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FOREWORD

Young children of today are being brought up in a world where they are surrounded by technological devices everywhere they turn. It is modern society.

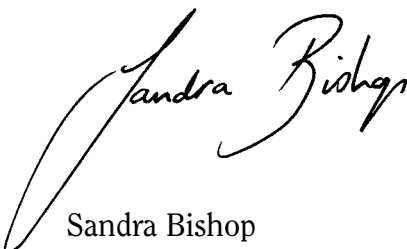
As young scientists, they need to be encouraged to learn to use some of these devices to attain accurate results, develop fair testing procedures and to be able to interpret the results.

The following lessons are sequential in development. The students are to gather some data about body temperature using a datalogging device. They are then required to analyse the results as they are graphed on the screen in real time. Following this, the students are able to print the data, and vary the graphs to further represent and analyse the data to suit their own style.

The students will be required to predict results, make inferences, hypothesise, think critically, estimate, observe, problem-solve, experiment, control variables, discuss, work cooperatively and organise. This will be done in the context of actively involving the students as they discover changes to their body temperature under different circumstances.

The lessons are suitable for children aged 8 onwards and form part of the science curriculum. The lessons allow scope for you, the teacher, to add to or vary them in any way that you feel is appropriate for your class.

Enjoy watching students gain instant feedback as they gather data and are able to interpret it as it comes in. See the delight in the faces of students as they use a datalogger to gather information. Watch as children show sheer enjoyment in science, and the science of their bodies as they see the changes occurring electronically. Have faith in the children that you teach, they will embrace this technology and run with it!



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Lesson One

LET'S GET STARTED

AIM

To identify the components of the datalogger

MATERIALS

A datalogger
A personal computer
Worksheet

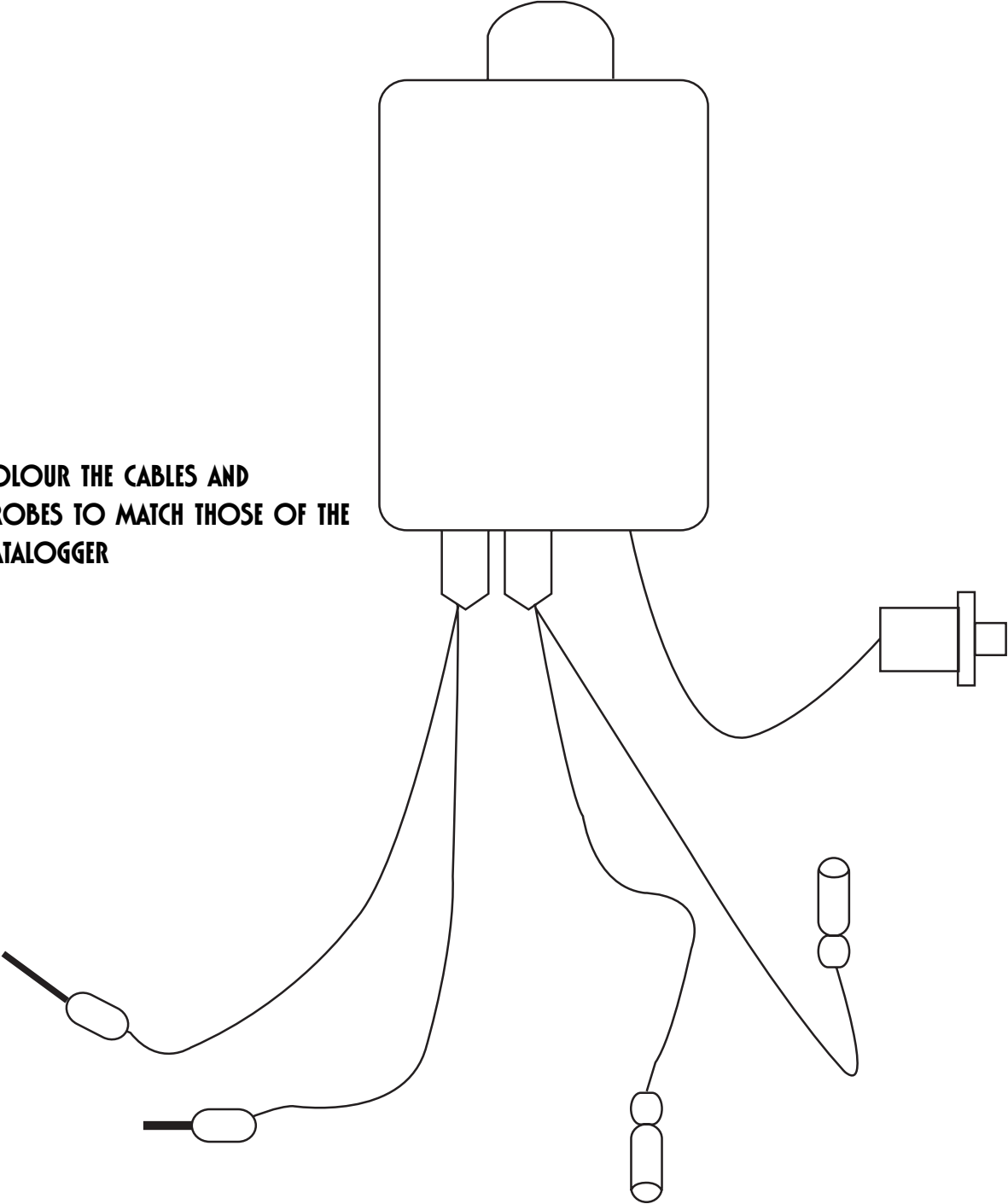
PROCEDURE

1. Explain to the children what a datalogger can do. Question the children as to why a datalogger is useful in our society with specific references to science and mathematics.
2. Brainstorm possible uses for a datalogger. Make a list and display the students' ideas, and encourage students to add to this list as they think of new ideas.
3. Identify all the components of the datalogger with the students.
Namely:
 - ⌘ The probes,
Light
Temperature
 - ⌘ The serial cable connector
 - ⌘ DB 9 connector at the back of the computer
 - ⌘ The datalogger itself
4. As a class, label and colour the worksheet provided.

Name _____

LABEL AND COLOUR THE DATALOGGER BELOW

COLOUR THE CABLES AND
PROBES TO MATCH THOSE OF THE
DATALOGGER



Lesson Two

GETTING TO KNOW THE DATALOGGER SCREEN

AIM

To identify the various parts of the datalogger screen on the computer

MATERIALS

A datalogger
A personal computer
Worksheet

PROCEDURE

1. Revise the previous lesson on the components of the datalogger. Demonstrate to the students how to connect the serial cable to the free serial port at either the side or the back of the computer. (Software should be installed prior to lesson.)
2. Demonstrate to the students how to get started with the datalogger. Press 'START' from the start option on your computer. Find and highlight the 'Intellecta elogger' (OZ datalogger) item. Click on this.
3. Identify all the parts of the screen.
 - ⌘ The two coloured temperature boxes/windows at the top of the screen
 - ⌘ The two coloured light boxes/windows at the top of the screen
 - ⌘ The graph (central section)
 - ⌘ The axis
 - ⌘ Upper and lower values of the temperature and light values
 - ⌘ The time window
 - ⌘ The record, stop, play and pause buttons
 - ⌘ The clipboard, sample interval and quit buttons
4. Hand the worksheet to the students asking them to colour and label it to match that of the screen.
5. During this session, use the checklist to evaluate the students' understandings of what the functions of a datalogger are, and their ability to name the components and connect the serial port to the computer.
6. Hand the students a certificate congratulating them on gaining competence in identifying the components of the datalogger.