

Keep It Clean!

Overall aims:

- Explore the concept of a circular economy
- Explore the concept of a linear economy
- Explore the principles of a circular economy, 1) designing out pollution 2) keep materials in use
- Develop understanding of systems that support a circular economy
- Make predictions
- Enhance fine motor confidence
- Promote entrepreneurship
- identify opportunities to repurpose materials

2 Vocabulary - keywords

Repurpose, reclaim, restore, design, economy, regenerate, acid, reaction, corrosive,

3 Sustainable abilities developed

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

4 Pillars of sustainability included

- Economic
- Ecological
- Social

5 STEAM domains

Science, Technology, Arts, Engineering, Math

6 Teaching methodologies/activity outline

This is best carried out at Saimhain, Halloween, end of October, the mid point between the the autumnal equinox (September 21st-23rd) and the winter solstice. At this point the



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	<p>children will have be more familiar with the setting, will have completed some projects and may have some materials that are damaged, soiled or superfluous.</p> <p>The teacher designates a documentarian and activates prior knowledge by using puppets/story/role play/digital resources to talk about how we take care of our materials.</p> <p>The teacher guides the children in a discussion about keeping materials in use and how keeping materials clean prolongs their life. The teacher shows the children some conventional cleaners and brings their attention to the symbol on them that shows that they can damage the natural environment. The teacher asks children to come up with some solutions and eventually suggests that they create their own natural cleaning solutions that cause little or no damage to the environment.</p> <p>The teacher and children gather the materials necessary to make the natural cleaning product. Before mixing them together, the teacher asks the children to make predictions of what will occur. When the water, Bicarbonate and Vinegar mix and react, the teacher asks the children what they think happened. The teacher asks the children to choose between an assortment of essential oils to give the cleaning product extra cleaning power and a pleasant scent.</p> <p>The children are given the task of cleaning toys, materials and furniture.</p> <p>The teacher asks the children how does the cleaning product remove grease and dirt from materials.</p> <p>A cleaning schedule is designed.</p>
7	<h2>Expected learning outcomes</h2> <p>The child will be able to:</p> <ul style="list-style-type: none"> • carry out the experiment • explain what happens during the chemical reaction between citric acid and or vinegar and bicarbonate. • Explain how the mixture is a cleaning agent. • Explain how keeping materials clean keeps them in use longer and designs out waste • Explain how the homemade cleaning agent is less harmful to the environment and how this designs out pollution.
8	<h2>Assessment</h2> <p>Search for “teachable moments” throughout everyday routines and activities to explore opportunities to use the Cleaning Product.</p>
9	<h2>Equipment and materials to be used in learning unit (tools, ingredients etc)</h2> <p>White vinegar or lemon juice, water, bicarbonate, repurposed plastic or glass bottles with spray nozzles, essential oils (optional, avoid eucalyptus).</p>



	fennel, peppermint, rosemary, verbena, wintergreen)
10	Kind of setting - lab, kitchen, outdoor etc. Indoors or outdoors,
11	References - source: https://www.theguardian.com/lifeandstyle/shortcuts/2019/jan/13/bicarb-vinegar-lemon-juice-how-to-clean-your-house-even-the-oven-the-old-fashioned-way



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