

# Cauliflower Brain

<b>1</b>	<p><b>Overall aims:</b></p> <ul style="list-style-type: none"> <li>• Develop an understanding of brain function</li> <li>• Destigmatize “negative” emotions such as anger and fear.</li> <li>• Understand the purpose of building a model</li> <li>• Recognize opportunities to repurpose materials</li> <li>• Deepen understanding of cause and effect</li> <li>• Make predictions</li> <li>• Enhance fine motor confidence</li> </ul>
<b>2</b>	<p><b>Vocabulary - keywords</b></p> <p>Brain, Amygdala, Pre frontal cortex, cortisol, response,</p>
<b>3</b>	<p><b>Sustainable abilities developed</b></p> <ul style="list-style-type: none"> <li>• Systems thinking:</li> <li>• Anticipatory competency</li> <li>• Normative competency:</li> <li>• Strategic competency:</li> <li>• Collaboration</li> <li>• Critical thinking</li> <li>• Self-awareness</li> </ul>
<b>4</b>	<p><b>Pillars of sustainability included</b></p> <ul style="list-style-type: none"> <li>• Economic</li> <li>• Ecological</li> <li>• Social</li> </ul>
<b>5</b>	<p><b>STEAM domains</b></p> <p>Science, Technology, Math</p>
<b>6</b>	<p><b>Teaching methodologies/activity outline</b></p> <p>This is best carried out in late summer, early autumn at the beginning of the school year. The teacher designates a documentarian and activates prior knowledge by asking the children about organs” What is an organ? What is a vital organ? (many children will know</p>



	<p>heart and lungs) Encourage children to explore the functions of the heart and lungs, as well as how we can detect them working. Deep breaths, listening for heartbeats. A Stethoscope would be useful here.</p> <p>What about in our heads? What organs live in there? The brain! Does anyone know what it looks like? Here the teacher shows a visual from a book or a tablet.</p> <p>What are the different parts of the brain? Here is the amygdala, here is the pre frontal cortex. (exploring the other parts of the human can be an eventual extension of learning) "What does the Amygdala do?" The teacher gives a brief simple explanation. "What does the Prefrontal cortex do?" The teacher gives a brief simple explanation. "To help us understand what the Amygdala and the pre frontal cortex do, we need a model of the brain."</p> <p>The teachers asks about the shape of the brain. The teacher presents the children with an assortment of fruit and vegetables from the farm/garden/shop and asks if any of them look like the Prefrontal Cortex? Which one looks like the Amygdala?</p> <p>Here the teacher co creates the model of the human brain using a cauliflower to represent the prefrontal cortex and another vegetable/fruit to represent the amygdala (cherry tomato, plum, passion fruit, grape, etc). Here the teacher uses intentional playful approaches to personify the amygdala and the pre-frontal cortex to explain their relationship.</p>
<p><b>7</b></p>	<p><b>Expected learning outcomes</b></p> <p><b>The child will be able to:</b></p> <ul style="list-style-type: none"> <li>• The children will gain a deeper understanding of the biology of emotions</li> <li>• The children will gain a deeper understanding of the benefits of model building</li> <li>• The children will become more self aware</li> <li>• The children will gain a deeper understanding of the emotional responses of others</li> </ul>
<p><b>8</b></p>	<p><b>Assessment</b></p> <p>search for "teachable moments" throughout everyday routines and activities to explore the relationship between the amygdala and the prefrontal cortex. using intentional playful approaches to animate the model.</p>
<p><b>9</b></p>	<p><b>Equipment and materials to be used in learning unit (tools, ingredients etc)</b></p> <ul style="list-style-type: none"> <li>• Cauliflower and an assortment of fruits and vegetables.</li> </ul>
<p><b>10</b></p>	<p><b>Kind of setting - lab, kitchen, outdoor etc.</b></p> <p>Anywhere</p>



<b>11</b>	<b>References - source:</b> <a href="http://blog.susanevans.org/how-to-make-a-vegetable-brain/">http://blog.susanevans.org/how-to-make-a-vegetable-brain/</a>



Co-funded by the  
Erasmus+ Programme  
of the European Union

This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.