

## That Makes Me Sick!



### Learning Outcomes:

- Students discuss the different types of microorganisms that exist.
- Design and conduct an experiment to examine the presence of microorganisms on everyday objects in their school.
- Investigate the best disinfectant to use to reduce the growth of harmful microorganisms.
- Explain the best method of hand washing and its necessity.

### Results:

- The students response to the module was very positive and they enjoyed being able to conduct the research and experiments
- The majority of students were able to conduct their work in an inquiry based manner and enjoyed the experience.
- The results that the students found and the conclusions that they were able to draw were very good.

### Student Opinions:

*'I really enjoyed doing this project. I enjoyed getting to work as a group to solve a problem.'* Claire

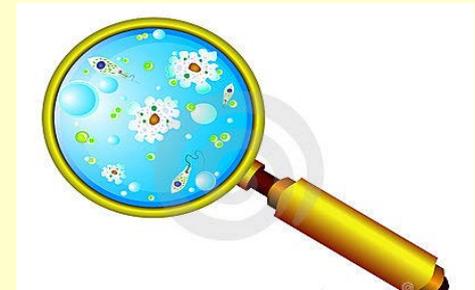
*'I really enjoyed this. I loved learning this way because it actually lets you think for yourself and I feel I learn things much better than just reading it from a book.'* Stephanie

*'I thought it was really interesting and more fun than just reading how to do everything from a book.'* Fiona

*'I enjoyed the freedom that we had to make up the experiments ourselves and research it. I also really enjoyed the fact that we were out of the classroom and actually doing the experiment hands-on, ourselves. I liked our ideas being used instead of being told what to do.'* Olivia

### Evaluation and Conclusions:

- Overall, the students enjoyed the module as it was hands-on, motivating, interesting and student centred.
- The majority of students were able to design and conduct the procedures with very little guidance from the teachers.
- It was evident that the students displayed no major issues in conducting the procedure, however when it came to drawing their conclusions they displayed some signs of struggle
- The students as part of this module were very capable of conducting the lessons through inquiry with the teacher as a mentor and facilitator



### Curriculum content:

Distribution of microorganisms in nature, common illnesses caused by microorganisms, precautions needed when working with microorganisms, methods of reducing harmful microorganisms and the technique for inoculating an agar plate.

### Objective of Module:

To give students the chance to work like scientists to investigate the microorganisms we encounter as part of our everyday lives, to understand that there are some harmful and some not so helpful microorganisms and encourage them to investigate the best methods to reduce the harmful ones.

### References:

Websites Used:  
[www.earthskids.com](http://www.earthskids.com)  
[www.google.com/images](http://www.google.com/images)  
[www.hse.ie](http://www.hse.ie)  
[www.keepingitkleen.com](http://www.keepingitkleen.com)  
[www.pei.ie](http://www.pei.ie)  
[www.sciencecompany.com](http://www.sciencecompany.com)

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