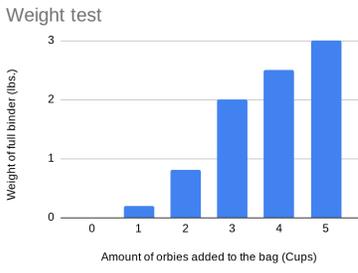


Problem & Project Objectives	Data Analysis and Results												
<p><b><u>Problem</u></b> Children with Sensory Processing Disorder struggle to keep calm and focused in a school environment.</p> <p><b><u>Requirements Specification</u></b> The weight of it should be 7% of the child's body weight (Ellem). The average size of the targeted user, which is a 5 year old child, is nearly 40 lbs (Moses). Meaning, this tool would be approximately 3lbs. This tool must also have textures that children with SPD can feel.</p>	<p><b><u>Testing Results</u></b> The binder was successfully meeting the standards of the requirements such as various textures, interactive activities and being 3lbs. When testing, it was concluded that the targeted user could successfully use this tool. The binder was suitable for resting on a child's lap and for children to interact with. The graphs and data table that is shown was a weight test that measured how much of the weighted material was needed to meet the weight requirements.</p>  <table border="1" data-bbox="860 714 1218 987"> <caption>Weight test data</caption> <thead> <tr> <th>Amount of orbees added to the bag (Cups)</th> <th>Weight of full binder (lbs.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.2</td> </tr> <tr> <td>2</td> <td>0.8</td> </tr> <tr> <td>3</td> <td>2.0</td> </tr> <tr> <td>4</td> <td>2.5</td> </tr> <tr> <td>5</td> <td>3.0</td> </tr> </tbody> </table>	Amount of orbees added to the bag (Cups)	Weight of full binder (lbs.)	1	0.2	2	0.8	3	2.0	4	2.5	5	3.0
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<p align="center"><b>Project Design</b></p>	<p align="center"><b>Interpretation &amp; Conclusions</b></p>												
<ul style="list-style-type: none"> <li>• 1: Acquire necessary materials that are shown above.</li> <li>• 2: Activate orbeez in 6 cups of water and let sit overnight.</li> <li>• 3: With a pencil divide 1pc of 8 ½ x11 paper cardstock in to 6 equal 5 1/2x 2 13/16 rectangles</li> <li>• 4: Cut cork textured paper, sand paper, plastic canvas mesh material, leather fabric and glitter textured paper in to 5 ½ x 2 13/12 rectangles</li> <li>• 5: Hot glue each piece of textured paper to the divided piece of 8 ½ x11 piece of cardstock making a grid of 5 textured squares and one empty space. Let glue dry until it is hard.</li> <li>• 6: In the empty space place the 9 clear plastic dot protectors stargard on the empty space.</li> <li>• 7: Whole punch that piece of paper and place it in the binder.</li> <li>• 8: Cut each color of the velcro rolls into two 2 ½ inch strips</li> <li>• 9: Hot glue each strip to a 8 ½ x11 piece of card stock making 2 even lines of 3</li> <li>• 10: Let glue dry until it is hard.</li> <li>• 11:Then diagonally place the other strip on its matching color</li> <li>• 12: Whole punch the sheet and place it in front of the other sheet in the binder</li> <li>• 13 :Place 1 cup of orbeez into a sealable bag</li> <li>• 14: Continue adding one cup to the bag until it is successfully 3lbs which is 4 cups.</li> <li>• 15: Seal the bag with the food saver</li> <li>• 16: Place bag in binder</li> </ul>	<p><b><u>Redesign</u></b> The redesigning that was made was sucking more air out of the bag with orbeez so the binder could be more functional and less bulky. This change successfully made the bag more compact and mobile.</p> <p><b><u>Conclusions</u></b> After building and observing it was concluded that the child would be able to find the binder useful to solve their problem. This is because the binder met the requirements of weight and interactive textures which were crucial for this problem. The child would also be able to use the binder in the way it was intended seeing that it is easily held and movable. For a future study the next step that could be taken would be to find out if SPD evolves as the child grows and if it gets worse or better and redesign the prototype so it is suitable for older children.</p>												

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