

8th Grade Nature of Science

Learning Target(s) in student friendly language:				
<ul style="list-style-type: none"> <li>- Planning and carrying out investigations</li> <li>- Analyzing and interpreting data</li> <li>- Designing solutions</li> </ul>				
Length of Instruction: # of Days				
17?				
Assessments				
<p><b>Pre Assessment:</b> Part 1: Design an Experiment <a href="#">Instructions slide</a></p> <p>Part 2: Conduct a classmate's experiment</p> <p>Part 3: Science T.A.L.K. discussing what was hard to follow, data trends, common errors, outliers</p> <p><a href="#">Rubric</a></p>	<p><b>Formative:</b> Part 1: Ziplines <a href="#">Zipline Slides</a> <a href="#">Student Sheet</a></p> <p>Part 2: Conduct a classmate's zipline</p> <p>Part 3: Science T. A. L. K. discussing what was hard to follow, data trends, common errors, outliers</p> <p>Experimental Design Exit Slip</p>	<p><b>Summative:</b> Part 1: Design an Experiment, Round 2 <a href="#">Instructions slide</a> <a href="#">Activity Sheet</a> <a href="#">Conclusion/Reflection Google Form</a></p> <p>Part 2: Conduct a classmate's experiment</p> <p>Part 3: Science T. A. L. K. discussing if you feel like you've improved, how so, what was hard to follow, data trends, common errors, outliers,</p>		
INSTRUCTIONAL PLAN				
<p><a href="#">SLIDES</a> ← For the week</p> <p>Talk about thinking</p>	<p>Regular Introductions, Create <a href="#">Group Norms</a> <i>8 groups, 2 repeats of</i></p>	<p>Engineering Task Day 1 Flipping Cups - <a href="#">Slides</a></p>	<p>Engineering Task Day 2 Flipping Cups - <a href="#">Slides</a></p>	<p>Pre-Assessment Experimental Design Activity - instructions and</p>

<p>activity: <a href="#">Zoom</a> → ReZoom End of the world challenge Communication Artist <a href="#">Slides</a> and <a href="#">WS</a></p> <p>Logistics: Assignment notebook, where to turn in work, Join GC, What to bring daily (notebook, writing utensil, folder, assignment notebook, iPad) Write name and “Science” on notebook and folder</p> <p><a href="#">Lego build challenge</a> <a href="#">Observation video</a> <a href="#">Observation telephone</a> and build a sentence</p>	<p><i>each norm category. Define what it looks like, etc. Compare with other group and present the top 3-4 ideas for your title.</i></p> <p>Parachute investigation</p>	<p>- <a href="#">Sheet</a> → print a class set. Use page protectors and write with vis a vis markers</p>	<p>- <a href="#">Sheet</a> → print a class set. Use page protectors and write with vis a vis markers</p>	<p>planning, <a href="#">checklist</a> <a href="#">Instructions slide</a></p>
<p>Pre-Assessment Experimental Design Activity - finish planning, carry out and collect data, record what you did</p>	<p>Pre-Assessment Experimental Design Activity - gallery walk with videos, give feedback to teams <a href="#">Gallery walk instructions</a> Note: students will leave ipads at stations so classmates can watch videos. Print out <a href="#">glows/grows sheets</a> to leave at station.</p>	<p>Students working independently. Do inquiry cubes and <a href="#">Set up gizmos</a> <a href="#">Pendulum Clock</a> Gizmo</p>	<p><a href="#">Group review of experimental vocab</a> <a href="#">Answer Key</a> <a href="#">Exit slip</a>: solo mission</p>	<p>Directly teach: IV, DV, constants, trials (identified from Pre-Assessment)</p> <p><a href="#">Student Slide</a> <a href="#">Zipline Slides</a> Day 1 of 2 <a href="#">Student Sheet</a></p> <p>Reteaching measurement materials: <a href="#">Length edpuzzle</a> Have measurement stuff available to spot check student work and provide immediate feedback</p>

<p><a href="#">Zipline Slides</a> day 2 of 2 <a href="#">Student Sheet</a></p> <p>Reteach experimental design materials: <a href="#">Go over everything</a></p>	<p><b>Scientist circle:</b> Share out using experimental design vocab Show video from Documenter, use white boards for others to guess IV, DV, and constants, Mouthpiece shares out answers</p> <ul style="list-style-type: none"> <li>- Mouthpiece shares out what happened</li> <li>- Documenter shares video to show us <ul style="list-style-type: none"> <li>- How it worked (your different designs for IV)</li> <li>- Data table (DV)</li> </ul> </li> </ul> <p>results of zipline activity/data After all groups share:</p> <ul style="list-style-type: none"> <li>- Why might have people gotten answers wrong</li> <li>- Trends in experiments: <ul style="list-style-type: none"> <li>- Did you all collect the same data?</li> <li>- Did you all</li> </ul> </li> </ul>	<p>Final review day: gizmo? Mini investigation? PVA and water?</p>	<p>Experimental Design Activity Day 1 of 3 - instructions and planning, <a href="#">checklist</a> <a href="#">Instructions slide</a> <a href="#">Activity Sheet</a> <a href="#">Conclusion/Reflection</a> <a href="#">Google Form</a> <a href="#">checklist</a></p>	<p>Experimental Design Activity Day 2 of 3 - conduct and organize data</p>
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	change the same things?			
Experimental Design Activity Day 3 of 3 - switch and complete another group's experiment	Share out: Compare data from both groups, rate how the results were	Buffer	Buffer	