GRADE 5– Unit 3: Ecosystems & The Food Web

Mission Statement
The primary goal of the Swedesboro-Woolwich School District is to prepare each student with the real life skills needed to compete in a highly competitive global economy. This will be achieved by providing a comprehensive curriculum, the integration of technology, and the professional services of a competent and dedicated faculty, administration, and support staff. Guiding this mission will be Federal mandates, including No Child Left Behind, the New Jersey Core Curriculum Content Standards, and local initiatives addressing the individual needs of our students as determined by the Board of Education. The diverse resources of the school district, which includes a caring PTO and active adult community, contribute to a quality school system. They serve an integral role in supporting positive learning experiences that motivate, challenge and inspire children to learn.

Unit/Module Overview
Ecosystems & The Food Web In this unit, students explore how organisms depend on one another and form an interconnected ecosystem. Students investigate food chains, food webs, and the importance of producers, consumers, and decomposers.

Standards Covered in Current Unit/Module
Related Standards and Learning Goals **SCI.5-PS3-1 -** Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. **SCI.5-LS1-1 -** Support an argument that plants get the materials they need for growth chiefly from air and water.

SCI.5-LS2-1 - Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

SCI.5-ESS3-1 - Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources, environment, and address climate change issues.

-I can develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

-I can support an argument that plants get the materials they need for growth chiefly from air and water.

-I can obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

-I can use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.

-I can define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

-I can 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

-I can 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..

Unit/Module Weekly Learning Activities and Pacing Guide			
Topic & # Days	**NJ Standards**	**Critical Knowledge & Skills**	**Possible Resources & Activities**

Week 1: Lesson 1 Why would a hawk move to New York City?	5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	**Obj. We are learning to**: ● I can develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. **Suggested Formative Assessment(s)**: ● **Test**: https://docs.google.com/presentation/d/1tVNVK-R8qL7AsqhJ2CZWhc01UmieuJ4w3oaJsG5rdrw/edit?usp=sharing ● **Key**: https://docs.google.com/presentation/d/1nT7uBgD0uEfOuLy1v3U4V3PRLv91gDurYRPdynaUmws/edit?usp=sharing	**Curriculum**: Mystery Science **Day 1**: Intro Video **Day 2 & 3**: Eat or Be Eaten lab **Day 4**: Video Edpuzzle (Food chains, transfer of energy, and Food Webs) https://edpuzzle.com/media/6282f7da80c0ff4105c501c3 **Day 5**: Test **Material**: Mystery Science Genius Generation Student Readers (English & Spanish Carolina Science Kits) Photosynthesis Video: https://www.youtube.com/watch?v=EstPeBt9CyU Photosynthesis "Four Ingredients" informational Packet (TpT activity) Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "What's for Dinner Activity" Colored Pencils.Markers.Crayons Game: http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain.htm https://betterlesson.com/lesson/631349/producers-consumers-decomposers# https://betterlesson.com/lesson/633027/food-webs Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk

			Google Classroom, "This Tangled Web We Weave" Activity, Markers/Colored Pencils Keystone Species Video: https://www.youtube.com/watch?v=JGcIp4YEKrc&t=152s Yellowstone Wolves https://www.yellowstonepark.com/things-to-do/wildlife/wolves Pass the Energy Activity page, Pass the Energy line graph Google Sheets (TpT Activity)
Week 2: Lesson 2: What do plants eat?	5.LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.	**Obj. We are learning to**: • I can support an argument that plants get the materials they need for growth chiefly from air and water. **Suggested Formative Assessment(s)**: • **Test**: https://docs.google.com/presentation/d/1tVNVK-R8qL7AsqhJ2CZWhc01UmieuJ4w3oaJsG5rdrw/edit?usp=sharing • **Key**: https://docs.google.com/presentation/d/1nT7uBgD0uEfOuLy1v3U4V3PRLv91gDurYRPdynaUmws/edit?usp=sharing	**Curriculum**: Mystery Science **Day 1**: Show video and preview of lab (Stop at slide entitled 10 of 16) **Day 2**: Teacher led lab Ensure every every student has their own worksheet **Day 3**: Video **Day 4**: NJSLA Assessment plants not mystery science. **Material**: Mystery Science Genius Generation Student Readers (English & Spanish Carolina Science Kits) Photosynthesis Video: https://www.youtube.com/watch?v=EstPeBt9CyU Photosynthesis "Four Ingredients" informational Packet (TpT activity) Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "What's for Dinner Activity" Colored Pencils.Markers.Crayons

			Game: http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain.htm https://betterlesson.com/lesson/631349/producers-consumers-decomposers# https://betterlesson.com/lesson/633027/food-webs Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "This Tangled Web We Weave" Activity, Markers/Colored Pencils Keystone Species Video: https://www.youtube.com/watch?v=JGcIp4YEKrc&t=152s Yellowstone Wolves https://www.yellowstonepark.com/things-to-do/wildlife/wolves Pass the Energy Activity page, Pass the Energy line graph Google Sheets (TpT Activity)
Weeks 3: Lesson 3: Where do fallen leaves go?	5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	**Obj. We are learning to**: ● I can develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. **Suggested Formative Assessment(s)**: ● **Test**: https://docs.google.com/presentation/d/1tVNVK-R8qL7AsqhJ2CZWhc01UmieuJ4w3oaJsG5rdrw/edit?usp=sharing ● **Key**: https://docs.google.com/presentation/d/1nT7uBgD0uEfOuLy1v3U4V3PRLv91gDurYRPdy	**Curriculum**: Mystery Science **Day 1**: Introduction Video & Discussion **Day 2**: Lab & Lab Paper **Day 3 & 4**: End of Video, Discussion & Teacher pay teacher worksheet to go along with lesson **Day 5**: Test **Material**: Mystery Science Genius Generation Student Readers (English & Spanish Carolina Science Kits) Photosynthesis Video: https://www.youtube.com/watch?v=EstPeBt9

		naUmws/edit?usp=sharing	CyU Photosynthesis "Four Ingredients" informational Packet (TpT activity) Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "What's for Dinner Activity" Colored Pencils.Markers.Crayons Game: http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain.htm https://betterlesson.com/lesson/631349/producers-consumers-decomposers# https://betterlesson.com/lesson/633027/food-webs Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "This Tangled Web We Weave" Activity, Markers/Colored Pencils Keystone Species Video: https://www.youtube.com/watch?v=JGcIp4YEKrc&t=152s Yellowstone Wolves https://www.yellowstonepark.com/things-to-do/wildlife/wolves Pass the Energy Activity page, Pass the Energy line graph Google Sheets (TpT Activity)
Week 4: Lesson 4: Do worms really eat dirt?	5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	**Obj. We are learning to**: ● I can develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	**Curriculum**: Mystery Science **Day 1**: Introduction Video & Discussion **Day 2**: Lab & Lab Paper **Day 3 & 4**: End of Video, Discussion & Teacher pay teacher worksheet to go along with lesson

		Suggested Formative Assessment(s): • **Test**: https://docs.google.com/presentation/d/1tVNVK-R8qL7AsqhJ2CZWhc01UmieuJ4w3oaJsG5rdrw/edit?usp=sharing • **Key**: https://docs.google.com/presentation/d/1nT7uBgD0uEfOuLy1v3U4V3PRLv91gDurYRPdynaUmws/edit?usp=sharing	**Day 5**: Test **Materials:** Mystery Science Genius Generation Student Readers (English & Spanish Carolina Science Kits) Photosynthesis Video: https://www.youtube.com/watch?v=EstPeBt9CyU Photosynthesis "Four Ingredients" informational Packet (TpT activity) Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "What's for Dinner Activity" Colored Pencils.Markers.Crayons Game: http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain.htm https://betterlesson.com/lesson/631349/producers-consumers-decomposers# https://betterlesson.com/lesson/633027/food-webs Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "This Tangled Web We Weave" Activity, Markers/Colored Pencils Keystone Species Video: https://www.youtube.com/watch?v=JGcIp4YEKrc&t=152s Yellowstone Wolves https://www.yellowstonepark.com/things-to-d

			o/wildlife/wolves Pass the Energy Activity page, Pass the Energy line graph Google Sheets (TpT Activity)
Week 5: Lesson 5: Why do you have to clean a fish tank but not a pond?	5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	**Obj. We are learning to**: ● I can develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. **Suggested Formative Assessment(s)**: ● **Test**: https://docs.google.com/presentation/d/1tVNVK-R8qL7AsqhJ2CZWhc01UmieuJ4w3oaJsG5rdrw/edit?usp=sharing ● **Key**: https://docs.google.com/presentation/d/1nT7uBgD0uEfOuLy1v3U4V3PRLv91gDurYRPdynaUmws/edit?usp=sharing	**Curriculum**: Mystery Science **Day 1**: Introduction Video & Discussion **Day 2**: Part 1 Only: Pond Ecosystem Game Part 2 of the game is too difficult **Day 3 & 4**: End of Video, Discussion & Teacher pay teacher worksheet to go along with lesson **Day 5**: Test **Materials:** Mystery Science Genius Generation Student Readers (English & Spanish Carolina Science Kits) Photosynthesis Video: https://www.youtube.com/watch?v=EstPeBt9CyU Photosynthesis "Four Ingredients" informational Packet (TpT activity) Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "What's for Dinner Activity" Colored Pencils.Markers.Crayons Game: http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain.htm https://betterlesson.com/lesson/631349/producers-consumers-decomposers# https://betterlesson.com/lesson/633027/food-webs

			Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "This Tangled Web We Weave" Activity, Markers/Colored Pencils Keystone Species Video: https://www.youtube.com/watch?v=JGcIp4YEKrc&t=152s Yellowstone Wolves https://www.yellowstonepark.com/things-to-do/wildlife/wolves Pass the Energy Activity page, Pass the Energy line graph Google Sheets (TpT Activity)
Week 6: Lesson 6: How can we protect Earth´s environments ?	5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	**Obj. We are learning to**: ● I can obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. **Suggested Formative Assessment(s)**: ● **Test**: https://docs.google.com/presentation/d/1tVNVK-R8qL7AsqhJ2CZWhc01UmieuJ4w3oaJsG5rdrw/edit?usp=sharing ● **Key**: https://docs.google.com/presentation/d/1nT7uBgD0uEfOuLy1v3U4V3PRLv91gDurYRPdynaUmws/edit?usp=sharing	**Curriculum**: Mystery Science **Day 1**: Introduction Video & Discussion **Day 2**: Bloom Buster Game **Day 3 & 4**: End of Video, Discussion & Teacher pay teacher worksheet to go along with lesson **Day 5**: Test **Material**: Mystery Science Genius Generation Student Readers (English & Spanish Carolina Science Kits) Photosynthesis Video: https://www.youtube.com/watch?v=EstPeBt9CyU Photosynthesis "Four Ingredients" informational Packet (TpT activity) Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "What's for Dinner Activity" Colored

			Pencils.Markers.Crayons Game: http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain.htm https://betterlesson.com/lesson/631349/producers-consumers-decomposers# https://betterlesson.com/lesson/633027/food-webs Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "This Tangled Web We Weave" Activity, Markers/Colored Pencils Keystone Species Video: https://www.youtube.com/watch?v=JGcIp4YEKrc&t=152s Yellowstone Wolves https://www.yellowstonepark.com/things-to-do/wildlife/wolves Pass the Energy Activity page, Pass the Energy line graph Google Sheets (TpT Activity)
Week 7: Lesson 7: Why did the dinosaurs go extinct?	5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	**Obj. We are learning to**: ● I can use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. **Suggested Formative Assessment(s)**: ● **Test**: https://docs.google.com/presentation/d/1tVNVK-R8qL7AsqhJ2CZWhc01UmieuJ4w3oaJsG5rdrw/edit?usp=sharing ● **Key**:	**Curriculum**: Mystery Science **Day 1**: Introduction Video & Discussion **Day 2**: Create a Dinosaur Food Web **Day 3 & 4**: End of Video, Discussion & Teacher pay teacher worksheet to go along with lesson **Day 5**: Test **Material**: Mystery Science Genius Generation Student Readers (English & Spanish Carolina Science Kits) Photosynthesis Video:

		https://docs.google.com/presentation/d/1nT7uBgD0uEfOuLy1v3U4V3PRLv91gDurYRPdynaUmws/edit?usp=sharing	https://www.youtube.com/watch?v=EstPeBt9CyU Photosynthesis "Four Ingredients" informational Packet (TpT activity) Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "What's for Dinner Activity" Colored Pencils.Markers.Crayons Game: http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain.htm https://betterlesson.com/lesson/631349/producers-consumers-decomposers# https://betterlesson.com/lesson/633027/food-webs Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "This Tangled Web We Weave" Activity, Markers/Colored Pencils Keystone Species Video: https://www.youtube.com/watch?v=JGcIp4YEKrc&t=152s Yellowstone Wolves https://www.yellowstonepark.com/things-to-do/wildlife/wolves Pass the Energy Activity page, Pass the Energy line graph Google Sheets (TpT Activity)
<u>Week 8</u>: Review & Unit Test	5-PS3-1 5-ESS3-1 5-LS2-1 5.LS1-1	**Obj. We are learning to**: ● I can use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was	**<u>Curriculum</u>**: Mystery Science **<u>Materials</u>:** Genius Generation:

		once energy from the sun. ● I can obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. ● I can develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. ● I can support an argument that plants get the materials they need for growth chiefly from air and water. **Suggested Formative Assessment(s)**: ● **Test**: https://docs.google.com/presentation/d/1tVNVK-R8qL7AsqhJ2CZWhc01UmieuJ4w3oaJsG5rdrw/edit?usp=sharing ● **Key**: https://docs.google.com/presentation/d/1nT7uBgD0uEfOuLy1v3U4V3PRLv91gDurYRPdynaUmws/edit?usp=sharing	5-LS1-1 How do we use food 5-LS2-1 Food Webs 5-PS3-1 How do we use food: Food Webs 5-ESS3-1 Water Quality & Distribution Mystery Science Genius Generation Student Readers (English & Spanish Carolina Science Kits) Photosynthesis Video: https://www.youtube.com/watch?v=EstPeBt9CyU Photosynthesis "Four Ingredients" informational Packet (TpT activity) Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "What's for Dinner Activity" Colored Pencils.Markers.Crayons Game: http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain.htm https://betterlesson.com/lesson/631349/producers-consumers-decomposers# https://betterlesson.com/lesson/633027/food-webs Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "This Tangled Web We Weave" Activity, Markers/Colored Pencils Keystone Species Video: https://www.youtube.com/watch?v=JGcIp4YEKrc&t=152s

			Yellowstone Wolves https://www.yellowstonepark.com/things-to-do/wildlife/wolves Pass the Energy Activity page, Pass the Energy line graph Google Sheets (TpT Activity)
Week 9: How can you save a town from a hurricane?	3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-5-ETS1-2. 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. 3-5-ETS1-3. 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.	**Obj. We are learning to**: ● I can define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. ● I can 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 ● I can 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. **Suggested Formative Assessment(s)**:	**Curriculum**: Mystery Science **Day 1**: Introduction Video & Discussion **Day 2 & 3**: Save Beachtown Project **Day 3 & 4**: End of Video, Discussion & Teacher pay teacher worksheet to go along with lesson **Day 5**: Genius Generation Renewable & NonRenewable Resources **Material**: Mystery Science Genius Generation Student Readers (English & Spanish Carolina Science Kits) Photosynthesis Video: https://www.youtube.com/watch?v=EstPeBt9CyU Photosynthesis "Four Ingredients" informational Packet (TpT activity) Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "What's for Dinner Activity" Colored Pencils.Markers.Crayons Game: http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/foodchain.htm https://betterlesson.com/lesson/631349/producers-consumers-decomposers# https://betterlesson.com/lesson/633027/food-

			webs Ecosystem Video: https://www.youtube.com/watch?v=CZhE2p46vJk Google Classroom, "This Tangled Web We Weave" Activity, Markers/Colored Pencils Keystone Species Video: https://www.youtube.com/watch?v=JGcIp4YEKrc&t=152s Yellowstone Wolves https://www.yellowstonepark.com/things-to-do/wildlife/wolves Pass the Energy Activity page, Pass the Energy line graph Google Sheets (TpT Activity)

Link to Additional Components including Cross Curricular Connections, Accommodations, Assessments, Etc
ELA Enduring Understanding Statements