Grade 3 -Science Curriculum

PS = Physical Science LS = Life Science
ESS = Earth & Space Science ETS = Engineering, Technology, and Society

Standard PS1 - Matter and Its Interactions			
Structure and Properties of Matter		**Resource(s)**	**Assessments**
3.PS1.A.1.	**Predict and investigate that water can change from a liquid to a solid (freeze), and back again (melt), or from a liquid to a gas (evaporation), and back again (condensation) as the result of temperature change**	*Generation Genius* - Online Educational Resource Discovery Education Videos Classroom Demonstrations and Discussions	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations
Types of Interactions of Matter			
3.PS1.B.1	**Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.**	*Generation Genius* - Online Educational Resource Discovery Education Videos Classroom Demonstrations and Discussions	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations
Standard PS2 - Motion and Stability: Forces and Interactions			
Types of Interactions			
3PS2.B.1	**Plan and conduct investigations to determine the cause and effect relationship of electric or magnetic interactions between two objects not in contact with each other.** (See Clarification Statement that follows.)	*Generation Genius* - Online Educational Resource Magic School Bus Rides Again - Episode 5 "The Magnetic Mambo (Magnetism)" Teacher Pay Teacher Resources	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations

	[Clarification Statement: Examples of an electric force could include the force on hair from an electrically charged balloon and the electrical forces between a charged rod and pieces of paper;examples of a magnetic force could include the force between two permanent magnets, the force between an electromagnet and steel paper clips, and the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects strength of the force and how the orientation of magnets affects the direction of the magnetic force.]		
Standard LS1 - From Molecules to Organisms: Structure and Processes			
Growth and Development of Organisms		**Resource(s)**	**Assessments**
3.LS1.B.1	**Develop a model to compare and contrast observations on the life cycle of different plants and animals.** (See Clarification Statement that follows.)	IXL Skills The Magic School Bus - "Gets Planted" - Ep. 37 Life Cycle Posters of plants and animals *Generation Genius* - Online Educational Resources	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters
	[Clarification Statement: Changes organisms go through during their life form a pattern.]		

Standard LS3- Heredity: Inheritance and Variation of Traits			
Inheritance of Traits		**Resource(s)**	**Assessments**
3.LS3.A.1	**Construct scientific arguments to support claims that some characteristics of organisms are inherited from parents and some are influenced by the environment.** (See Clarification Statement that follows.)	The Magic School Bus Goes Cellular - Episode 44 IXL Skills Generation Genius - Online Educational Resource Discovery Education	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters
	[Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]		

Natural Selection		**Resource(s)**	**Assessments**
3.LS3.B.1	**Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving and finding**	Missouri Department of Conservation - *Nature Unleashed* Discovery Education Generation Genius - Online Educational Resource; IXL Skills	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters

	mates. (See Clarification Statement that follows.)		
	[Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]		
	Adaptation	**Resource(s)**	**Assessments**
3.LS3.C.1	**Construct an argument with evidence that in a particular ecosystem some organisms – based on structural adaptations or behaviors – can survive well, some survive less well, and some cannot survive.** (See Clarification Statement that follows.)	Missouri Department of Conservation - *Nature Unleashed* Discovery Education Generation Genius - Online Educational Resource; IXL Skills	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters
	[Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]		

	Biodiversity and Humans	**Resource(s)**	**Assessments**
3.LS3.D.1	**Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.** (See Clarification Statement that follows.)	Missouri Department of Conservation - *Nature Unleashed* Discovery Education Generation Genius - Online Educational Resource; IXL Skills	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters
	[Clarification Statement: Examples of		

	environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.]		
Standard ESS2- Earth's Systems			
	Weather and Climate	**Resource(s)**	**Assessments**
3.ESS2.D.1	**Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.** (See Clarification Statement that follows.)	Discovery Education Generation Genius - Online Educational Resource; IXL Skills Super Teacher Worksheets	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters
	[Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.]		
3.ESS2.D.2	**Obtain and combine information to describe climates in different regions of the world.**	Discovery Education Generation Genius - Online Educational Resource; IXL Skills Super Teacher Worksheets	
Standard ESS3- Earth and Human Activity			
	Natural Hazards		
3.ESS3.B.1	**Make a claim about the merit of an existing design solution (e.g. levies, tornado shelters, sea walls, etc.) that reduces the impacts of a weather-related hazard.** (See Clarification Statement that follows.)	Discovery Education Generation Genius - Online Educational Resource; IXL Skills Super Teacher Worksheets	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters

	[Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.]		
Standard ETS1- Engineering Design			
Defining and Delimiting Engineering Problems		**Resource(s)**	**Assessments**
3.ETS1.A.1	**Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.**	Teacher provided resources on the engineering design process with examples used during class discussion and direction	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters
Developing Possible Solutions			
3.ETS1.B.1	**Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem**	Teacher provided resources on the engineering design process with examples used during class discussion and direction	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters
Optimizing the Solution Process			
3.ETS1.C.1	**Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.**	Teacher provided resources on the engineering design process with examples used during class discussion and direction	Exit Tickets IXL Skills Classroom Quizzes Laboratory Investigations Student Projects / Posters