Grade 1 Science: Year at a Glance

UNIT 1: PATTERNS OF CHANGE IN THE SKY						Instructional days: 15
Performance Expectations		**Learning Goals** (Foundation Box)			**Connections to the CCSS – ELA**	**Connections to the CCSS – Mathematics**
		Disciplinary Core Ideas	**Science and Engineering Practices**	**Crosscutting Concepts**		
1-ESS1-1	Use observations of the sun, moon and stars to describe patterns that can be predicted.	ESS1.A	Analyzing and Interpreting Data	Patterns	W.1.7 W.1.8	
1-ESS1-2	Make observations at different times of year to relate to the amount of daylight to the time of year.	ESS1.B	Planning and Carrying Out Investigations	Patterns	W.1.7 W.1.8	MP.2 MP.4 MP.5 1.OA.A.1 1.MD.C.4
Teacher Notes						
Instructional implementation is based on a 100-day time frame—for example, 33 weeks of instruction x 3 days per week = 99 days + 1 = 100 days of instruction. This time frame assumes a 45–60 minute instruction block. Teachers should calculate the instructional days based on their time frame.						

* Indicates connection to Engineering

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UNIT 2: CHARACTERISTICS OF LIVING THINGS						Instructional days: 15
Performance Expectations		**Learning Goals** (Foundation Box)			**Connections to the CCSS – ELA**	**Connections to the CCSS – Mathematics**
		Disciplinary Core Ideas	**Science and Engineering Practices**	**Crosscutting Concepts**		
1-LS3-1	Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	LS3.A LS3.B	Constructing Explanations and Designing Solutions	Patterns	RI.1.1 W.1.7 W.1.8	MP.2 MP.5 1.MD.A.1
1-LS1-2	Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.	LS1.B	Obtaining, Evaluating, and Communicating Information	Patterns	RI.1.1 RI.1.2	1.NBT.B.3 1.NBT.C.4 1.NBT.C.5 1.NBT.C.6
Teacher Notes						

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UNIT 3: MIMICKING ORGANISMS TO SOLVE PROBLEMS						Instructional days: 25
Performance Expectations		**Learning Goals** (Foundation Box)			**Connections to the CCSS – ELA**	**Connections to the CCSS – Mathematics**
		Disciplinary Core Ideas	**Science and Engineering Practices**	**Crosscutting Concepts**		
1-LS1-1*	Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.	LS1.A	Constructing Explanations and Designing Solutions	Structure and Function	W.1.7	
K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	ETS1.B	Developing and Using Models	Structure and Function	SL.2.5	
Teacher Notes						

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UNIT 4: LIGHT AND SOUND						**Instructional days: 20**
Performance Expectations		**Learning Goals** (Foundation Box)			**Connections to the CCSS – ELA**	**Connections to the CCSS – Mathematics**
		Disciplinary Core Ideas	**Science and Engineering Practices**	**Crosscutting Concepts**		
1-PS4-2	Make observations to construct an evidence-based account that objects can be seen only when illuminated.	PS4.B	Constructing Explanations and Designing Solutions	Cause and Effect	W.1.2 W.1.7 W.1.8 SL.1.1	
1-PS4-3	Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.	PS4.B	Planning and Carrying Out Investigations	Cause and Effect	W.1.7 W.1.8 SL.1.1	
1-PS4-1	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	PS4.A	Planning and Carrying Out Investigations	Cause and Effect	W.1.7 W.1.8 SL.1.1	
Teacher Notes						

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UNIT 5: COMMUNICATING WITH LIGHT AND SOUND						Instructional days: 25
Performance Expectations		**Learning Goals** (Foundation Box)			**Connections to the CCSS – ELA**	**Connections to the CCSS – Mathematics**
		Disciplinary Core Ideas	**Science and Engineering Practices**	**Crosscutting Concepts**		
1-PS4-4*	Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.*	PS4.C	Constructing Explanations and Designing Solutions		W.1.7	MP.5 1.MD.A.1 1.MD.A.2
K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	ETS1.A	Asking Questions and Defining Problems		RI.1.1 W.1.6 W.1.8	MP.2 MP.4 MP.5 2.MD.D.10
K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	ETS1.B	Developing and Using Models	Structure and Function	SL.2.5	
Teacher Notes						

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