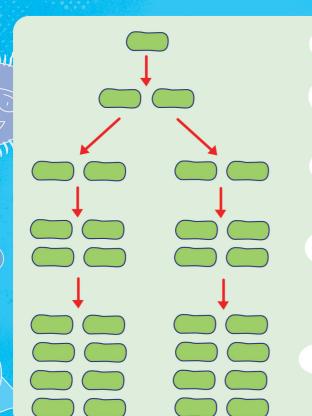
## EAT. SPLIT. REPEAT

A single germ can't do much harm on its own... but bacteria make copies of themselves very quickly. They simply split in two! Some bacteria can do this every 20 minutes.

Each time it happens, the army of bacteria doubles.



1 cell
2 cells
4 cells
8 cells

At this rate of growth and with unlimited food, the bacteria would weigh more than the Earth after 48 hours!



## You will need

- A bag of sliced bread
- 3 sealable plastic bags
- A permanent marker pen
- Soap and a nail brush
- Clean tongs (optional)

## What you do:

- Label the three bags 'clean hands', 'dirty hands' and 'control'.
- Transfer a slice of bread into the 'control' bag without touching it with your hands and seal.
- **8.** Take another slice out and rub your hands all over it, then put it in the 'dirty hands' bag and seal.
- 4. Wash your hands really well using warm water, soap and a nail brush.
- 5. Take out a third slice of bread and rub your hands on it, then seal it in the 'clean hands' bag.
- 6. Place the three bags somewhere warm and check them every day.



16 cells

opening them,
as some of this
bacteria could be nasty.



After 5-7 days, colonies of bacteria and mould will be visible on the bread. This should happen sooner in the 'dirty hands' bag, as you transferred more bacterial cells and mould spores onto the bread. The control bag allows you to compare your experiment with bread that hasn't been







