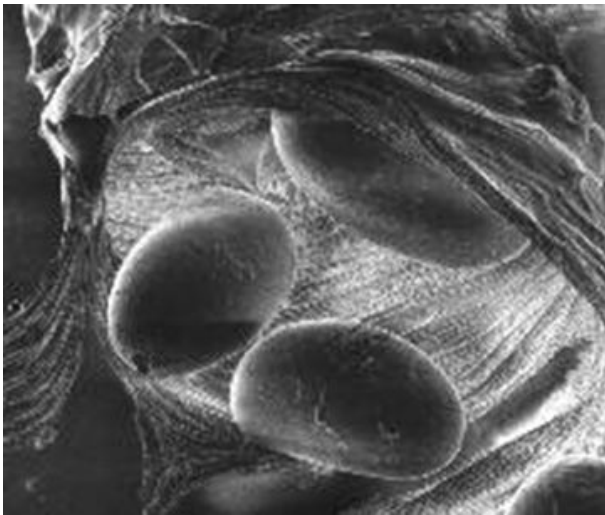




# WEEK 14: MICROORGANISMS



## Science in the News



Nosema photographed inside the gut of a honey bee. Credit: Food and Environment Research Agency (Fera), via BeeAware

### Parents:

For primary learners, work through our full 'microorganisms' lesson plan with your child. It is based around the national curriculum learning objectives found in the year 6 'Living things and their habitats' topic. Download here - [Science Creates Outreach](#)

For secondary learners, the contents can be discussed in more depth using the [original online article](#).

### HONEY BEES ALSO FACING NOVEL PANDEMIC

The honey bee has been facing a pandemic caused by a fungus, a type of microorganism. The fungus, called Nosema, lives in the guts of honey bees and stops the bees from reproducing. It is thought that this pandemic has been threatening the bees for almost 20 years. While this has been documented across Europe, Canada and even in Kenya, this infection has almost exclusively been recorded in the European honeybee.

Bees are very important for us and the planet because they pollinate many of the food crops we eat and, of course, give us honey! This means that the fungus may damage plant communities because it is reducing the number of bees that can pollinate plants.



## Try it at home - Make your own mini microscope!

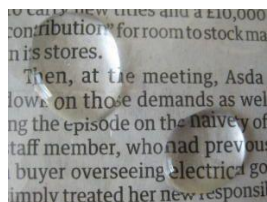
### What do you need?

- Clear tape
- 2 Pencils
- Pipette
- Small objects from around the house e.g a coin, a leaf, a note
- Water
- White sheet of paper

### Why does this work?

A bead of water works in a similar way to the lens of an eye. The droplet changes the light waves and tricks your eye into seeing the object larger than it is. Smaller droplets usually magnify the objects slightly more than the larger ones.

If you want to learn more about the science behind this, check out our lesson on our website - [Science Creates Outreach](#)



### Instructions:

1 First, set two pencils down about 2 inches from each other. Top tip- make sure the pencils are parallel.

2. Next, stick a long piece of tape over both of the pencils and stick them down onto the Table. Top tip - try and make the tape as tight as possible!

3. After that, drop a small drop of water on top of the tape using a pipette. You can try different sized drops to see which one produces the best magnification.

4. Then, slide a small object under the droplets of water and observe! The droplet will magnify 4 times or more, but you can use a magnifying glass as well to make the object even bigger.

We would love to see what you're growing, so please take a photo and send it to [info@sciencecreates-outreach.co.uk](mailto:info@sciencecreates-outreach.co.uk).





# WEEK 14: MICROORGANISMS

K W C W T L P X K N N C J K W  
 E A F L Q A N I M A L J F O H  
 N K T E B E J M H Z M A H H K  
 S D H S B D P D V K Q I J M K  
 M S I N A G R O O R C I M F K  
 P X M S S E P N C N F Z K F K  
 A G U V T L Y Z E S O U V Z W  
 I N M O A Q E G W S O M N U Q  
 R U O N T G O M W Z R R N G F  
 E G T Q S H P T I G J H C E I  
 T E J C T S U R I V L J O I R  
 C R A A E Q G K Z L L I S Q M  
 A M P H U U K B H U E C F H U  
 B S K O S E J S L U C I M M V  
 X T W O M I O K N L O P S B N

Animal  
 Bacteria  
 Cell  
 Fungi  
 Germs  
 Microorganism  
 Microscope  
 Pathogen  
 Plant  
 Virus  
 Yeast

## Read, Watch, Ask



Have a read of our [lesson](#) to learn more about microorganisms.



What is a microorganism? Watch [here](#) to find out.\*



Got any questions about today's topic? Email us at [info@sciencecreates-outreach.co.uk](mailto:info@sciencecreates-outreach.co.uk) and we'll answer them!



### Did you know?

Microorganisms make up the largest number of living organisms on the planet. The human body has more microbes than living cells, and there are typically between 10,000 and 10 million bacteria on each hand!

Some bacteria have chemicals that can generate light, this is called bioluminescence.



## Be Inspired...

In this section we interview inspirational members of the Science Creates science community so that you can learn more about different jobs, what they involve and how you can do the same! This week we interviewed Xiao from a company called QLM.

### What does QLM do?

QLM is working on natural gas leak detection. Methane, the primary part of natural gas that we use to heat up our houses and cook our meals, is a potent greenhouse gas. Detection, measurement and mitigation of leaks are important to prevent future warming of the planet.

### What is your job title and what do you do?

I am the Co-Founder and Chief Technical Officer. I work with our engineers and physicists to solve our customers measurement problems with our device, improve our existing products and develop new products and measurement solutions.

### Do you like your job? Why?

Yes, because I like to solve problems, and there are a lot of them in research and development.

### Have you always wanted to be a scientist?

Yes, either a scientist or an engineer. I put together my first computer with my elder cousin and that had me convinced that electronics was my passion.

### How did you get your job?

I was not an exceptional all round good student, but I have perseverance and am passionate about things I love to do. In order to be qualified in what I love to do, I had to pass a few exams and finish my PhD with a lot of hard work.

