



CORRELATIONS FOR THE NEVADA MIDDLE LEVEL (6-8) SCIENCE STANDARDS

GRADES 6-8

With Assessment Guidelines information

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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)

Unit Title	Activity Number
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)

Unit Title	Activity Number
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)

Unit Title	Activity Number
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>
IAES Issues and Earth Science	
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?
IALS Issues and Life Science	
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?
IAPS Issues and Physical Science	
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 Frameworks (NGSF) notes 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 NSGF emphasizes 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 NSGF emphasizes 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 seven assessment variables are:

- Designing Investigations (DI)
- Organizing Data (OD)
- Analyzing Data (AD)
- Understanding Concepts (UC)
- Evidence and Trade-offs (ET)
- Communication Skills (CS)
- 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 Activity 40 Analysis Question 1, 3 and 4, IAES Activity 43 Analysis Question 3 using Understanding Concepts scoring guide and Item Bank Question D2 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.

NEVADA SCIENCE STANDARD	SEPUP	
	LOCATION	ASSESSMENT
PHYSICAL SCIENCE		
Physical Science Unifying Concept A Matter — <i>Matter has various states with unique properties that can be used as a basis for organization. The relationship between the properties of matter and its structure is an essential component of study in the physical Science. The understanding of matter and its properties leads to practical applications, such as the capability to liberate elements from ore, create new drugs, manipulate the structure of genes and synthesize polymers.</i>		
<i>P.8.A Students understand the properties and changes of properties in matter.</i>		
P.8.A.1 Students know particles are arranged differently in solids, liquids, and gases of the same substances.	IAPS 6, 7, 10, 14, 35 (Studying Materials Scientifically) (Chemistry of Materials) (Water)	6 AQ1 AD 7 AQ1 AD, AQ5 UC 10 AQ1 AD 14 [IB] B7 35 AQ1 AD
P.8.A.2 Students know elements can be arranged in the periodic table which shows repeating patterns that group elements with similar properties.	IAPS 14, 15, 19 (Chemistry of Materials)	14 [IB] B4-6 15 AQ5 UC 19 [IB] B12-14
P.8.A.3 Students know methods of separating mixtures based on the properties of the components.	IAPS 3, 5 (Studying Materials Scientifically)	3 Proc DI; [IB] A16 5 Proc GI
P.8.A.4 Students know atoms often combine to form molecules, and that compounds form when two or more different kinds of atoms chemically bond.	IAPS 17, 20, 36 (Chemistry of Materials) (Water)	17 AQ6 UC; [IB] B9-11 20 Not Assessed 36 AQ8 UC; [IB]

		C22
P.8.A.5 Student know mass is conserved in physical and chemical changes.	IAPS 25 (Chemistry of Materials)	25 Not Assessed
P.8.A.6 Students know matter is made up of tiny particles called atoms.	IAPS 16, 17, 50 (Chemistry of Materials) (Water)	16 [IB] B7-11 17 AQ6 UC; [IB] B9-10 50 AQ5 UC
P.8.A.7 Students know the characteristics of electrons, protons, and neutrons.	IAPS 16, 17, 50 (Chemistry of Materials) (Water)	16 [IB] B7-11 17 AQ6 UC; [IB] B9-10 50 AQ5 UC
P.8.A.8 Students know substances containing only one kind of atom are elements which cannot be broken into smaller pieces by normal laboratory processes.	IAPS 15, 16 (Chemistry of Materials)	15 AQ5 UC 16 [IB] B7-11
Forces and Motion (Physical Science Unifying Concept B)	<i>The laws of motion are used to describe the effects of forces on the movement of objects.</i>	
<i>P.8.B Students understand that position and motion of an object result from the net effect of the different forces acting on it.</i>		
P.8.B.1 Students know the effect of balanced and unbalanced forces on an object's motion.	IAPS 74, 75, 81 (Force and Motion)	74 Proc DI; [IB] E1-2, 5-6 75 AQ2 UC, [IB] E2, 4-6, 7, 14 81 [IB] E8
P.8.B.2 Students know electric currents can produce magnetic forces and magnets can cause electric currents.	Not addressed	

P.8.B.3 Students know every object exerts gravitational force on every other object, and the magnitude of this force depends on the mass of the objects and their distance from one another.	IAES 95, 96 (Exploring Space)	95 AQ4 AD; [IB] G10, 12 96 [IB] G 4, 7, 19
Energy (Physical Science Unifying Concept C)	<i>The total energy of the universe is constant. All events involve the transfer of energy in one form or another. In all energy transfers, the overall effect is that the energy is spread out uniformly.</i>	
<i>P.8.C Students understand transfer of energy.</i>		
P.8.C.1 Students know visible light is a narrow band within the electromagnetic spectrum.	Not addressed	
P.8.C.2 Students know vibrations (e.g., sounds, earthquakes) move at different speeds in different materials, have different wavelengths, and set up wave-like disturbances that spread away from the source uniformly.	Not addressed	
P.8.C.3 Students know physical, chemical, and nuclear changes involve a transfer of energy.	IAPS 56, 58, 66 (Energy)	56 Not assessed 58 AQ2 UC, [IB] D4-5, D8 66 Not assessed
P.8.C.4 Students know energy cannot be created or destroyed, in a chemical or Physical reaction, but only changed from one form to another.	IAPS 57 (Energy)	57 [IB] D19-20
P.8.C.5 Students know heat energy flows from warmer materials or regions to cooler ones through conduction, convection, and radiation.	IAPS 58, 61, 62 (Energy)	58 AQ2 UC, [IB] D4-5, D8 61 [IB] D10 62 [IB] D6, D19, D20

P.8.C.6 Students know electrical circuits provide a means of transferring electrical energy to produce heat, light, sound, and chemical changes.	IAPS 65, 66 (Energy)	65 Proc DI; D13 66 Proc DI; [IB] D16
LIFE SCIENCE		
Heredity (Life Science Unifying Concept A) — <i>Students understand the role of genetic information in the continuation of a species.</i>		
L.8.A.1 Students know heredity is the passage of genetic instructions from one generation to the next generation.	IALS 63, 65, 66 (Genetics)	63 Not assessed 65 AQ8: UC 66 AQ3: AD, AQ4: AD; [IB] D23-26
L.8.A.2 Students know changes in genes of eggs and sperm can cause changes in inherited characteristics.	IALS 63, (Genetics) IALS 96, 97 (Evolution)	63 [IB] D10 96 Proc OD; AQ2a AD 97 AQ2 S1
L.8.A.3 Students know organisms can be bred for specific characteristics.	IALS 60, 61, 65 (Genetics)	60 Not assessed 61 Not assessed 65 AQ8 UC
L.8.A.4 Students know some characteristics of an organism are the result of a combination of interaction with the environment and genetic information.	IALS 55, 64, 65 (Genetics)	55 Not assessed 64 Proc DI; AQ1 AD; [IB] D27 65 Not assessed
Structure of Life (Life Science Unifying Concept B) — <i>Students understand that living things are composed of cells, which are specialized in multicellular organisms to perform a variety of life functions.</i>		
L.8.B.1 Students know all organisms are composed of cells, which are the fundamental units of life.	IALS 38, 39, 42 (Cell Biology and Disease)	38 Not assessed 39 Proc OD; AQ2 AD, DI; [IB] C26-27 42 Not assessed
L.8.B.2 Students know cells grow, divide, and take in nutrients which they use to	IALS 15 (Body Works)	15 AQ3 UC; [IB] B6, B32 42 [IB] D3, D7,

provide energy for cell functions.	IALS 42 (Cell Biology and Disease)	D16-10, C23
L.8.B.3 Students know some organisms are made of just one cell and that multicellular organisms can consist of thousands to millions of cells working together..	IALS 38, 45 (Cell Biology and Disease)	38 Not assessed 45 AQ5 UC, [IB] C2, C4, C29
L.8.B.4 Students know cells combine to form tissues that combine to form organs and organ systems that are specialized to perform life functions.	IALS 12, 15, 42 (Cell Biology and Disease)	12 [IB] B12, B13, B15 15 [IB] B2, B6, B33 42 [IB] D3, D7, D6-10, C23
L.8.B.5 Students know disease can result from defects in body systems or from damage caused by infection.	IALS 31, 37 (Cell Biology and Disease)	31 [IB] C8 37 Act UC, [IB] C14
Organisms and Their Environment (Life Science Unifying Concept C) — <i>Students understand how living and non-living components of ecosystems interact.</i>		
L.8.C.1 Students know how matter and energy are transferred through food webs in an ecosystem.	IALS 78, 81 (Ecology)	78 [IB] E8-11 81 Proc UC; [IB] E14, E17
L.8.C.2 Students know how to characterize organisms in any ecosystem by their function	IALS 78, 80, 81 (Ecology)	78 [IB] E8-11 80 [IB] E26 81 Proc DI, AQ5 UC; [IB] E14, E17
L.8.C.3 Students will evaluate how changes in environments can be beneficial or harmful.	IALS 72, 83, 87 (Ecology)	72 AQ6 ET; [IB] E25, E27 83 [IB] E34-35 87 AQ1 ET

L.8.C.4 Students know inter-related factors affect the number and type of organisms an ecosystem can support.	IALS 72, 83, 85 (Ecology)	72 AQ6 ET; [IB] E25, E27 83 [IB] E39-40 85 AQ1a AD, AQ1b AD, AQ1c UC; [IB] E20-24
Diversity of Life (Life Science Unifying Concept D) — <i>Students understand that life forms change over time, contributing to the variety of organisms found on the Earth.</i>		
L.8.D.1 Students know species can be identified and classified based upon their characteristics.	IALS 75, 76, 89 (Ecology) (Evolution)	75 [IB] E4, E36 76 AQ 1-2 89 AQ4 ET, [IB] F1-4, F29
L.8.D.2 Students know fossils provide evidence of how life and environmental conditions have changed throughout geologic time.	IALS 90-91, 93-94, 99 (Evolution)	90 Not assessed 91 Proc 10a AD, Proc 11a AD AQ3 UC 93 AQ3 UC [IB] F6 94 AQ3 UC, [IB] F16, F26 97 AQ2 CM, [IB] F15, F22-25, F27-28, F30-31 99 AQ2 UC
L.8.D.3 Students know an organism’s behavior is based on both experience and on the species’ evolutionary history.	IALS 95, 96, 97 (Evolution)	95 [IB] F18-21 96 AQ2 DCI 97 Not assessed
EARTH AND SPACE SCIENCES		
Atmospheric Processes and the Water Cycle (Earth and Space Science Unifying Concept A) – <i>Students understand the relationship between the Earth’s atmosphere, topography, weather and climate.</i>		

<p>E.8.A.1</p> <p>Students know seasons are caused by variations in the amounts of the Sun’s energy reaching Earth’s surface due to the planet’s axial tilt.</p>	<p>IAES 75-77, 80, 82</p> <p>(Earth in Space)</p>	<p>76 AQ4 AD</p> <p>77 [IB] F10-12</p> <p>80 [IB] F4-9</p> <p>82 AQ5 UC, [IB] F5, F8</p>
<p>E.8.A.2</p> <p>Students know how the processes involved in the water cycle affect climatic patterns.</p>	<p>IAES 60, 62</p> <p>(Weather and Atmosphere)</p>	<p>60 [IB] E3, E8-9</p> <p>62 AQ4 SI; [IB] E3, 9, 11, 15</p>
<p>E.8.A.3</p> <p>Students know the properties that make water an essential component of the earth system.</p>	<p>IAES 53, 57, 66</p> <p>(Weather and Atmosphere)</p>	<p>53 [IB] E2, E7</p> <p>57 [IB] E10</p> <p>66 AQ2 UC; [IB] E12-13</p>
<p>E.8.A.4</p> <p>Students understand the composition of Earth’s atmosphere, emphasizing the role of the atmosphere in Earth’s weather and climate.</p>	<p>IAES 64-66</p> <p>(Weather and Atmosphere)</p>	<p>64[IB] E4-5</p> <p>65 Not assessed</p> <p>66 AQ2 UC</p>
<p>E.8.A.5</p> <p>Students know the difference between local weather and regional climate.</p>	<p>IAES 50-52, 66, 68-70</p> <p>(Weather and Atmosphere)</p>	<p>50 [IB] E16</p> <p>51 Not assessed</p> <p>52 Not assessed</p> <p>66 [IB] E2, E7</p> <p>68 Not assessed</p> <p>69 [IB] E14</p> <p>70 [IB] E12-13</p>
<p>E.8.A.6</p> <p>Students know topography and patterns of global and local atmospheric movement influence local weather which occurs primarily in the lower atmosphere.</p>	<p>IAES 54-55, 66</p> <p>(Weather and Atmosphere)</p>	<p>54 [IB] E8, E10</p> <p>55 Proc DI; [IB] E4-5</p> <p>66 [IB] E2, E7</p>
<p>Solar System and the Universe (Earth and Space Science Unifying Concept B) —<i>Students understand characteristics of our solar system that is part of the Milky Way</i></p>		

<i>galaxy.</i>		
E.8.B.1 Students know the universe contains many billions of galaxies, and each galaxy contains many billions of stars.	IAES 86, 88 (Exploring the Solar System)	86 Not assessed 88 Not assessed
E.8.B.2 Students know the solar system includes a great variety of planetary moons, asteroids, and comets.	IAES 88, 90-91 (Exploring the Solar System)	88 AQ2 UC; [IB] G3, G13, G17 90 [IB] G9, 16, 18 91 AQ4 UC
E.8.B.3 Students know characteristics of the planets in our solar system	IAES 84, 89-91 (Exploring the Solar System)	84 Proc UC; [IB] G6, G13-14 89 Proc RE; [IB] F13, G17 90 [IB] G18 91 Q4 UC; [IB] G19
E.8.B.4 Students know Earth is part of a solar system located within the Milky Way Galaxy.	IAES 89 (Exploring the Solar System)	89 Proc RE
E.8.B.5 Students know the Sun is many thousands of times closer to Earth than any other star, and billions of times closer than the far end of the Milky Way Galaxy.	IAES 92 (Exploring the Solar System)	92 Not assessed
E.8.B.6 Students know the Sun is a medium-sized star located in the Milky Way Galaxy, part of which can be seen as a growing band of light spanning the clear night sky.	IAES 89, 92 (Exploring the Solar System)	89 Proc RE 92 Not assessed
E.8.B.7 Students know regular and predictable motions of Earth around the Sun and the Moon around the Earth explain such	IAES 73, 74, 78-79 (Earth in Space)	73 AQ1 UC 74 [IB] F1-2

phenomena as the day, the year, phases of the Moon, and eclipses.		78 AQ2 UC 79 IB] F2-4, F7-11, F16, F35
Earth Composition and Structures (Earth and Space Science Unifying Concept C) — <i>Students understand that the Earth is composed of interrelated systems of rocks, water, air, and life.</i>		
E.8.C.1 Students know sedimentary rocks and fossils provide evidence for changing environments and the constancy of geologic processes.	IAES 40 (Plate Tectonics) IALS 90-91, 93 (Evolution)	40 [IB] D9 90 AQ3 SI; [IB] F5 91 AQ3 UC; [IB] F12-14 93 [IB] F8-10
E.8.C.2 Students know rocks at Earth’s surface weather, forming sediments that are buried, then compacted, heated and often recrystallized into new rock.	IAES 19-22 (Rocks and Minerals)	19 [IB] B4, 6 20 Not assessed 21 Not assessed 22 AQ7 UC; [IB] B5, 11
E.8.C.3 Students know Earth is composed of a crust (both continental and oceanic); hot convecting mantle; and a dense, metallic core.	IAES 38 (Plate Tectonics)	38 AQ5 UC; [IB] D1, D15
E.8.C.4 Students know the very slow movement of large crustal plates result in geological events.	IAES 37, 44-45, 47-48 (Plate Tectonics)	37 Not assessed 44 [IB] D4, 10 45 [IB] D3, 8, 11, 12, 16 47 [IB] D14 48 AQ4 UC
E.8.C.5 Students know how geologic processes account for state and regional topography.	Local Issue	
E.8.C.6 Students know minerals have different	IAES 15-17	15 [IB] B2-3 16 AQ3 RE; [IB]

properties and different distributions according to how they form.	(Rocks and Minerals)	B7-10 17 Not assessed
E.8.C.7 Students know the characteristics, abundances, and location of renewable and nonrenewable resources found in Nevada.	Local Issue	
E.8.C.8 Students know soils have properties, such as color, texture, and water retention, and provide nutrients for life according to how they form.	IAES 3-6 (Studying Soils Scientifically)	3 [IB] A2 4 [IB] A7-8 5 AQ5 UC; [IB] A3-4, 9 6 AQ3 AD
THE NATURE OF SCIENCE		
Scientific Inquiry (Nature of Science Unifying Concept A) — <i>Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.</i>		
N.8.A.1 Students know how to identify and critically evaluate information in data, tables, and graphs.	IAPS 12, 22, 40... IAES 27, 51-52... IALS 3, 14, 17, 19...	12 AQ5 ET; [IB] B1 22 Proc OD 27 Proc OD; [IB] C8 51 Proc OD 3 AQ1 ET, AQ4 UC, [IB] A3, A7, A17 14 [IB] B16
N.8.A.2 Students know how to critically evaluate information to distinguish between fact and opinion..	IAPS 2, 6-11... IAES 2, 6, 7... IALS 2, 3, 10...	2 AQ2 UC; [IB] A11-14 6 AQ1 AD [IB] A3, A4

		<p>2 AQ3 RE</p> <p>6 AQ3 AD, [IB] A8-9</p> <p>2 AQ2b RE</p> <p>3 AQ1 RE, AQ4 UC</p> <p>10 AQ3 RE, ET</p>
<p>N.8.A.3</p> <p>Students know different explanations can often be given for the same evidence.</p>	<p>IAPS 3, 10, 38...</p> <p>IAES 16, 20, 32...</p> <p>IALS 14, 17, 48</p>	<p>3 Proc DI; [IB] A16</p> <p>10 AQ1 AD, Proc DI; [IB] A10-12</p> <p>16 AQ3 RE; [IB] B7-10</p> <p>20 Proc GI; [IB] B6</p> <p>14 [IB] B16</p> <p>17 [IB] B1, B8, B21</p>
<p>N.8.A.4</p> <p>Students know how to design and conduct a controlled experiment.</p>	<p>IAPS 3, 10...</p> <p>IAES 16, 20...</p> <p>IALS 14, 17...</p>	<p>3 Proc DI; [IB] A16</p> <p>10 AQ1 AD, Proc DI; [IB] A10-12</p> <p>16 AQ3 RE; [IB] B7-10</p> <p>20 Proc GI; [IB] B6</p> <p>14 [IB] B16</p> <p>17 [IB] B1, B8, B21</p>
<p>N.8.A.5</p> <p>Students know how to use appropriate technology and laboratory procedures safely for observing, measuring, recording, and analyzing data.</p>	<p>IAPS 6-11...</p> <p>IAES 3, 4, 6, 10...</p> <p>IALS 14, 17, 19...</p>	<p>6 AQ1 AD [IB] A3, A4</p> <p>7 AQ 1 AD, AQ1 UC, [IB] A5, A7, A8</p>

		<p>3 [IB] A2</p> <p>6 AQ3 AD, [IB] A8-9</p> <p>14 [IB] B16</p> <p>17 [IB] B1, B8, B21</p>
<p>N.8.A.6</p> <p>Students know scientific inquiry includes evaluating results of scientific investigations, experiments, observations, theoretical and mathematical models, and explanations proposed by other scientists.</p>	<p>IAPS 2, 6-11...</p> <p>IAES 2, 6, 7...</p> <p>IALS 2-5...</p>	<p>2 AQ2 UC</p> <p>6 AQ1 AD [IB] A3, A4</p> <p>2 AQ3 RE</p> <p>6 AQ3 AD, [IB] A8-9</p> <p>2 AQ2b ET, AQ4 UC, AQ5 ET</p> <p>5 [IB] A11-14</p>
<p>N.8.A.7</p> <p>Students know there are multiple methods for organizing items and information.</p>	<p>IAPS 12, 14, 22...</p> <p>IAES 24, 27, 31...</p>	<p>12 AQ5 ET; [IB] B1</p> <p>14 [IB] B4-6</p> <p>22 Proc OD</p> <p>27 Proc OD; [IB] C8</p>
<p>Science, Technology, and Society (Nature of Science Unifying Concept B) —<i>Students understand the interactions of science and society in an ever-changing world.</i></p>		
<p>N.8.B.1</p> <p>Students understand that consequences of technologies can cause resource depletion and environmental degradation, but technology can also increase resource availability, mitigate environmental degradation and make new resources economical.</p>	<p>IALS 60, 94</p> <p>IAPS 80</p> <p>IAES 40-42</p>	<p>60 AQ1 DCI [IB] D2</p> <p>94 AQ3 UC, [IB] F16, F26</p> <p>80 AQ2; [IB] E2, 3, 11, 20</p> <p>41 AQ3 UC; [IB] D2</p> <p>42 [IB] D4, 6, 8-10, 16</p>

<p>N.8.B.2</p> <p>Students know scientific knowledge is revised through a process of incorporating new evidence gained through on-going investigation and collaborative discussion.</p>	<p>IALS 60, 94</p> <p>IAPS 80</p> <p>IAES 40-42</p>	<p>60 AQ1 DCI [IB] D2</p> <p>94 AQ3 UC, [IB] F16, F26</p> <p>80 AQ2; [IB] E2, 3, 11, 20</p> <p>41 AQ3 UC; [IB] D2</p> <p>42 [IB] D4, 6, 8-10, 16</p>
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