Hugelkultur

1 Overall aims:

- Explore the concept of water retention
- -Deepen understanding of the biology of soil
- -Deepen understanding of the biology of plants
- -Develop mathematical skills
- -Develop measuring skills
- -Make predictions
- -Strengthen fine motor skills

2 Vocabulary - keywords

Hugelkulture, moisture, maximise, fertility, decompose,

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, Engineering, Art, Math

6 Teaching methodologies/activity outline

The teacher asks the children about planting.
“What do plants need to grow?’
“How could we maximise our plants chances of thriving?”

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	Using stories, digital resources, books and role play, the teacher explains that Hugelkulture is a centuries old method of using available materials to build natural raised beds with rotting wood at the base of them that improve soil quality for growing plants. . The teacher employs the NASA best engineering model 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
7	**Expected learning outcomes** **The child will be able to:** ● Explain the concept of Hugelkulture ● Build Hugelkulture mounds ● Monitor growth
8	**Assessment** Help the children in observing and assessing the effectiveness, if any of the Huggelkulture mounds ,
9	**Equipment and materials to be used in learning unit (tools, ingredients etc)** Spade, wood, mulch, compost, seeds
10	**Kind of setting - lab, kitchen, outdoor etc.** outdoors, garden

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11 References - source:

https://www.permaculture.co.uk/articles/many-benefits-hugelkultur

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