

Washington Township School District

STEM/Makerspace Curriculum

Grade:	4	Mystery Science Unit/Project Title:	Human Machine Adaptive Device
NJ Learning Standard(s):	4-ETS1-1, LS1.A		
Objective:	SWBAT engineer a technology to solve a problem.		
STEM/ Unit Activities	Adaptive Device Design		
Suggested Assessments:	<ul style="list-style-type: none"> • Adaptive device organizer • Journal • Writing 		
Supplies Needed:	<ul style="list-style-type: none"> • One pair of sunglasses (either old or inexpensive new) • Eyeglass Repair Kit (including mini screwdriver, replacement screws, and if possible a magnifying glass) 		
Resources to Support Unit:	http://tryengineering.org/lesson-plans/adaptive-device-design Adaptive Devices Full Teacher Lesson Plan Adaptive Devices Student Worksheet		

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Grade:	4	Mystery Science Unit/Project Title:	Human Machine Working Lung
NJ Learning Standard(s):	4-PS4-3.ETS1.C.1, 4-LS1-1		
Objective:	SWBAT: <ul style="list-style-type: none"> • Discover how the lungs work • Construct a lung model using common household items 		
STEM/ Unit Activities	Build a Lung Model (suggestion: rather than giving the students directions on how to build the lung, give them the materials and have them come up with a way to build a “working” lung)		
Suggested Assessments:	<ul style="list-style-type: none"> • Exit Ticket • Journal 		
Supplies Needed:	<ul style="list-style-type: none"> • empty 2-liter bottle • plastic bag (trash bag or thick grocery bag) • thick rubber band • balloon • drinking straw • masking tape • modeling clay • scissors 		
Resources to Support Unit:	https://www.homesciencetools.com/learning-center/build-lung-model-science-project https://www.homesciencetools.com/a/how-lungs-work		

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Grade:	4	Mystery Science Unit/Project Title:	The Human Machine Mystery 4: How Does Your Brain Control Your Body?
NJ Learning Standard(s):	4-LS1-1, 4-LS1-1.A		
Objective:	SWBAT engineer a helmet to protect a model brain (egg) during a fall.		
STEM/ Unit Activities	The Egghead Helmet Experiment		
Suggested Assessments:	<ul style="list-style-type: none"> • Data Table • Design Sheet 		
Supplies Needed:	<ul style="list-style-type: none"> • Eggs • Measuring tapes • Plastic straws • Clear tape • Masking tape • Index cards • Bubble mailers • Art tissue paper • String • Cotton balls • Small plastic cups • Facial tissues • Pipe cleaners • Bubble wrap • Wrapping paper • Cardboard • Plastic containers • Rubber bands • Large trash bags • Paper towels for cleanup 		
Resources to Support Unit:	Egghead Helmet Experiment General Overview: Grades 4-5 Egghead Helmet Experiment Student Worksheet: Grades 4-5		

