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| **Session 5: How has the bean grown?** |
| Science curriculum area **(2P):** | **Plants (2P)**i. observe and describe how seeds and bulbs grow into mature plantsii. find out and describe how plants need water, light and a suitable temperature to grow and stay healthy |
| Working Scientifically (**KS1 WS**) | **Working Scientifically (KS1 WS)** i) asking simple questions and recognising that they can be answered in different waysii) observing closely, using simple equipmentiii) performing simple testsiv) identifying and classifyingv) using their observations and ideas to suggest answers to questionsvi) gathering and recording data to help in answering questions |
| Teaching Objectives | * To consider and attempt to explain the differences between the two beans.
* To make careful observations about the beans.
* To model and label the plant.
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| Key Vocabulary: seed, bean, water, warmth, nutrients, leaves, stem, roots |
| ResourcesJunk Model Bean sheet, craft and junk modelling materials, tape, glue, wool, pipe cleaners. | Weblinks |
| Whole class: Ask the chn to stand near the beans and to look carefully at each other's beans. Ask them: *Is there one that has flourished more than the others? Any that haven't done very well? Can we work out why some have done better than others? What about the temperature in the room? Are some near the window? Has their growth been different to the growth of beans placed elsewhere? Can we explain why?* Point out the leaves, stem and roots of the healthy beans grown in the classroom. Ask the chn to look carefully at their own bean and fill in the final section of the Bean Diary record. Now ask them to look together at the bean in the cupboard. Ask them to talk with a talk partner about what has happened to this bean, and compare its growth to those beans grown in the classroom, looking at similarities and differences. Ask: *Can you explain why these differences have happened? What is similar about the cupboard bean and the classroom beans? How are the leaves, roots and stem similar/different? How would the bean continue to grow if it was kept in the cupboard? How would it change if it was brought out into the classroom?* Collect together their responses onto a flipchart. Congratulate them on their scientific thinking.Fill in the cupboard bean diary and suggest that it is now brought out into the classroom so the chn can start to observe any changes in its health and growth. Take photographs of it at this stage to refer back to later.  |
| Activities: Split the chn into small teams and show them the resource sheet. Challenge them to make a bean out of junk modelling materials. Tell them that their model must show the roots, stem and leaves of the bean and that they must be clearly labelled. Ask the more able to include in their model the seed coat left at the base of the plant and other details. Also ask them to talk about the function of each of these plant parts. Extend the more able by challenging them to record a little video or make a leaflet explaining their model, the parts they have included and their functions.  |
| Plenary | Place all the junk models in the classroom and go on a Plant Parade with the chn. Encourage them to look carefully at each other's work and to offer constructive peer review comments.  |
| Outcomes | Children will* Understand that there are differences between the bean grown in the classroom and the one grown in the cupboard
* Begin to explain why those differences have occurred
* Begin to talk about the various functions of the parts of the plant and their importance
* Working in effective teams, make a hydroponically grown bean out of craft and junk materials
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