



Science Experiment:

Project: Coding Lesson 1, Programming Language

Supplies:

Ahead of time prepare cards with images on them. Smiley faces, squares, triangles, etc on 3x5 note cards.

Paper

Pencils

Time:

40 minutes

What to Do:

Choose a child and give them a card with an image. The child describes the picture for the class to reproduce. The children can ask questions to clarify the instructions. The object is to see how quickly and accurately the exercise can be completed.

Repeat the exercise, but this time the children are not allowed to ask questions. It is best to use a simpler image for this exercise, as the children can get lost very quickly.

Now try the exercise with the instructing child hidden behind a screen, without allowing any questions, so that the only communication is in the form of instructions. Point out that this form of communication is most like the one that computer programmers experience when writing programs. They give a set of instructions to the computer, and don't find out the effect of the instructions until afterwards.

Reflect:

Have the children draw a picture and write down their own instructions. Try them out in pairs or as a whole class.

Apply:

Imagine the consequences of an error in the program of a computer in a space shuttle launch, a nuclear power plant, or the signals on a train track!

Resources:

<http://csunplugged.org/programming-languages>