Communicating with the public during the development of e-Bug

Dr Donna Lecky
Dr Cliodna McNulty
19th September 2003
What is e-Bug?

- A pan European educational resource
  - Junior and Senior School children
- 18 European Countries
- Personal hygiene and prudent antibiotic use

Developmental Team:
- Project Coordinator: Cliodna McNulty
- Pack Developer: Donna Lecky
- Web Lead: Patty Kostkova
- Web Developer: David Farrell
- Lead Administrator: Diane Stallabrass

Associate Partners:
- Belgium (BE): Herman Goossens, Stijn De Corte
- Czech Republic (CZ): Jiri Benes, Tereza Kopfivová Herotová
- Denmark (DE): Jette Holt, Marianne Noer
- France (FR): Pierre Dellamonica, Pia Touboul
- Greece (EL): Jenny Kremastinou, Koula Merakou
- Italy (IT): Guiseppe Cornaglia, Raffaela Koncan
- Poland (PL): Pawel Grzesiowski, Anna Olczak-Pienkowska
- Portugal (PT): Antonio Brito Avo
- Spain (ES): José Campos
- United Kingdom (UK): Julius Weinberg

Collaborating Partners:
- Croatia: Arjana Tambic Andrasevic
- Finland: Pentti Huovinen
- Hungary: Gabor Ternak
- Ireland: Robert Cunney
- Latvia: Sandra Berzina
- Lithuania: Rolanda Valinteliene
- Slovakia: Tomáš Tesař
- Slovenia: Marko Pokorn
Schools and teachers

• Focus groups with science teachers
  - What do they require from e-Bug?
  - What resources do they already use?
  - Examination of other resources
  - What would make you use e-Bug above other resources?
Teacher requirements

• MUST link closely to the National Curriculum
• MUST be adaptable
• Important to have IT links
• Beneficial to cover a range of teaching styles
• Be student friendly
• Be teacher friendly
Looks like he tries to be funny but isn’t!

A devil in disguise - look at his grin

Looks like she gets up to a lot of mischief

She thinks she’s cool but she’s not

Are they brother and sister?

They look like they’re made out of rubber!
Student Questionnaire 2 – Girl character

Amy
Student Questionnaire 2 – Boy character

Harry
Questionnaire 3 – Bug characters

Good bugs

Bad bugs
Good Bugs

- *Penicillium*
- *Lactobacillus*

Bad Bugs

- *Staphylococcus*
- *Campylobacter*
- *Influenza*
- *Dermatophyte*
Activity Trials – Student Feedback

Chicken Salad Questionnaire
Thank you for taking time to fill out the questionnaire. It shouldn't take long to complete and will help us to improve the activity and make it more fun! Please be honest in your answers.

1. How enjoyable did you find the activity?
   - [ ] Loved it
   - [ ] liked it
   - [ ] neutral
   - [ ] disliked it
   - [ ] hated it

2. Name three things you liked about the activity:
   a. 
   b. 
   c. 

3. What was the BEST part of the activity and why?

4. What was the WORST part of the activity and why?

5. After this activity, would you think more about washing your hands when handling food?
   - [ ] Yes
   - [ ] No
   - [ ] Maybe

6. What was the main thing you learned in this lesson?

7. Are you a boy or girl?
   - [ ] Boy
   - [ ] Girl

*Germs can spread very easily
Always wash hands when dealing with food

Seeing the microbes was really cool. It helped me understand more about it. It was a different type of lesson. Seeing the bacteria on the food. The whole lesson – I never knew bacteria were alive. It was really hard to keep the bacteria off the salad. Nothing – I just loved it. Yes 78.3% No 0% Maybe 21.7% Germs can spread very easily. Always wash hands when dealing with food.
Activity Trials – Teacher feedback

• It would be beneficial to have some background information for teachers

• Some of the activities were too long – it would be much better to stick to one main activity

• Really liked the individual student sheets

• The activities are a new fun way to teach the curriculum for both the students AND the teachers
Introduction to Microbes

In this section, students are introduced to the concept of microorganisms, which are tiny living creatures that can cause disease. The lesson plan includes activities that allow students to explore the different types of microorganisms and their impact on human health.

1.1 Micro-Organisms
An Introduction

Learning Outcome:
- Students will be able to identify different types of microorganisms.
- Students will understand the importance of microorganisms in human health.

Teaching Materials:
- Microscope slides
- Microbiology textbooks
- Online resources

Introduction Information:
Microorganisms are the smallest and most numerous type of life. They can be found everywhere, including in the air, water, and soil. Some microorganisms are beneficial to humans, while others can cause disease.

Key Concepts:
- Bacteria
- Fungi
- Viruses
- Protozoa
- Arthropods

Activity:
- Students will observe microorganisms under a microscope.
- Students will conduct experiments to determine the effect of microorganisms on plant growth.

Assessment:
- Students will complete a quiz on microorganisms.
- Students will prepare a report on the importance of microorganisms in the environment.

Lesson Plan:
1. Introduction to Microorganisms
2. Microbial Diversity
3. Microbial Ecology
4. Microbial Pathogens
5. Microbial Control

Resources:
- Microscope slides
- Microbiology textbooks
- Online resources

Follow-up Activity:
- Students will design an experiment to test the effectiveness of a new anti-microbial agent.
- Students will create a poster on the role of microorganisms in the ecosystem.

By the end of the lesson, students should be able to:
- Identify different types of microorganisms.
- Understand the importance of microorganisms in human health.
- Design experiments to test the effectiveness of anti-microbial agents.
**Junior School Pack**

**Student section**

---

**What are Microbes?**

- There are three different types of microbes: bacteria, viruses, and fungi.

**Mycrobe Mania**

There are 3 different types of microbes.

1. Bacteria
2. Viruses
3. Fungi

**Bacteria**

- There are three different types of bacteria. They look like:
  - Spirals (Clostridium)
  - Reeds (Legionella)
  - Balloons (Staphylococci)

- They are so small that 1000s of bacteria could fit on the full stop at the end of this sentence.
- Some bacteria are helpful in cooking, for example, making yoghurt and cheese.
- Some bacteria are harmful and cause infection.

**Virus**

- Viruses are even smaller than bacteria and can sometimes look like INSECT bodies.
- Most viruses make us sick.
- Diseases like CHICKEN POX and the FLU are caused by viruses.
- Viruses are easily spread from one person to another.

**Fungi**

- Fungi are the largest of all microbes.
- Fungi can be found in the air, on plants and in water.
- Mould, which grows on bread, is a type of fungi.
- Some antibiotics are made from fungi.
Extension Activities

- Homework sections
- Promoting key messages in the home

Science fairs

- Collaboration with e-Bug, HPA, DH, BSAC, APUA, DG-Sanco
- Promoting key health messages from e-Bug to the local community