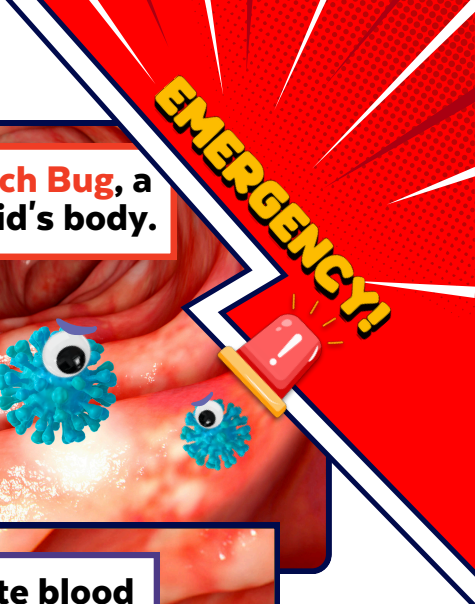
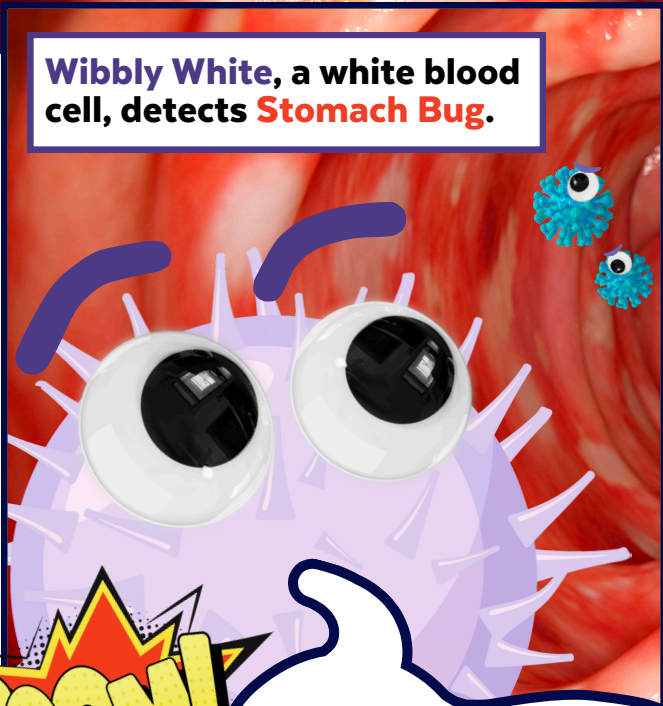


CHAPTER 4

BAD Microbes & Illnesses



Norovirus, a.k.a. **Stomach Bug**, a bad microbe, enters a kid's body.

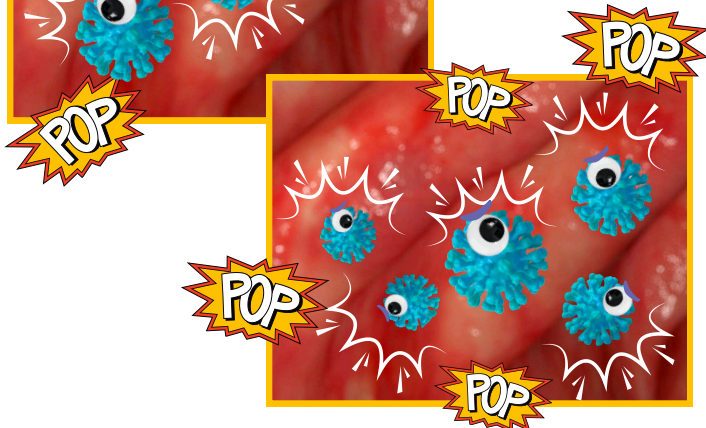
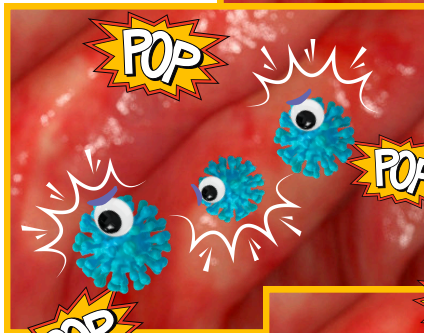
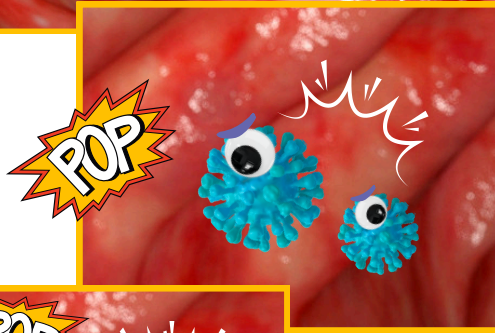
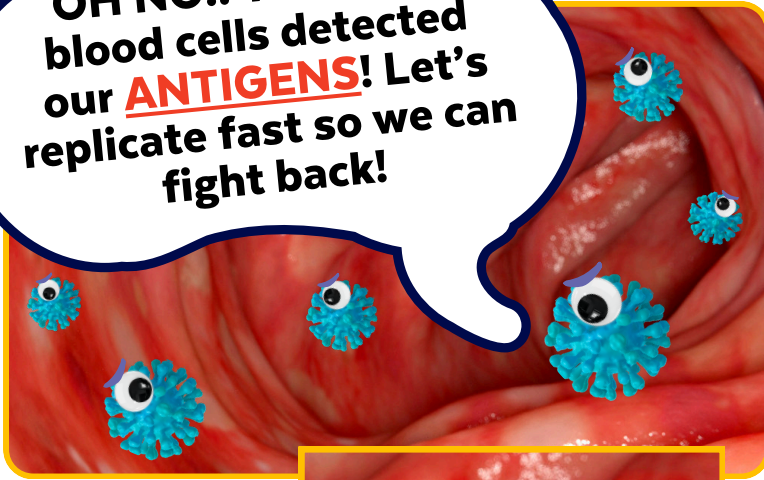


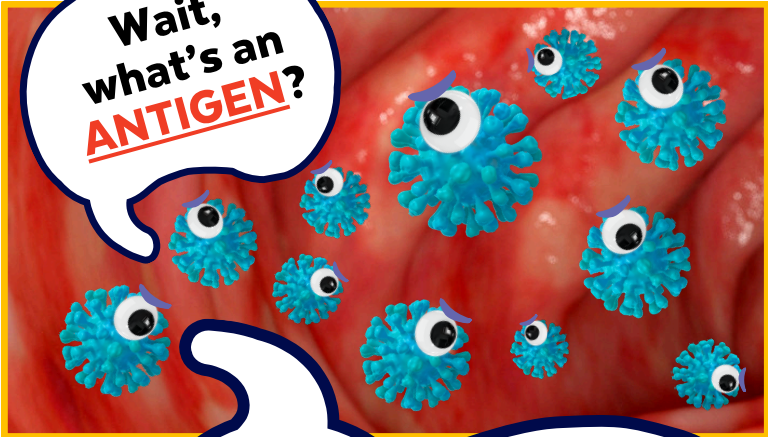
Wibbly White, a white blood cell, detects **Stomach Bug**.

BOOM!

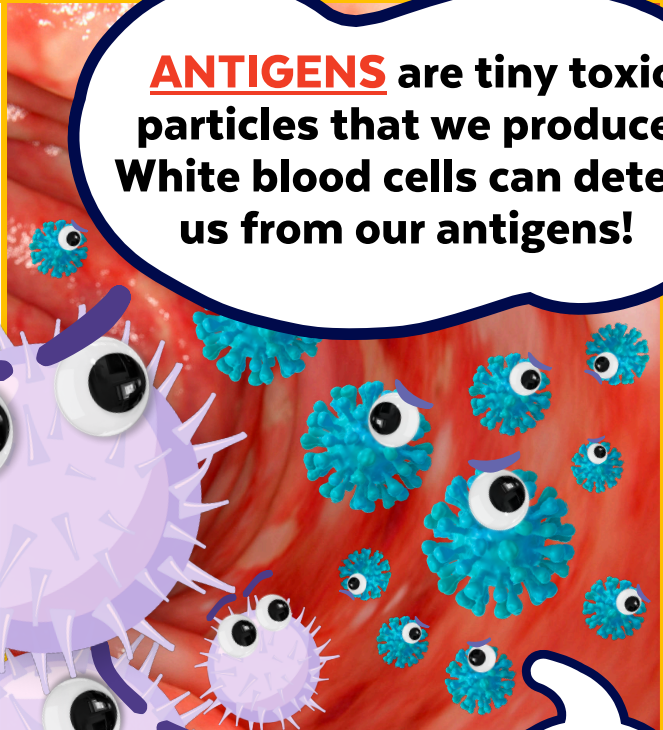
How did these pesky microbes get in??
Ready, set...
ATTACK!!!

OH NO!! The white
blood cells detected
our **ANTIGENS**! Let's
replicate fast so we can
fight back!

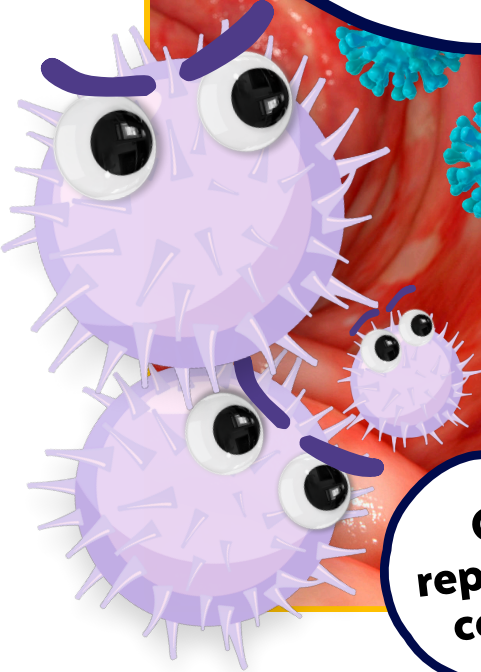




Wait,
what's an
ANTIGEN?



ANTIGENS are tiny toxic
particles that we produce!
White blood cells can detect
us from our antigens!



Quickly, keep
replicating! They're
coming after us!



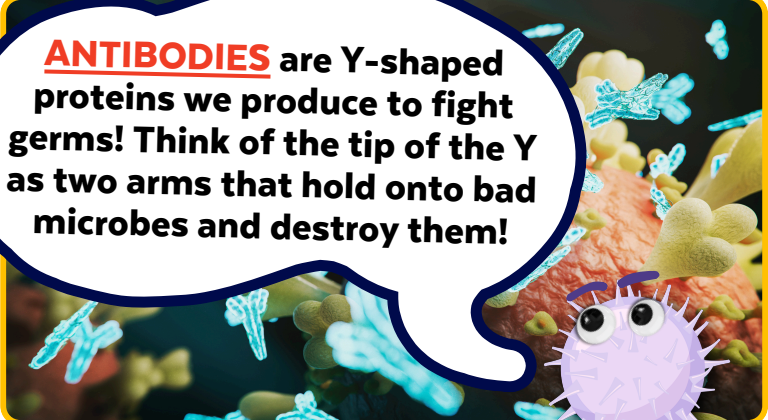
Calling all white blood cells in our **IMMUNE SYSTEM**! The microbes are invading the stomach!



We need to create a new **ANTIBODY** to make these bad germs surrender.



Did someone say **ANTIBODY**? What's that?

An illustration showing several blue Y-shaped antibodies attacking a large, orange, textured microbe. A smaller purple microbe with eyes and spikes is also visible in the foreground.

ANTIBODIES are Y-shaped proteins we produce to fight germs! Think of the tip of the Y as two arms that hold onto bad microbes and destroy them!

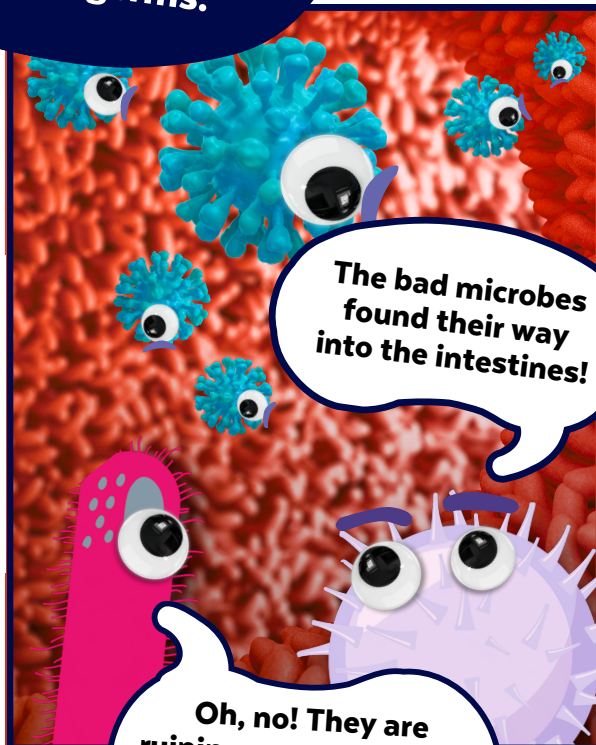
A close-up photograph of a child's face, showing their mouth and nose. A white digital thermometer is placed in their mouth. A purple microbe with eyes and spikes is positioned near the thermometer.

Uh, oh... I'm not feeling too well.

Body temperature is increasing! The bad microbes won't like that.

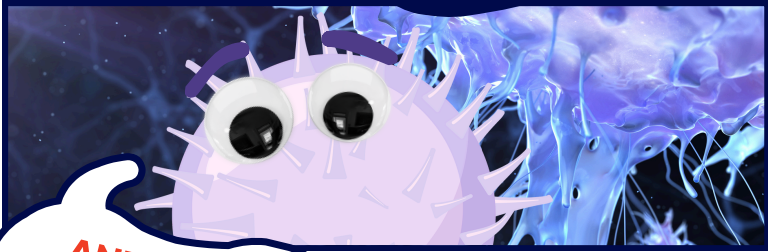


It seems you have a fever. Stay home and rest to help your body fight the germs.

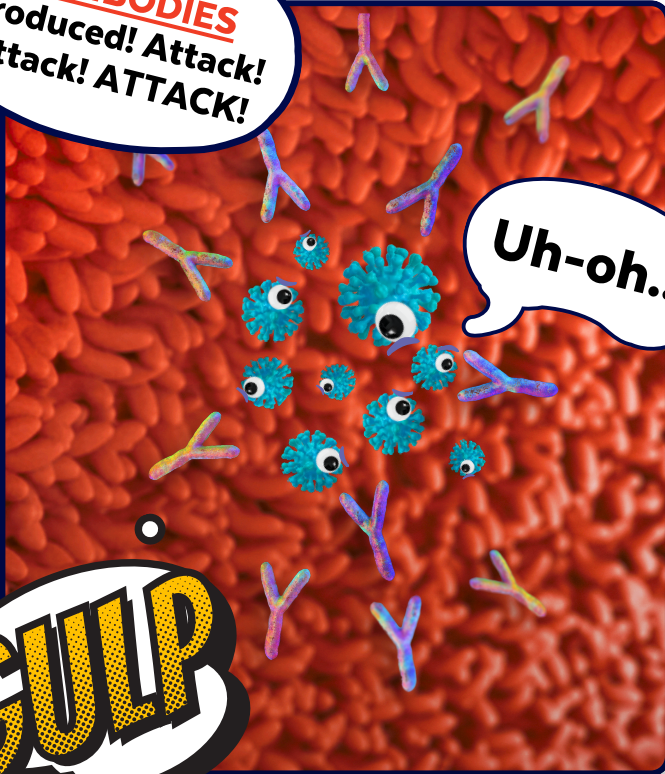


The bad microbes found their way into the intestines!

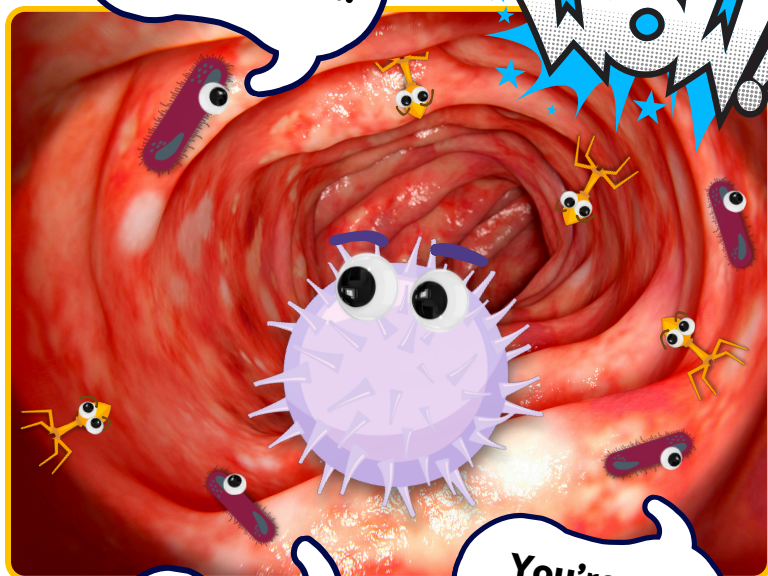
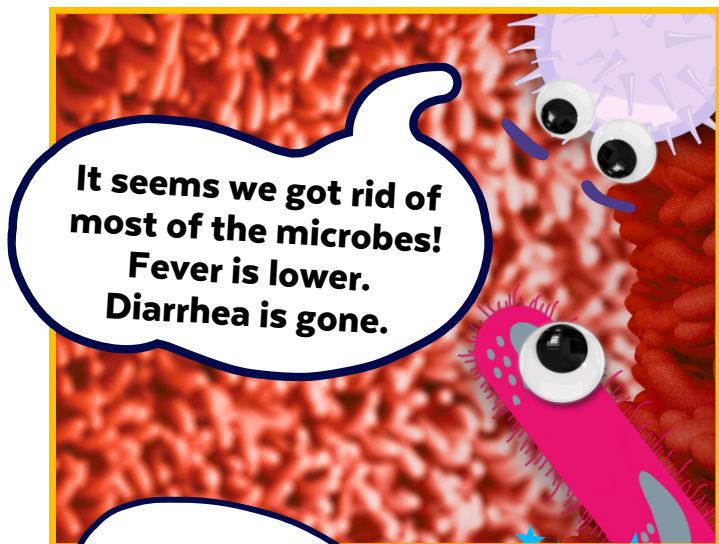
Oh, no! They are ruining everything! This kid will have diarrhea soon. Eek!



ANTIBODIES
produced! Attack!
Attack! ATTACK!

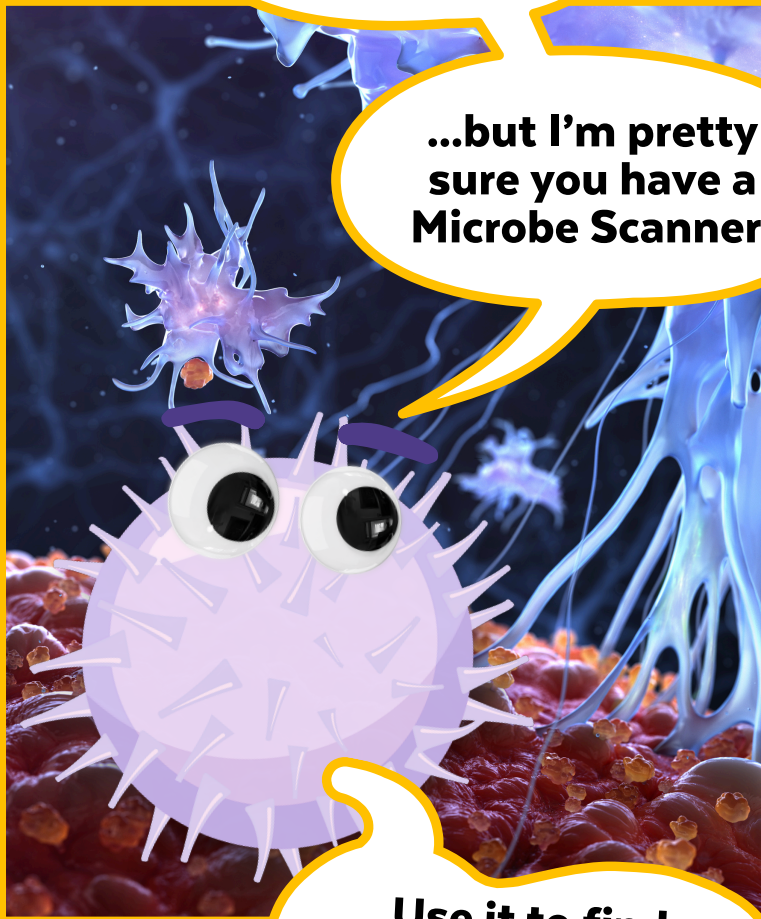


GULP



I bet you'd like
to see all of these
microbes up close!
Well, you may not have
a MICROSCOPE...

...but I'm pretty
sure you have a
Microbe Scanner!



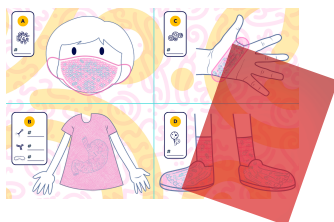
Use it to find
microbes and
ANTIBODIES in a
child's body!

HANDS-ON ACTIVITY

CHECKLIST



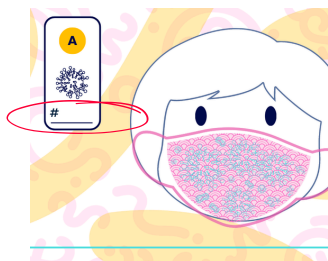
Grab a red lens and a Medical Film from your teacher.



Look at the child's body through your colored lens to find the hidden microbes and antibodies!



Write down the number of microbes and antibodies you can find in each part of the body.



Flip your Medical Film and fill out the report on the other side of the paper.



**We're arriving
at our next stop:
a take home
activity!**

SCREECH



TAKE HOME:

**Your Microbe
Finger Puppets!**

