Barefoot
Computing at School

Awesome Autumn
Garlands Galore

Duration: **20-30 minutes,** *plus time for collecting objects*

Concepts and approaches covered

Creating   Pattern   Logic

Early Learning Goal and Development Matters Links

ELG: Creating with Materials

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;

ELG: Fine Motor Skills

- Use a range of small tools, including scissors, paint brushes and cutlery;

Active Learning

- Respond to new experiences that you bring to their attention

Creating and thinking critically

- Review their progress as they try to achieve a goal. Check how well they are doing.

Mathematics

3 and 4 year olds – Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern.

Reception – Continue, copy and create repeating patterns. Make patterns with varying rules (including AB, ABB and ABBC) and objects and invite children to continue the pattern.

Understanding the world

- 3 and 4 year olds – Use all their senses in hands-on exploration of natural materials.
- Reception – Explore the natural world around them.

Children: Talk about the patterns they can see in a sequence and continue a given pattern. They spot mistakes in patterns and fix them.

Adults: Provide an opportunity to look at a range of patterns in the environment and question children about the similarities and differences in them. Model how to complete patterns which have been started. Model creating patterns containing deliberate mistakes, and then model the process of checking, finding and fixing those errors.

The activity

In this activity, children create garlands from prints of autumn objects. They collect natural objects such as leaves, pine cones, acorns etc. and use them to create prints on long paper strips. These strips can be used as decorative garlands, or joined up to make autumn crowns. Alternatively, they can use the autumn images provided by cutting them out and arranging them into patterns on the strips.

Resources needed

- Long strips of paper
- Autumn objects
- Paint for printing
- Autumn garlands worksheet (provided)
- Scissors
- Glue

Links to and key questions to encourage Computational Thinking

This section offers lots of opportunities and prompts through the activity supporting the children's Computational Thinking.

Concepts and approaches	Links	Key Questions; to prompt discussion use "I wonder why/how?"
Creating	Children make prints or use the images provided and create repeating patterns on paper strips. These can then be hung as garlands, or joined up into crowns. They may look at examples of repeating patterns first before designing and creating their own. As children are creating their patterns, encourage them to keep checking their work, and making changes or fixes where needed.	■ What do we need for this part? ■ Which objects shall we choose? ■ How did you make that? ■ Can we check what we have done so far? ■ Does anything need changing? ■ What do you like about yours? ■ I wonder how it could be better?
Pattern	Pattern occurs as children spot what is the same and different in their garland sequences. Children can be given the start of a pattern and talk about similarities and differences they can see. They predict what comes next in the pattern, and complete and check. They may look at patterns with varying rules, e.g. AB, ABB and ABBC.	■ What do you notice about these pictures? ■ Which objects are repeated? ■ Which object is first? ■ What do we need next? How do we know? ■ Is that the same as...?
Logic	As children identify what is repeated in the structure of the pattern, they start to build up a picture of the pattern and further refine their understanding based on new information they find. This is logical reasoning, the cycle of prediction and explaining.	■ Tell me about your work ■ Why did you put that there? ■ I wonder what would happen if... ■ What have you found out? ■ How do you know that?

Linked activites

Top Marks shape pattern creation: https://www.topmarks.co.uk/ordering-and-sequencing/shape-patterns

Further reading

https://www.ncetm.org.uk/classroom-resources/ey-pattern/

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