

ELISA FOXFORD'S GUIDE TO CORONAVIRUS



HEY ELISA!

HAVE YOU HEARD? EVERYONE IS REALLY SCARED OF CORONAVIRUS!

I'VE SEEN WHAT IT LOOKS LIKE ON TV, BUT I DON'T UNDERSTAND WHY NOBODY CAN SEE IT FLYING AROUND!

THAT'S BECAUSE VIRUSES ARE VERY SMALL, SO YOU'LL NEED A MICROSCOPE TO SEE THEM!

IF YOU LOOKED AT A CORONAVIRUS UNDER A MICROSCOPE YOU WOULD SEE IT HAS A CROWN OF SPIKES, WHICH IS WHERE IT GETS ITS NAME (CORONA = CROWN).

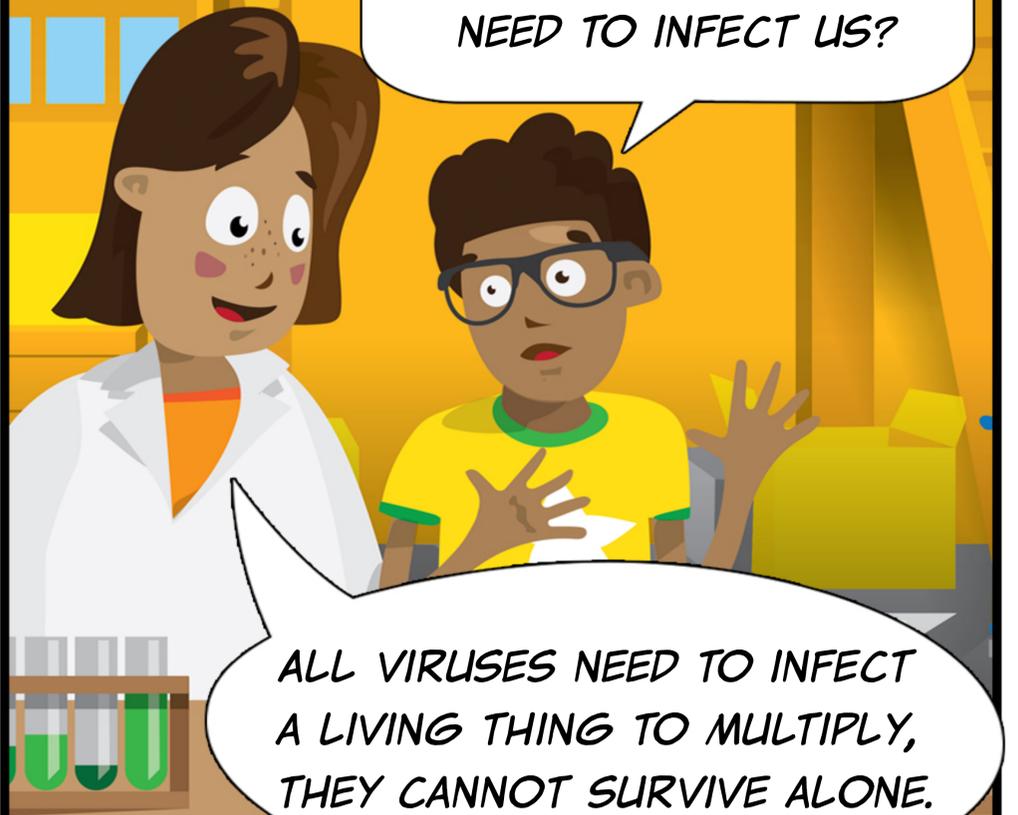
THERE ARE MANY DIFFERENT CORONAVIRUSES. SOME CAUSE SERIOUS DISEASES, OTHERS DO NOT.

SCIENTISTS BELIEVE THIS NEW CORONAVIRUS (SARS-COV-2) ORIGINALLY CAME FROM BATS AND STARTED INFECTING HUMANS LATE LAST YEAR.



VIRUSES LOVE BATS, THEY LIVE IN BIG COLONIES AND CAN EASILY SPREAD BETWEEN THEM.

BUT WHY DOES THE VIRUS NEED TO INFECT US?



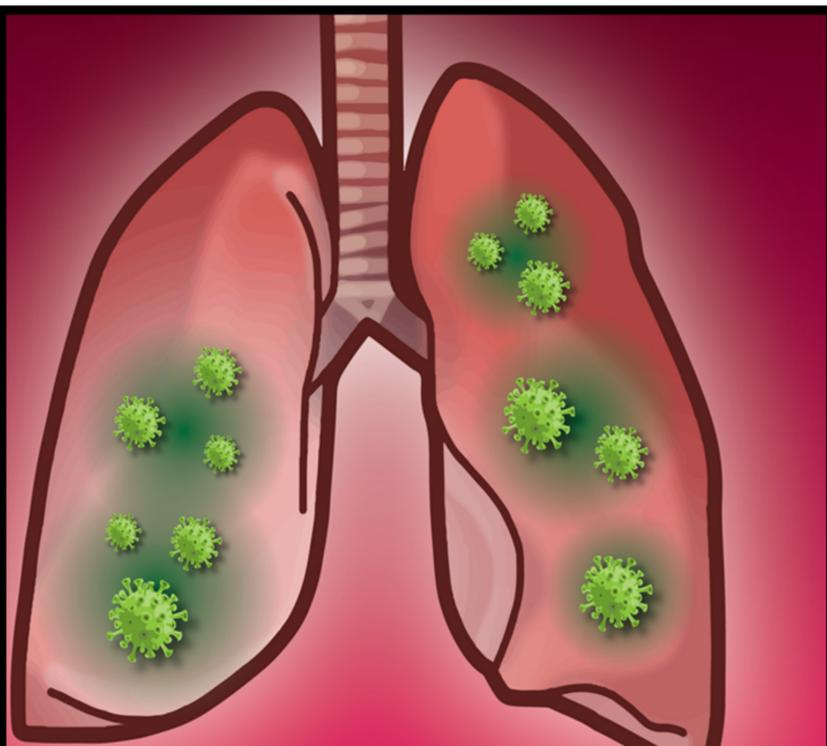
ALL VIRUSES NEED TO INFECT A LIVING THING TO MULTIPLY, THEY CANNOT SURVIVE ALONE.

WHEN WE ARE SICK WITH A CORONAVIRUS, WE RELEASE SMALL LIQUID DROPLETS FROM OUR MOUTHS AND THIS HELPS THE VIRUS SPREAD TO OTHER PEOPLE, MAINLY THROUGH THEIR NOSES AND MOUTHS.



MOST PEOPLE WHO GET SICK WILL RECOVER ON THEIR OWN BECAUSE OUR BODIES HAVE A BUILT-IN DEFENCE AGAINST DISEASES, THE IMMUNE SYSTEM.

WHEN THE CORONAVIRUS INFECTS A PERSON, IT MULTIPLIES IN THEIR BODY, INCREASING ITS NUMBERS, AND IN THE PROCESS, MAKES US SICK.

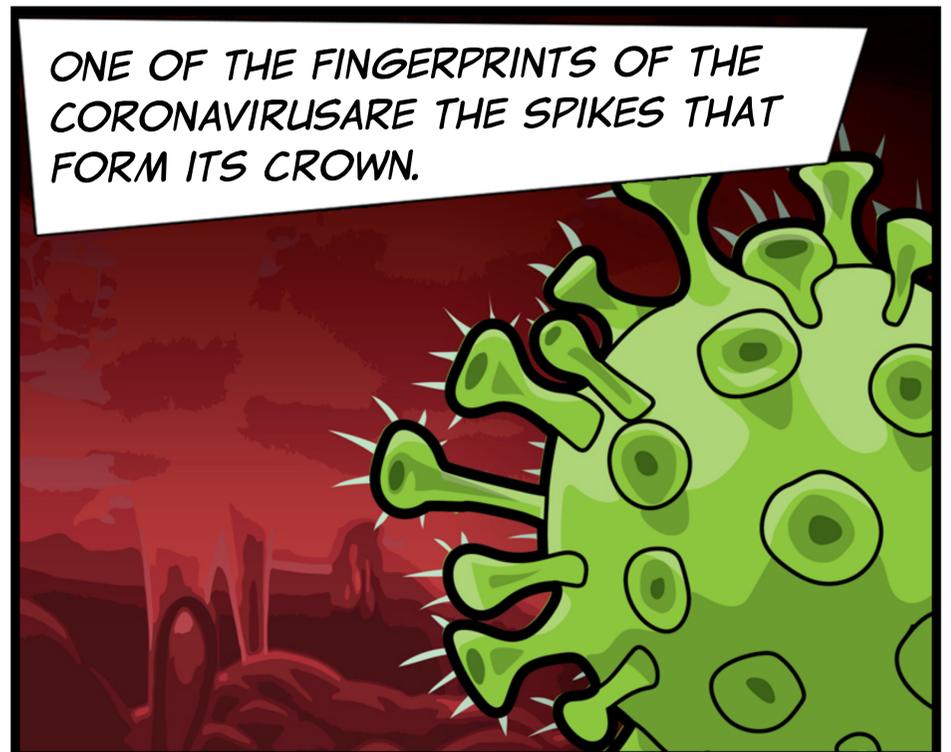


WOW, MY BODY CAN DO THAT?



YUP! YOU SEE, EACH VIRUS HAS UNIQUE 'FINGERPRINTS' WHICH ALLOW OUR BODIES TO IDENTIFY IT AS DIFFERENT FROM ANOTHER VIRUS.

ONE OF THE FINGERPRINTS OF THE CORONAVIRUS ARE THE SPIKES THAT FORM ITS CROWN.



THE IMMUNE SYSTEM POLICES AGAINST ALL DISEASES INCLUDING VIRUSES. ONE PART OF THE IMMUNE SYSTEM IS LIKE AN EVER-PRESENT POLICE PATROL.

THEY MOVE AROUND THE BODY LOOKING FOR SUSPICIOUS ACTIVITY, INVESTIGATING ANYTHING THAT LOOKS UNUSUAL AND ACTING IMMEDIATELY IF THEY DO.



A SECOND PART OF THE IMMUNE SYSTEM ARE MORE LIKE VIRUS DETECTIVES.



AFTER THE VIRUS HAS BEEN ACTIVE FOR A SHORT TIME, DETECTIVES LOOK FOR VIRAL 'FINGERPRINTS' TO HELP IDENTIFY IT AND THEN WORK TO STOP IT.

THESE DETECTIVES TAKE TIME TO IDENTIFY THE VIRUS, WHICH IS WHY IT USUALLY TAKES US TIME TO GET BETTER AFTER WE GET SICK.



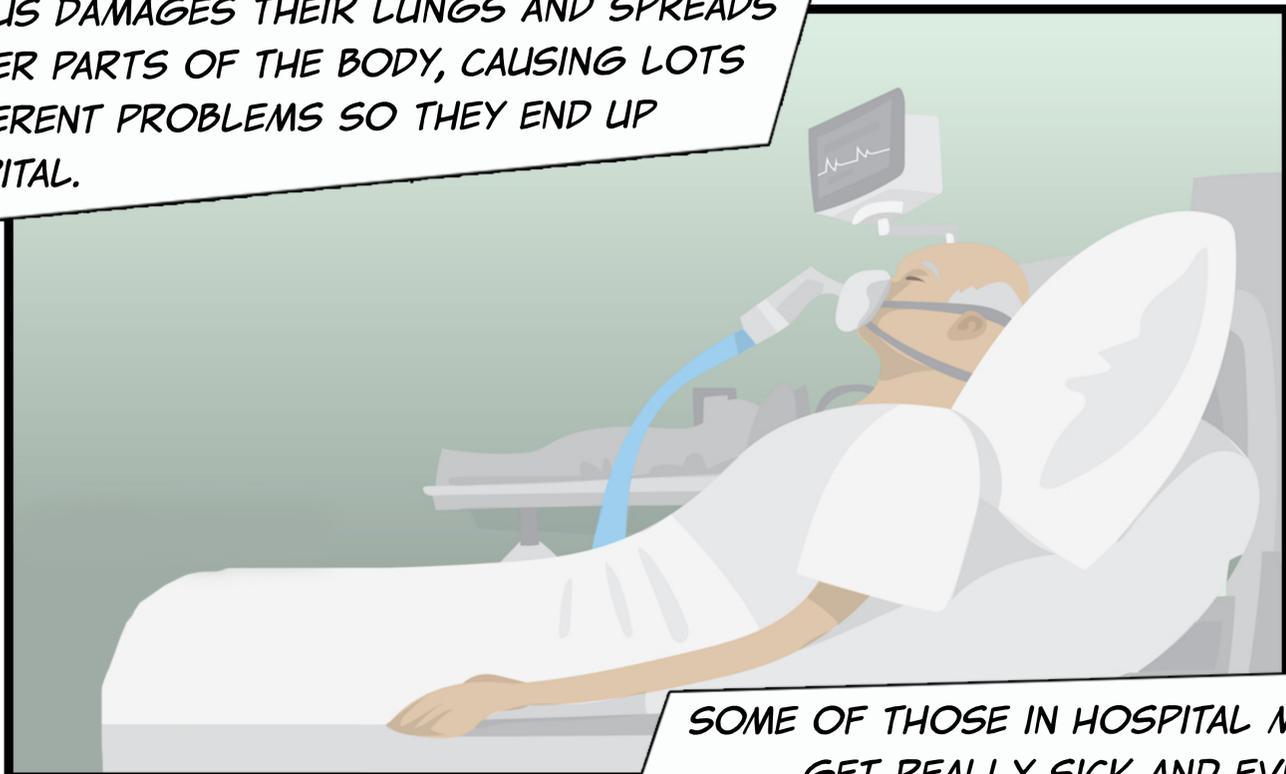
HOWEVER AFTERWARDS THEY CAN REMEMBER THE VIRUS AND ACT FASTER TO STOP IT IF IT COMES BACK!

BUT IF OUR BODIES CAN FIGHT THE VIRUS ON ITS OWN, WHY ARE PEOPLE GETTING SICK?



BECAUSE SOME PEOPLE, ESPECIALLY THOSE WHO ARE OLD OR HAVE OTHER ILLNESSES, HAVE WEAKER IMMUNE SYSTEMS, THEY CANNOT FIGHT OFF THE DISEASE.

THE VIRUS DAMAGES THEIR LUNGS AND SPREADS TO OTHER PARTS OF THE BODY, CAUSING LOTS OF DIFFERENT PROBLEMS SO THEY END UP IN HOSPITAL.



SOME OF THOSE IN HOSPITAL MIGHT GET REALLY SICK AND EVEN DIE.

SO WHAT CAN WE DO TO STOP THIS VIRUS FROM INFECTING MORE PEOPLE?



GOOD QUESTION! SCIENTISTS ARE WORKING TO TRY AND UNDERSTAND HOW CORONAVIRUS SPREADS. THEY USE A SPECIAL NUMBER CALLED 'R' TO HELP WORK THIS OUT.

R STANDS FOR REPRODUCTION NUMBER.

The spread of disease speeds up

R GREATER THAN 1

R LOWER THAN 1

The disease spread slows down

IF 'R' IS GREATER THAN 1, MORE PEOPLE GET INFECTED AND THE SPREAD OF THE DISEASE SPEEDS UP. IF 'R' IS LESS THAN 1, THE DISEASE SPREAD SLOWS DOWN.



HANDS



FACE



SPACE



IF WE CAN KEEP 'R' BELOW 1, WE SHOULD BE ABLE TO STOP THE DISEASE.

SIMPLE ACTIONS SUCH AS WASHING OUR HANDS, STAYING AT HOME, WEARING A MASK, AND STAYING 2M APART CAN HELP REDUCE THE 'R' NUMBER.



ANOTHER WAY TO REDUCE THE R NUMBER IS THROUGH VACCINES...

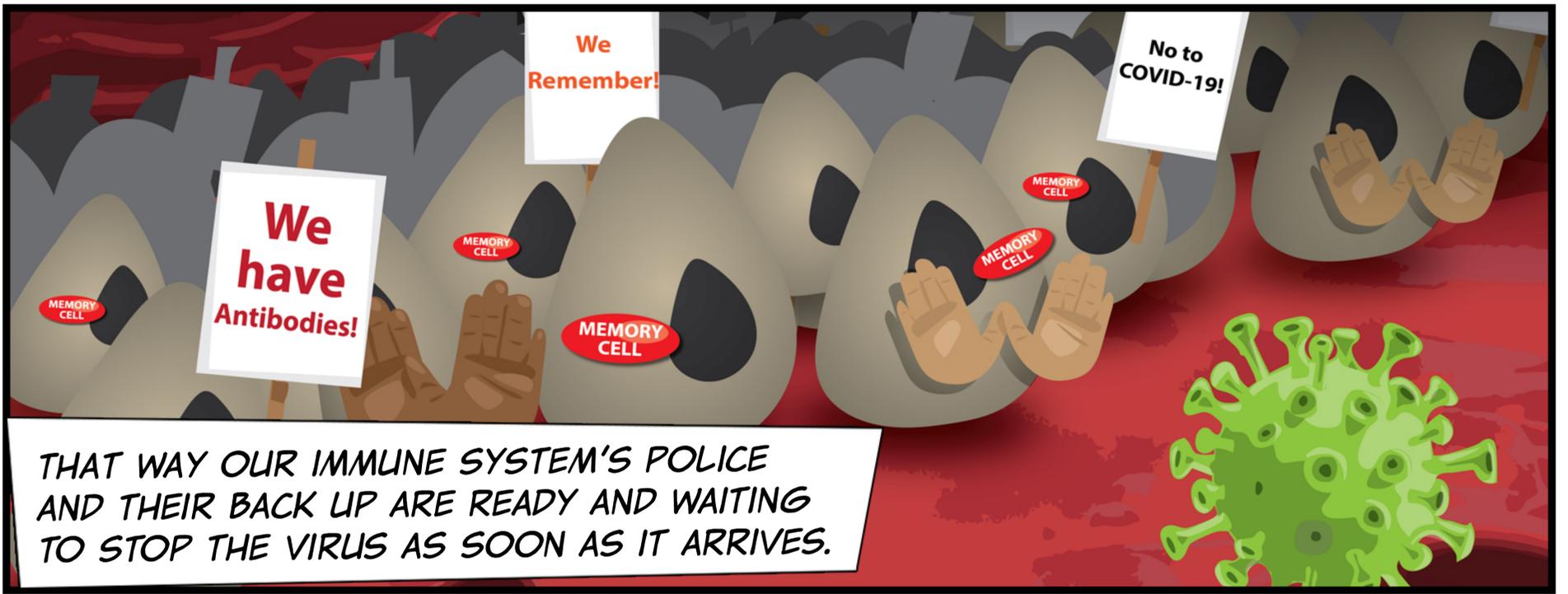
A NEEDLE?! OH NO!



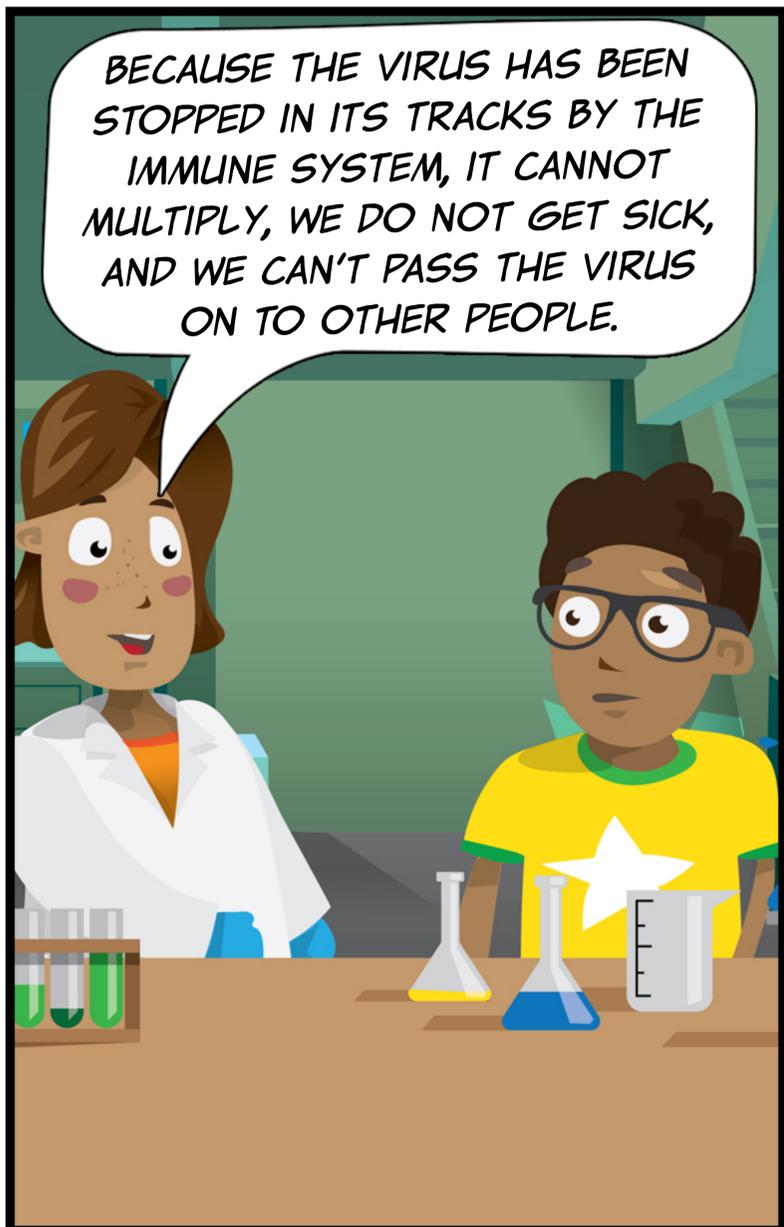
SURE IT MIGHT STING YOUR ARM FOR A FEW SECONDS, BUT THIS VACCINE COULD SAVE YOUR LIFE AND THE LIVES OF THOSE AROUND YOU!



A VACCINE WORKS BY PROVIDING OUR VIRUS DETECTIVES THE 'FINGERPRINTS' OF THE VIRUS, AND A 'MOST WANTED' POSTER BEFORE IT EVEN INFECTS OUR BODY.



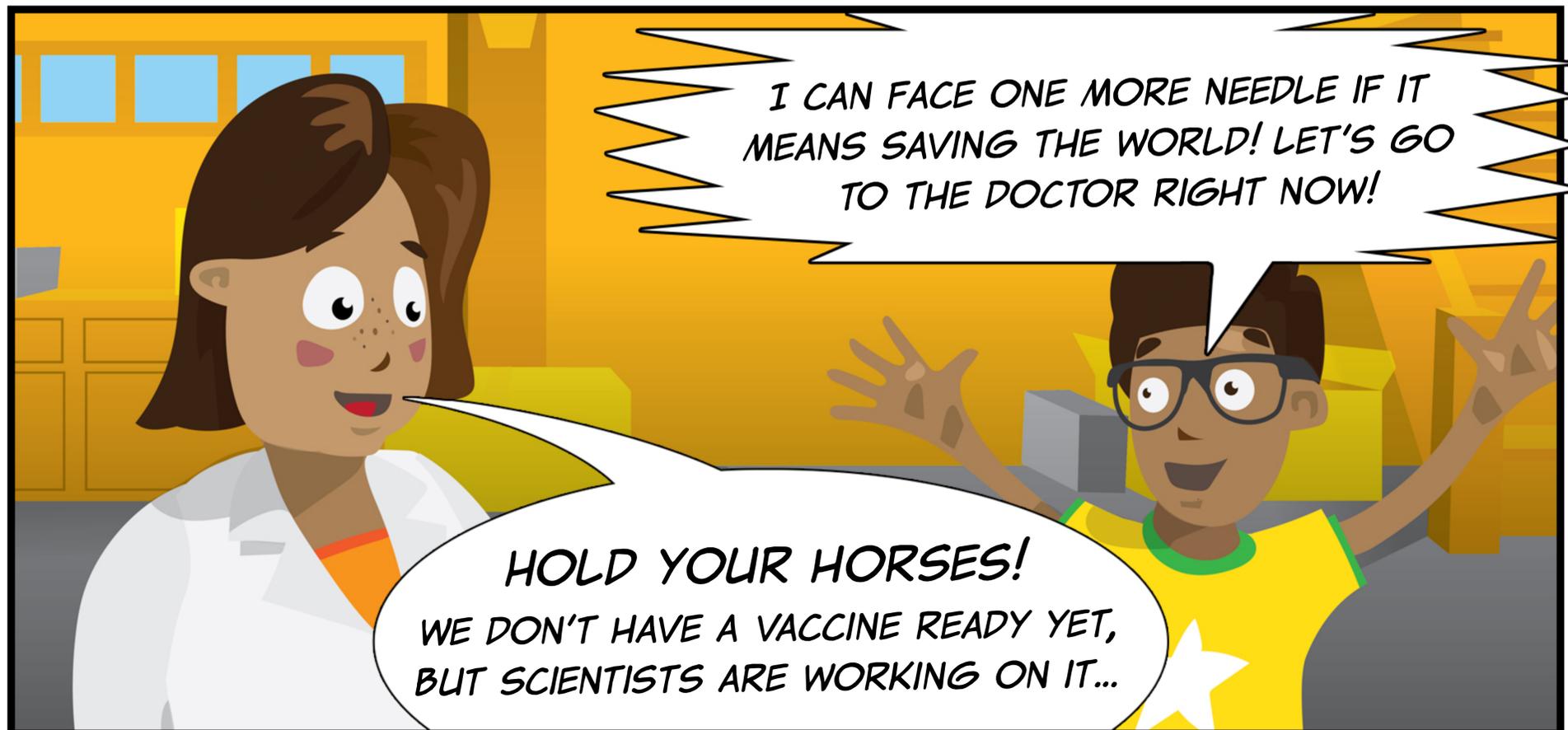
THAT WAY OUR IMMUNE SYSTEM'S POLICE AND THEIR BACK UP ARE READY AND WAITING TO STOP THE VIRUS AS SOON AS IT ARRIVES.



BECAUSE THE VIRUS HAS BEEN STOPPED IN ITS TRACKS BY THE IMMUNE SYSTEM, IT CANNOT MULTIPLY, WE DO NOT GET SICK, AND WE CAN'T PASS THE VIRUS ON TO OTHER PEOPLE.



IF ENOUGH PEOPLE HAVE THE VACCINE, THE VIRUS RUNS OUT OF PEOPLE IT CAN INFECT AND THE OUTBREAK SLOWS UNTIL IT EVENTUALLY STOPS.



I CAN FACE ONE MORE NEEDLE IF IT MEANS SAVING THE WORLD! LET'S GO TO THE DOCTOR RIGHT NOW!

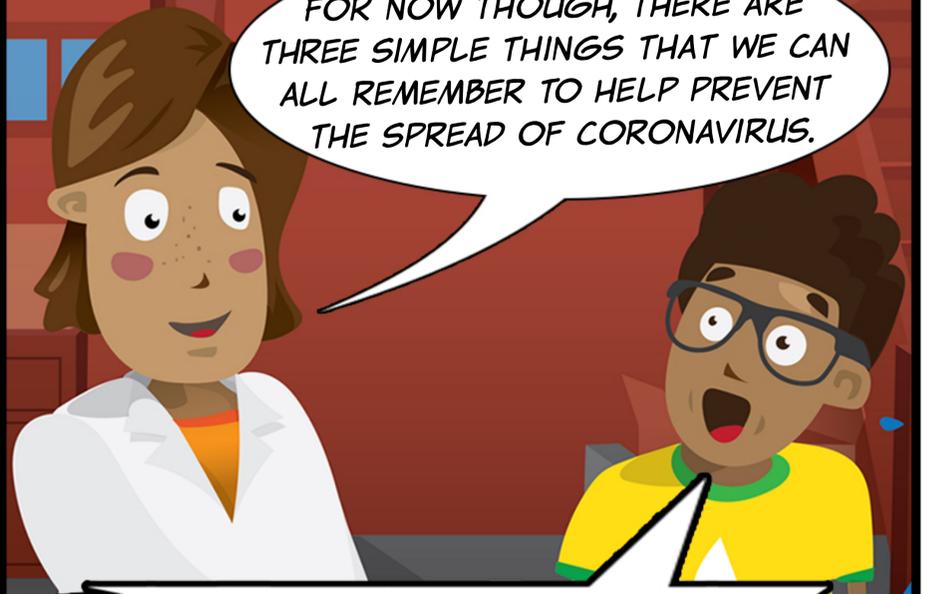
HOLD YOUR HORSES!
WE DON'T HAVE A VACCINE READY YET, BUT SCIENTISTS ARE WORKING ON IT...

WHEN SCIENTISTS THINK THEY HAVE DEVELOPED GOOD VACCINES, THEY TEST THESE IN HEALTHY VOLUNTEERS TO MAKE SURE THEY ARE SAFE AND ACTUALLY WORK.



IF SUCCESSFUL, WE CAN GIVE THE VACCINE TO ALL THE PEOPLE WHO NEED IT.

FOR NOW THOUGH, THERE ARE THREE SIMPLE THINGS THAT WE CAN ALL REMEMBER TO HELP PREVENT THE SPREAD OF CORONAVIRUS.



WAIT! I KNOW WHAT THEY ARE...

WASH YOUR



HANDS

COVER YOUR



FACE

KEEP YOUR



SPACE



THANK YOU FOR READING ELISA FOXFORD'S GUIDE TO CORONAVIRUS!

THIS COMIC BOOK WAS PRODUCED BY:



THE JENNER INSTITUTE
DEVELOPING INNOVATIVE VACCINES

IN COLLABORATION WITH:



CutGraphics
graphic design • illustration