

## Extended Learning Resources

Grade Level	Discipline/Course	4 <sup>th</sup> Quarter Learning Standard	Online Resources	Activities That Address Standard
9	Biology	<b>HS-LS2</b> Ecosystems: Interactions, Energy, and Dynamics  <b>HS-ETS1</b> Engineering Design	<a href="https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/">https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/</a>  <a href="https://digitalcommons.imsa.edu/snack_boxes/">https://digitalcommons.imsa.edu/snack_boxes/</a>  <a href="http://www.newsela.com">www.newsela.com</a>	<ol style="list-style-type: none"> <li>1. Phenomenon: Lions versus Water Buffalo <a href="https://youtu.be/LU8DDYz68kM">https://youtu.be/LU8DDYz68kM</a></li> <li>2. Asking questions: Students ask questions about phenomenon and share questions with others via a driving question board or an <a href="#">online sharing tool</a> of your choice. Students will pose questions that ask about the lions or water buffalo and how they are behaving in the clip. This can lead to the concept of some organisms living in groups.</li> <li>3. Planning and Carrying Out an Investigation: Students may go outside to make observations of organisms that also live in groups (insects, birds, etc). Students should consider whether these organisms are living in groups for the same reasons as the lions or water buffalo. Teachers may offer methods for collecting data or allow students to create their own. What patterns do they see? What claims can students make about their behavior of the animals they observed outside?</li> <li>4. Engaging in Argument from Evidence: Students share their observations and any data collected to explain</li> </ol>

				<p>how their data supports their claim. Students may present their evidence and explain how their evidence supports their claim in a myriad of ways using the technology available to the teacher.</p> <p>5. Continuing the story: This may lead to activities around genetics that enable students to figure out how the lions are related to one another and/or activities around macromolecules and energy where students can distinguish what these different species consume.</p>
10-12	Earth and Space Science	<p><b>HS-ETS1</b> Engineering Design</p> <p><b>HS-ESS2-5</b> Plan and conduct an investigation of the properties of water and its effects on Earth's Materials</p>	<p><a href="https://www.nsta.org/daily-do#tab">https://www.nsta.org/daily-do#tab</a></p> <p><a href="https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/">https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/</a></p> <p><a href="http://www.newsela.com">www.newsela.com</a></p>	<p>ESS 2.C The Roles of Water in Earth's Surface Processes</p> <ol style="list-style-type: none"> <li>1. Phenomenon: Time Lapse: The Power of Water <a href="https://youtu.be/N8C9OaBRW2g">https://youtu.be/N8C9OaBRW2g</a></li> <li>2. Asking questions: Students ask questions about phenomenon and share questions with others via a driving question board or an <a href="#">online sharing tool</a> of your choice. Students will pose questions that ask about the effects of weathering. This can lead to the concept of water properties and erosion. What did they observe? Why did that happen?</li> <li>3. Planning and Carrying Out an Investigation: Students will fill a plastic water bottle or hard plastic container completely full of water and put a lid on tightly. They will freeze it overnight and make observations the next day. What did they observe? Why did that happen?</li> </ol>

				<p>4. Engaging in Argument from Evidence: Students share their observations and any data collected to explain how their data supports their claim. Students may present their evidence and explain how their evidence supports their claim in a myriad of ways using the technology available to the teacher and students.</p> <p>5. Continuing the story: This may lead to activities around modeling land formation as seen on a walk with their family and a discussion of the role water plays in the weather or human sustainability when it comes to water use in the home.</p>
11-12	STEM	HS-ETS1 Engineering Design	<p><a href="https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/">https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/</a></p> <p><a href="http://www.newsela.com">www.newsela.com</a></p> <p><a href="https://pbskids.org/designsquad/">https://pbskids.org/designsquad/</a></p>	<p>1. Phenomenon: An endothermic reaction (lab demo) <a href="https://www.youtube.com/watch?v=GQkJI-Nq3Os">https://www.youtube.com/watch?v=GQkJI-Nq3Os</a></p> <p>2. Asking questions: Students ask questions about phenomenon and share questions with others via a driving question board or an <a href="#">online sharing tool</a> of your choice. Students will pose questions that ask about how mixing two liquids can make something freeze or if the substances are dangerous by themselves. Discuss what signs indicate a chemical reaction, rather than a physical change. This can lead to the concept of chemical processes, energy, collisions of molecules and the rearrangements of atoms into new molecules.</p> <p>3. Planning and Carrying Out an Investigation: Students can use basic household items to model the reaction they saw in the video using baking soda, pink lemonade powder, salt and water.</p>



