

HUDSONVILLE MIDDLE SCHOOL COURSE FRAMEWORK



COURSE/SUBJECT

Discovery Science 3rd year



<p>UNIT PACING Names of units and approximate pacing</p>	<p>UNIT LEARNING TARGETS By the end of the unit, students will be able to...</p>	<p>STANDARD Which standards (i.e. common core, MMC, etc.) does this address?</p>
<p>Introduction to Year 3, Marshmallow Challenge</p>	<p>Students will be able to identify the process used in Discovery Science. Students will be able to identify habits of good scientists and engineers.</p>	<p>HSCE Inquiry Process NGSS 6. Constructing explanations (for science) and designing solutions (for engineering)</p>
<p>Rube Goldberg</p>	<p>Students will be able to identify how energy transfers. Students will be able to communicate the relationship between net force, momentum, and work.</p>	<p>HSCE Inquiry Process Net force, momentum, work NGSS 2. Developing and using models CC.LS. 3 - Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.</p>
<p>Egg Crash Test Car</p>	<p>Students will be able to identify the difference between an inelastic and elastic collision. Students will be able to calculate the speed of their car and how energy is conserved in their crash.</p>	<p>HSCE Newtons Laws Motion of objects Calculating speed, distance, time, acceleration, net force, momentum, work. NGSS 2. Developing and using models 4. Analyzing and interpreting data CC.LS. 7 - Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).</p>

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Human Behaviors	Students will be able to collect data and run an investigation that answers a driving questions.	NGSS 8. Obtaining, evaluating, and communicating information CCSS
Crime Scene Investigation	Students will be able to solve a crime using reasoning when given evidence pertaining to the crime.	HSCE Acids and Bases NGSS 8. Obtaining, evaluating, and communicating information CCSS
Bottle Rockets	Students will be able to explain Newton's three laws and how they relate to bottle rocket launching.	HSCE Newtons Laws Motion of objects Calculating speed, distance, time, acceleration, net force, momentum, work. NGSS 2. Developing and using models 4. Analyzing and interpreting data CC.LS. 7 - Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

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Rocket Balloon Jousting	Students will be able to explain acceleration and momentum and identify which balloon jousters have the most/least and why.	HSCE Newtons Laws Motion of objects Calculating speed, distance, time, acceleration, net force, momentum, work. NGSS 2. Developing and using models 4. Analyzing and interpreting data CC.LS. 7 - Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).