

Design a Kitchen of the Future

STEM Project

This project covers the following;

- **Science:** Design & make/ Materials / Environmental Awareness & Care/ Forces
- **Maths:** Measurement/ Shape & Space/ Number/ Early Mathematical Activities
- **Engineering:** Design & Make
- **Technology:** Design & Make / audio recordings/ photography/ Adobe Spark / use of Seesaw, ClassDojo and other platforms to present to class
- **Visual Art:** Drawing / Construction
- **English/Gaeilge:** Oral Language/ Writing



Task

Kitchens are evolving. Think about what smart home technology is infiltrating our kitchens. Your task is to design a kitchen of the future, in particular for 50 years in the future.

Criteria: You need to draw your design of your futuristic kitchen. Feel free to add colour. Please include the following;

- The kitchen is 8m in length and 4m in width. Therefore, please draw your design to scale.
- It must have 2 exits. One door leads to the garden.
- It must include an appliance to wash items, keep food cold and heat up food.
- Include a colour or key code for the materials you will use in your design. Will there be tiles on the floor? What materials are your storage cupboards made from? Think about all the different materials you might use.
- Consider shapes in your kitchen. Include a variety shapes in your design.
- Consider the following elements of your kitchen;
Storage, lighting, appliances, electrical points, seating
- Include a short written explanation of the improvements you have made to your futuristic kitchen.

**Decoration & visual presentation will get extra credit.*

Timeframe:

- Give children a timeframe to complete their project within to help develop self-management during independent learning.

Extensions to criteria to increase challenge

Teachers consider some of the following suggestions to challenge pupil's learning further;

- Research development in smart home technology. What is already happening to advance kitchen technology? Write a short report to share with your class.
- There are opportunities to include design & make elements to this from tea cosies and fridge magnets to more detailed constructions such as solar panel ovens, pedal bins, water pumps etc.
- Explore tessellation in the kitchen by examining tile patterns on floors and walls in current kitchen. Is there an opportunity to engage in mosaic design?
- Integrate recyclable materials and construct a Bin Monster from those recycled materials in your bin. What will you use and why?
- Integrate digital technology. Could they share an audio recording on Seesaw giving an explanation of their futuristic kitchen? Are there children who would like the challenge of designing a kitchen using digital tools or creating an Adobe Spark poster/video of their creation? Sketch Up for Schools allows students to digitally create 3D shapes. Why not design a fridge, stove, storage press or other structure for the kitchen.

Simplify criteria for younger children or those needing support as follows;

Teachers consider some of the following suggestions to support pupil's learning further;

- Use story as a stimulus for design. Perhaps design a kitchen for Goldilocks house so that she stops visiting the three bears.
- Continuing this theme, can you design and make a table & chairs for the three bears using only newspaper? Integrate one-to-one correspondence by ensuring there is sufficient bowls, spoons, chairs for each bear. Perhaps draw a table plan instead of a kitchen plan.
- Count the cups & plates in your press. Do you have enough cups to match the plates?
- Examine the pattern of tiles in a kitchen. To be sure, offer some photos in case pupils do not have tiles at home. Can children recreate a pattern using blue, red and green tiles but the same colour cannot touch itself?
- Include two shapes in your design.
- What could you add to your kitchen to create tasty treats? A popcorn maker? A candyfloss machine?
- Use stories to inspire oral language around the kitchen.
- Be a reporter and bring a class on a tour of your own kitchen. Record child's presentation on either audio or video. Excellent language opportunities here.