Building a Fire

1 Overall aims:

- -Explore the concept of combustion
- -Make predictions
- -Strengthen fine motor skills
- -Develop fire skills

2 Vocabulary - keywords

Combustion, chemical reaction, fuel, oxygen, smoke

3 Sustainable abilities developed

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

4 Pillars of sustainability included

- Ecological
- Social
- Economical

5 STEAM domains

Science, Math, engineering

6 Teaching methodologies/activity outline

The teacher employs the NASA best engineering model for fire construction.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.

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	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 will depend on the setting and fire by-laws in their region.
7	**Expected learning outcomes** **The child will be able to:** ● -assist in building a fire ● -understand the basics of fire safety ● explain the concept of combustion ● -understand the concept of renewable fuel ● -understand the difference between Greenwood and dead wood ● learn from mistakes
8	**Assessment** Find teachable moments throughout routines to reinforce concepts. Encourage children to keep their eye out for kindling and firewood throughout play.
9	**Equipment and materials to be used in learning unit (tools, ingredients etc)** ● Wood, Flint, tinder, water, watering cans
10	**Kind of setting - lab, kitchen, outdoor etc.** Outdoors, garden, park, forest
11	**References - source:** https://www.youtube.com/watch?v=nv1h2_rUY7o&t=1617s

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