and stratus clouds and how they relate to weather changes. (624.01.c)	IAES 66, 69	(66) Q2: UC [IB] E: 7, 9
<b>Goal 4.2: Understand Geo-chemical Cycles and Energy in the Earth System</b>		
<b>No objectives at this grade level.</b>		

SCIENCE STANDARDS 6	SEPUP	
	LOCATION	ASSESSMENT
<b>Standard 5: Personal and Social Perspectives; Technology</b>		
<b>Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced</b>		
6.S.5.1.1 Identify issues for environmental studies. (626.01.a)	IALS 72, 73, 87	(72) Q6: ET (73) Proc: UC, CS (87) Q1: ET
<b>Goal 5.2: Understand the Relationship between Science and Technology</b>		
6.S.5.2.1 Describe how science and technology are part of our society. (625.01.a)	IAES 72, 98  IALS 53, 88  IAPS 11, 32	(72) Quick check, Proc: GI (98) Q2: ET, CS (53) Proc: GI, Q2: RE, Q3: ET (88) Proc: GI, SI, Q2: AD, Q3: ET (11) Proc: GI (32) Proc: GI
6.S.5.2.2 Describe how science and technology are interrelated. (625.01.b)	IAES 64, 87, 94  IALS 23, 34, 103	(94) Quick check [IB] G: 8, 15, 16 (23) Quick check, Q7: UC (34) Q4: RE, ET [IB] G: 4-11
<b>Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them</b>		

SCIENCE STANDARDS 6	SEPUP	
	LOCATION	ASSESSMENT
6.S.5.3.1 Explain the difference between renewable and nonrenewable resources. (626.03.a)	IAES 12 IAPS 64, 68, 70	(64) Q5: AD, Quick check



GRADE 7

SCIENCE STANDARDS 7	SEPUP	
	LOCATION	ASSESSMENT
<b>Standard 1: Nature of Science</b>		
<b>Goal 1.1: Understand Systems, Order, and Organization</b>		
7.S.1.1.1 Define small systems as a part of a whole system. (633.01.a)	IALS 16, 38, 42	(16) Q6: UC, Q7: UC Quick check  (42) Quick check
7.S.1.1.2 Determine how small systems contribute to the function of the whole. (633.01.a)	IAES 11, 22  IALS 42, 83  IAPS 17, 71	(11) Q2: RE, ET  (22) Q7: UC  (42) Quick check  (83) Proc: DI  (17) Q6: UC  (71) Q1: UC
7.S.1.1.3 Identify the different structural levels of an organism (cells, tissues, organs, and organ systems). (633.01.b)	IALS 12, 15, 42	(12) Quick check  (45) Quick check  Q3: UC  (42) Quick check  [IB] C: 16
<b>Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations</b>		
7.S.1.2.1 Describe how observations and data are evidence on which to base scientific explanations and predictions. (633.02.a)	IAES 28, 42  IALS 37, 94	(94) Q3: UC,  Quick Check

SCIENCE STANDARDS 7	SEPUP	
	LOCATION	ASSESSMENT
	IAPS 32, 65	(65) Proc: DI
7.S.1.2.2 Use observations to make defensible inferences. (633.02.b)	IAES 20, 57 IALS 2, 32  IAPS 3, 40	(57) Quick check  (2) Q2b: RE  (32) Q2: RE, Q5: ET, Quick check
7.S.1.2.3 Use models to explain or demonstrate a concept. (633.02.c)	IAES 28, 43 IAPS 17, 36  IALS 18, 65	(17) Q6: UC  (36) Q8: UC  (18) Q5b: SI  (65) Q8: UC, Quick check
<b>Goal 1.3: Understand Constancy, Change, and Measurement</b>		
7.S.1.3.1 Identify concepts of science that have been stable over time. (633.03.a)	IAES 76, 79  IALS 92, 93  IAPS 78, 80	(76) Q4: AD  [IB] F: 2-10  (93) Q4: UC  [IB] F: 6-10  (80) Quick check  [IB] E: 13, 14
7.S.1.3.2 Recognize changes that occur within systems. (633.03.b)	IAES 48, 69  IALS 78, 79  IAPS 36, 39	(48) Q4: UC  (69) CS  (78) Quick check (79) Q2: SI  (36) Q8: UC

SCIENCE STANDARDS 7	SEPUP	
	LOCATION	ASSESSMENT
		(39) Proc: DI, Q7: SI [IB] B: 7
7.S.1.3.3 Make metric measurements using appropriate tools. (633.03.c)	IAES 4, 55  IALS 19, 36  IAPS 9, 81  TR II: Science Skills Sheet 1, 2	(4) Quick check  (55) Proc: DI  (19) Q4: OD, Q3b: AD
<b>Goal 1.4: Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State</b>		
Reference to objective 7.S.3.2.1		
<b>Goal 1.5: Understand Concepts of Form and Function</b>		
<b>No objectives at this grade level.</b>		
<b>Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills</b>		
7.S.1.6.1 Identify controls and variables used in scientific investigations. (634.01.b)	IAES 67, 72  IALS 5, 48  IAPS 51, 65	(67) Proc: DI  (72) Proc: DI, Quick check  (5) Q7: DI, SI  (48) Proc: DI, Q4: UC  (51) Q4: DI, SI, Q5: ET  (65) Proc: DI

SCIENCE STANDARDS 7	SEPUP	
	LOCATION	ASSESSMENT
	TR II: Science Skills Sheet 5	
7.S.1.6.2 Use appropriate tools and techniques to gather and display data. (634.01c)	IAES 43, 55 IALS 19, 51,  IAPS 9, 17 TR II: Science Skills Sheet 1, 2	(55) Proc: DI  (19) Q4: OD, Q3b: AD (51) Proc: OD, Q1: AD, Q4: UC  (17) Q6: UC
7.S.1.6.3 Evaluate data in order to form conclusions. (634.01.d)	IAES 4, 59  IALS 14, 64  IAPS 7, 32	(4) Quick check [IB] A: 13, 14, C: 8, 9  (14) DI, Q4: AD  (64) DI, Q1: AD  [IB] E: 4, 6c  (7) Q1: AD, Q5: UC  [IB] B: 22
7.S.1.6.4 Use evidence and critical thinking to accept or reject a hypothesis. (634.01.e)	IAES 11, 32 IALS 10, 47  IAPS 51, 65	(11) Q2: RE, ET  (10) Q3: RE, ET (47) Proc: OD, Q2: AD, Q3: SI  (51) Q4: DI, SI, Q5: ET  (65) Proc: DI
7.S.1.6.5 Evaluate alternative explanations or predictions. (634.01.f)	IAES 23, 35  IALS 49, 67	(23) Q3: ET  (35) Proc: CS, Q1: ET  (49) Q6: ET  (67) Q2: UC, Q3: ET

SCIENCE STANDARDS 7	SEPUP	
	LOCATION	ASSESSMENT
	IAPS 12, 52	(12) Q5: ET (52) Proc: CS, Q1: ET
7.S.1.6.6 Communicate and defend scientific procedures and explanations. (634.01.g)	IAES 16, 67  IALS 86, 109  IAPS 28, 65	(16) Proc: DI, Q3: RE (67) Proc: DI [IB] A: 1 (86) Q1: CS (109) Proc: DI, SI [IB] A: 1-3 [IB] G: 24-25 (28) Q3: ET (65) Proc: DI [IB] A: 16, 17
<b>Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors</b>		
<b>No objectives at this grade level.</b>		
<b>Goal 1.8: Understand Technical Communication</b>		
7.S.1.8.1 Read and evaluate technical instructions. (643.02.a)	IAES 43, 71  IALS 24, 109  IAPS 25, 69	(24) Q4: UC (109) Proc: DI, SI (25) Quick check
<b>Standard 2: Physical Science</b> No Objectives at this grade level		
<b>Standard 3: Biology</b>		

SCIENCE STANDARDS 7	SEPUP	
	LOCATION	ASSESSMENT
<b>Goal 3.1: Understand the Theory of Biological Evolution</b>		
7.S.3.1.1 Describe how natural selection explains species change over time. <a href="#">(637.01.a)</a>	IALS 95, 96, 99	(96) Proc: OD, Q2a: AD (99) Q2: UC
<b>Goal 3.2: Understand the Relationship between Matter and Energy in Living Systems</b>		
7.S.3.2.1 Describe how energy stored in food is primarily derived from the Sun through photosynthesis. <a href="#">(638.01.a)</a>	IALS 15, 78, 81	(15) Q3: UC (78) Quick check (81) Proc: UC [IB] E: 14, 15, 17
7.S.3.2.2 Describe how the availability of resources (matter and energy) limits the distribution and abundance of organisms. <a href="#">(638.01.b)</a>	IALS 79, 83, 85	(79) Q2: SI (83) Proc: CS, DI, Quick check (85) Q1a: AD, Q1b: AD, Q1c: UC
7.S.3.2.3 Illustrate how atoms and molecules cycle among the living and nonliving components of the biosphere. <a href="#">(638.01.c)</a>	IAES 58, 62  IALS 78, 81  IAPS 39	(58) Quick check [IB] E: 7, 10, 12, 13 (62) Q4: SI (78) Quick check (81) Q5: UC (39) Q7: S1
7.S.3.2.4 Identify how energy flows through ecosystems in one direction, from photosynthetic organisms to herbivores, carnivore, and decomposers. <a href="#">(638.01.d)</a>	IALS 15, 78, 81	(15) Q3: UC (78) Quick check (81) Proc: UC

SCIENCE STANDARDS 7	SEPUP	
	LOCATION	ASSESSMENT
		[IB] E: 14, 15, 17
<b>Goal 3.3: Understand the Cell is the Basis of Form and Function for All Living Things</b>		
7.S.3.3.1 Explain the relationships among specialized cells, tissues, organs, organ systems, and organisms. (636.01.a)	IALS 16, 38, 42	(16) Q6: UC, Q7: UC, Quick check (42) Quick check
7.S.3.3.2 Identify the parts of specialized plant and animal cells. (636.01.b)	IALS 38, 40, 42	(40) Proc: OD, Q3: AD (42) Quick check
7.S.3.3.3 Identify the functions of cell structures. (636.01.b)	IALS 38, 42, 44	(42) Quick check
7.S.3.3.4 Describe cell functions that involve chemical reactions. (630.01.c)	IALS 39, 40	(39) Proc: OD, Q2: AD: SI (40) Proc: OD, Q3: AD
7.S.3.3.5 Describe how dominant and recessive traits are inherited. (636.01.e)	IALS 59, 60, 61	(59) Proc: DI, Q7: UC
<b>Standard 4: Earth and Space Systems</b> No objective at this grade level		
<b>Standard 5: Personal and Social Perspectives; Technology</b>		
<b>Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced</b>		
<b>No objectives at this grade level.</b>		
<b>Goal 5.2: Understand the Relationship between Science and Technology</b>		
7.S.5.2.1 Explain how science and technology are interrelated. (640.01.a)	IAES 43, 93	(108) Q3: ET, Quick

SCIENCE STANDARDS 7	SEPUP	
	LOCATION	ASSESSMENT
	IALS 35, 108  IAPS 72, 85	check  (72) Q1: ET  (85) Proc: CS
7.S.5.2.2 Explain how science advances technology. (640.01.b)	IAES 42, 87  IALS 37, 103  IAPS 16, 80	(37) UC, CS  (16) Quick check  (80) Q2: UC, Quick check
Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them		
7.S.5.3.1 Identify alternative sources of energy. (641.03.a)	IAPS 64, 68, 69	(64) Q3: ET, Q4: AD  [IB] D: 7  (68) Proc: DI



GRADE 8/9

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
<b>Physical Science</b>		
<b>Standard 1: Nature of Science</b>		
<b>Goal 1.1: Understand Systems, Order, and Organization</b>		
8-9.PS.1.1.1 Explain the scientific meaning of system, order, and organization. (648.01a)	IALS 44, 75, 76	
<b>8-9.PS.1.1.2 Apply the concepts of order and organization to a given system. (648.01a)</b>	IALS 15, 16, 83	(15) Q3: UC, Quick check  (16) Q6: UC, Q7: UC, Quick check  (83) Proc: CS, Quick check
<b>Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations</b>		
<b>8-9.PS.1.2.1 Use observations and data as evidence on which to base scientific explanations. (648.02a)</b>	IAES 16, 55  IALS 8, 48  IAPS 3, 51	(16) Proc: DI  (55) Proc: DI  [IB] A: 1, 13  (8) Proc: DI  [IB] A: 14-19  (48) Proc: DI  (3) Proc: DI  (51) Proc: DI  [IB] A: 16, B: 19-21

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
<b>8-9.PS.1.2.2 Develop models to explain concepts or systems. (648.02b)</b>	IAES 28, 43 IAPS 17, 36  IALS 18, 65	(17) Q6: UC  (36) Q8: UC  (18) Q5b: SI  (65) Q8: UC, Quick check
<b>8-9.PS.1.2.3 Develop scientific explanations based on knowledge, logic, and analysis. (648.02c)</b>	IAES 10, 31 IALS 21, 44 IAPS 37, 65	(10) Quick check   (37) Q2: AD, Quick check  (65) Proc: DI
<b>Goal 1.3: Understand Constancy, Change, and Measurement</b>		
<b>8-9.PS.1.3.1 Measure changes that can occur in and among systems. (648.03b)</b>	IAES 27, 64  IALS 84, 86,  IAPS 70, 72	(27) Proc: OD, Quick check  (84) Q1a: OD, Q1b: OD. Q3a: OD, Q3b: AD, Quick check  (86) Proc: CS  (72) Q1: ET
<b>8-9.PS.1.3.2 Analyze changes that can occur in and among systems. (648.03b)</b>	IAES 2, 8 IALS 79, 88  IAPS 13, 25	(2) Q3: RE  (79) Q2: SI  (87) Q1: ET  (88) Q2: AD, Q3: ET  (13) Proc: RE

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
		(25) Quick check
<b>8-9.PS.1.3.3 Measure and calculate using the metric system. (648.03c)</b>	IAES 4, 55  IALS 19, 36  IAPS 9, 81  TR II: Science Skills Sheet 1, 2	(4) Quick check  (55) Proc: DI  (19) Q4: OD, Q3b: AD
<b>Goal 1.4: Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State</b>	.	
<b>No objectives in Physical Science</b>		
Goal 1.5: Understand Concepts of Form and Function		
<b>No objectives in Physical Science</b>		
<b>Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills</b>		
<b>8-9.PS.1.6.1 Identify questions and concepts that guide scientific investigations. (649.01a)</b>	IAES 55, 72  IALS 8, 64  IAPS 51, 65	(55) Proc: DI  (72) Proc: DI  (8) Proc: DI, Quick check  (64) Proc: DI, Q1: AD  (51) Proc: DI, Q5: ET  (65) Proc: DI
<b>8-9.PS.1.6.2 Utilize the components of scientific problem solving to design, conduct, and communicate results of</b>	IAES 16, 67	(16) Proc: DI  (67) Proc: DI

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
investigations. (649.01b)	IALS 5, 48  IAPS 3, 38	(5) Proc: DI  (48) Proc: DI  (3) Proc: DI  (38) Proc: DI, Q1-3: AD
8-9.PS.1.6.3 Use appropriate technology and mathematics to make investigations. (649.01c)	IAES 4, 27  IALS 19, 92  IAPS 9, 22  TR II: Science Skills Sheet 1, 2	(4) Quick check  (27) Proc: OD, Quick check  (19) Q4: OD, Q3b: AD  (22) Proc: OD
8-9.PS.1.6.4 Formulate scientific explanations and models using logic and evidence. (649.01d)	IAES 28, 43  IAPS 17, 36  IALS 18, 65	(17) Q6: UC  (36) Q8: UC  (18) Q5b: SI  (65) Q8: UC, Quick check
8-9.PS.1.6.5 Analyze alternative explanations and models. (649.01e)	IAES 3, 72  IALS 1, 39  IAPS 1, 51	(72) DI, Quick check  (39) Proc: OD, Q2: AD, SI  (51) Q4: DI, SI, Q5: ET
8-9.PS.1.6.6 Communicate and defend a	IAES 83, 98	(83) Q5: ET

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
scientific argument. (649.01f)	IALS 67, 89  IAPS 12, 29	(98) Q2: ET, CS  (67) Q2: UC, Q3: ET, CS  (89) Q4: ET  (12) Q5: ET  (29) Q1: ET, Proc: CS
8-9.PS.1.6.7 Explain the differences among observations, hypotheses, and theories. (649.01g)	IAES 13, 42  IALS 94, 97  IAPS 16, 57	(94) Q3: UC, Quick check  (97) Q2: SI  (16) Quick check  (57) Q3: UC, Quick check
Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors		
<b>No objectives in Physical Science</b>		
<b>Goal 1.8: Understand Technical Communication</b>		
8-9.PS.1.8.1 Analyze technical writing, graphs, charts, and diagrams. (658.02a)	IAES 25, 43  IALS 30, 35  IAPS 22, 44	(25) Quick check  (30) Proc: OD, Q1a: AD  (22) Proc: OD  (44) Q5: UC
<b>Standard 2: Physical Science</b>		
Goal 2.1: Understand the Structure and Function of Matter and Molecules and		

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
Their Interactions		
<b>No objectives in Physical Science</b>		
<b>Goal 2.2: Understand Concepts of Motion and Forces</b>		
<b>8-9.PS.2.2.1 Explain motion using Newton’s Laws of Motion. (650.04b)</b>	IAPS 78, 79, 80	(78) Quick check (79) Q2: SI (80) Q2: UC, Quick check
<b>Goal 2.3: Understand the Total Energy in the Universe is Constant</b>		
<b>8-9.PS.2.3.1 Explain that energy can be transformed but cannot be created nor destroyed. (650.05a)</b>	IAPS 57, 58, 67	(57) Q3: UC, Quick check (58) Q2: UC (67) Q5: AD, Quick check
<b>8-9.PS.2.3.2 Classify energy as potential and/or kinetic and as energy contained in a field. (650.05b)</b>	IAPS 54, 55, 58	(54) Proc: DI (55) Q1: UC, Quick check (58) Q2: UC
<b>Goal 2.4: Understand the Structure of Atoms</b>		
<b>8-9.PS.2.4.1 Describe the properties, function, and location of protons, neutrons, and electrons. (650.01a)</b>	IAPS 16, 17, 50	(16) Quick check (17) Q6: UC (50) Q5: UC
<b>8-9.PS.2.4.2 Explain the processes of fission and fusion. (650.01b)</b>	Not covered	
<b>8-9.PS.2.4.3 Describe the characteristics of isotopes. (650.01c)</b>	Not covered	

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
8-9.PS.2.4.4 State the basic electrical properties of matter. (650.01d)	IAPS 64, 65, 66	(64) Q3: ET, Q4: AD (65) Proc: DI (66) Proc: DI
<b>8-9.PS.2.4.5 Describe the relationships between magnetism and electricity.</b>	Not covered	
<b>Goal 2.5: Understand Chemical Reactions</b>		
<b>8-9.PS.2.5.1 Explain how chemical reactions may release or consume energy while the quantity of matter remains constant. (650.03a)</b>	Not covered	
<u>Standard 3: Biology</u> No goals or objectives in Physical Science.		
<u>Standard 4: Earth and Space Systems</u> No goals or objectives in Physical Science.		
<u>Standard 5: Personal and Social Perspectives; Technology</u>		
Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced		
<b>No objectives in Physical Science.</b>		
<b>Goal 5.2: Understand the Relationship between Science and Technology</b>		
<b>8-9.PS.5.2.1 Explain how science advances technology. (655.01a)</b>	IAES 23, 47  IALS 42, 103  IAPS 16, 80	(23) Q3: ET (47) Quick check (42) Quick check (16) Quick check (80) Q2: UC, Quick check

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
<b>8-9.PS.5.2.2 Explain how technology advances science. (655.01a)</b>	IAES 42, 87 IALS 37, 108  IAPS 29, 44	(37) UC, CS  (108) Quick check, Q3: ET  (29) Q1:ET, Proc: CS  (44) Q5: UC
<b>8-9.PS.5.2.3 Explain how science and technology are pursued for different purposes. (656.01b)</b>	IAES 32, 87 IALS 21, 100 IAPS 12, 22	(100) Quick check  (12) Q5: ET  (22) Proc: OD
Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them		
<b>No objectives in Physical Science.</b>		
<b>EARTH SCIENCE</b>		
<b>Standard 1: Nature of Science</b>		
<b>Goal 1.1: Understand Systems, Order, and Organization</b>		
<b>8-9.ES.1.1.1 Explain the scientific meaning of system, order, and organization. (648.01a)</b>	IAES 6, 66, 76	(6) Q3: AD  (66) UC: Q2  (76) Q4: AD
<b>8-9.ES.1.1.2 Apply the concepts of order and organization to a given system. (648.01a)</b>	IAES 22, 44, 64	(22) Q3: ET
<b>Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations</b>		



SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
<b>8-9.E.S.1.2.1 Use observations and data as evidence on which to base scientific explanations. (648.02a)</b>	IAES 16, 55  IALS 8, 48  IAPS 3, 51	(16) Proc: DI  (55) Proc: DI [IB] A: 1, 13  (8) Proc: DI [IB] A: 14-19  (48) Proc: DI  (3) Proc: DI  (51) Proc: DI [IB] A: 16, B: 19-21
<b>8-9.E.S.1.2.2 Develop models to explain concepts or systems. (648.02b)</b>	IAES 28, 43  IAPS 17, 36  IALS 18, 65	(17) Q6: UC  (36) Q8: UC  (18) Q5b: SI  (65) Q8: UC, Quick check
<b>8-9.E.S.1.2.3 Develop scientific explanations based on knowledge, logic, and analysis. (648.02c)</b>	IAES 10, 31  IALS 21, 44  IAPS 37, 65	(10) Quick check    (37) Q2: AD, Quick check  (65) Proc: DI
<b>Goal 1.3: Understand Constancy, Change, and Measurement</b>		
<b>8-9.E.S.1.3.1 Measure changes that can occur in and among systems. (648.03b)</b>	IAES 27, 64  IALS 84, 86,	(27) Proc: OD, Quick check  (84) Q1a: OD, Q1b: OD, Q3a: OD, Q3b:

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
	IAPS 70, 72	AD, Quick check (86) Proc: CS (72) Q1: ET
<b>8-9.ES.1.3.2 Analyze changes that can occur in and among systems. (648.03b)</b>	IAES 2, 8 IALS 79, 88  IAPS 13, 25	(2) Q3: RE (79) Q2: SI (87) Q1: ET (88) Q2: AD, Q3: ET (13) Proc: RE (25) Quick check
<b>8-9.ES.1.3.3 Measure and calculate using the metric system. (648.03c)</b>	IAES 4, 55  IALS 19, 36  IAPS 9, 81 TR II: Science Skills Sheet 1, 2	(4) Quick check (55) Proc: DI (19) Q4: OD, Q3b: AD
<b>Goal 1.4: Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State</b>	.	
<b>No objectives in Earth Science</b>		
Goal 1.5: Understand Concepts of Form and Function		
<b>No objectives in Earth Science</b>		
<b>Goal 1.6: Understand Scientific Inquiry</b>		

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
<b>and Develop Critical Thinking Skills</b>		
<b>8-9.ES.1.6.1 Identify questions and concepts that guide scientific investigations. (649.01a)</b>	IAES 55, 72  IALS 8, 64  IAPS 51, 65	(55) Proc: DI (72) Proc: DI (8) Proc: DI, Quick check (64) Proc: DI, Q1: AD (51) Proc: DI, Q5: ET (65) Proc: DI
<b>8-9.ES.1.6.2 Utilize the components of scientific problem solving to design, conduct, and communicate results of investigations. (649.01b)</b>	IAES 16, 67  IALS 5, 48  IAPS 3, 38	(16) Proc: DI (67) Proc: DI (5) Proc: DI (48) Proc: DI (3) Proc: DI (38) Proc: DI, Q1-3: AD
<b>8-9.ES.1.6.3 Use appropriate technology and mathematics to make investigations. (649.01c)</b>	IAES 4, 27  IALS 19, 92  IAPS 9, 22 TR II: Science Skills Sheet 1, 2	(4) Quick check (27) Proc: OD, Quick check (19) Q4: OD, Q3b: AD (22) Proc: OD
<b>8-9.ES.1.6.4 Formulate scientific explanations and models using logic and evidence. (649.01d)</b>	IAES 28, 43 IAPS 17, 36	(17) Q6: UC

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
	IALS 18, 65	(36) Q8: UC (18) Q5b: SI (65) Q8: UC, Quick check
<b>8-9.ES.1.6.5 Analyze alternative explanations and models. (649.01e)</b>	IAES 3, 72 IALS 1, 39 IAPS 1, 51	(72) DI, Quick check (39) OD, Q2: AD, SI (51) Q4: DI, SI, Q5: ET
<b>8-9.ES.1.6.6 Communicate and defend a scientific argument. (649.01f)</b>	IAES 83, 98  IALS 67, 89  IAPS 12, 29	(83) Q5: ET (98) Q2: ET, CS (67) Q2: UC, Q3: ET, CS (89) Q4: ET (12) Q5: ET (29) Q1: ET, Proc: CS
<b>8-9.ES.1.6.7 Explain the differences among observations, hypotheses, and theories. (649.01g)</b>	IAES 13, 42 IALS 94, 97  IAPS 16, 57	(94) Q3: UC, Quick check (97) Q2: SI (16) Quick check (57) Q3: UC, Quick check
Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors		
<b>No objectives in Earth Science</b>		
<b>Goal 1.8: Understand Technical Communication</b>		

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
<b>8-9.ES.1.8.1 Analyze technical writing, graphs, charts, and diagrams. (658.02a)</b>	IAES 25, 43 IALS 30, 35 IAPS 22, 44	(25) Quick check  (30) Proc: OD, Q1a: AD  (22) Proc: OD  (44) Q5: UC
<b>Standard 2: Physical Science</b> No goals or objectives in Earth Science.		
<b>Standard 3: Biology</b> No goals or objectives in Earth Science.		
<b>Standard 4: Earth and Space Systems</b>		
<b>Goal 4.1: Understand Scientific Theories of Origin and Subsequent Changes in the Universe and Earth Systems</b>		
<b>8-9.ES.4.1.1 Explain the current scientific theory that suggests that the solar system formed from a nebular cloud of dust and gas. (654.01a)</b>	n/c	
<b>8-9.ES.4.1.2 Identify methods used to estimate geologic time. (654.01b)</b>	IAES 39 IALS 90, 92, 93	(90) Q3: SI  (93) Q4: UC  [IB] F: 6-10
<b>8-9.ES.4.1.3 Show how interactions among the solid earth, oceans, atmosphere, and organisms have changed the earth system over time. (654.01c)</b>	IAES 29, 33, 65	(29) Q2: UC  (33) Quick check
<b>Goal 4.2: Understand Geo-chemical Cycles and Energy in the Earth System</b>		
<b>8-9.ES.4.2.1 Explain the internal and external energy sources of the earth</b>	IAES 46, 75	(75) Quick check

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
(654.02a)	IALS 78, 81  IAPS 58, 70	(78) Quick check  (81) Proc: DI, Q5: UC  (58) Q2: UC
<b>Standard 5: Personal and Social Perspectives; Technology</b>		
<b>Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced</b>		
<b>8-9.ES.5.1.1 Analyze environmental issues such as water and air quality, hazardous waste, and depletion of natural resources. (656.01a)</b>	IAES 35, 49  IALS 53, 87  IAPS 29, 52	(35) Proc: CS, Q1: ET  (49) Q2: ET  (53) Q2: RE, Q3: ET  (87) Q1: ET  (29) Proc: CS, Q1: ET  (52) Proc: CS, Q1: ET
<b>Goal 5.2: Understand the Relationship between Science and Technology</b>		
<b>8-9.ES.5.2.1 Explain how science advances technology. (655.01a)</b>	IAES 23, 47  IALS 42, 103  IAPS 16, 80	(23) Q3: ET  (47) Quick check  (42) Quick check  (16) Quick check  (80) Q2: UC, Quick check
<b>8-9.ES.5.2.2 Explain how technology advances science. (655.01a)</b>	IAES 42, 87  IALS 37, 108	(37) UC, CS  (108) Quick check, Q3: ET

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
	IAPS 29, 44	(29) Q1: ET, Proc: CS (44) Q5: UC
<b>8-9.ES.5.2.3 Explain how science and technology are pursued for different purposes. (655.01b)</b>	IAES 32, 87 IALS 21, 100 IAPS 12, 22	(100) Quick check (12) Q5: ET (22) Proc: OD
<b>Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them</b>		
<b>8-9.ES.5.3.1 Describe the difference between renewable and nonrenewable resources. (656.03a)</b>	IAPS 64	(64) Q3: ET, Q4: AD [IB] D: 7
<b>BIOLOGY</b>		
<b>Standard 1: Nature of Science</b>		
<b>Goal 1.1: Understand Systems, Order, and Organization</b>		
<b>9-10.B.1.1.1 Explain the scientific meaning of system, order, and organization. (648.01a)</b>	IALS 44, 75, 76	
<b>9-10.B.1.1.2 Apply the concepts of order and organization to a given system. (648.01a)</b>	IALS 15, 16, 83	(15) Q3: UC, Quick check (16) Q6: UC, Q7: UC, Quick check (83) Proc: CS, Quick check
<b>Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations</b>		
<b>9-10.B.1.2.1 Use observations and data as evidence on which to base scientific</b>	IAES 16, 55	(16) Proc: DI

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
explanations. (648.02a)	IALS 8, 48  IAPS 3, 51	(55) Proc: DI [IB] A: 1, 13 (8) Proc: DI [IB] A: 14-19 (48) Proc: DI (3) Proc: DI (51) Proc: DI [IB] A: 16, B: 19-21
9-10.B.1.2.2 Develop models to explain concepts or systems. (648.02b)	IAES 28, 43 IAPS 17, 36  IALS 18, 65	(17) Q6: UC (36) Q8: UC (18) Q5b: SI (65) Q8: UC, Quick check
9-10.B.1.2.3 Develop scientific explanations based on knowledge, logic and analysis. (648.02c)	IAES 10, 31 IALS 21, 44 IAPS 37, 65	(10) Quick check  (37) Q2: AD, Quick check (65) Proc: DI
<b>Goal 1.3: Understand Constancy, Change, and Measurement</b>		
9-10.B.1.3.1 Measure changes that can occur in and among systems. (648.03b)	IAES 27, 64  IALS 84, 86,	(27) Proc: OD, Quick check  (84) Q1a: OD, Q1b: OD. Q3a: OD, Q3b: AD, Quick check



SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
	IAPS 70, 72	(86) Proc: CS (72) Q1: ET
<b>9-10.B.1.3.2 Analyze changes that can occur in and among systems. (648.03b)</b>	IAES 2, 8 IALS 79, 88  IAPS 13, 25	(2) Q3: RE (79) Q2: SI (87) Q1: ET (88) Q2: AD, Q3: ET (13) Proc: RE (25) Quick check
<b>9-10.B.1.3.3 Measure and calculate using the metric system. (648.03c)</b>	IAES 4, 55  IALS 19, 36  IAPS 9, 81 TR II: Science Skills Sheet 1, 2	(4) Quick check (55) Proc: DI (19) Q4: OD, Q3b: AD
<b>Goal 1.4: Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State</b>		
<b>Reference to 7.S.3.2.1</b>		
<b>Goal 1.5: Understand Concepts of Form and Function</b>		
<b>No objectives in Biology.</b>		
<b>Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills</b>		
<b>9-10.B.1.6.1 Identify questions and concepts that guide scientific</b>	IAES 55, 72	(55) Proc: DI

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
investigations. (649.01a)	IALS 8, 64  IAPS 51, 65	(72) Proc: DI  (8) Proc: DI, Quick check  (64) Proc: DI, Q1: AD  (51) Proc: DI, Q5: ET  (65) Proc: DI
9-10.B.1.6.2 Utilize the components of scientific problem solving to design, conduct, and communicate results of investigations. (649.01b)	IAES 16, 67  IALS 5, 48  IAPS 3, 38	(16) Proc: DI  (67) Proc: DI  (5) Proc: DI  (48) Proc: DI  (3) Proc: DI  (38) Proc: DI, Q1-3: AD
9-10.B.1.6.3 Use appropriate technology and mathematics to make investigations. (649.01c)	IAES 4, 27  IALS 19, 92  IAPS 9, 22  TR II: Science Skills Sheet 1, 2	(4) Quick check  (27) Proc: OD, Quick check  (19) Q4: OD, Q3b: AD  (22) Proc: OD
9-10.B.1.6.4 Formulate scientific explanations and models using logic and evidence. (649.01d)	IAES 28, 43  IAPS 17, 36  IALS 18, 65	(17) Q6: UC  (36) Q8: UC  (18) Q5b: SI  (65) Q8: UC, Quick

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
		check
9-10.B.1.6.5 Analyze alternative explanations and models. (649.01e)	IAES 3, 72  IALS 1, 39  IAPS 1, 51	(72) Proc: DI, Quick check  (39) Proc: OD, Q2: AD, SI  (51) Q4: DI, SI, Q5: ET
9-10.B.1.6.6 Communicate and defend a scientific argument. (649.01f)	IAES 83, 98  IALS 67, 89  IAPS 12, 29	(83) Q5: ET  (98) Q2: ET, CS  (67) Q2: UC, Q3: ET, CS  (89) Q4: ET  (12) Q5: ET  (29) Q1: ET, Proc: CS
9-10.B.1.6.7 Explain the differences among observations, hypotheses, and theories. (649.01g)	IAES 13, 42  IALS 94, 97  IAPS 16, 57	(94) Q3: UC, Quick check  (97) Q2: SI  (16) Quick check  (57) Q3: UC, Quick check
<b>Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors</b>		
<b>No objectives in Biology.</b>		
<b>Goal 1.8: Understand Technical Communication</b>		

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
9-10.B.1.8.1 Analyze technical writing, graphs, charts, and diagrams. (658.02a)	IAES 25, 43 IALS 30, 35 IAPS 22, 44	(25) Quick check  (30) Proc: OD, Q1a: AD  (22) Proc: OD  (44) Q5: UC
<b>Standard 2: Physical Science</b> No goals or objectives in Biology.		
<b>BIOLOGY</b>		
<b>Standard 3: Biology</b>		
<b>Goal 3.1: Understand the Theory of Biological Evolution</b>		
9-10.B.3.1.1 Use the theory of evolution to explain how species change over time. (652.01a)	IALS 95, 96, 97	(96) Proc: OD, Q2a: AD  (97) Q2: SI  [IB] F: 18-21
9-10.B.3.1.2 Explain how evolution is the consequence of interactions among the potential of a species to increase its numbers, genetic variability, a finite supply of resources, and the selection by the environment of those offspring better able to survive and reproduce. (652.01a)	IALS 96, 97, 101	(96) Proc: OD, Q2a: AD  (97) Q2: SI  [IB] F: 37, 38  (101) Q5b: ET, Quick check  [IB] F: 1, 3
<b>Goal 3.2: Understand the Relationship between Matter and Energy in Living Systems</b>		
9-10.B.3.2.1 Explain how matter tends toward more disorganized states (entropy). (653.01a)	n/c	

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
<b>9-10.B.3.2.2 Explain how organisms use the continuous input of energy and matter to maintain their chemical and physical organization. (653.01b)</b>	IALS 15, 78, 81	(15) Q3: UC (78) Quick check (81) Proc: UC [IB] E: 14, 15, 17
<b>9-10.B.3.2.3 Show how the energy for life is primarily derived from the sun through photosynthesis. (653.01c)</b>	IALS 81	(81) Proc: UC [IB] E: 14, 15, 17 (82) Quick check
9-10.B.3.2.4 Describe cellular respiration and the synthesis of macromolecules. (653.01d)	IAPS 16, 17, 40	(16) Quick check (17) Q6: UC (40) Proc: OD, Q3: AD
<b>9-10.B.3.2.5 Show how matter cycles and energy flows through the different levels of organization of living systems (cells, organs, organisms, communities) and their environment. (653.01h)</b>	IALS 15, 18, 78	(15) Q3: UC (18) Q5b: SI (78) Quick check [IB] E: 14, 15, 17
<b>Goal 3.3: Understand the Cell is the Basis of Form and Function for All Living Things</b>		
<b>9-10.B.3.3.1 Identify the particular structures that underlie the cellular functions. (651.01a)</b>	IALS 38, 40, 42	(40) Proc: OD, Q3: AD (42) Quick check
<b>9-10.B.3.3.2 Explain cell functions involving chemical reactions. (651.01b)</b>	IALS 80, 81	
<b>9-10.B.3.3.3 Explain how cells use DNA to store and use information for cell functions. (651.01c)</b>	Not covered	
<b>9-10.B.3.3.4 Explain how selective expression of genes can produce specialized cells from a single cell. (651.01e)</b>	Not covered	

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
<u>Standard 4</u> : Earth and Space Systems <b>No goals or objectives in Biology.</b>		
<b>Standard 5: Personal and Social Perspectives; Technology</b>		
<b>Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced</b>		
<b>9-10.B.5.1.1 Analyze environmental issues such as water and air quality, hazardous waste, forest health, and agricultural production. (656.01a)</b>	IAES 35, 49  IALS 53, 87  IAPS 29, 52	(35) Proc: CS, Q1: ET  (49) Q2: ET  (53) Q2: RE, Q3: ET  (87) Q1: ET  (29) Proc: CS, Q1: ET  (52) Proc: CS, Q1: ET
<b>Goal 5.2: Understand the Relationship between Science and Technology</b>		
<b>9-10.B.5.2.1 Explain how science advances technology. (655.01a)</b>	IAES 23, 47  IALS 42, 103  IAPS 16, 80	(23) Q3: ET  (47) Quick check  (42) Quick check  (16) Quick check  (80) Q2: UC, Quick check
<b>9-10.B.5.2.2 Explain how technology advances science. (655.01a)</b>	IAES 42, 87  IALS 37, 108  IAPS 29, 44	(37) UC, CS  (108) Quick check, Q3: ET  (29) Q1: ET, Proc: CS  (44) Q5: UC

SCIENCE STANDARDS 8/9	SEPUP	
	LOCATION	ASSESSMENT
<b>9-10.B.5.2.3 Explain how science and technology are pursued for different purposes. (656.01b)</b>	IAES 32, 87 IALS 21, 100 IAPS 12, 22	(100) Quick check  (12) Q5: ET  (22) Proc: OD
<b>Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them</b>		
<b>9-10.B.5.3.1 Describe the difference between renewable and nonrenewable resources. (656.03a)</b>	IALS 72, 77, 80	(72) Q6: ET  (77) Proc: OD, Q4: AD, Q6: AD