

Bee-Bot Project

Session 7

Subject - Science

Topic – Life Cycle of a Flower

Target group – Kinder2 / Year 1

Time – 45mins

Resources

- ✓ PowerPoint Presentation - **Session 7 Life Cycle of a Flower.pps**
- ✓ 2 Bee-Bots
- ✓ 2 transparent plastic mats
- ✓ 2 sets of cards with different steps in the Life Cycle of a Flower - **Cards for Bee-Bot Mat – Flower Life Cycle.pdf**
- ✓ Worksheet – **Worksheet Flower.pdf**
- ✓ Digital microscope and different kind of leaves
- ✓ Blank sheets of paper and crayons
- ✓ Flowerpot, soil, and seeds
- ✓ On-screen activity – **Session 7 Plant.pgs**
- ✓ “Għini nikber” badge – **Ghini Nikber Badge.pdf**

Objectives

- Children will learn:
- ✓ The steps that are involved in the life-cycle of a plant/flower.
 - ✓ how to program the bee-bot to reach a destination
 - ✓ how to use the digital microscope to have a better look at leaves, soil etc.
 - ✓ how to actually plant a flower
 - ✓ the two basic needs for a plant to grow: water and light

Presentation of topic

- ✓ The session starts off with the teacher asking the children what they enjoy seeing when they go for a walk in the countryside. “Meta tmur fil-kampanja x’tieġu gost tara?” Here the children ought to get started talking about the beauty of nature.
- ✓ The children are encouraged into thinking how we at home try to bring nature closer to us. Here children who have a garden at home may see how they can relate better to nature. Other children can also mention how they grow plants at home bringing life into their own spaces.
- ✓ PowerPoint presentation - **Session 7 Life Cycle of a Flower.pps** main objective is to introduce the pupils to the different stages a plant goes through to grow from a little seed to the flower we see.
- ✓ The fact that a seed needs basic features for it to grow is also hinted at when the children see the boy putting a seed in the soil. A seed won’t grow if it is not sown. The importance of the seed being watered is shown with the rain and the girl happily watering the plant while waiting for the flower to start growing. The beaming sun ought to remind the children that a plant needs good light for it to grow.
- ✓ The slow moving animations are used to remind the children that a plant doesn’t simply grow overnight but it takes days and a lot of care for it to grow.
- ✓ The final slide of the PowerPoint Presentation Slide 6 gives a summary as to what children are to remember when taking care of a plant/flower.

Group Activities

- ✓ Following the presentation of the topic, the class can be divided into groups where they will be actively engaged in various activities that can be carried out related to this topic. Activities suggested will focus on the use of the Bee-Bots. Alternative activities can also be carried out. It is recommended that the different groups rotate from one activity to another for all the children to have a chance at handling and programming the Bee-Bot. In this way children will have the opportunity to practice what they have learnt using various methods and technologies.

- Activity 1: Bee-Bot activity - ***Cards for Bee-Bot Mat – Flower Life Cycle.pdf***

The children are presented with a mat on which they can see the different stages a plant goes through to grow into a flower. These cards have all been jumbled up and the group of children working at this activity have to help the Bee-Bot to go from one picture to another in a sequence so as to show the proper sequence of how a seed grows into a flower.

- Activity 2: Digital microscope activity

A group of children can examine different leaves more thoroughly by looking at the leaves brought to the classroom through a digital microscope. The digital microscope is connected to the teacher's laptop or class desktop so the pupils can investigate the leaves. Each child can be asked to bring along a leaf from home so as to have a varied selection of leaves. After having examined the leaves closely the children are encouraged to do some leaf rubbing onto provided sheets of paper with their crayons.

- Activity 3: Worksheet - ***Worksheet Flower.pdf***

The children are given a worksheet on which they have the different stages the plant goes through to grow into a flower. The pictures are all jumbled up and the children are to write the correct number in the box provided for each picture to put them in the correct order.

- Activity 4: On-screen – ***Session 7 Plant.pgs***

The children are presented with an on-screen activity which they are to work on their classroom desktop. The activity is worked with the Primary Writer software. Here the children are once again asked to put pictures of a flower's life cycle in a sequence.

- Activity 5: Planting our flower

A group of children is given the opportunity to plant their own flower. A flowerpot, soil and sunflower seeds are provided for the children to sow their own seed by digging a hole in the soil and covering up the seed. The seed is watered and left in a well-lit area.

Conclusion

- ✓ To summarise what has been learnt, the children are asked to remember what they need to do to take good care of their newly sown flower for it to grow: a flower/plant needs to be in the light and watered regularly. The class is given a “Ghini nikber” badge (use the ***Ghini Nikber Badge.pdf***) which will help them remember who will be in charge of watering the plant for the week.