

Washington Township School District

STEM/Makerspace Curriculum

Grade:	5	Mystery Science Unit/Project Title:	Mystery Science: Lab 3 Web of Life & Water Systems Stem: Filtration System
NJ Learning Standard(s):	5-LS2-1		
Objective:	SWBAT: <ul style="list-style-type: none"> • Compare and contrast different elements that make up a water filtration system • Evaluate how water filtration is an important part of the water cycle 		
STEM/ Unit Activities	Filtration System		
Suggested Assessments:	<ul style="list-style-type: none"> • Hypothesis Packet (Teacher created & Shared) • Journal • Project Rubric 		
Supplies Needed:	<ul style="list-style-type: none"> • 2-liter soda bottles cut in half (by an adult) per student or student group. • napkins or paper towels • gravel, sand and cotton balls for your filter • dirty water, you can make it by adding cooking oil, food coloring, pieces of paper, and tiny pieces of Styrofoam to water 		
Resources to Support Unit:	Directions/Activity: http://pbskids.org/zoom/activities/sci/waterfilter.html Picture: http://japhilio.weebly.com/uploads/1/3/8/5/13856217/1350015821.jpg Article on Filtration (TYPES): https://wellnesshubnova.com/water-filtration-pros-and-cons/		

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Grade:	Whole-Wide Lab	Mystery Science Unit/Project Title:	Mystery Science: Lab 3 Web of Life Stem: Worm Farm *School Wide Experiment
NJ Learning Standard(s):	5-LS2-1		
Objective:	Students will: <ul style="list-style-type: none"> • Evaluate how different matter can or can't be naturally decomposed over a period of time • Analyze recycling concepts and how long a time frame it takes different matter to decompose 		
STEM/ Unit Activities	Worm Farm		
Suggested Assessments:	<ul style="list-style-type: none"> • Data sheets (5th grade students) • Quarterly reports (created by 5th grade students but displayed for all students to examine) • Project Rubric • Unit Test 		
Supplies Needed:	<ul style="list-style-type: none"> • Large aquarium (Michele Cooper will donate) • Red wigglers worms specifically sold for worm farms – sold at bait and tackle stores • Soil, sand, stone • Fruit, chicken bone and Styrofoam to decompose • Grass seeds • Magnifying glasses <p>Worm Care/Food: Collect classroom garbage from snacks and lunches. Items that worms love to eat are breads, vegetable matter, paper napkins, paper towels, coffee grinds and unbleached coffee filters. Avoid meats, juice boxes, anything waxed, cardboard, plastics, and eggshells. The worms prefer smaller pieces, so large items like bananas peels should be torn up. Place the garbage on top of the substrate. There is no need to bury it, because the worms will find it. 2,000 worms will eat approximately 8 lbs. of garbage a week.</p>		

<p>Resources to Support Unit</p> <p>&</p> <p>Cross-Curricular Activities</p>	<p>Lab (will need to tweak for aquarium): http://www.brighthubeducation.com/middle-school-science-lessons/27161-composting-science-projects-with-worms/</p> <p>Picture reference: https://www.bing.com/images/search?view=detailV2&ccid=MR%2Bh%2FAav&id=D1F08704B97B2704477EE912D5809705A0CAF97A&thid=OIP.MR-h_AavsiX5NYJFhl_7ZgEsEp&q=worm+decomposition+projects&simid=607995232802574067&selectedIndex=112&mode=overlay&first=1</p> <p>http://www.wormfarmfacts.com/Worm-Food.html - article</p> <p>http://www.wormfarmfacts.com/Get-Started.html - article on habitat/food needs</p> <p>http://www.nytimes.com/2013/01/01/science/worms-produce-another-kind-of-gold-for-farmers.html - Article on Life of Worm Farmer</p>
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