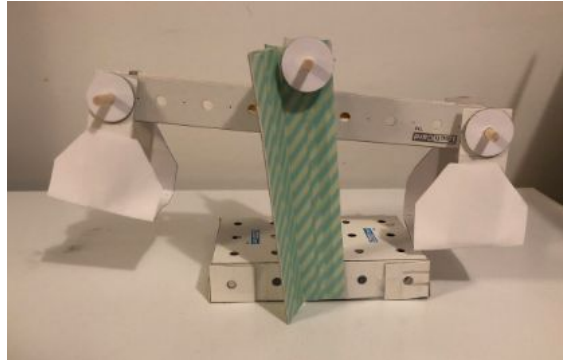


## The Popcorn Book- Creation Crate Junior Tech Cards Balance



Activity Title:	The Popcorn Book- Creation Crate Junior Tech Cards Balance
Timeframe:	~2 Hours
Big Ideas and/or Essential Questions:	How can I design a balance to test differences between popped and unpopped kernels?
PA Standards:	<p>Next Generation Science Standards Practices</p> <ul style="list-style-type: none"> <li>• Developing and using models</li> <li>• Designing solutions for engineering</li> </ul>
Learning Target(s):	<ul style="list-style-type: none"> <li>- I can use the Engineering By Design process.</li> <li>- I can create my own Balance/Scale.</li> </ul>
Materials:	<ul style="list-style-type: none"> <li>• Book: <u>The Popcorn Book</u> By: Tomie de Paola</li> <li>• Link of the Book: <a href="https://www.youtube.com/watch?v=bCp59TLWmZI&amp;vI=en-US">https://www.youtube.com/watch?v=bCp59TLWmZI&amp;vI=en-US</a></li> <li>• Creation Crate Junior Tech Card Balance/Scale Kit (One per Group): <a href="https://www.creationcrate.com/order-junior">https://www.creationcrate.com/order-junior</a></li> <li>• Sharpie Markers and/or Washi Tape to Decorate Tech Cards</li> <li>• Glue Dots to Help with Assembling the Tech Card Projects</li> <li>• Popped Kernels of Popcorn in a Baggie (one per group)</li> <li>• Unpopped Kernels of Popcorn in a Baggie (one per group)</li> <li>• Projector</li> <li>• Ipads or Tablets</li> <li>• Website about Weights and Scales: <a href="https://www.explainthatstuff.com/weights_and_balances.html">https://www.explainthatstuff.com/weights_and_balances.html</a></li> <li>• Website with Information About Popcorn: <a href="https://www.cbc.ca/kidscbc2/the-feed/everything-you-want-to-know-about-popcorn">https://www.cbc.ca/kidscbc2/the-feed/everything-you-want-to-know-about-popcorn</a></li> <li>• Student Log (one per student)</li> </ul>

Activity Procedures:	<ol style="list-style-type: none"> <li>1. Read aloud “The Popcorn Book” by Tomie de Paola <ul style="list-style-type: none"> <li>○ Optional: Show the video of “The Popcorn Book”:  <a href="https://www.youtube.com/watch?v=bCp59TLWmZI&amp;vI=en-US">https://www.youtube.com/watch?v=bCp59TLWmZI&amp;vI=en-US</a> </li> </ul> </li> <li>2. Students will get into their groups. They will work together to build a balance/scale. <ul style="list-style-type: none"> <li>○ Optional: Students can decorate their Tech Card projects using markers and/or Washi Tape</li> <li>○ Students can follow the instructions that are provided by Creation Crate Junior.</li> <li>○ If you use the glue dots it helps the students when they assemble the kit.</li> </ul> </li> <li>3. Students will read the information about balances and popcorn. <ul style="list-style-type: none"> <li>○ Students are able to review the information using their ipads. Another option, involves teachers projecting the websites for the students to read as a whole class.</li> </ul> </li> <li>4. The students will look at the differences between popped and unpopped kernels. The students will place 5 unpopped kernels and 5 popped kernels. Students will continue to compare different amounts of kernels. The students will keep track of the experiment by recording their results on their logs.</li> <li>5. The students will try to explain why they think that the unpopped kernels weigh more than the popped corn.</li> </ol>
Assessments:	The teacher can observe the students throughout the lesson. The teacher can review the students’ logs.

## Popped and Unpopped Kernels



**Directions:** Place the different number of kernels to compare the weight on the scales. Record your results.

Number of Kernels	Results
1 Kernel	
2 Kernels	
3 Kernels	
4 Kernels	
5 Kernels	
Bag of Kernels	



