Restoration Yard

Overall aims:

- Explore the concept of a circular economy
- Explore the concept of a linear economy
- Explore the 3 principles of a circular economy 1) design out pollution and waste, 2) keep materials in use, 3) regenerate natural systems
- 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,

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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children will have be more familiar with the setting, will have completed some projects and may have some materials that are damaged or superfluous.
The teacher designates a documentarian and activates prior knowledge by using puppets/story/role play/digital resources to talk about what we do with materials when they become damaged or when we feel we no longer need them.
Ideally, a field trip to a Recreate centre or Architectural salvage yard is organised.
The teacher asks the children what can be made from materials that we are ready to throw away. Here she can show examples of houses, large scale sculptures and elaborate gowns and toys made of repurposed materials.
The teacher guides a discussion on designing out waste and pollution and asks children how this can be done in the setting.
The teacher activates prior knowledge on the salvage yard visit and suggests that the children design and build their own salvage shed/yard for the setting to keep track of materials to avoid acquiring unnecessary items and adding to waste disposal.

The teacher employs the NASA best engineering model to design the Restoration Yard
ASK- children identify the problem, requirements that must be met and constraints that must be considered

IMAGINE- children brainstorm solutions and research ideas. They also identify what others have done.

PLAN- children choose two to three of the best ideas from their brainstormed list and sketch possible designs, ultimately choosing a single design to prototype

CREATE - children build a working model, or prototype that aligns with design requirements and is within design constraints.

TEST children evaluate the solution through testing, they collect and analyse data; they summarise strengths and weaknesses of their design that were revealed during testing

IMPROVE Based on the results of their tests, children make improvements on their design. They also identify changes they will make and justify their revisions

At the ASK stage, constraints include materials coming only from the setting, children's homes, charity shops and freecycle sites. The Restoration Yard must be designed so that it protects the materials from weather. Additionally, a corresponding stock book with periodic stock takes must be created.

7 Expected learning outcomes

The child will be able to:

- carry out the building project using the NASA framework

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	• explain why they chose the materials, the site and the design • explain the importance of troubleshooting, evaluating solutions and making improvements to design • explain the Restoration Yard as a system • Evaluate the effectiveness of the Restoration Yard
8	**Assessment** Search for "teachable moments" throughout everyday routines and activities to explore opportunities to use the restoration Yard.. During class meetings, the children will discuss the effect that the Restoration Yard has on ongoing projects. What other systems could support a circular economy?
9	**Equipment and materials to be used in learning unit (tools, ingredients etc)** Tarpaulin, unused shed, notebook, unused shelves, storage boxes.
10	**Kind of setting - lab, kitchen, outdoor etc.** Indoors or outdoors, workshop
11	**References - source:** https://www.ecoandbeyond.co/articles/teaching-kids-about-recycling/

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