Deep Breaths

1 Overall aims:

- Define anxiety, reaction, self regulation, respiration
- Reinforce understanding of the functions of the amygdala and the cerebral cortex
- Develop understanding of the relationship between the respiratory system and the brain
- Develop entrepreneurship
- Recognize opportunities to repurpose materials
- Deepen understanding of cause and effect
- Make predictions
- Enhance fine motor confidence

2 Vocabulary - keywords

Lungs, diaphragm, respiration,

3 Sustainable abilities developed

- Systems thinking:
- Anticipatory competency
- Normative competency:
- Strategic competency:
- Collaboration
- Critical thinking
- Self-awareness

4 Pillars of sustainability included

- Economic
- Ecological
- Social

5 STEAM domains

Science, Technology, Math

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6	**Teaching methodologies/activity outline** This is best carried out at the autumnal equinoxe (September 21st-23rd). The teacher designates a documentarian and activates prior knowledge by asking the children about respiration. Why do we breathe? How do we breathe? What are the names of the body parts that help us breathe? How do we feel when we bring our attention to our breath? How do we feel when we sit still and take a few deep breaths? What do you think is happening in our brain when we take some deep breaths? What do our lungs and diaphragm look like when we are taking deep breaths? Here the teacher shows a 2D representation of the human respiratory system and asks "What materials could we repurpose to create a model of the human respiratory system?" Here the teacher and the children co create a model of the human respiratory system by repurposing materials.
7	**Expected learning outcomes** **The child will be able to:** ● gain a deeper understanding of the respiratory system and its relationship to brain activity. ● gain a deeper understanding of the benefits of model building ● become more self aware
8	**Assessment** 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.
9	**Equipment and materials to be used in learning unit (tools, ingredients etc)** ● Hard plastic bottles ● Elastic bands ● balloons ● Straws
10	**Kind of setting - lab, kitchen, outdoor etc.** Anywhere

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11 References - source:

https://www.sciencebuddies.org/stem-activities/lung-model

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