Design a Dream Garden for your Teacher

STEM Project

This project covers the following;
- **Science**: *Design & make/ Living Things/ Environmental Awareness*
- **Maths**: *Measurement/ Shape & Space/ Number/ Algebra*
- **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

Your teacher's garden has become overgrown and s/he is looking for some new designs to bring it back to life! Can you help?

Criteria: You need to draw in colour, your design of your teacher's dream garden. Please include the following;
- The garden is 20m in length and 12m in width. Therefore, please draw your design to scale.
- Don't forget to include the shed at the back, which is 2m in width and 3m in length.
- Include a key code for the materials you will use in your design. Will there be a stone patio or a raised wooden deck? Think about all the different materials you might use.
- Consider shapes in your garden. Include a variety shapes in your design. Remember the plan will be a bird's eye view, so you may draw 2D shapes to represent 3D structures.
- Your teacher would like to grow her/his own vegetables. Choose the vegetables or herbs you will plant and explain why you chose them. Where in the garden will you place them? (NSEW) Why did you choose this location?
- Your teacher wants to reduce his/her carbon footprint. What could you add to the garden to do this? Explain your choice.
- Include flowers that encourage pollination. You may need to do some research first. Which pollinators do you wish to attract?

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;

- Apply a budget. Offer pupils a link to a gardening website or newspaper advertisement of plants. Ask pupils to budget the overall cost of the design.
- There are opportunities to include design & make elements to this from simple bug hotels & snail snugs to more detailed constructions such as birdhouses, seating areas, solar panel ovens, etc.
- Environmental art could also be included where pupils use materials from their own garden or local area to create an installation.
- Share images from Bloom, Ireland's largest gardening festival. Could pupils create a design to enter this national competition?
- Integrate recyclable material into the garden. What will you use and why?
- Integrate digital technology. Will the child take photos of possible plants? Could they share an audio recording on Seesaw giving a guided tour of the dream garden or even their own? Are there children who would like the challenge of designing a garden 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 shed, birdhouse or other structure for the garden.

Simplify criteria for younger children or those needing support as follows;
Teachers consider some of the following suggestions to support pupil's learning further;

- Design a pattern for teacher's flowerbed using three colours/two shapes/different heights of plants.
- Include two shapes in your design.
- Incy Wincy Spider does not like the rain. Can you include a design for spiders to shelter in on wet days?
- What could you add to the garden to get birds to visit?
- Design & Make a bug hotel, a snail snug, a hedgehog home, etc.
- Use stories to inspire oral language around gardens.
- Be a reporter for a gardening programme and describe your garden orally. Record child's presentation on either audio or video.
- Include identifier cards to assist pupils in naming their plant choices.