



Sample Lesson Plan
The Big Bus Module: Honeybee Logo



**Honey
Bee Logo**

Title

Using *The Big Bus Honeybee Logo* to introduce children to the programming language of Logo.

Introduction

Honey bee Logo is a simple introduction to programming language through the modules of Robee Bee. Early Logo commands of direction, distance, rotation and angle are involved in guiding Robee as he helps the young bees of his colony.

In this Lesson

The children are introduced to Robee Bee, the on screen character that they need to guide using simple instructions. They practise giving isolated instructions to move forward or backward, turn right or left. As they are asked to navigate increasingly complex routes, they are able to view both a cumulative record of the instructions they have given and an on screen trail that they can cross-reference to the instructions.

Age Range: 6 – 10 years

Lesson Plan

Learning objectives

Having completed this module most children will have developed their ability to:

- Try things out and explore what happens in real and imaginary situations
- Predict the outcomes of the decisions they make
- Make sensible estimates of distance, appreciating the need for consistency in units
- Understand angle as a measure of turn, recognising quarter and half turns.

Technical preparation

Install the CD-ROM on to the computer. If you are presented with a choice of Worlds to visit select Bo Bear's World, Adventurers' World or Explorers' World as appropriate.

If you are in Adventurers' World or Explorers' World, open the Information Booklet index and scroll through the available modules to find the module. Select **Honeybee Logo**.

This module has three levels of difficulty (see **differentiation** below). If you wish to run the module at its default setting, click on the **Start bee** to move to the menu screen of starting places.

If you wish to change the difficulty level, or vary the number of repetitions of each module, click on the **Teacher bee** to access the teacher controls. Here, it is simple to change the set-up. Next click on the **bee** to take you to the menu screen of starting places.

Previous experience

It will help the children's understanding of this module if they have previous experience of giving and receiving instructions relating to movement. If possible, use a P.E. or dance lesson to develop these concepts.

However, the program can be used alone to introduce this area of the curriculum.

Introducing the module

Gather the children around a large computer monitor or interactive whiteboard then select **start the module**.

Recap the **key terminology** the children will encounter in the module. Discuss the terms forward, backward, turn left and turn right. Direct the children's attention to the computer monitor or whiteboard then select the **Introduction** from the start menu. Take the children through the introduction, following through to the simple movement of Robee around the hive to find the flashing cell.

This requires one step at a time instructions, involving either direction or turn (Note that some of the cells are full of honey, and slightly darker so Robee needs to navigate around these).

Continue through the module to feed the baby bees, creating two part instructions of direction and distance. Ask the children for their ideas of the instructions to give, and if they do not produce the expected result, discuss where they went wrong. Can they now see what the instruction should have been? (The track is drawn on screen and each instruction listed). What do they now need to do to correct their error?

Now move on to help Robee move across the garden. Discuss with the children the plan representation of the garden;

identifying the obstacles, Robee's starting position and the target. Work through the first few instructions with the children to give them an idea of the scale of the plan. The children could now break into working groups and undertake the module for themselves, otherwise continue to the end of this section with the whole group. Once they have broken into their groups, allow the children about 15- 20 minutes to complete the module from the start of the introduction. They will benefit from building up their skills of giving instructions and estimating distances as they work through the modules within the hive. After this time, gather them back together to discuss how they got on. Did anyone manage to reach the bird table without crashing into any of the obstacles? Did they find it hard using the turn left and right instructions as they moved down a computer screen? How did they help themselves with this?

Classroom management

A single classroom computer running *The Big Bus*, using a large monitor or interactive whiteboard, is an effective whole class teaching resource. Introduce the module to the whole class before pupils break into their groups. If you have access to a computer suite this module can be completed as a whole class lesson. If you have access to only one or two computers, pupils will need to complete the module on a rotational basis.

Duration

Each group of children will require approximately 15 - 20 minutes of computer time. The teacher introduction and follow-up time will take approximately 15 minutes and 10 minutes respectively.

Differentiation

There are three levels of difficulty available in **Honeybee Logo**. It is also possible to determine the numbers of repetitions the children are required to complete. These are accessed through the Teacher Controls. (See **Technical preparation** above).

Extending the module

The module could be extended in the following ways:

- Following the program to its conclusion over a series of lessons, children can ultimately learn how to write and modify their own program
- The instructional language involved in using Honeybee Logo can be extended to complement work undertaken in literacy lessons.

Curriculum Information

QCA Scheme of work (ICT) Unit 2D, Unit 4E.

The National Curriculum in England for Mathematics (KS1&2)

Ma2 Using and applying number. Ma3 Shape, space and measures.

The Scotland 5-14 Guidelines for ICT

Control and monitoring: Level B, C, D.

The Scotland 5-14 Guidelines for Mathematics

Shape, position and movement: Level B, C, D.

The Northern Ireland Curriculum for Mathematics (KS1)

Shape and Space –Position, Movement and Direction: b, c.

The Northern Ireland Curriculum for Mathematics (KS2)

Shape and Space –Position, Movement and Direction: a, f.

The National Curriculum in Wales for Information Technology (KS2)

It2: 2.1, 2.2.

The National Curriculum in Wales for Mathematics (KS2)

Ma3:1.1, 1.2, 2.3, 3.1.

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