

SUPERLAB

Science at the heart of healthcare



Institute of
Biomedical Science



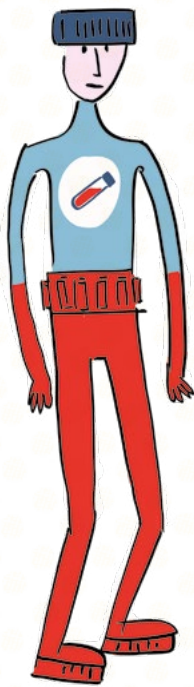
SUPERLAB is a fun and educational comic for KS2 children about the wonders of biomedical science. This comic can be enjoyed by children alone, in the classroom or with the help of adults.

age 7-11

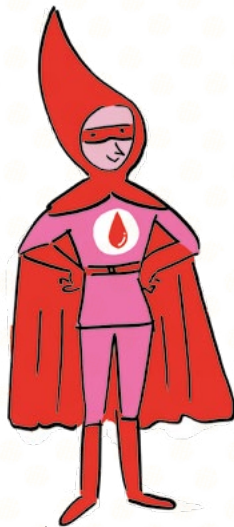
Biomedical Superheroes!

We're all biomedical scientists who do medical tests in hospital superlabs

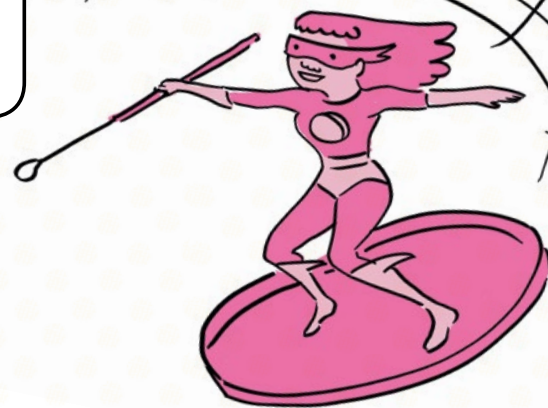
I'm **HAEMATOMAN** the HAEMATOLOGIST and I analyse blood samples.



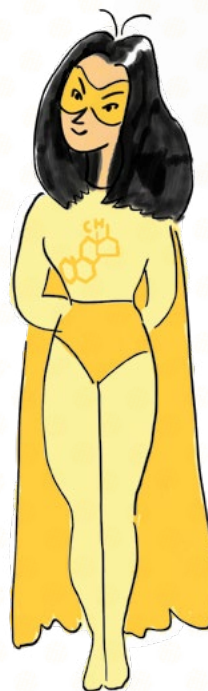
I'm **CHEMIGIRL** the CLINICAL CHEMIST and I understand changes in blood and wee.



I'm **BUG RIDER** the MICROBIOLOGIST and I grow bacteria in wee and poo.



I'm **BLOOD BOY** the TRANSFUSIONIST and I make sure people get the right kind of blood when they need a transfusion.



I'm **HISTOQUEEN** the HISTOLOGIST and I look at tissue samples under a microscope.



I'm **SPECIMAN** the
CYTOLOGIST and I
look for patterns in
cells.

I'm **IMMUNA** the
IMMUNOLOGIST and I
understand your immune
system.

I'm **SUPERGENE** the
GENETICIST and I know
all about genes.

I'm **CAPTAIN VIRUS** the
VIROLOGIST and I know
about viruses and viral
infections.

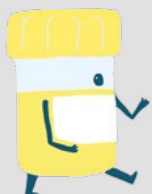


We help doctors
find out why
people are
unwell

We are the patient's samples that doctors send to the hospital.
Follow us!



tissue sample

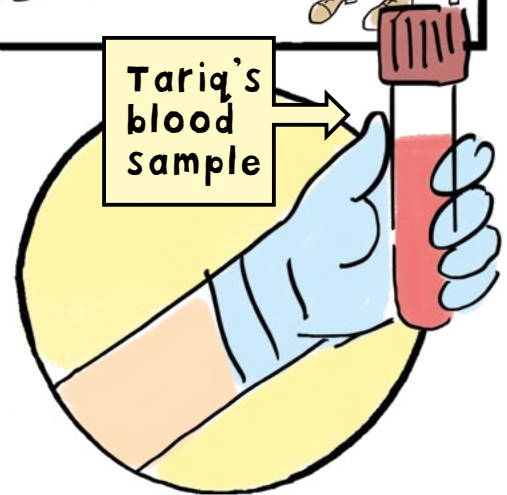
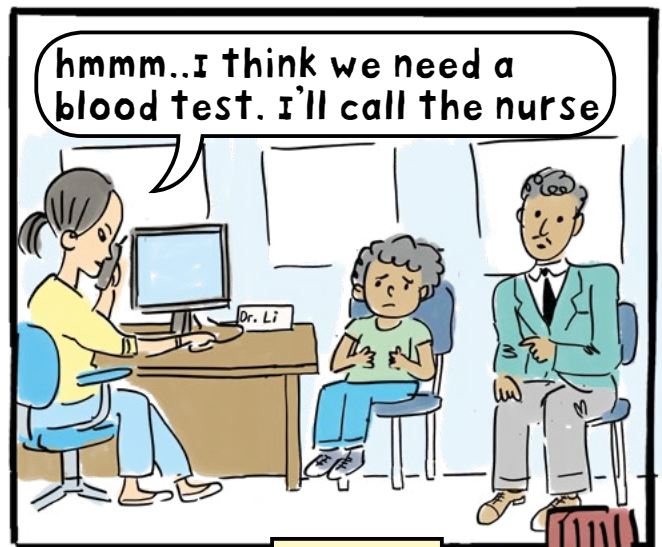


wee sample



blood sample

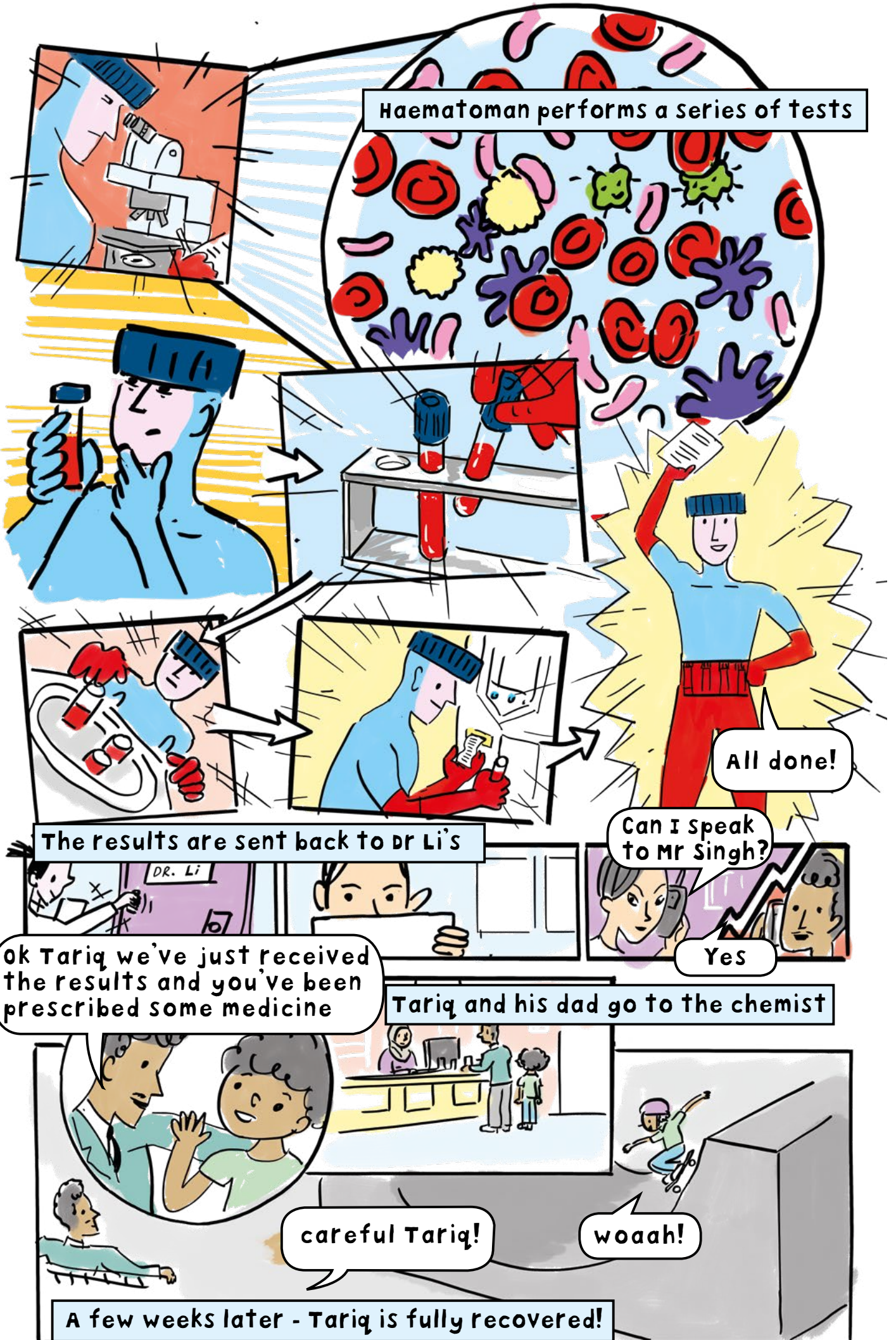
TARIQ'S STORY



the sample heads to the hospital...



Haematoman performs a series of tests



All done!

Can I speak to Mr Singh?

Yes

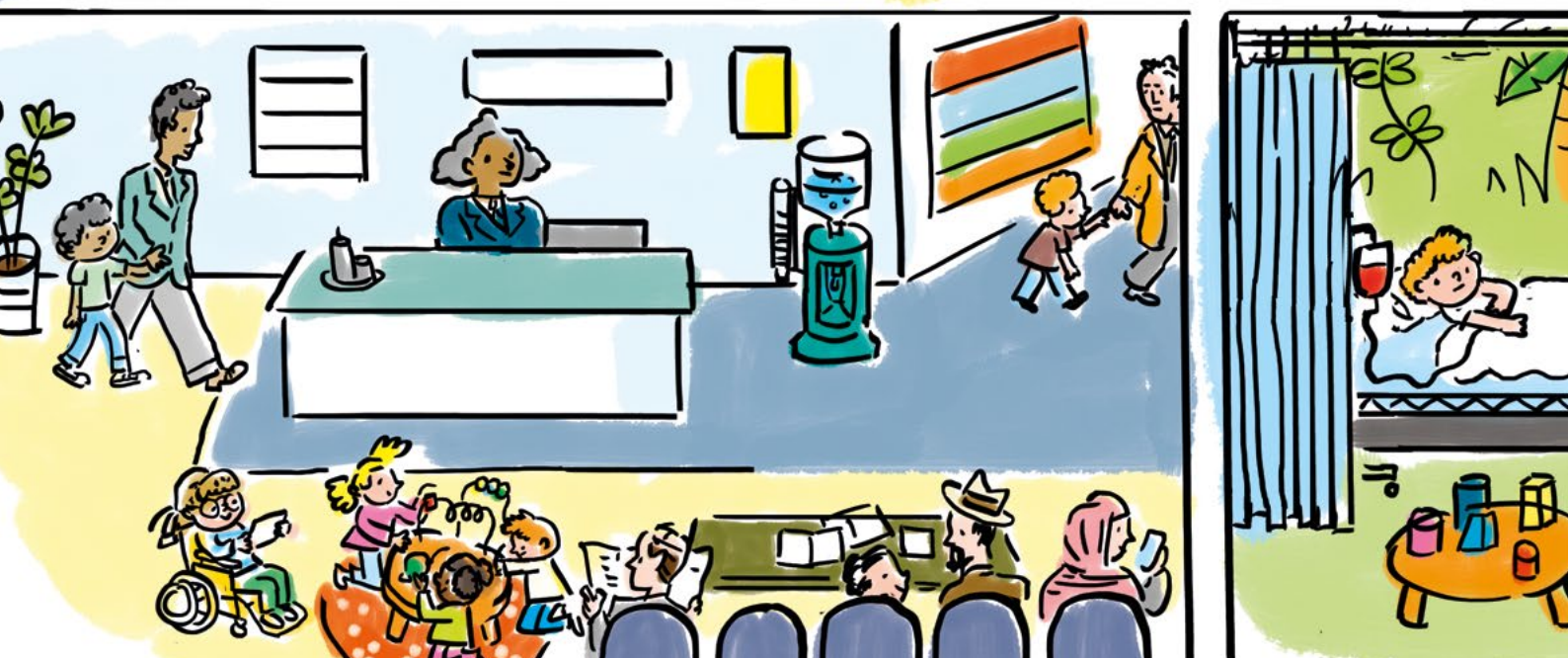
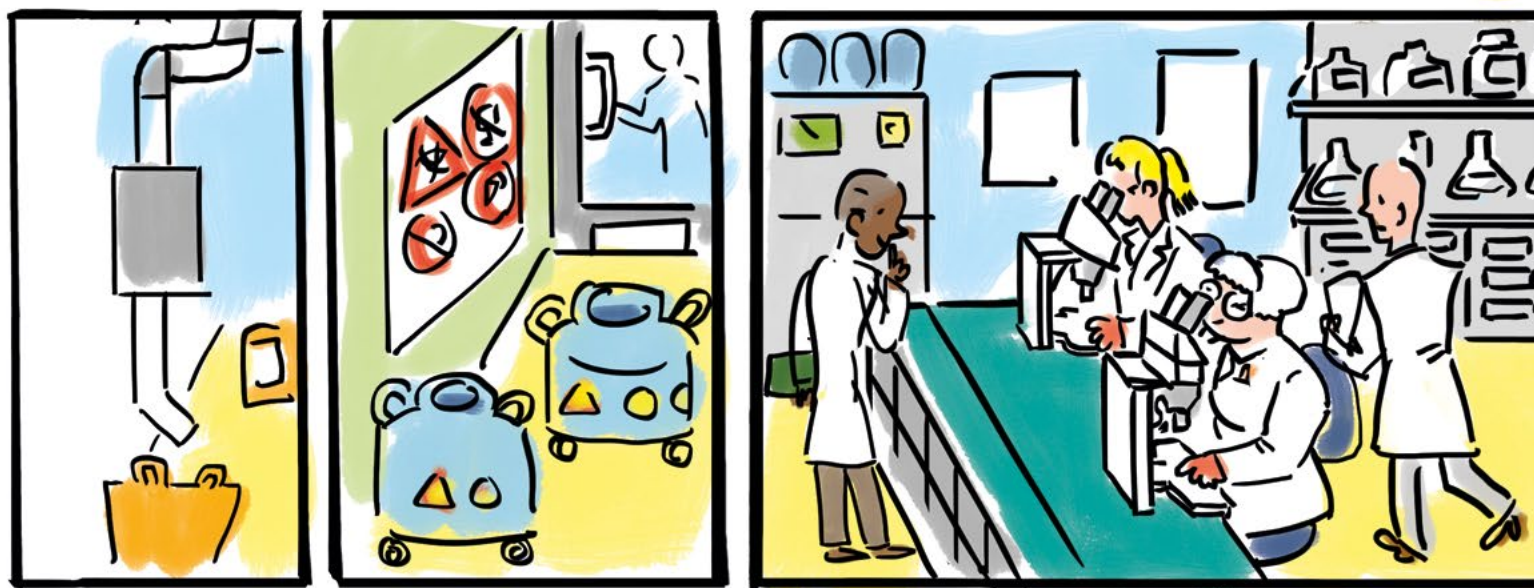
ok Tariq we've just received the results and you've been prescribed some medicine

Tariq and his dad go to the chemist

careful Tariq!

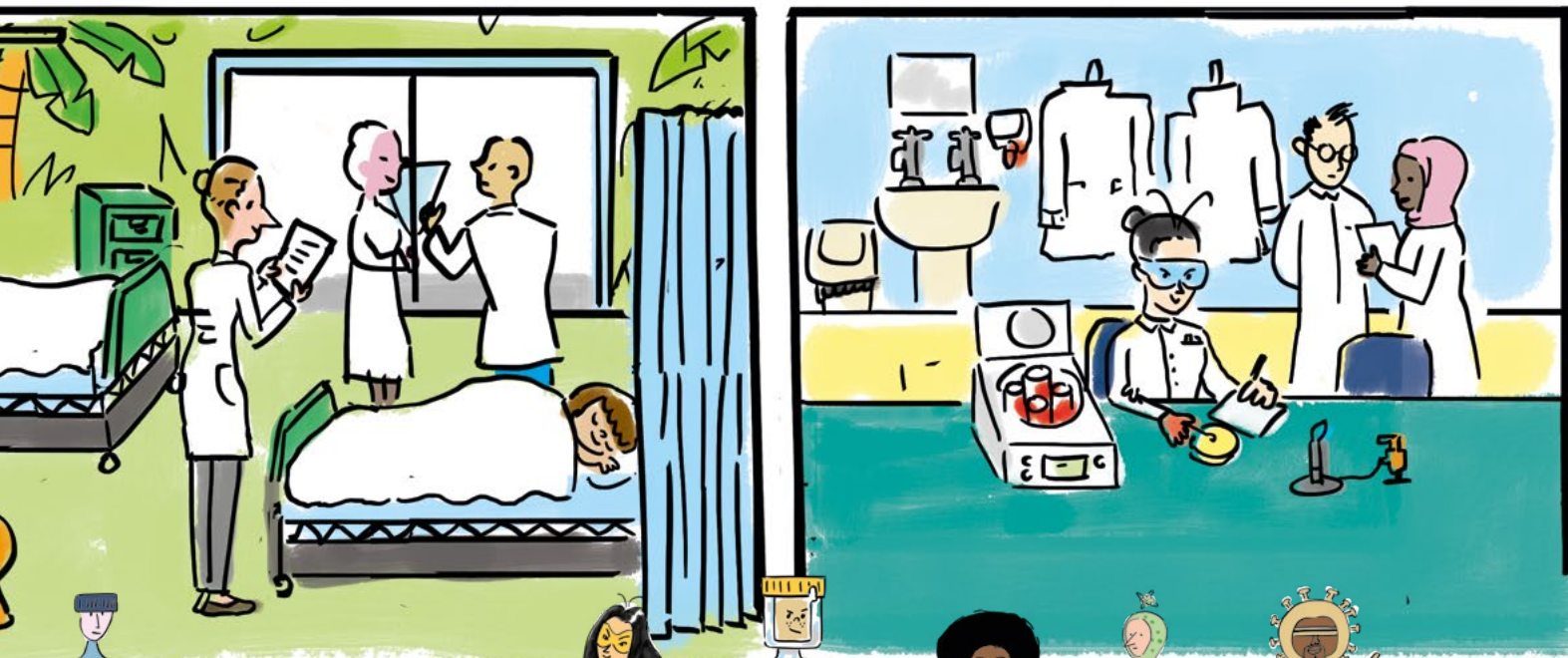
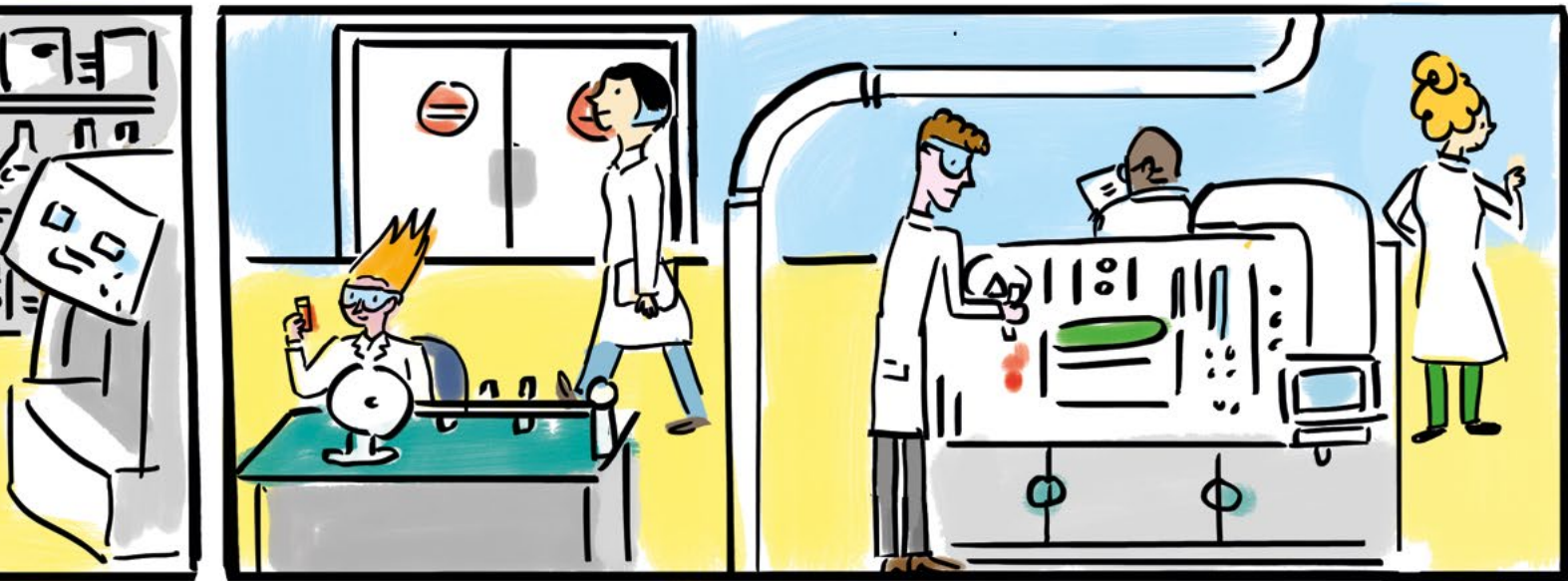
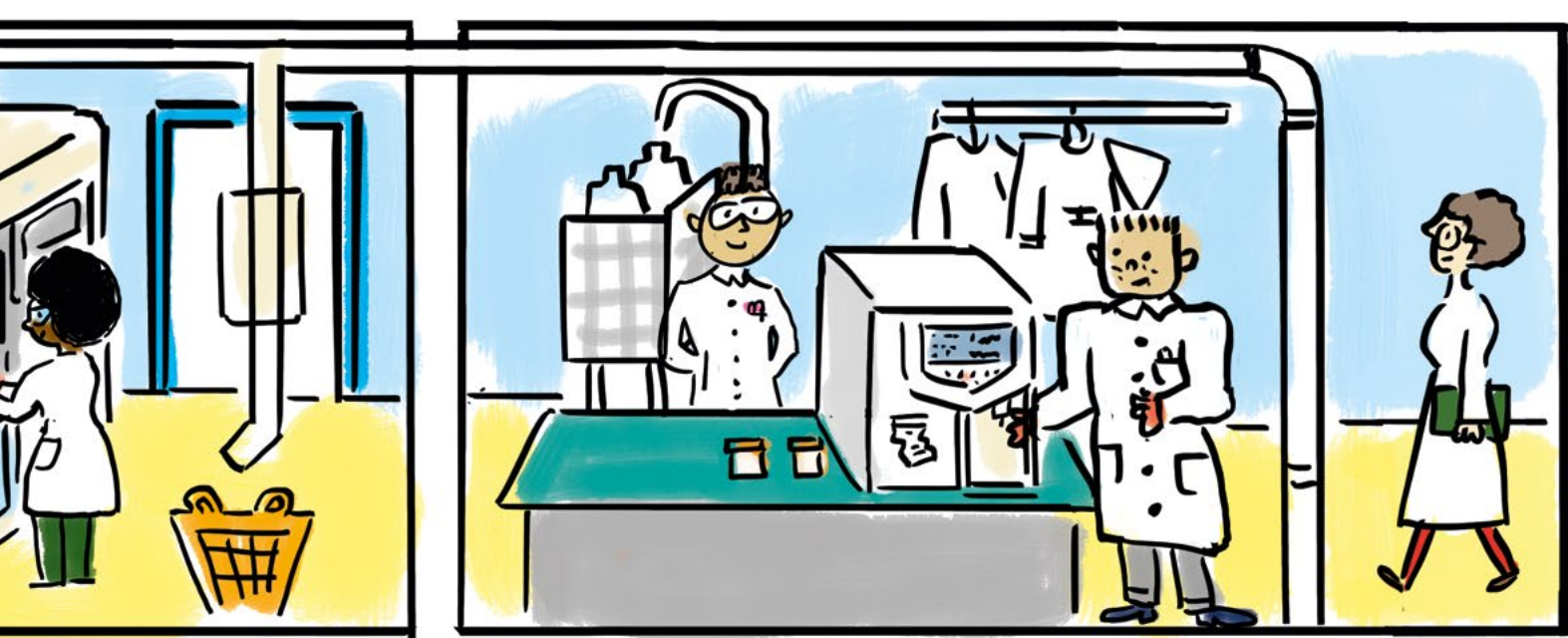
woaah!

A few weeks later - Tariq is fully recovered!



Find us!

Lots of science is happening in the hospital,
can you spot our superheroes as biomedical scientists?

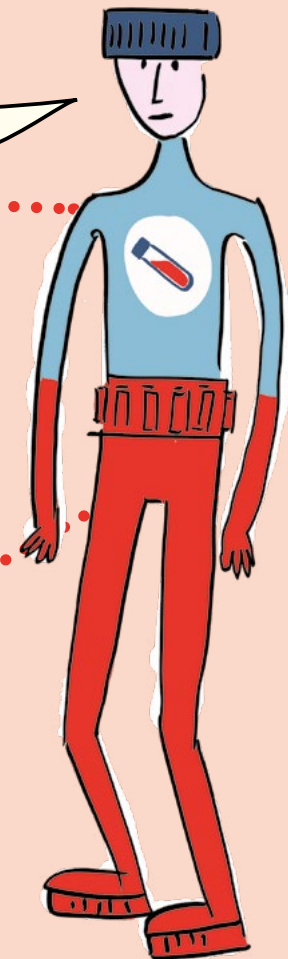


blood sample



Welcome to my Superlab -
the haematology lab!

We have just received a
few blood samples, let's
process them!



First let's stick a barcode
on the samples to identify
them and keep track



We don't want
any mix-ups

I like my new
stripy T-shirt!



Let's find out the blood types



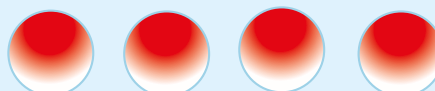
Use the blood type key to complete the blood test cards

Blood type key

O+



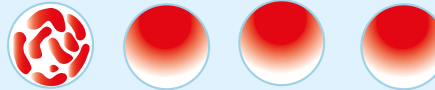
O-



A+



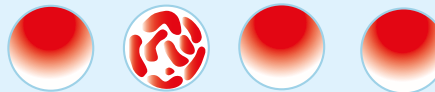
A-



B+



B-



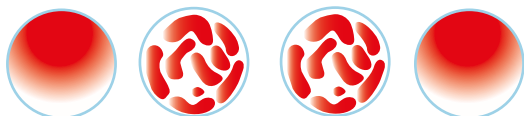
AB+



AB-



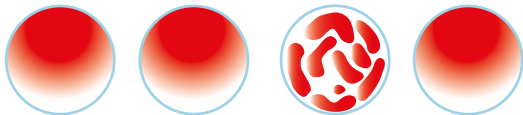
blood test card



Name:
Sam Paul

Blood type:

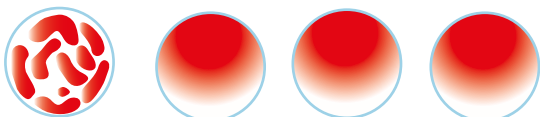
blood test card



Name:
Mike Robe

Blood type:

blood test card



Name:
Sir Clotalot

Blood type:

blood test card



Blood type:

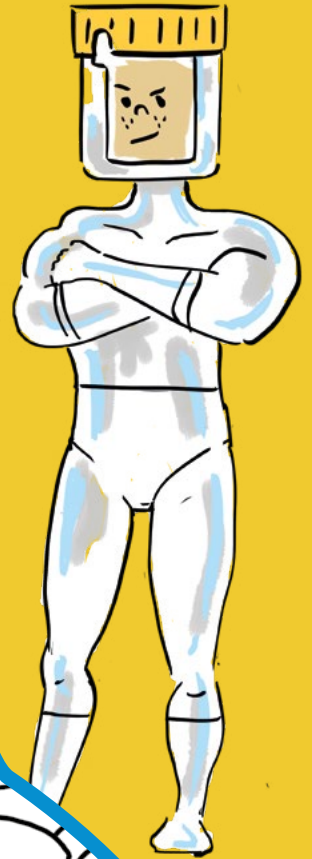
AB+

going for more tests

blood sample



Can you identify the different blood cells in this sample. Using the key below, colour in the different cells in the correct colour.



Key

red blood cells



white blood cells



platelets



germs



Make your own 'Test Your Sample' game

Sample cards



Microbiology lab



Blood lab

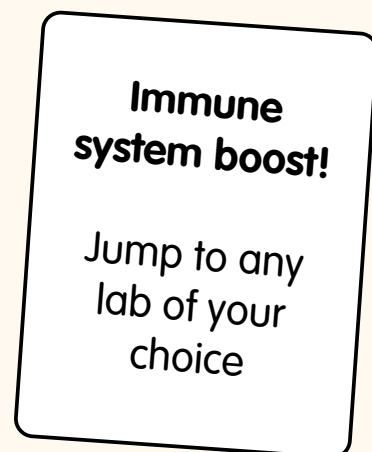
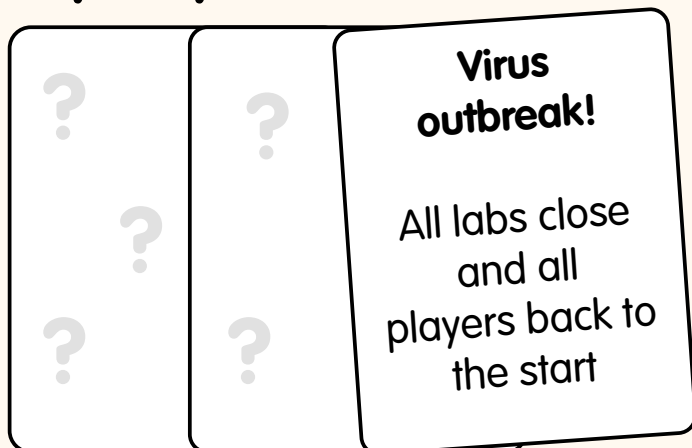


Gene lab



Cell lab

Mystery cards



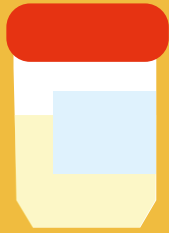
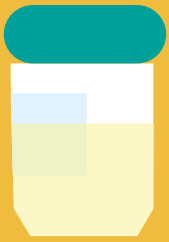
You will need: coloured paper, felt tip pens, scissors.

Sample cards: using the examples above as a guide make 3 of each kind so that you end up with 12 cards in total. The colour of the sample needs to match the correct lab.

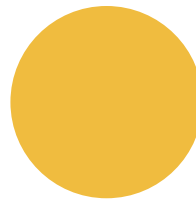
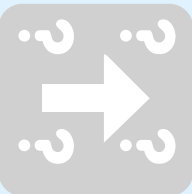
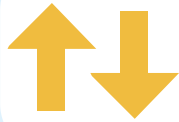
Mystery cards: on white paper draw question marks on one side and write an instruction on the other. This page has some examples of the type of instruction. Make 12 mystery cards and put them face down next to the game.

A full set can be downloaded from:
www.superlabscience.com

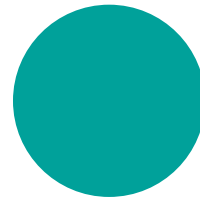
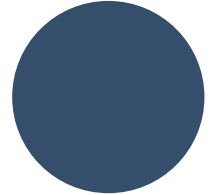
Microbiology lab



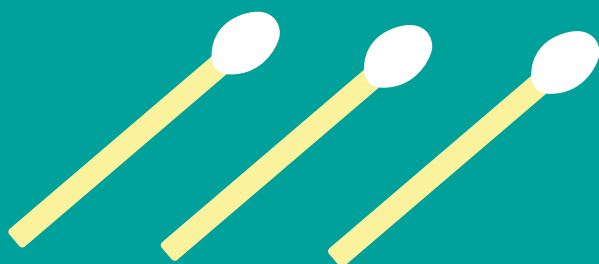
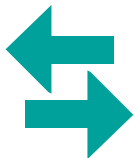
sample
drop off



START

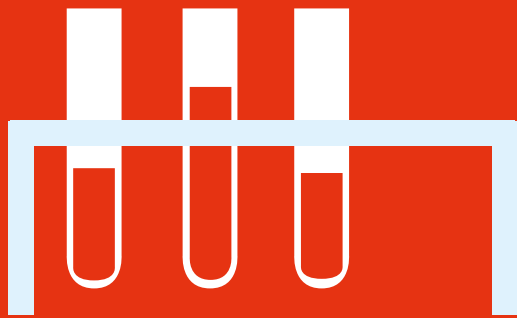


sample
drop off

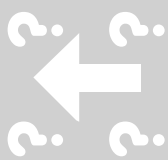


Gene lab

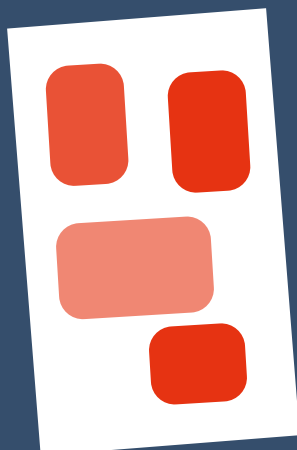
Blood lab



sample
drop off



sample
drop off



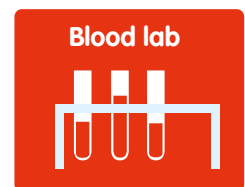
Cell lab

'Test your sample' game

2-4 players

You will need: sample cards and mystery cards, counters and dice

How to play: all players choose a colour and place your counters on the start. Deal the sample cards so each player has 3 cards. Take it in turns to roll the dice and move along the board in the direction of the arrows. Your mission is to drop off the samples on the drop off squares in the correct labs. For instance:



Only one sample can be deposited at a time. You do not need to roll the exact number to land on the drop off squares. If you land on a question mark you must select a mystery card from the pile and follow the instructions. The first person to drop off all their samples at the correct labs, wins!



Mystery cards



Sample cards

tissue sample



Welcome to my lab!
The histology lab.

We have just received
a tissue sample!



Let's fix the sample and prepare it for observation!



tissue



fix



dehydrate



embed
in wax



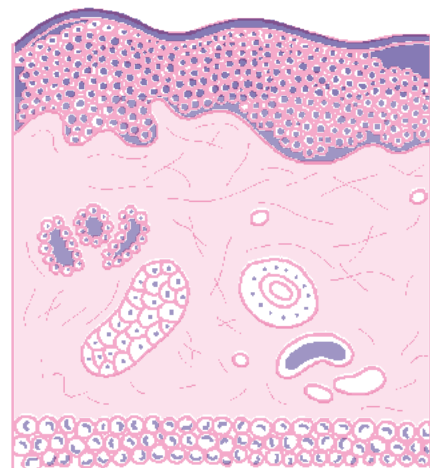
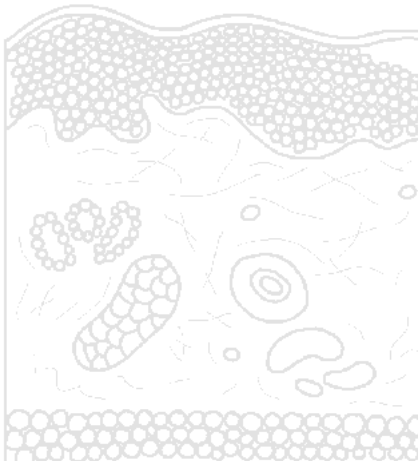
slice



a thin layer is put under the
microscope for analysis

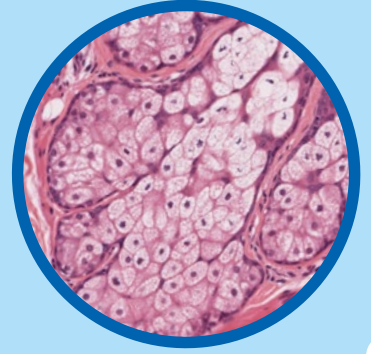
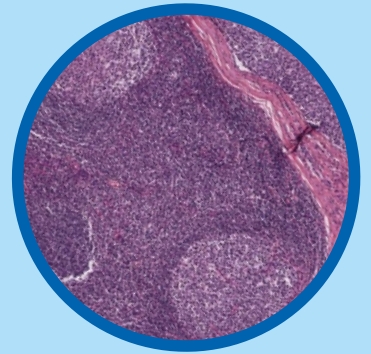
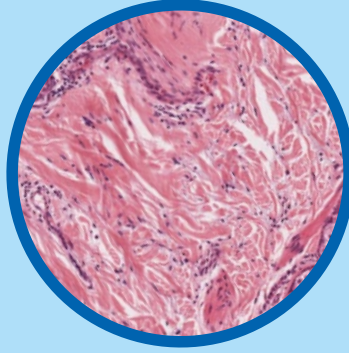
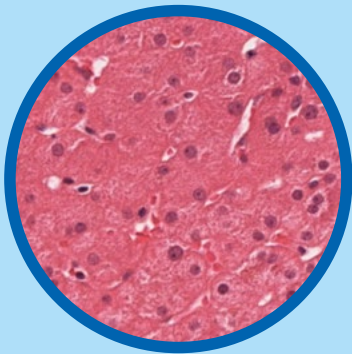
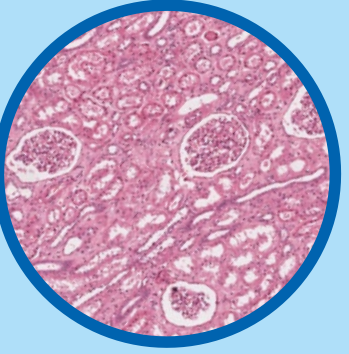
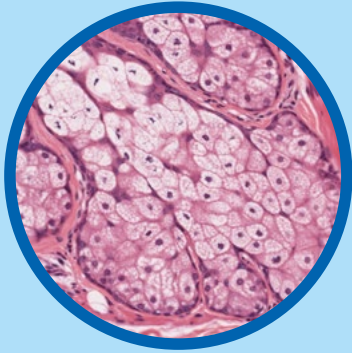
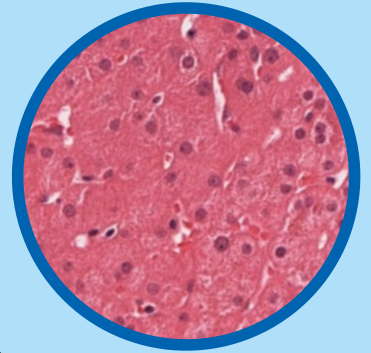
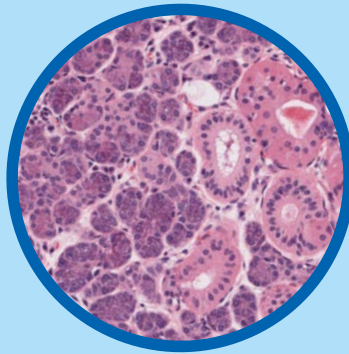
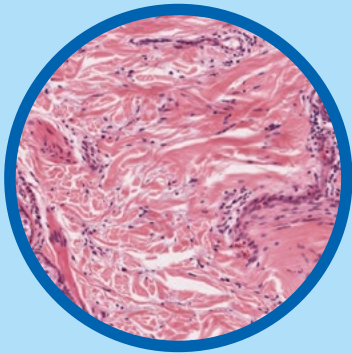
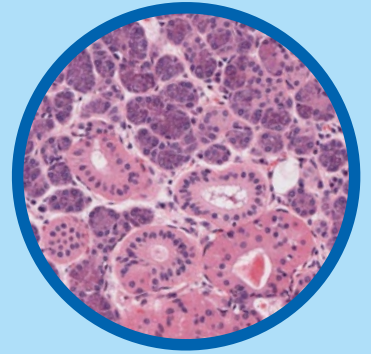
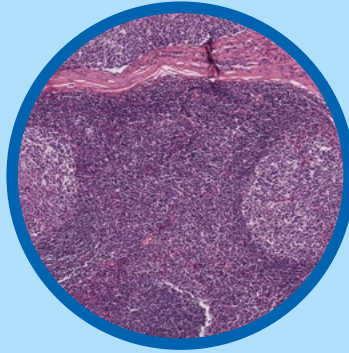


Dyes are used to contrast the structures of the cells so they can be recognised - *colour the slide*



Let's have a closer look

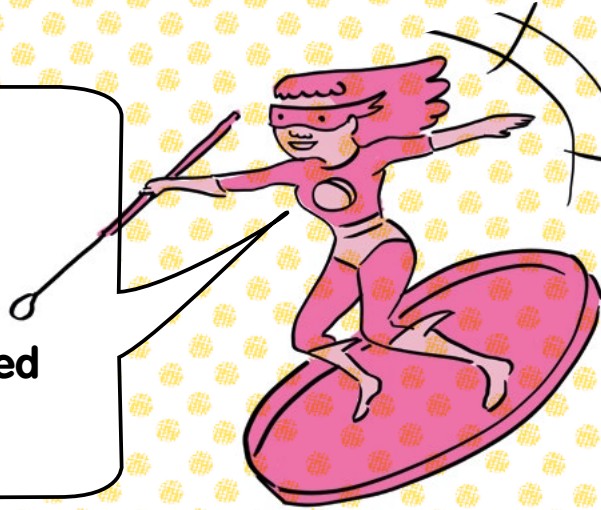
Sort out the slides below into matching pairs



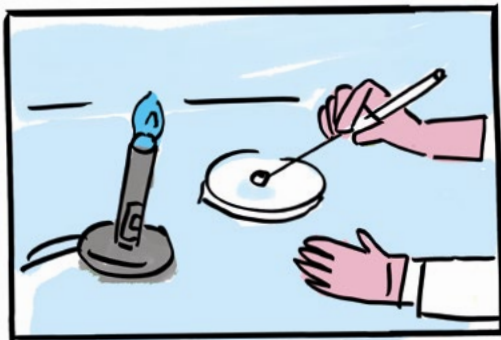
wee sample



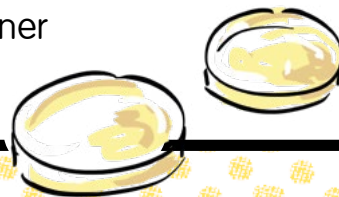
Bug Rider to the rescue!
Welcome to the microbiology lab.
We have just received a wee sample!



Let's check this wee sample and see if we have any bacteria growing ...



Bug Rider sterilises the metal loop with a Bunsen burner and inoculates the Petri dish with the sample



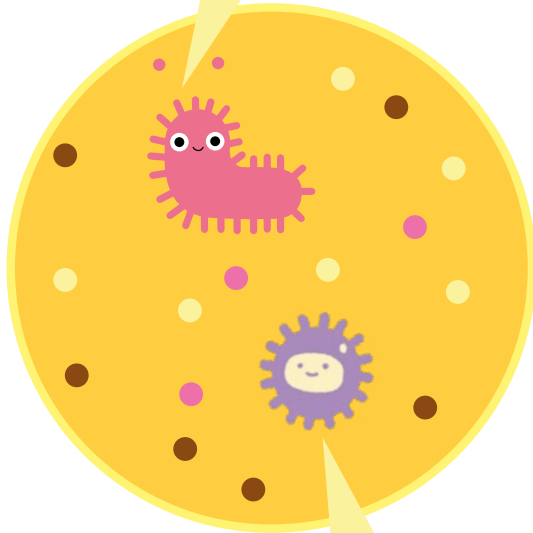
Germ Sudoku

Complete the grid to have one of each germ in each column or row

While we wait for the bacteria to grow let's do a germ sudoku

Funny fever!

Why did the bacteria cross the microscope?



To get to the other slide

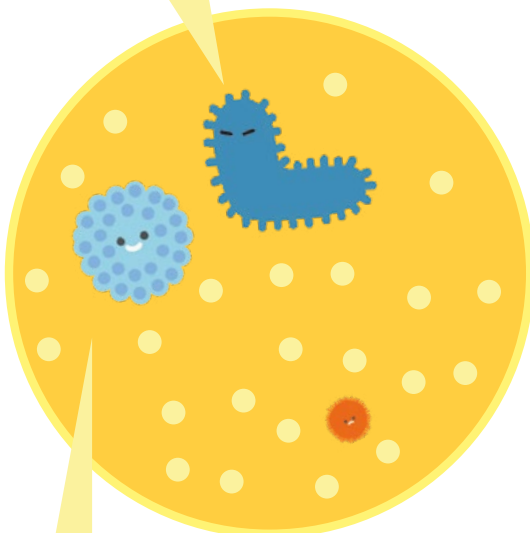
Hey, why are the viruses all gone?



Because they "FLU" AWAY

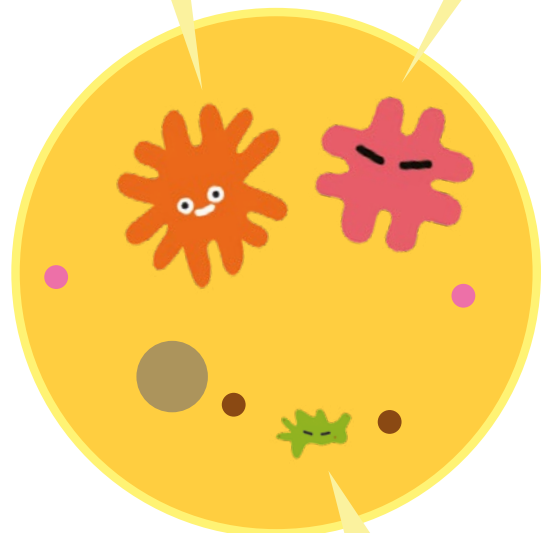
LOL

Tell me the one about the germ



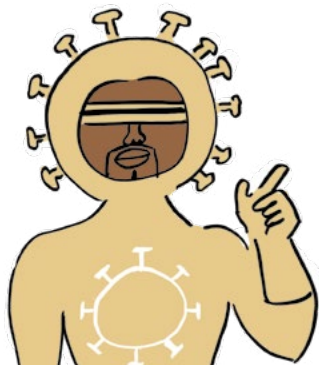
I can't. I don't want to spread it around

The food is great here

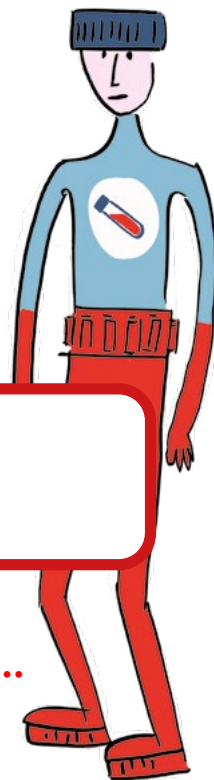


Where's the loo?

It's at the back-teria!



Create your own Superhero scientist!



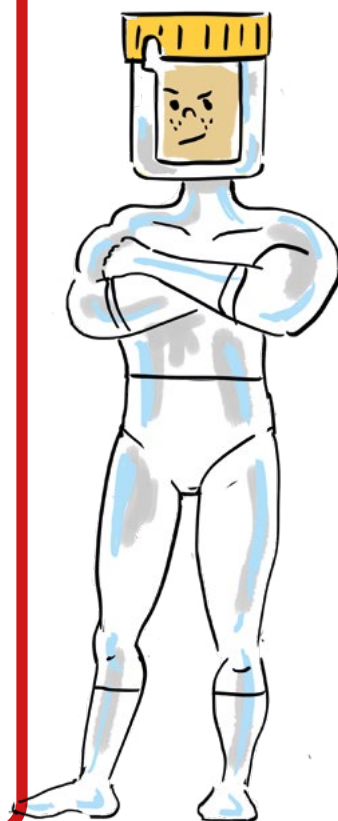
My Superhero power is...

My Superhero works in the

My Superhero's special tool is....
(bunsen burner, petri dish, syringe,
test tube)

My Superhero's name is.....

My Superhero outfit looks like....



Draw your Superhero in their superlab





IBMS proudly supports Harvey's Lab Tours

Harvey's Lab Tours help young patients and their families feel more at ease by connecting children with the biomedical science staff who process and analyse their samples. These visits help ease fears and build understanding.



www.harveyslabtours.com