

Science, Technology, Engineering and Mathematics (STEM) in the Early Years



Den Designing Activity



Engineering

What you need for this activity:

- A collection of large sticks, garden canes or poles
- Large pieces of waterproof material / sheeting or shower curtains
- String, rope, clothesline, duct tape, large pegs
- Buckets and sand or stones (to support the canes)
- Large stones to hold down the edges of the den



What to do:

1. Introduce the idea of dens.
2. Explore the different den making materials available and how they could be used to create a den.
3. Discuss the size, shape, design of the proposed den. Encourage the children to share their ideas
4. Model how to join the canes to build the frame and encourage the children to have a go for themselves. Encourage collaborate working.
5. Support the children in problem solving if they encounter any difficulties.
6. Place the canes in buckets and add sand/stones to support them or drive into the grass if outside.
7. Work out ways of joining the sheets, if needed, and place on the frame.
8. If outside, add large stones to the edges of the sheeting to hold it down.

Other ideas you could try....

1. Sit with the children inside the den and talk about how it feels (it is warmer/ colder or darker or lighter than outside?)
2. Sit in the den when it is raining. Listen to the sounds of the rain. Are there any leaks? Where and how can these be stopped.
3. Add sleeping bags and camping equipment to encourage role play.
4. Challenge children to make different sized dens to fit different numbers of children inside.
5. Make very small dens to put toys into and use these for small world storytelling.
6. Explore pictures of different tents and discuss what they look like and what they are used for e.g. camping, circus, weddings etc.



Key Engineering Concepts

- Designs can be discussed and planned for and then followed, when creating structures.
- There are different ways of constructing and joining materials to create strong structures.
- It is important to experiment and test designs throughout the building process.

Vocabulary

- Encourage children to use words like structure, secure, support, strong, upright, capacity.
- Emphasise engineering process words like *plan*, *experiment*, *test*, *create*, *design*, *problem solve*.