Discovering facts about bacteria can be fun

Australia

Project name:
Bacteria

Teacher:
Tobias O'Connor

School:
Mulga Street Primary School, Mount Gambier

Learning areas:
Science and Health

Objectives:
To increase children's awareness of bacteria and the impact it has on their everyday life

Outcomes:
Students are now able to identify areas where individual and community health may be placed at risk and take steps to prevent or reduce spread of bad bacteria

"More than ever, students are now able to shape their own learning pathways and to go in many directions with their learning."
— Tobias O'Connor, Mulga Street Primary School

Children in the Mulga Street Primary School in central Australia used a variety of new and traditional technologies to learn about bacteria. The aim was to increase children's awareness of bacteria and the impact they have on their daily life. By the end of the topic students were able to identify areas where individual and community health may be placed at risk, adopt practices which reduce spread of bacteria.

Situation

Mulga Street Primary School is located in Mount Gambier, a large rural town with 24,000 residents located 450 km south east of the state capital in South Australia. Many students who attend this school come from disadvantaged homes, often from working class homes or one parent families, and this is contrasted by a number of students who come from dual income families living in the neighbouring new estates. Since Mulga Street Primary School has a newly established computer lab which serves the needs of teachers and students well, Tobias O'Connor, an ICT Coordinator and District ICT Coach, found a way to bring closer to children the knowledge of a common health threat – bacteria.

Objectives

The main objective of the project was to increase children's awareness of bacteria and the impact it has on their daily life. 32 students in a combined classroom were involved in this 10 week unit, which addresses health and science topics from the mandated curriculum in the South Australia

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Curriculum and Accountability Framework. Children used a variety of new and traditional technologies to learn about bacteria, like Internet Explorer, Microsoft Movie Maker and Microsoft Office Publisher, to identify types of bacteria, the role that these bacteria have, where they are commonly located, how they breed, and to find ways to minimize the potential health treats of bad bacteria (pathogens). Almost all activities in this unit led towards the end product of students: a short clay animation film, based on a community health message about bacteria.

Outcomes

By the end of this project students were able to identify areas where individual and community health may be placed at risk (i.e. cross contamination, poor hygiene practices, inappropriate food storage), adopt practices which prevent or reduce spread of bad bacteria (pathogens) (i.e. washing hands, clean water, disinfectant, proper food storage), and identify how micro organisms are a part of the natural world around them, understanding the positive and negative affects they have.

"One of the main advantages is that the kids were very engaged with this new way of learning, and being able to interact with the learning objects and the online sites. And from the teachers' perspective, we were able to give them content across to the children in a very exciting and engaging way", says Tobias O'Connor, a teacher from Mulga Street Primary School.

Students developed a shared understanding of the characteristics and behavior of living things, and how they are interrelated and interdependent. They also increased their knowledge of and skills for healthy dietary practice, and researched and critically analysed information, including the ones found online, on food choices, identifying the influence of peers and the media on nutritional choices.

Assessments were used throughout the unit to ensure that students were keeping up with the pace of the course and to ensure that learning outcomes for each lesson were met. In several instances students were asked to repeat the use of the learning object, to reinforce the learning that needs to take its place. As many components of this course had sections to be written in the students Science book, this then became a good record of their achievement in this topic.

"I now regularly teach other teachers how to use computers and incorporate 'best practices' of ICT in education. Examples of things I have taught them include using clay animation, using blogs in the classroom, creating websites, using Interactive Whiteboards etc. My emphasis is on embedding technology and software into teaching – the technology itself should not be the focus", says Tobias O'Connor.