



Today we read the book: 'Do not lick this book'. By Idan Ben-Barak and Julian Frost. This book is about Min the microbe. She is small. Very small. In fact so small that you'd need to look through a microscope to see her. We opened the book and Min took us on an adventure to amazing places she's never seen before – like the icy glaciers of our teeth. Youssef and E. joined in the adventure and they took an active part in the story by collecting the four different types of microbes on their finger, collecting them from the screen, their teeth, jumper and belly button.



We discussed the E.coli microbe and that it is important to wash our hands before eating. We spoke about the Streptococcus bacteria which eats holes in our teeth and therefore makes brushing teeth necessary.



E. also pointed out that eating too many sweets is not good for the teeth. The fungus *Aspergillus niger* we probably pick up while playing outside. The last microbe we discussed was the *Corynebacterium* which lives on our skin and is a big fan of dirt. Our solution to hold them at bay was to shower, take baths, wash our bodies as well as clean our clothes.



All this may sound very serious but we had many good giggles, especially when Santa's nose was mentioned, when we visited the belly button or when all the different microbes added their funny comments. We discussed the different instruments we could use in our investigations and explorations. Gudrun encouraged the children to use a magnifying glass or a microscope and she showed these to E. and Youssef.



When we finished the session Lea, Reggie and Finn took the opportunity to talk to Youssef and E.



Gudrun connected the microscope which she had borrowed from the school's science lab and showed the children how they could discover more details about an object which were not as visible to their eyes.

Lea, Julia and Reggie collected different items such as a leaf, a flower and a piece of grass. All children who looked through the microscope gasped at what they saw. Julia wanted to see a Lego man in detail and seemed very pleased with the result: 'Look at the big eye.'



Outcome 4: Children are confident and involved learners

Children develop a range of skills and processes such as problem solving, inquiry, experimentation, hypothesising, researching and investigating

This is evident, for example, when children:

- explore their environment
- contribute constructively to mathematical discussions and arguments

Educators promote this learning, for example, when they:

- plan learning environments with appropriate levels of challenge where children are encouraged to explore, experiment and take appropriate risks in their learning
- provide experiences that encourage children to investigate and solve problems
- encourage children to make their ideas and theories visible to others

model mathematical and scientific language

- listen carefully to children's attempts to hypothesise and expand on their thinking through conversation and questioning

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This activity gave the children opportunity to explore and investigate the tiny, invisible world around us and discover microbes, fungi and bacteria. Children often hear about how bacteria or viruses can make them ill and are very much aware of the importance of effective hand-washing procedures. However, they usually don't delve deeper into the subject of microbiology and by providing them with activities to explore this field further, we help them gain a better conceptual understanding. This will hopefully also enable them to better understand some aspects of the Covid pandemic which they are currently being confronted with.

Observing various items under the microscope or through the magnifying glass invites research and fosters observation skills. While doing this, children are also actively encouraged to use language to describe what they see and communicate their observations to others. This forms part of the 'cycle of research' which informs or STEM approach at preschool.

We will continue to use the microscope to provoke further investigations and discussions.



Emma and I talked a little more about bad bacteria that harms us but also about good bacteria that we need such as good gut bacteria. She painted a close up view of bacteria.



The black and green bacteria is good gut bacteria and the red and purple/blue one is bacteria that makes us sick.

Another painting showing bacteria that is less close up than in the previous painting:

