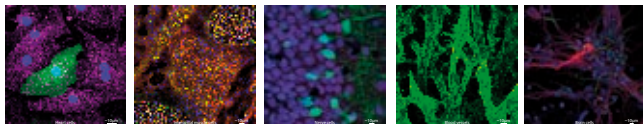


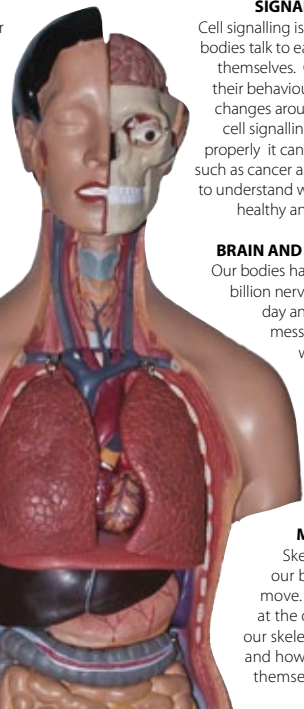
THE BABRAHAM INSTITUTE DISCOVERY BIOLOGY - FOR BIOMEDICINE

Our scientists investigate how our bodies work and what can happen when we get ill or as we grow older. The latest technology is used to study conditions such as birth defects, cancer, obesity, heart disease, diabetes and autoimmune diseases such as rheumatoid arthritis.



DNA

Each of the trillions of cells in our body has a nucleus (a control centre) containing two metres of DNA. This is like a recipe for our bodies - e.g. it determines the colour of our eyes and hair. Learning how DNA works and how it fits into the nucleus will help us to understand diseases caused by faults in our DNA.



SIGNALLING

Cell signalling is how cells in our bodies talk to each other and to themselves. Cells can modify their behaviour in response to changes around them. When cell signalling does not work properly it can lead to diseases such as cancer and we are trying to understand what happens in healthy and diseased cells.

IMMUNE SYSTEM

White blood cells fight micro-organisms that can cause disease. We look at how different white blood cells develop and what goes wrong in diseases such as rheumatoid arthritis.

BRAIN AND NERVES

Our bodies have one hundred billion nerve cells that work day and night sending messages down their wires. We look at how nerve cells work and what can happen in diseases such as Alzheimer's. We also look at brain function.

THE HEART

The heart pumps blood around the body to supply it with oxygen and food. We are looking at how heart cells work and what happens in heart diseases.

MUSCLES

Skeletal muscles in our body allow us to move. We are looking at the development of our skeletal muscle cells, and how they can repair themselves after injury.



The Babraham Institute
An Institute of the Biotechnology and
Biological Sciences Research Council



How can we help you?

Please contact me if you would like to arrange a visit to YOUR school, or if you have any ideas or request for other activities.

Contact



Michael Hinton
Foundation/Primary Schools Liaison
The Babraham Institute
Babraham Research Campus
Cambridge CB22 3AT

Tel: 01223 496364

Mobile: 0777 0700 837

michael.hinton@bbsrc.ac.uk



<http://www.babraham.ac.uk/scisoc/realscience.html>

Real Life, Real Science

2010 - 2011



Perse Pelicans students investigating solids, liquids and gases

FREE foundation/primary resources
from The Babraham Institute to inspire
the next generation of scientists.



The Babraham Institute is an
institute of the Biotechnology
and Biological Sciences
Research Council

FREE

Primary School Resources for Science

FREE

These usually consist of a PowerPoint presentation followed by a hands-on activity

What is a Scientist?

What do we do, how old you have to be, what you wear and almost any other question!

Demonstration: Fun with dry ice

Activities: What gives a felt-tip pen its colours?

What gives sweets their colours?

Blood & Circulation

Where blood comes from, where it goes and what it does. All the way from haemoglobin to ultrasound.

Activity: Heart dissection

Digestion & Health

Follow your lunch on a journey through your body, and find out what's good to eat and why.

Activities: Intestine Challenge & Digest-a-Sandwich!

Micro-organisms

What are micro-organisms, how big are they, what do they do and where can you find them?

Activities: How germs spread between us. How clean is your classroom? - an experiment using agar plates to grow microorganisms.

Muscles and Bones

What and where they are and how they work.

Activities: Looking at animal muscles and bones, and the structure of the human skeleton.

Natural Selection & Evolution

How does Natural Selection work? Can we see Evolution in action? How might it affect us?

Activities: Moth-spotting!

Looking for an Assembly?

We currently offer assemblies on 'What is a Scientist?' and Sound & Hearing. These will entertain and inform the whole school, and are especially popular during National Science Week in March. Audience participation by students and teachers is encouraged.



Digestion & Health at Meadow Primary School, Balsham

Further information.

We supply all equipment and consumables for the visits, and can provide audiovisual equipment if necessary. The practicals have been risk-assessed for Health & Safety and are presented by REAL scientists, working on 'Discovery Biology for Better Health' in REAL research laboratories, with a REAL passion for communicating their love of science to YOUR school.

Development & Healthy Growth

From conception to old age - what goes on inside our bodies? Growth, development and puberty - but no reproduction!

Activities: Height/age comparisons.

Solid, Liquid or Gas?

Investigating states of matter.

Demonstration: Fun with dry ice

Activity: Making slime and explosions!

DNA?

What is DNA and why is it important?

Activity: Extracting DNA from onions and teachers

Sound & Hearing

How do we hear and how can it affect our health?

Activities: What can you hear? How much noise can you make?

Fair Testing

What do we need to consider when designing a scientific experiment?

Activity 1: Which car rolls the furthest, and how to make sure the results mean something.....

Activity 2: Which kitchen roll does the best job?



RESEARCH
COUNCILS UK

eppendorf

We are grateful to the BBSRC, Research Councils UK and Eppendorf UK who have helped to support our school visits through funding and contributions