

	A	B	C	D	E	F
1	<b>Quincy Public School District #172</b>					
2	<b>Science Curriculum</b>					
3						
4	<b>Grade Level</b>	<b>Units of Study</b>	<b>NGSS Alignment</b>	<b>Instructional Materials/Resources</b>	<b>Common Assessments</b>	<b>Defined Stem</b>
5	<b>Kindergarten</b>					
6	Q. 1	What is Science? Launching	L.K.5a, SP1, SP1, SP6, SP7, K-2-ETS1-2, SP1, SP8, K-LS1-1, SP8	Better Lessons-Joyce Baumann, Unit 1, Lesson 1, Lesson 2, Lesson 3, Lesson 4; *Kim Ramsey: Lesson 6; *Sesame Street: Nature Walk; *Sid the Science Kid: The Magnification Investigation; *Kim Ramsey Lesson 5; Defined Stem: Scotty STEM	What is Science Independent Practice Sort; What does a Scientist Do?; My Science Tools Activity Sheet	
7	Q. 2	Forces and Interactions: Pushes and Pulls	K-PS2-1, K-PS2-2, PS2.A, PS2.B, PS3.C, ETS1.A	Defined Stem-Pushes and Pulls, district provided materials for the kindergarten motion unit (13 lessons) Better Lesson-Joyce Baumann, Unit 4	Pushes & Pulls performance Assessment (Defined STEM) *Illustration w/rubric (provided); Turn, Turn, Turn-A Simple Assessment-Joyce Baumann-Lesson 9-The Ball to Change Direction (should be able to be done with guidance & support)	Pushes and Pulls
8	Q. 3	Interdependent Relationships in Ecosystems: Animals, Plants	K-LS1-1, K-ESS2-2, K-ESS3-1, K-ESS3-3, LS1.C, ESS2.E, ESS3.A, ESS3.C, ETS1.B	Current animal unit, Defined Stem-Zoo Animals; Better Lessons: Joyce Baumann Unit 7 and 8; Kasie Hamman Unit 4 Lesson 5	*Assessment Activity 1-Parts of the Plant; *Assessment Activity 2-Life Cycle of the Plant; *Zoo Animals performance Assessment (Defined STEM); *Illustration w/Rubric Provided	Zoo Animals
9	Q. 4	Weather and Climate	K-PS3-1, K-PS3-2, K-ESS2-1, K-ESS3-2, PS3.B, ESS2.D, ESS3.B, ETS1.A	Current weather unit, Defined Stem-Weather Reporter; Effect of sunlight on the earth's surface and reducing warming effects (Better Lesson-Joyce Baumann, Unit 10-Lessons 1, 2, 7, 8, and 9), Purpose of forecasting weather (calendar and weather forecast information), Call local weather station and/or enter poster/drawing contest, Better Lesson-Kasie Hamman, Unit 9 lessons 1-8	*Weather Reporter; * Guess the Season; * Storm Preparedness Poster	Weather Reporter
10	<b>Grade Level: 1</b>					

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11	Q. 1	What is Science? Launching	SP1, SP2, SP3, SP4, SP5, SP6, SP7, SP8, 1-LS1-1, 1-LS1-2, 1-LS3-1, XC-SF-LE-1, XC-P-LE-1	What is a scientist? By Barbara Lehr (available for free online @ betterlesson.com); Mealworms; Hand Lenses 1 per student; 1 Science Journal; Seashell or rock varities; National Geographic Young Explorere magazine family lessons May 2012 (provided); What do you do with a tail like that? Steve Jenkins; Accurate plastic animals or preserved specimens; Petridishes or little tuperware containers; popsicle sticks; Clay or Play-doh; Toothpicks; Cardboard (about 4x6); Other reproducibles provided in Unit in Betterlesson.com	PBA-Students create 3D model of an animal they chose and label external parts of an animal; Orally communicate one external part and describe how it helps the animal meet it's needs	
12	Q. 2	Waves: Light and Sound	1-PS4-1, 1-PS4-2, 1-PS4-3, 1-PS4-4, PS4.A, PS4.B, PS4.C	*Defined Stem-Drums and Vibrations (Gr. 1)	Performance Task for Drums Vibrations: Products-illustration, poster, model, video, journal prompts. Robrics included.	Drums and Vibrations
13	Q. 3	Structure, Function, and Informational Processing	1-LS1-1, 1-LS1-2, 1-LS3-1, SL1.A, LS1.B, LS1.D, LS3.A, LS3.B	*Defined Stem-Animal Adaptations	*Performance Task-Products-Brochure, Research Map, Model, Journal Prompt (From Defined Stem: Animal Adaptations)	Animal Adaptation
14	Q. 4	Space Systems: Patterns and Cycles	1-ESS1-1, 1-ESS1-2, ESS1.A, ESS1.B			Astronomer
15	<b>Grade Level: 2</b>					
16	Q. 1	What is Science? Launching	SP1, SP2, SP3, SP4, SP5, SP-8, 2-PS1-3, 2 PS1-4, 2-ESS2-1, K-2-ETS1-1, 2-PS1-1, 2-PS1-2	Veronique Paquette, Better Lessons Unit 1- Inquiry in Science	Is it a system? (Lesson 6); Temm me what you learned... (Lesson 12); What is this a picture of? (Lesson 13)	
17	Q. 2	Structure and Properties of Matter	SP3, SP4, SP6, SP7, 2-PS-1, 2-PS-2; 2-PS-3, 2-PS-4	Structures and Properties of Matter ( <a href="http://www.mccracken.kyschools.us/downloads/2%20ONGSS%20UNIT%20Matter.pdf">http://www.mccracken.kyschools.us/downloads/2%20ONGSS%20UNIT%20Matter.pdf</a> )	2-PS1-1, 2pPS1-2, 2-PS1-3, 2-PS1-4; Lesson 18-Unit Test	Housing Culture

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18	Q. 3	Interdependent Relationships in Ecosystems	SP2, SP4, SP5, SP6, SP7, SP8, 2-LS4-1, 2-LS4-2	<a href="https://www.teachengineering.org/lessons/view/duk_sunflower_mary_less">https://www.teachengineering.org/lessons/view/duk_sunflower_mary_less</a> ; <a href="http://www.reachoutmichigan.org/funexperiments/agesubject/lessons/sunlight.html">http://www.reachoutmichigan.org/funexperiments/agesubject/lessons/sunlight.html</a> ; <a href="https://funtasticunitstudies.files.wordpress.com/2011/05/plant-chapter.pdf">https://funtasticunitstudies.files.wordpress.com/2011/05/plant-chapter.pdf</a> ; <a href="http://betterlesson.com/lesson/627685/celebrity-experiment">http://betterlesson.com/lesson/627685/celebrity-experiment</a> ; Continue to use Lessons #1-7 from 2nd grade unit Habitats Insights; <a href="http://betterlesson.com/lesson/628121/pollination-power">http://betterlesson.com/lesson/628121/pollination-power</a> ; Lessons 7-9 starting with: <a href="http://betterlesson.com/lesson/632264/seed-dispersal">http://betterlesson.com/lesson/632264/seed-dispersal</a> <a href="http://betterlesson.com/lesson/635861/engineering-super-seeds-part-1">http://betterlesson.com/lesson/635861/engineering-super-seeds-part-1</a> <a href="http://betterlesson.com/lesson/636042/engineering-super-seeds-part-2">http://betterlesson.com/lesson/636042/engineering-super-seeds-part-2</a> ; The wonderful Biodiversity of Life (whole unit) found at <a href="http://betterlesson.com/lesson/633375/setting-up-an-interactive-science-notebook">http://betterlesson.com/lesson/633375/setting-up-an-interactive-science-notebook</a>	Plants- 2-LS2-1; Plant notebooks/Rubric; Pollination/seed dispersal- 2-LS2-2 Vanilla Pollinator Rubric <a href="http://betterlesson.com/lesson/resource/3300686/vanilla-pollinator-rubric?from=lessonsection_narrative">http://betterlesson.com/lesson/resource/3300686/vanilla-pollinator-rubric?from=lessonsection_narrative</a> ) and for seed dispersal use <a href="https://docs.google.com/forms/d/e/1FAIpQLSctHPsaWKwJ_2mKktFn8DFmUH3JZsrKcVrIldb8Ony_YAqFA/viewform?c=0&amp;w=1">https://docs.google.com/forms/d/e/1FAIpQLSctHPsaWKwJ_2mKktFn8DFmUH3JZsrKcVrIldb8Ony_YAqFA/viewform?c=0&amp;w=1</a> ; 2-LS24-1 Biodiversity Big Ideas Work Page (Unit 4-Lesson 17)	Honeybee's
19	Q. 4	Earth's System: Processes that Shape the Earth	SP1-8, 2-ESS1-1, 2-ESS2-1, 2-ESS2-2, 2-ESS2-3	1. Jeri Faber of Better Lesson-Water and Landforms Unit 6 all 10 lessons <a href="http://betterlesson.com/lesson/635801/where-is-water-found-on-earth">http://betterlesson.com/lesson/635801/where-is-water-found-on-earth</a> 2. Jeri Faber of Better Lesson-Earth's Changes-Unit 7 all 21 lessons	2-ESS2-1 Comparing Erosion Design Solutions <a href="http://betterlesson.com/lesson/resource/3238879/comparing-erosion-solutions-student-sheet?from=section_resources_title">http://betterlesson.com/lesson/resource/3238879/comparing-erosion-solutions-student-sheet?from=section_resources_title</a> 2-ESS2-2 Making a Map Grading Sheet at <a href="http://betterlesson.com/lesson/resource/3218502/making-a-map-grading-sheet?from=section_resources_title">http://betterlesson.com/lesson/resource/3218502/making-a-map-grading-sheet?from=section_resources_title</a> ; 2-ESS1-1 Journaling Earth's Changes--Creating a Multimedia Presentation using Google slides <a href="http://betterlesson.com/lesson/640357/earth-s-changes-creating-a-multimedia-presentation-part-3">http://betterlesson.com/lesson/640357/earth-s-changes-creating-a-multimedia-presentation-part-3</a>	Volcanology Contest
20	<b>Grade Level: 3</b>					
21	Q. 1	Forces and Interactions	3-PS2-1, 3-PS2-2, 3-PS2-3, 3-PS2-4, PS2.A, PS2.B	Better Lessons (Marybelle Espin)-9 lessons; Unit 9-Magnets an Ancient and Modern Marvel, 6 lessons (including assesment); Unit 13-Forces, 3 lessons; Defined Stem (optional) - Skateboard Park Advocate	Magnet Unit Assessment; My Magnetic Influenced or Powered Invention Assessment	Data Analyst (Baseball Bat Project)

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22	Q. 2	Interdependent Relationships in Ecosystems:Environmental impacts of organisms	3-LS2-1, 3-LS4-1, 3-LS4-3, 3-LS4-4, LS2.C, LS3.D, LS4.A, LS4.C, LS4.D	Better Lessons (Marybelle Espin)-26 lessons; Unit 8-Vertebrate Classification, 6 lessons; Unit 10-Animal Adaptations, 5 lessons; Unit 11-Fossils, Evidence of Organisms That Lived Long Ago, 8 lessons (including assessment); Unit 17-Teamwork, the Animal Survival Guide, 7 lessons	Fossils, Evidence of Organisms That Lived Long Ago Unit Assessment	Dinosaur Hunter: Fossils and the Past
23	Q. 3	Inheritance and Variation of Traits: Life Cycles and Traits	3-LS1-1, 3-LS3-1, 3-LS3-2, 3-LS4-2, LS1.B, LS3.A, LS3.B, LS4.B	Better Lessons (Marybelle Espin)-31 lessons; Unit 1-Classifying Seashells, 2 lessons; Unit 2-Vetebrates and Invertebrates, 4 lessons; Unit 3-Vertebrates, 2 lessons; Unit 4-Bats, 3 lessons; Unit 12-Animal Life Cycles, 8 lessons (including assessment); Unit 15-Elephants an Adaptation Project, 7 lessons; Defined Stem (optional) - Oklahoma Farm Bureau Leader: The Dust Bowl of the 1930's; Organic Farming	Animal Life Cycles Unit Assessment; Ladybugs Unit Assessment	Naturalist: Monarch Butterflies
24	Q. 4	Weather and Climate	3-ESS2-a, e-ESS2-2, 3-ESS3-1, ESS2.C, ESS3.B	Better Lessons (Marybelle Espin)-17 lessons; Unit 5-Extreme Weather/Hurricanes, 5 lessons; Unit 6-Weather Instruments, 5 lessons (including assessment); Unit 7-Tornadoes, 4 lessons; Unit 16-Weather Data, 3 lessons; Defined Stem (optional) -Market Researcher: US Regions; Oklahoma Farm Bureau Leader: The Dust Bowl of the 1930's	Weather Instruments Unit Assessment; Hurricane Unit Assessment	Weather Reporter: Reducing the Impact of Severe Weather
25	<b>Grade Level: 4</b>					
26	Q. 1	Launching		BetterLesson.com lessons, AIMS "It's Simply Marbleous"	Defining Dissolving Lab Report	
27	Q. 1	Energy	4-PS3-1, 4-PS3-2, 4-PS3-3, 4-PS3-4, 4-ESS3-1, PS3.A, PS3.B, PS3.C, PS3.D, ESS3.A, ETS1.A, 4-PS4-1, 4-PS4-3, PS4.A, PS4.C, ETS1.C	Roller Coaster Interact, "Center for Learning in Action" Energy Unit, Electircal Unit (of past Magnetism and Electricity Unit)	Energy Conversion Project	Wind Energy Systems Installer: Energy Transformations
28	Q. 2	Electricity and Waves	4-ESS1-1, 4-ESS2-1, 4-ESS2-1, 4-ESS2-2, 4-ESS3-2, ESS1.C, ESS2.A, ESS2.B, ESS2.E, ESS3.B, ETS1.B	Center for Learning in Action Waves Unit, Electricity portion of magnetism and electricity.	Electricity common assessments	
29	Q. 3	Rocks and Weathering, Earth and Human Activity	4-ESS1-1, 4-ESS2-1, 4-ESS2-1, 4-ESS2-2, 4-ESS3-2, ESS1.C, ESS2.A, ESS2.B, ESS2.E, ESS3.B, ETS1.B	Earth Materials Unit, SEPUP 6th Unit C Defined Stem - Industrial Development Geologist: Rivers & Sediments	Rock and Mineral assessments, SEPUP	Industrial Development Geologist: Rivers & Sediments, Emergency Services Director: Earthquakes
30	Q. 4	Animals and Plants Structures	4-PS4-2, 4-LS1-1, 4-LS1-2, PS4.B, LS1.A, LS1.D	5th Grade Human Body Systems Defined Stem - Dietitian,		Dietitian
31						
32	<b>Grade Level: 5</b>					
33	Q. 1	Launching		BetterLesson.com lessons, Inquiry in Action "Defining Dissolving"	It's Simply Marbleous Lab Report	
34	Q. 1	Matter and Its Interactions	5-PS1-1, 5-PS1-2, 5-PS1-3, 5-PS1-4, PS1.A, PS1.B	Microworlds	Matter Unit Assessment	

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35	Q. 2	Ecosystems and Webs	5-PS3-1, 5-LS1-1, 5-LS2-1, PS3.D, LS1.C, LS2.A, LS2.B	Food Chains and Webs; Funkenbusch Biome Unit, Defined Stem - Forester	Food Chains and Webs Assessment	Forester
36	Q. 3	Earth's Major Systems	5-ESS2-1, 5-ESS2-2, 5-ESS3-1, ESS2.A, ESS2.C, ESS3.C	Peterson's Pond Interact Unit, Defined Stem - Planning Commission: Urban Heat Islands		Planning Commission: Urban Heat Islands
37	Q. 4	Our Sky: Earth and Space Systems	5-ESS2-1, 5-ESS1-1, 5-ESS1-2, PS2.B, ESS1.A, ESS1.B	SEPUP (73: Measuring Shadows, Measuring), Defined Stem - Online Space Weather Business		Online Space Weather Business
38	<b>Grade Level: 6</b>					
39	Q. 1	Scientific Method/Intro to earth science	MS-Ess2-2, MS-Ess3-4,	Sepup Unit A Activities: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 Defined STEM: Crop Doctor Gizmo:	Lab Notebook Pre-test, Unit A Post-test, Lab Notebooks, Defined STEM	Crop Doctor
40	Q. 2	History of Earth	MS-ESS1-4, MS-ESS2-1, MS-ESS2-2, MS-ESS2-3, MS-ESS3.A, MS-ess3.b, MS-ESS3.2,	Unit B and D Activities: 12, 13, 14, 15, 18/19, 20, 22, *23, 38 21-take a step further with rock strata, 39, 40, 41, 42, 44, 45, 46, 47-48, 49 with modifications for human impact, *7th grade activity 92 and 93 for rock strata Defined STEM: Gizmo:	Unit B Post-test, Lab Notebook Mid-point assessment, Lab Notebooks, Defined STEM	
41	Q. 3	Weather and Climate	MS-ESS2-4, MS-ESS2-5, MS-ESS3-5, MS-ESS3-1, MS-ESS2-6, MS-Ess3-3	Unit E Activities: 50, 53, 54, 55, 56, 57, 58, 59, 60, 61* 62, 63, 64, 65, 66, 68, 69, 70 Defined STEM: Weather Scientist HOLES: Affect of altitude on temperature, landforms affecting weather, Coriolis Effect Gizmo	Lab Notebook End-point Assessment Unit C Post-test, Lab Notebooks, Defined STEM	Weather Scientist
42	Q. 4	Space Systems	MS-ESS1-1, MS-ESS2-6, MS-ESS1-2, MS-ESS1-3	Unit F and G Activities: 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96 HOLES: Eclipse, Galaxy Gizmo: Eclipse Lesson,	Lab Notebook End-of-Year Assessment, Unit D Post-test, Lab Notebooks, Defined STEM	
43	<b>Grade Level: 7</b>					
44	Q. 1	Intro to Science	MSLS1-1	Glencoe, Sepup, Globe-Fearon	Unit A Test, Lab Notebook, Safety Quiz, Project, SLO GOAL PRE-TEST	
45	Q. 1	Microlife	MS-LS1-1, 1-2, 1-3, 1-8	Sepup, Globe-Fearon	Unit B Test, Lab Notebook, Cell Project	
46	Q. 2	Genetics	MS-LS-1-4, 1-5, 3-1, 3-2, 4-5	Sepup, Globe-Fearon	Unit C Test, Lab Notebook, SLO GOAL MID TEST	
47	Q. 2	Evolution	MS-LS-4-1, 4-2, 4-3, 4-4, 4-6	Sepup, Globe-Fearon	Unit D Test, Lab Notebook	
48	Q. 3	Plants/Animals	MS-LS-1-3, 2-2	Glencoe, Sepup, Globe-Fearon	Unit E Test, Plants Test, Lab Notebook, Frog Dissection, SLO GOAL POST TEST	App Developer: Athletics And Body Systems
49	Q. 4	Ecology	MS-LS-1-6, 1-7, 2-1, 2-2, 2-3, 2-4, 2-5	Mark Twain Media Life Science	Unit F Test, Lab Notebook	
50	<b>Grade Level: 8</b>					
51	Q. 1	Studying Materials Scientifically	MS-PS1-3	SEPUP Glencoe Physical Science Textbook Physical Science Lab Textbook	Science Safety Quiz Lab Book Assessment A1-A6 Lab Book Assessment A7-A10 Unit A Vocabulary Test Studying Materials Scientifically Unit A Test	Matter: Best Materials for a drink container
52	Q. 2	The Chemistry of Materials	MS-PS1-1, MS-PS1-2, MS-PS1-3, MS-PS1-4, MS-PS1-5, MS-PS1-6	SEPUP Glencoe Physical Science Textbook Physical Science Lab Textbook	Life Cycle of a Container Poster Lab Book Assessment B12-B16 Lab Book Assessment B17-B23 Lab Book Assessment B24-B25 Vocabulary Quiz B12-B20	

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53	Q. 3	Energy	MS-PS3-1, MS-PS3-2, MS-PS3-5, MS-PS3-3, MS-PS3-4, MS-PS1-2, MS-PS1-6, Ms-PS3-1, MS-PS3-3, MS-PS2-3	SEPUP Glencoe Physical Science Textbook Physical Science Lab Textbook	Lab Book Assessment D56-D60 Lab Book Assessment D61-D67 Energy Quiz D53-D56 Unit D Energy Final Test	
54	Q. 4	Force and Motion	MS-PS2-1, MS-PS2-2, MS-PS2-4, MS-PS2-5	SEPUP Glencoe Physical Science Textbook Physical Science Lab Textbook	Roller Coaster Assessment Measuring Speed/Distance/Time Quiz Measuring Force/Mass/Acceleration Quiz Lab Book Assessment E79-E83 Unit E Force and Motion Test	
55	Q. 4	Waves and Their Applications in Technologies for information Transfer	MS-PS4-3, MS-PS4-2, MS-PS4-1	SEPUP Glencoe Physical Science Textbook Physical Science Lab Textbook	Waves Quiz	
56	<b>Biology</b>					
57	Q. 1	Characteristics/Nature of Science	This unit weaves throughout the course	Dr. Snow activity	Summative: Nature of Science Unit Test, Dr. Snow Letter, Pillbug Lab Write-up; Formative: Nature of Science quiz, Characteristics of Living Things/Feedback Loop Quiz	
58	Q. 1	Characteristics of Living Things	HS-LS 1-2; HS-LS 1-3	Holt Biology; Pillbug Characteristics of Living Things Lab		
59	Q. 1	Ecology and Species Interactions, Cycling of Matter	HS-LS 2-1; HS-LS 2-2; HS-LS 2-4; HS-LS 2-5; HS-LS 2-6; HS-LS 2-7; HS-LS 2-8; HS-ETS 1-3	Holt Biology	Summative: Ecosystem Facelift Group/Presentations (honors), Ecology and Populations Test; Formative: Energy flow in Ecosystems quiz, Populations and species interactions quiz	
60	Q. 1	Chemistry of Living Things/Macromolecules	HS-LS 1-1; HS-LS 1-6; HS-LS 1-7	Holt Biology	<b>Summative:</b> Enzyme lab, Chemistry and macromolecules test; <b>Formative:</b> Chemistry quiz, Macromolecules quiz, Enzyme quiz, Temperature vs. amylase activity graph	
61	Q. 2	Cellular Structure and Transport	HS-LS 1-2	Holt Biology	<b>Summative:</b> Diffusion and osmosis dialysis tubing lab write-up; Cells and cell transport test; Cell membrane project	
62	Q. 2	Cellular Energy	HS-LS 1-5; HS-LS 1-7; HS-LS 2-3; HS-LS 2-5	Holt Biology	<b>Summative:</b> Photosynthesis quiz, Cellular respiration quiz, Colored light and photosynthesis lab, Molasses Lab write-up and letter to CEO; <b>Formative:</b> Cellular Respiration lab (yeast/brom blue)	
63	Q. 3	Cell Reproduction	HS-LS 1-4; HS-LS 3-2	Holt Biology	<b>Summative:</b> Mitosis Quiz; Cellular Reproduction Test; Mitosis vs. Meiosis Argumentative essay; <b>Formative:</b> Comparison plant and animal cell mitosis lab analysis, Comparing mitosis and meiosis yarn lab	

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64	Q. 3	Genetics and Heredity	HS-LS 3-1; HS-LS 3-2; HS-LS 3-3	Holt Biology	<b>Summative:</b> Mendelian genetics quiz, Non-mendelian genetics quiz, Genetics Test, Genetic Disorder Project; <b>Formative:</b> Genetics problems (mendelian and non-mendelian), Karyotype lab, Pedigree lab, Karyotype lab	TBD
65	Q. 4	DNA, RNA and protein synthesis	HS-LS 1-1; HS-LS 3-1; HS-LS 3-2	Holt Biology	<b>Summative:</b> DNA/RNA Unit test; <b>Formative:</b> DNA quiz; RNA/protein synthesis quiz	
66	Q. 4	Evidence for Change over Time (macroevolution/microevolution)	HS-LS 4-1; HS-LS 4-2; HS-LS 4-3; HS-LS 4-4; HS-LS 4-5; HS-LS 3-3 (honors)	Holt Biology	<b>Summative:</b> Darwin vs. Wallace essay, Change over time test; <b>Formative:</b> Natural Selection quiz, Macro and Microevolution quiz, Fishy Frequencies Lab (honors)	
67	<b>Chemistry</b>					
68	Q. 1	Introduction Skills: Dimensional Analysis, Safety, Laboratory Techniques, Scientific Method, Significant Figures, and Density (3-4 Weeks)	HS-PS 1	Flinn Scientific; Holt Modern Chemistry	Separation of sand, salt and metal, 3 Layer density challenge, Chapter 1 & 3 Unit Test, Lab Safety Test (80% or higher)	Defined STEM: Chernobyl Tour Operator: Examining the Aftermath of a Nuclear Disaster-Grade 12 Honors; Nuclear Energy Scientist-Grade 11 Honors; Chemical Engineer: Carbon Fiber-Grade 11 Honors
69	Q. 1	Atomic Theory	HS-PS-1; HS-PS1-8	Flinn Scientific; Holt Modern Chemistry	Mole conversion lab-mole conversions, measuring accuracy Chapter 3 Unit test; How many monles in a drink of water/in a message of chalk?	
70	Q. 1	Nomenclature and the mole concept (3-4 weeks)	HS-PS 1-1; HS-PS 1-7; HS-PS2-6	Flinn Scientific; Holt Modern Chemistry	Chapter 7-Part 1 Unit Test, Chapter 7-Part 2 Unit Test, Percent water in popcorn lab	
71	Q. 2	Chemical Equations (3 weeks)	HS-PS 1-1; HS-PS 2-6; HS-PS 1-4; HS-PS 1-7	Flinn Scientific; Holt Modern Chemistry	Chapter 8 Unit Test; Types of Reactions Lab	
72	Q.2	Stoichiometry (3 weeks)	HS-PS1-1; HS-PS1-3; HS-PS2-6; HS-PS1-4; HS-PS1-5; HS-PS1-6	Flinn Scientific; Holt Modern Chemistry	Make 1.00 gram of designated salt from household materials (inquiry challenge); Chapter 9 Unit Test; Air bag design challenge	
73	Q. 3	Atomic & Molecular Structure (3 weeks)	HS-PS1-1; HS-PS1-3; HS-PS2-6; HS-PS4-1; HS-PS4-3	Flinn Scientific; Holt Modern Chemistry	Determine the gas in lights using a spectroscope; Unit (Chapter 4, 5, 6 test)	
74	Q. 4	Gases, Liquids, & Solids (3 weeks)	HS-PS1-1; HS-PS1-2; HS-PS1-4; HS-PS1-5; HS-PS1-6; HS-PS1-7; HS-PS3-2	Flinn Scientific; Holt Modern Chemistry	Design a rocket; Unit Test (Chapter 10 and 11)	
75	Q. 4	Acid/Base Stoichiometry (3 weeks)	HS-PS1-1; HS-PS1-4; HS-PS1-5; HS-PS1-6; HS-PS-7	Flinn Scientific; Holt Modern Chemistry	Determine the concentration of household vinegar (inquiry challenge); Unit Test	
76	<b>Honors Chemistry</b>					

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77	Q.1	Introduction to Chemistry	SEP; MP4: HS-PS1-3	Introductory Chemistry: A Foundation	100 ml of limewater as a techniques test; Measure the thickness of aluminum foil & the diameter of a copper wire to three significant digits (inquiry challenge); Salt Bottle Challenge, Match Rockets or Spaghetti Tower; Unit 1 Test	
78	Q. 1	Nomenclature	HS-PS1-1; HS-PS1-2; HS-PS2-6; SEP DCI (PS1.A; PS2.B)	Introductory Chemistry: A Foundation	Separation of a mixture using chromatography (inquiry challenge); Design complex Cartesian Divers; Qualitative Analysis Scheme; Unit 2 Test	
79	Q. 1	Mole Concept	HS-PS1-1; HS-PS1-2; HS-PS1-7; SEP	Introductory Chemistry: A Foundation	Empirical formula of a hydrate (as inquiry); Combustion analysis of an unknown; Unit Test 3	
80	Q. 2	Chemical Equations	HS-PS 1-2; HS-PS 1-4; HS-PS 1-7; HS-PS 2-6; HS-PS5-3; SEP	Introductory Chemistry: A Foundation	Identify 8 unknowns (inquiry challenge); Alka-Seltzer Project 1, Unit Test 4	
81	Q. 2	Stoichiometry	HS-PS1-1; HS-PS2-6; HS-PS1-2; HS-PS1-5; SEP	Introductory Chemistry: A Foundation	Make 1.00 gram of designated salt from household materials (inquiry challenge); Design, test & trouble-shoot in order to develop the most efficient air bag; Limiting Reactant Conceptual Challenge (PhET); Unit Test 5	
82	Q. 3	Enthalpy*	HS-PS3-1; HS-PS3-4; SEP	Introductory Chemistry: A Foundation	Determination of Bunsen Burner temperature (as Inquiry); Determination of the heat of formation of the magnesium ion; Unit Test 6	
83	Q. 3	Atomic & Molecular Structure	HS-PS1-1; HS-PS1-8; HS-PS2-6; HS-PS4-1; HS-PS4-3; HS-PS4-4; SEP	Introductory Chemistry: A Foundation	Determin unknowns with line spectra; CER with Fluorescent Lights (Spectroscope Challenge); Neon Discharge Tube Challenge; Unit Test 7	
84	Q. 4	Gases, Liquids, & Solids	HS-PS1-1; HS-PS1-2; HS-PS1-4; HS-PS1-5; HS-PS1-7; HS-PS3-2; SEP	Introductory Chemistry: A Foundation	Determine the relationships between the temperature, pressure, volume and amount of gases (inquiry challenge, PhET); Determine the amount of hydrogen in a penny (inquiry challenge); Cigarette Lighters to Determine R? (Inquiry Challenge); Design the Best Rocket Challenge (kit); Unit Test 8	
85	Q. 4	Acid/Base Stoichiometry	HS-PS1-1; HS-PS1-2; HS-PS1-6; HS-PS1-7; SEP	Introductory Chemistry: A Foundation	Standardization of a Base, (Virtual & Wet); Determine the concentration of household vinegar (inquiry Challenge); Unit Test 9	
86	<b>Fundamentals of Chem. &amp; Physics</b>					



	A	B	C	D	E	F
87	Q. 1	Science Skills	HS-PS1-1, HS-PS1-3, HS-PS1-8, HS-PS2-6, HS-PS4-3	Pearso: Pyhsical Science	Lab Safety Test (80% or better), Lab Skills Training, Ch. 1 Quiz	
88	Q. 1	Classification of Matter	HS-PS3-2, HS-PS1-3, HS-PS1-6	Pearson: Physical Science	Salt and Sand Separation Lab, Vocabulary Quiz, Ch. 2 Test	
89	Q. 1	States of Mater and Gas Laws	HS-PS3-2; HS-PS1-3: HS-PS1-6	Pearson: Physical Science	Vocabulary Quiz, Ch. 3 Test, Lab: Boyle and Charle's	
90	Q. 1	Atoms	HS-PS1-1, HS-PS1-3, HS-PS1-8, HS-PS2-6, HS-PS4-4	Pearson: Physical Science	Vocabulary Quiz, Ch. 4 Test, Atomic Poster Project, Lab: Flame Test	
91	Q. 2	Periodic Table	HS-PS1-1, HS-PS1-3, HS-PS1-8, HS-PS2-6, HS-PS4-4	Pearson: Physical Science	Vocabulary Quiz, Ch. 5 Test, Superhero Project, Lab: Metal, Nonmetal, and Metalloid	
92	Q. 2	Bonding	HS-PS1-1, HS-PS1-3, HS-PS1-4	Pearson: Physical Science	Vocabulary Quiz, Lab: Ionic and Covalent, Ch. 6 Test	
93	Q. 2	Chemical Reactions	HS-PS1-2, HS-PS1-4, HS-PS1-5, HS-PS1-6, HS-PS1-7	Pearson: Physical Science	Vocabulary Quiz, Ch. 7 Test	
94	Q.3	Motion	Cross-Cutting Concepts	Pearson: Physical Science	Vocabulary Quiz; Ch. 11 Quiz; Lab: Velocity & Acceleration	
95	Q. 3	Forces and Motion	HS-PS2-1; HS-PS2-2; HS-PS2-3; HS-PS2-4; HS-ESS1-4	Pearson: Physical Science	Vocabulary Quiz; Ch. 12 Test; Lab: Types of Forces (Friction)	
96	Q. 3	Work, Power, and Machines	Cross-Cutting Concepts; HS-ESS3-1; HS-ESS3-2; HS-ESS3-3	Pearson: Physical Science	Vocabulary Quiz; Ch. 14 Test	
97	Q. 3	Energy	HS-PS3-1; HS-PS3-2; HS-PS3-3; HS-PS3-4; HS-PS3-5	Pearson: Physical Science	Ch. 15 Test; Lab: Calorimeter	
98	Q. 3	Earth-Moon Systems	HS-ESS1-1; HS-ESS1-4; HS-ESS1-5; HS-ESS1-2; HS-ESS1-6	Pearson: Physical Science	Vocabulary Quiz; Earth Moon Quiz	
99	Q. 4	Thermal Energy	HS-PS3-4; HS-PS3-5; HS-ESS1-2; HS-ESS2-3	Pearson: Physical Science	Vocabulary Quiz; Ch. 16 Test; Lab: Specific Heat of and Unknown Metal	
100	Q. 4	Mechanical Waves	HS-ESS1-2; HS-PS4-1; HS-PS4-3; HS-PS4-4; HS-PS4-5	Pearson: Physical Science	Vocabulary Quiz; Ch. 17 Test; Lab: Slinky Lab	
101	Q. 4	Electromagnetic Spectrum	HS-ESS1-2; HS-PS4-3; HS-PS4-4; HS-PS4-5	Pearson: Physical Science	Vocabulary Quiz; Ch. 18 Test	
102	Q. 4	Electricity & Magnetism	HS-PS2-5; HS-PS2-2; HS-PS2-3; HS-PS2-4	Pearson: Physical Science	Vocabulary Quiz; Ch. 20 & 21 Tests	
103	<b>Physics</b>					
104	Q. 1	Intro to Physics, Describing motion, Kinematics in 1D	Integrated throughout the year	Car project, Defined Stem Runway	Scientific Notation Quiz; Significant Figures Quiz; Conversions Quiz; Estimation Quiz	Runaway
105	Q. 1	Describing Motion	Integrated throughout the year	Pearson Physics Chapter 2; Holt Physics Chapter 2.1 & 2.2; Verrier Lab Graph Matching; Phet moving man	Solve for a variable Quiz; Describing Motion Quiz 1; Information from a Graph Quiz; Acceleration Quiz; Describing Motion Test	
106	Q. 1	Kinematics in 1D	HS-PS2-4	Pearson Physics Chapter 3; Holt Physics Chapter 2.3; Tickers	Constant acceleration quizzes; Free fall quiz; Kinematics in 1D Test	Runaway

	A	B	C	D	E	F
107	Q. 2	Vectors and Projectile Motion		Pearson Physics Chapter 4; Holt Physics Chapter 3; Vectors Gizmo	Trig Quiz; Vectors component and addition Quiz; Projectile Motion Quiz; Relative Velocity Quiz; Vectors and Projectile Motion Test	
108	Q. 2	Forces	HS-PS2-1	Pearson Physics Chapter 5; Holt Physics Chapter 4; Forces Gizmo; Free Body Diagram Gizmo	1st and 2nd Law Quiz; Friction Quiz; Forces Test	
109	Q. 3	Energy	PS-HS 3-1; PS-HS 3-2; PS-HS 3-3	Pearson Physics Chapter 6; Holt Physics Chapter 5; Gizmo	KE, PE Quiz; Conservation of energy Quiz; Simple Machine and Efficiency Quiz; Energy Test	
110	Q. 3	Momentum and Collisions	HS-PS 2-2; HS-PS 2-3	Pearson Physics Chapter 7; Holt Physics Chapter 6; Momentum Gizmo; Collisions Gizmo	Momentum Quiz; Conservation of Momentum Quiz; Momentum and Collisions Test	
111	Q. 3	Rotation		Pearson Physics Chapters 8 & 9; Holt Physics Chapter 7 & 8; Centripetal Acceleration Lab Rotation Gizmo; Defined Stem Wind Turbine	Rotation Quiz 1; Rotation Test	
112	Q. 4	Waves	PS-HS 4-1; PS-HS 4-2; PS-HS 4-5	Pearson Physics Chapter 13; Holt Physics Chapters 12 & 16; Waves Gizmo	Waves Quiz; Waves Test	
113	Q. 4	Sound	PS-HS 4-3	Pearson Physics Chapter 14; Holt Physics Chapter 13; Beats Lab (Vernier); Gizmo	Sound Quiz 1; Sound Quiz 2; Sound Test	
114	Q. 4	Electrostatics	PS-HS 3-5	Pearson Physics Chapters 19 & 20; Holt Physics Chapter 17; Gizmo Electric Field	Electric Field and Energy Quiz; Electrostatic Test	
115	Q. 4	Electricity	PS-HS 2-4; PS-HS 2-5; PS-HS 3-5; PS-HS 2-5	Pearson Physics Chapter 21; Holt Physics Chapters 18.1, 18.2, 19 & 20; Resistivity Phet/Gizmo	Circuit Quiz; Electricity Test	
116	<b>Human Anatomy/Physiology</b>					
117	Q. 1	Introduction to Human Anatomy & Physiology	HS-LS1-2; HS-LS1-3	Hole's Human Anatomy & Physiology Text	TBD	TBD
118	Q. 1	Skeletal System	HS-LS1-1; HS-LS1-2; HS-LS1-3	Hole's Human Anatomy & Physiology Text	TBD	TBD
119	Q. 1	Tissues	HS-LS1-1; HS-LS1-2	Hole's Human Anatomy & Physiology Text	TBD	TBD
120	Q. 2	Muscular System	HS-LS1-1; HS-LS1-2	Hole's Human Anatomy & Physiology Text	TBD	TBD
121	Q.2	Integumentary System	HS-LS1-1	Hole's Human Anatomy & Physiology Text	TBD	TBD
122	Q.2	Genetics/Bioethics	HS-LS1-1; HS-LS3-1; HS-LS3-2; HS-LS3-3; HS-LS1-3	Hole's Human Anatomy & Physiology Text	TBD	TBD
123	Q.3	Nervous System I	HS-LS1-1; HS-LS1-2	Hole's Human Anatomy & Physiology Text	TBD	TBD
124	Q.3	Nervous System II	HS-LS1-1; HS-LS1-2	Hole's Human Anatomy & Physiology Text	TBD	TBD
125	Q.3	Nervous System III	HS-LS1-1; HS-LS1-2	Hole's Human Anatomy & Physiology Text	TBD	TBD
126	Q.4	Blood	HS-LS1-1	Hole's Human Anatomy & Physiology Text	TBD	TBD
127	Q.4	Cardiovascular System	HS-LS1-2; HS-LS1-3	Hole's Human Anatomy & Physiology Text	TBD	TBD

	A	B	C	D	E	F
128	Q.4	Respiratory System	HS-LS1-7; HS-LS1-3	Hole's Human Anatomy & Physiology Text	TBD	TBD
129	Q.4	Digestive System	HS-LS1-1	Hole's Human Anatomy & Physiology Text	TBD	TBD
130	<b>Microbiology</b>					
131	Q. 1	Introductory Skills: Safety, Laboratory Aseptic Techniques, Microscope use with oil immersion objectives, cell size, APA citations	CCS: RST.11-12.1, MP2, HSN-Q.A.1, HSN-Q.A.3	Flinn Scientific, APA citation Resource, Microscope Lab, Aseptic Technique Lab, Sterile Transfer Lab	None available as this is the only class	
132	Q. 1	Themes and Tools of Microbiology	CCS: RST.11-12.1, WHST.11-12.8, WHST.9-12.9, WHST.9-12.5, WHST.9-12.7; NGSS: HS-LS2-6, HS-LS2-7, HS-LS2-8	Text Chapter 1, 3; Debate Information; APA citations resource	None available as this is the only class	
133	Q. 1	Prokaryotic Cell Structure and Function	NGSS: HS-LS1-2	Text Chapter 3; Simple Stain Lab; Gram Stain Lab	None available as this is the only class	
134	Q. 1	Introduction to the Virus	CCS: WHST.0-12.2; NGSS: HS-LS1-1	"Hot Zone" outside reading: Text Ch. 6	None available as this is the only class	
135	Q. 2	Elements of Microbial Nutrition, Ecology, and Growth	CCS: MP.4, HSF-IF.C.7; NGSS: HS-LS1-2, HS-LS1-7, HS-LS1-5	Text Chapter 2.7, Growth Lab, Environmental Lab	None available as this is the only class	
136	Q. 2	Microbial Metabolism	NGSS: HS-LS1-3, HS-LS2-3, HS-LS2-5	Text CH. 8, Catalase Lab, Biochemical Hydrolysis Food Lab, Sugar Fermentation Lab, Enteric Detective Lab	None available as this is the only class	
137	Q. 2	Physical and Chemical Agents for Microbial Control/Drug Control	NGSS:	Text Chapter 11-12; Antiseptic/Disinfectant Lab; Antibiotic Lab	None available as this is the only class	
138	Q. 2	Genetic Bacterial Transformation	NGSS: HS-LS1-4, HS-LS3-1; HS-LS3-2	Biorad pGLO Bacterial Transformation Kit	None available as this is the only class	
139	<b>Zoology</b>					
140	Q. 1,3	Intro to Zoology	HS-LS4-1; HS-LS4-2; HS-LS4-3	Zoology Text, Powerpoint, Notes, Worksheets	TBD	TBD
141	Q. 1,3	Evolution	HS-LS4-1, HS-LS4-2, HS-LS4-3; HS-LS4-4; HS-LS4-5; HS-LS3-1; HS-LS3-2; HS-LS2-1; HS-LS4-6	Zoology Text, Powerpoint, Notes, Worksheets	TBD	TBD
142	Q. 1,3	Phylum Porifera	HS-LS1-1; HS-LS1-2	Zoology Text, Powerpoint, Notes, Worksheets	TBD	TBD
143	Q. 1,3	Phylum Mollusca	HS-LS1-1; HS-LS1-2		TBD	TBD
144	Q. 1,3	Phylum Echinoderm	HS-LS1-1; HS-LS1-2	Zoology Text, Powerpoint, Notes, Worksheets	TBD	TBD
145	Q. 1,3	Phylum Arthropod	HS-LS1-1; HS-LS1-2; HS-LS2-7	Zoology Text, Powerpoint, Notes, Worksheets	TBD	TBD
146	Q.2,4	Phylum Chordata (Fish)	HS-LS1-1; HS-LS1-2	Zoology Text, Powerpoint, Notes, Worksheets	TBD	TBD
147	Q.2,4	Phylum Chordata (Reptiles)	HS-LS1-1; HS-LS1-2; HS-LS3-1	Zoology Text, Powerpoint, Notes, Worksheets	TBD	TBD
148	Q.2,4	Phylum Chordata (Mammals)	HS-LS1-1; HS-LS1-2; HS-LS3-1	Zoology Text, Powerpoint, Notes, Worksheets	TBD	TBD
149	Q.2,4	Phylum Chordata (Amphibians)	HS-LS1-1; HS-LS1-2	Zoology Text, Powerpoint, Notes, Worksheets	TBD	TBD