PGCE IT 20001-2003: Lesson plan pro-forma Liz Lewis

Topic: LOGO	Date: 14th Oct 2001
Title: Using Logo to draw a House	Time: Double Session 1 hr 40 mins
Class Year 8	
Lesson no 2 in a sequence of 2 lessons	

Aim

Understand how to program Logo to draw shapes

Learning Objectives

All: Be able to draw a house consisting of several rectangles and a roof represented by a triangle using the FD, RT, PU and PD Logo commands

Most: Be able to use the repeat command to minimise instructions and create procedures.

Some: Be able to use variables in procedures.

Key Questions

How do we calculate the length of the two sides of the roof?
How can we create a window with the repeat command? – which command must we not repeat the fourth time?
How do we get the pen in the right position to make the windows?

Resources

Projector or smart board and a conventional black or white board. The latter is essential. A smart board is often inappropriate; in a large IT room only those sitting right up front can read what is on the screen – I've seen this in Hampstead – it's a waste of time. If you're teaching concepts its essential that the children can see what you are writing.

Workstations loaded with Logo software

Handouts with summary of commands, syntax of procedures and variables i.e.

fd n – this means 'forward' *n* units
repeat n **[any commands]** – this means 'repeat *n* times the commands in **square** brackets'
cs – this means 'clear the screen'

Links with IT NC/GCSE

Strand : ICT Capability

Levels : 7

Link with previous lesson

The children know how to start up Logo. They know how to use the fd and rt commands to create a rectangle They know how to use the pu and pd commands to move the pointer to the desired place without drawing a line The know how to use cs to clear the screen The formula for working out the length of the sides of a triangle which has one angle of 90 degrees and two 45 degree angles (can't remember name Isosceles?) has been covered.

Time	Pupil Activity	Teacher Activity	Resource
10	Every pupil or group of pupils must log on	Make sure every pupil has working system and if working in group is grouped well	
10	Questions and Answers related to topic.	• Recap previous lesson. • Ask children to supply sequence of statements to draw a rectangle. **Q. what does rt 1 do?** **Q. How do a draw a roof?** **Q. What angles do I need for the triangle?** **Q.How long should the side be?** • Demo on smart board • Ask children to make a note of all dimensions to take to workstation • Any questions?	Black Board Smart board
10	Draw rectangle and roof	First lab session. Going round students and offering help	WS
10	Listening and answering questions	• Explain objectives of this lesson, introduce repeat command (Try and get the children to commend on how repetitive the commands are) • Any questions?	BB & SB
10	Students to reduce number of instructions with use of repeat	Second Lab exercise. Going round students and offering help	WS
10	Listening and answering questions	• Introduce procedures. Show how it can make the code clearer to understand. • Any questions?	BB & SB
10	Children write a procedure to draw a square	Third Lab exercise. Going round students and offering help	WS

10	Listening and answering questions	• Introduce variables. Give a number of examples on BB Any questions?	BB & SB
15	Ask children to parameterise their "square" procedure so that they can draw a rectangle of any size.	Fourth Lab exercise. Going round students and offering help	WS
5	Listening and answering questions	Recap of lesson : • Discuss problems • Discuss homework • What's happening next week	BB & SB
Homework/extension to next lesson		email teacher with attached logo file. The logo file should Ex 1:Draw a house (roof, windows and door) Ex 2: Use the repeat command Ex 3: Use a procedure Ex 4: Use a variable	
Differentiation – alternative activities		• Ask more advanced students to add a second variable to their procedure and to look up the HELP for information on this • Create houses/roofs with different dimensions	