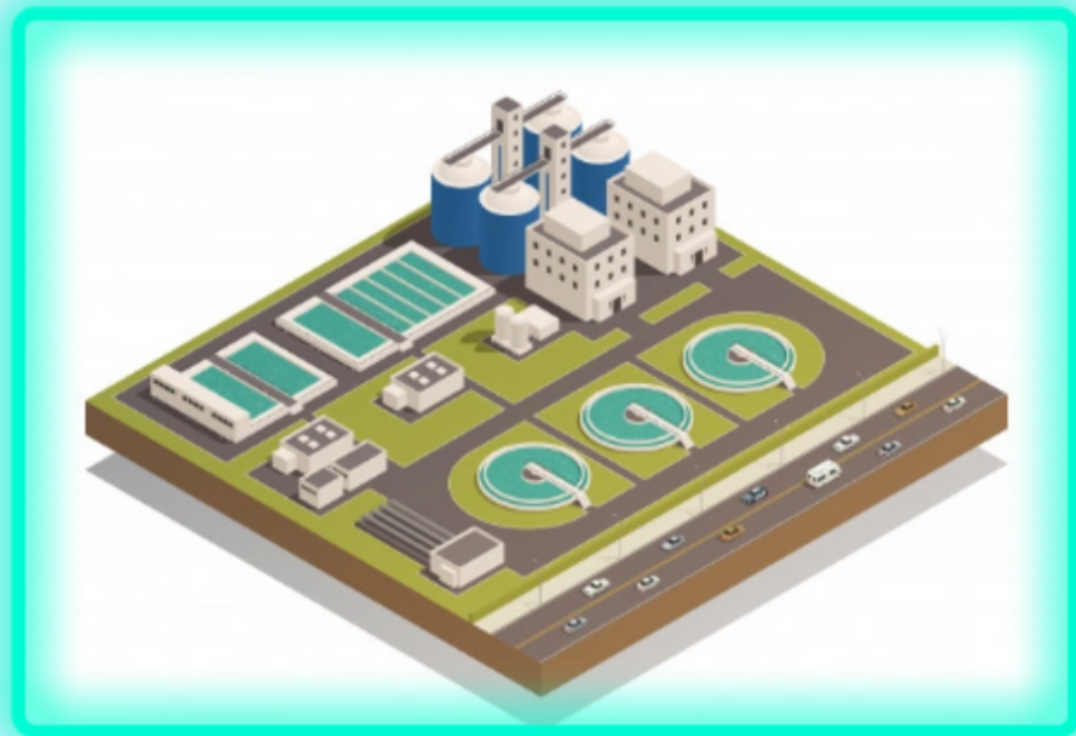
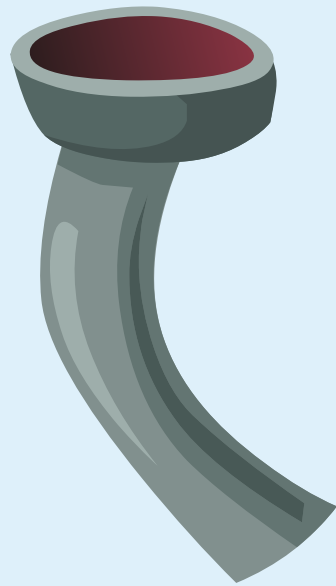
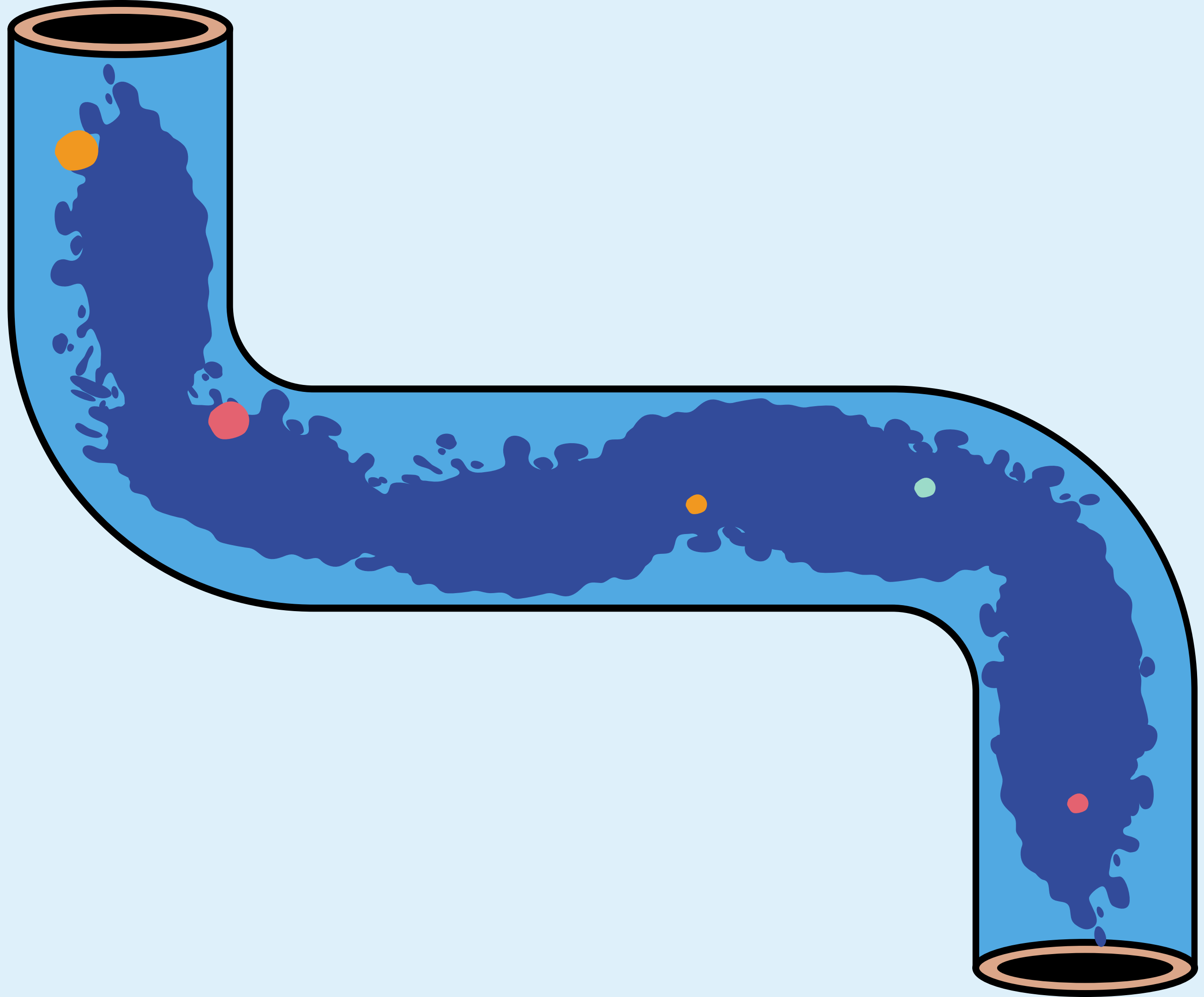


What happens to soap after you wash your hands?

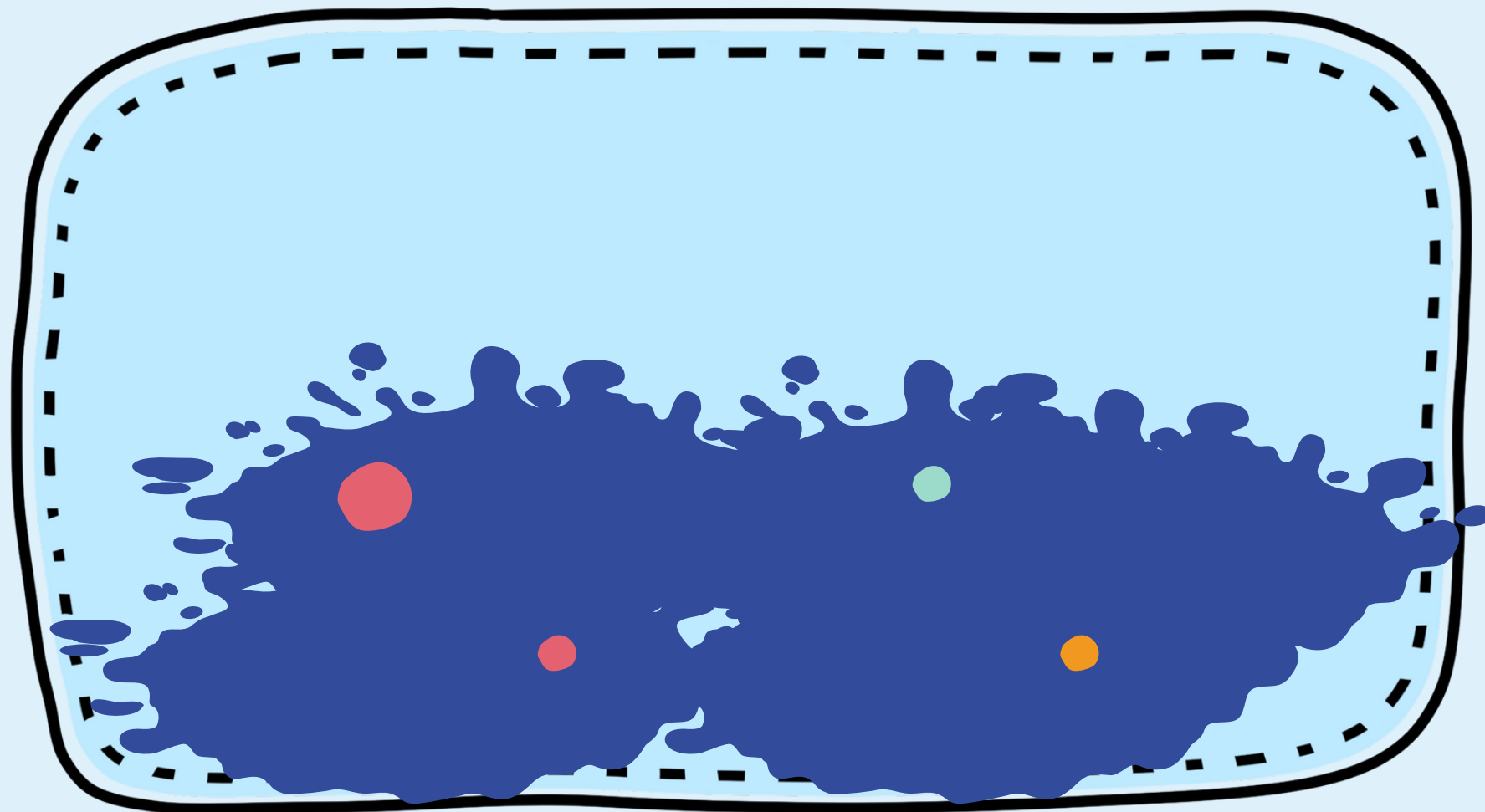
Agnieszka Cuprys, NMBU



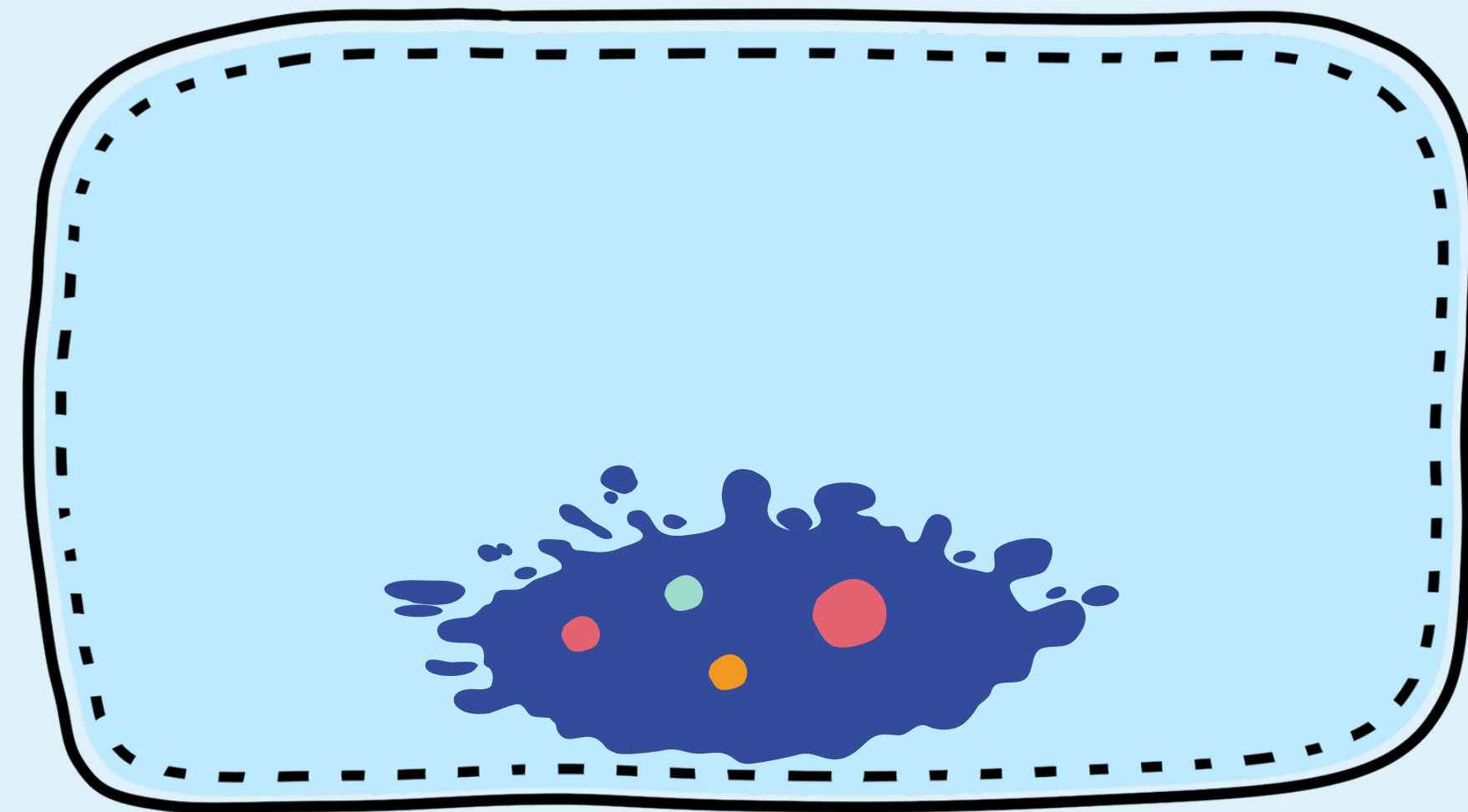




Before treatment



After treatment

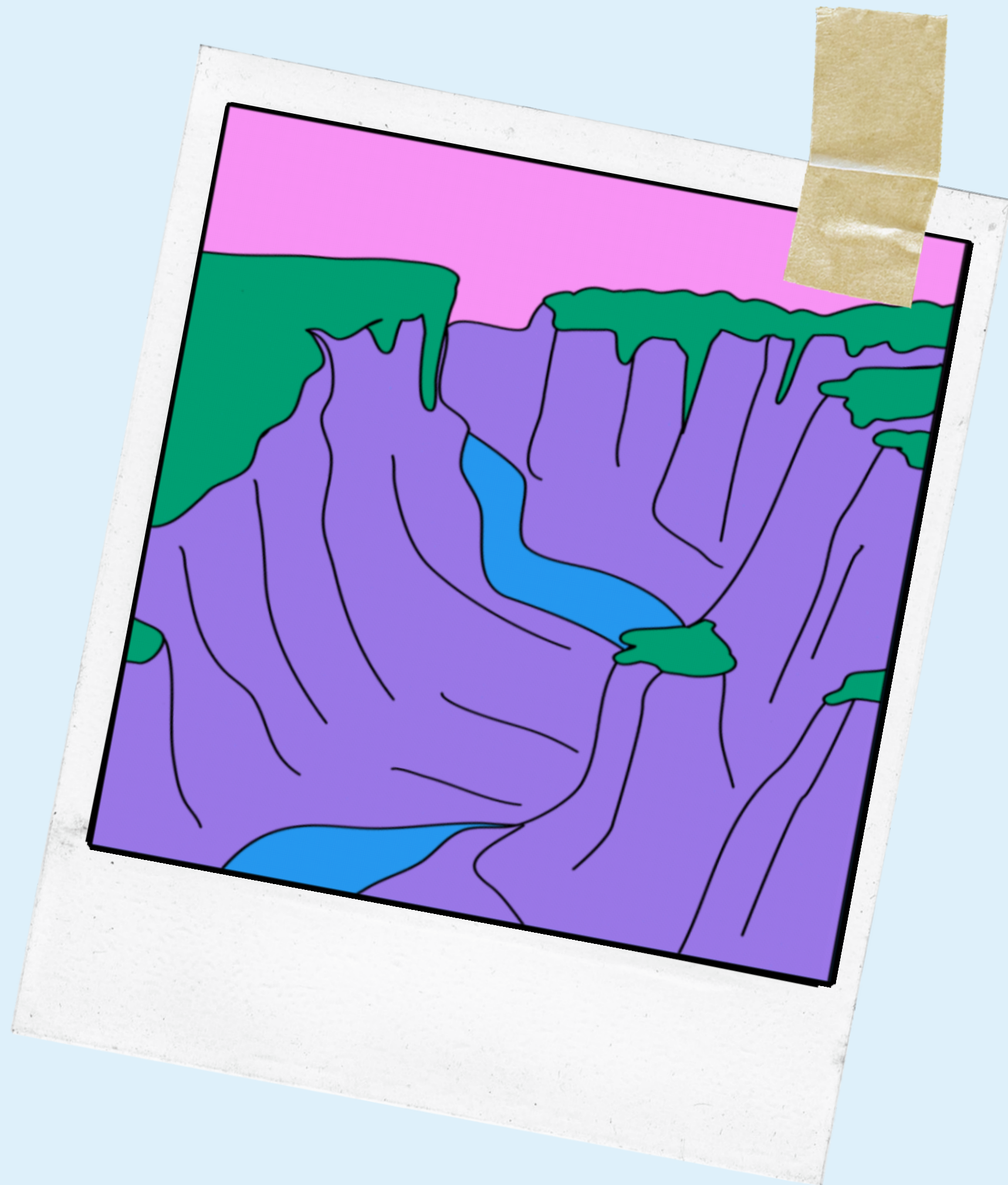
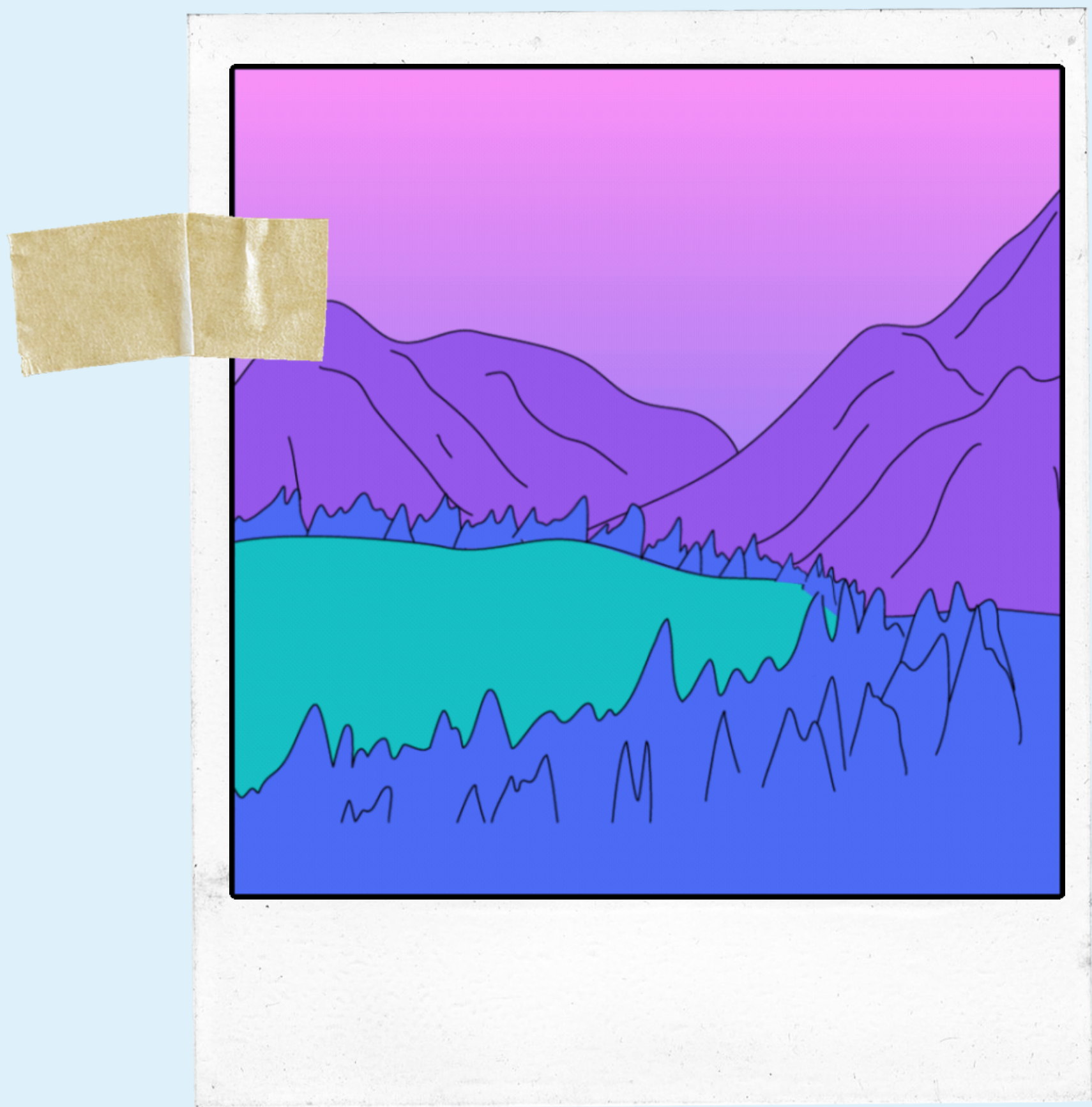


Main pollution

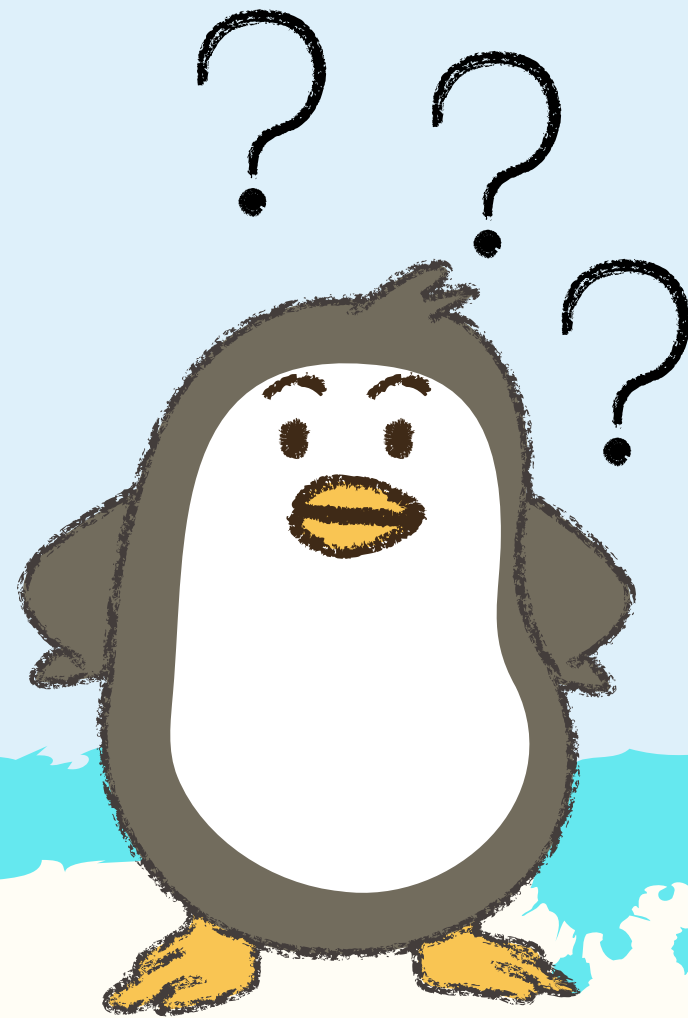


Micorpollutants



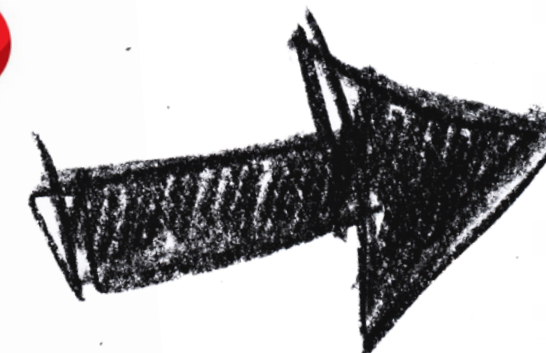
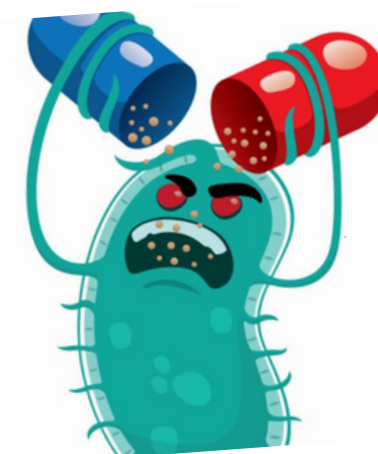


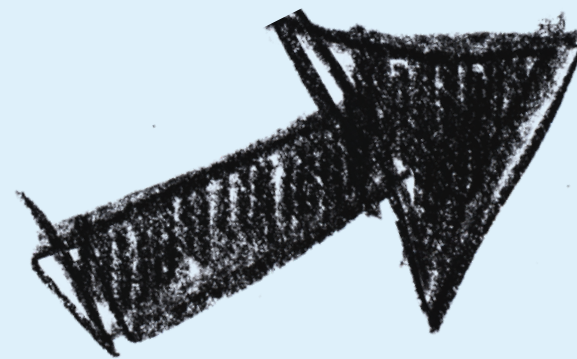
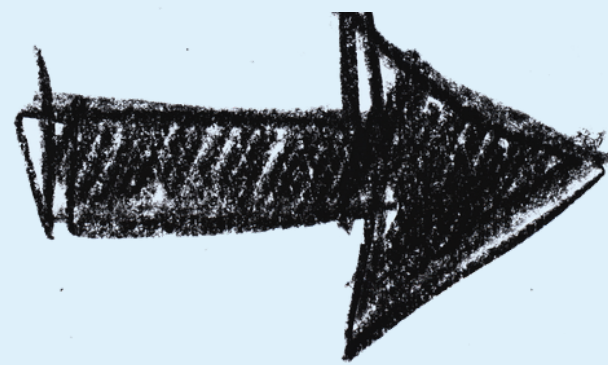
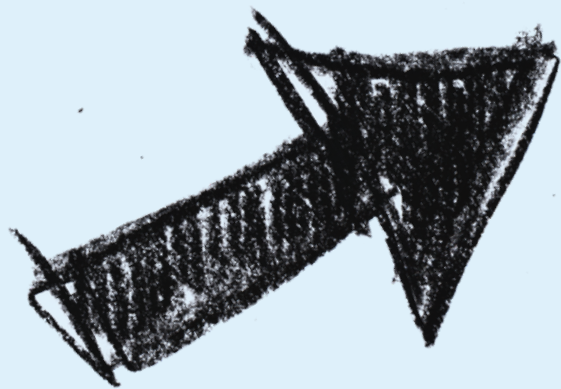
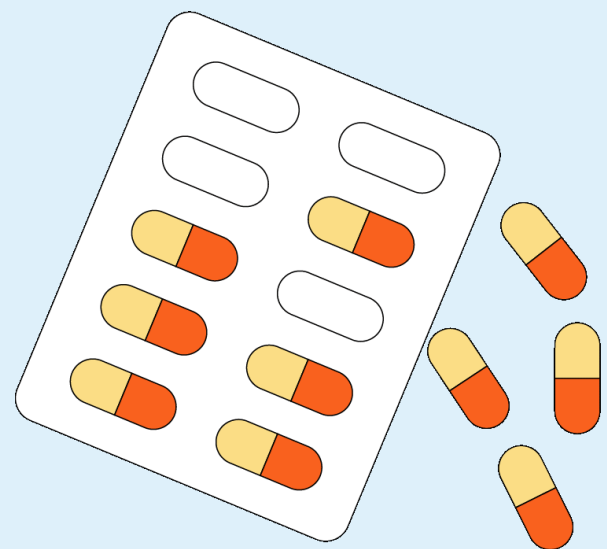
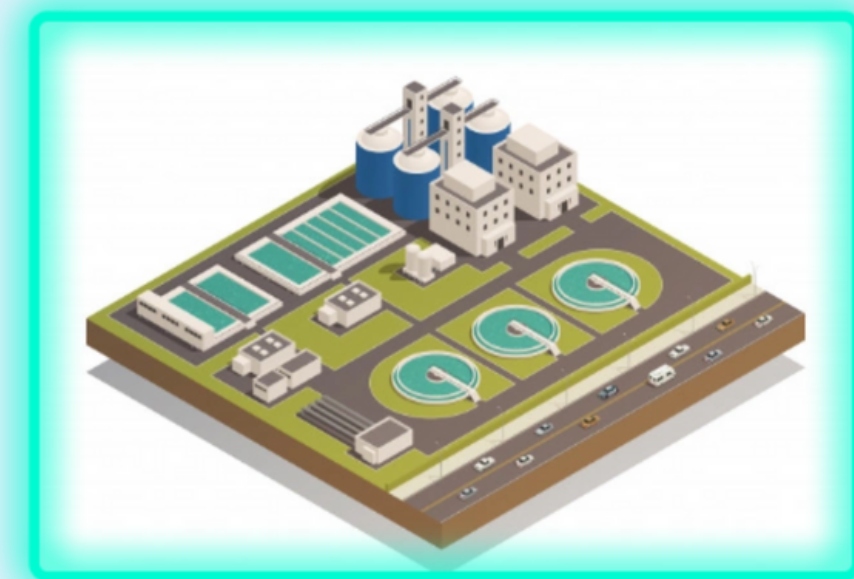
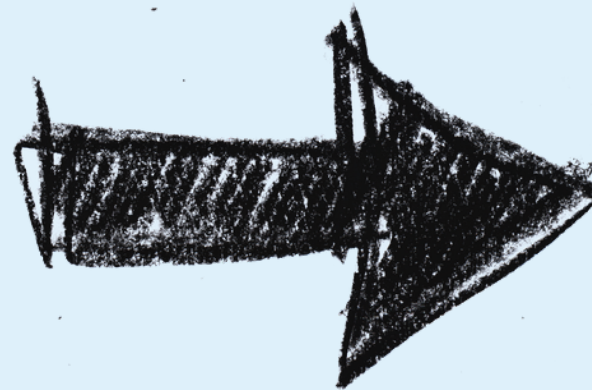
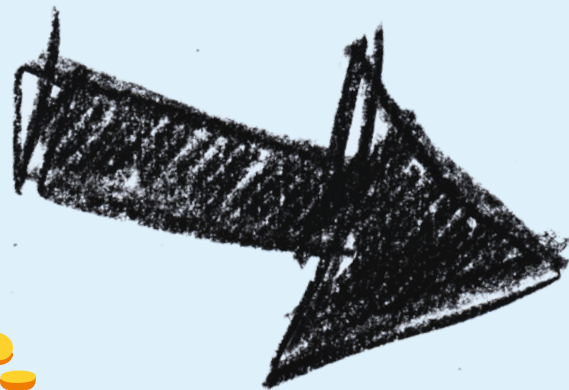
What is their concentration?





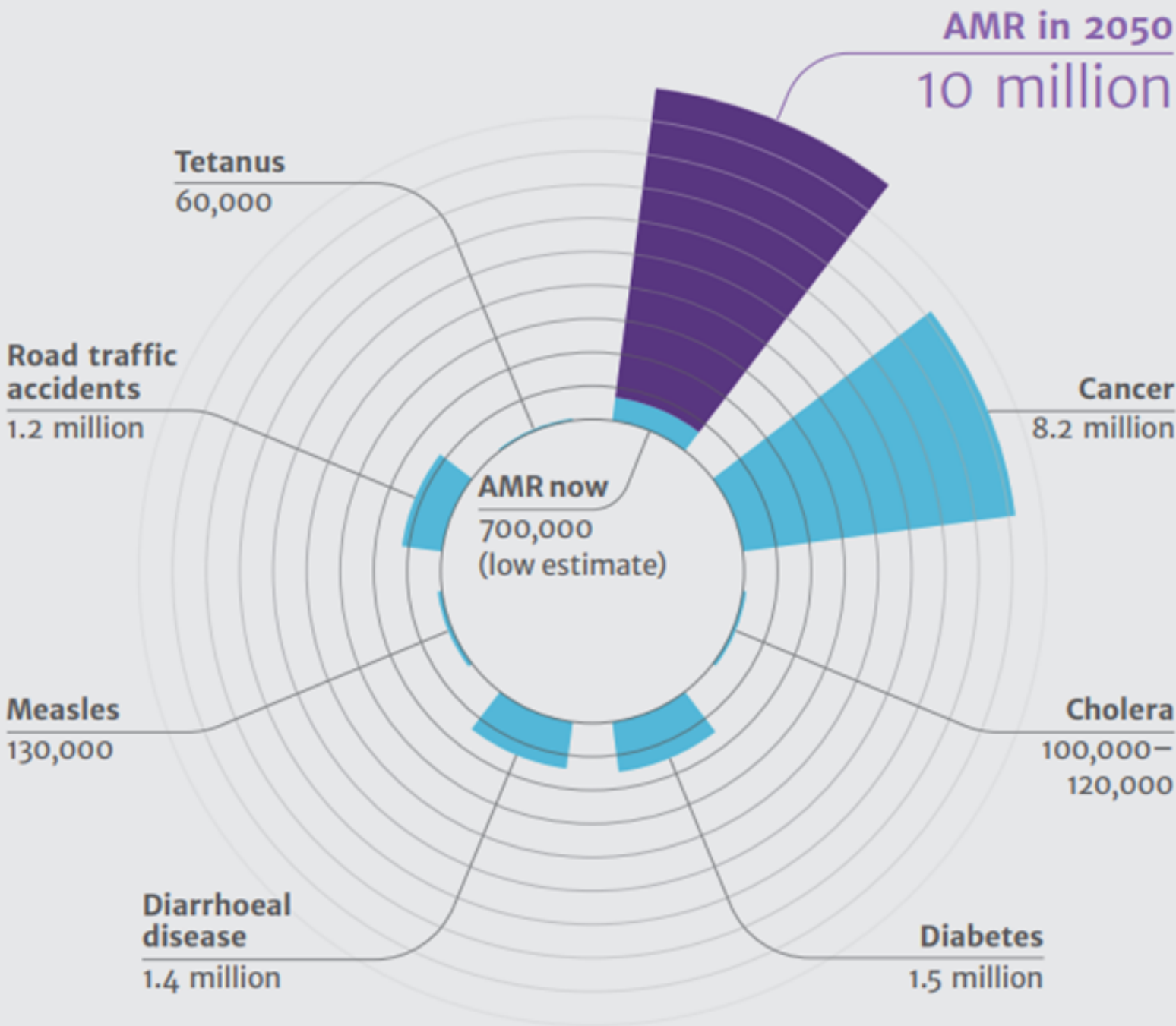






EXPIRED

Deaths attributable to AMR every year compared to other major causes of death



67%

PROJECTED INCREASE IN LIVESTOCK ANTIBIOTICS WORLDWIDE BY 2030

Projected increase in antibiotics administered to livestock animals in feed: 67% worldwide by 2030 (from 2015 levels) (Van Boeckel et al., 2015). Much of this increase will come in emerging economies.



43-67%

INCREASE IN PHARMACEUTICAL USAGE, GERMANY

In Germany, pharmaceutical usage is projected to increase by 43-67% by the year 2045 (from a baseline of 2015). An ageing population is thought to be the main driver (Civity, 2017).

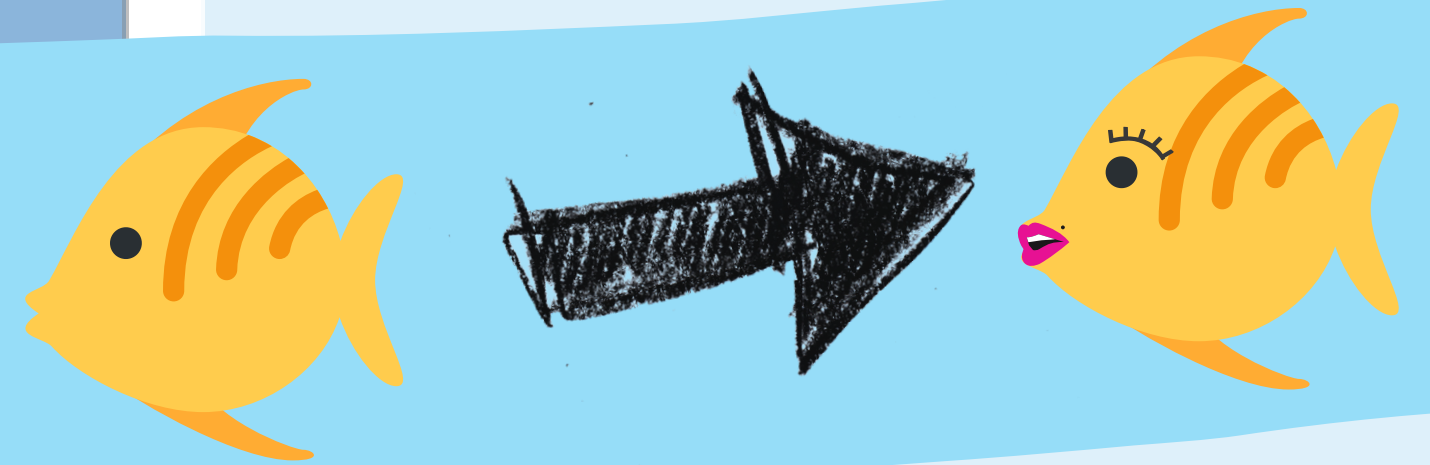
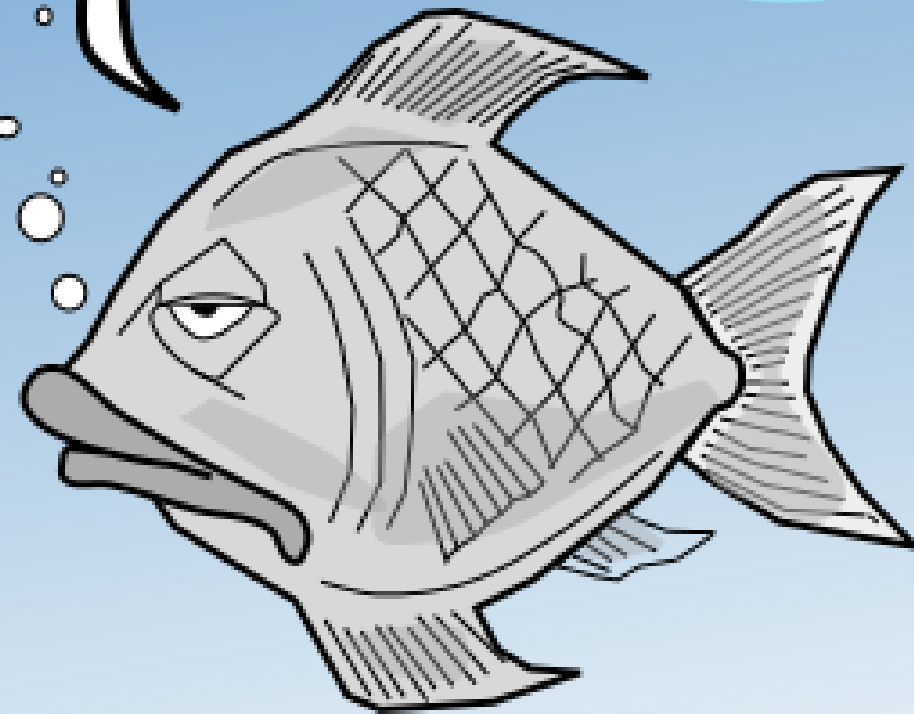
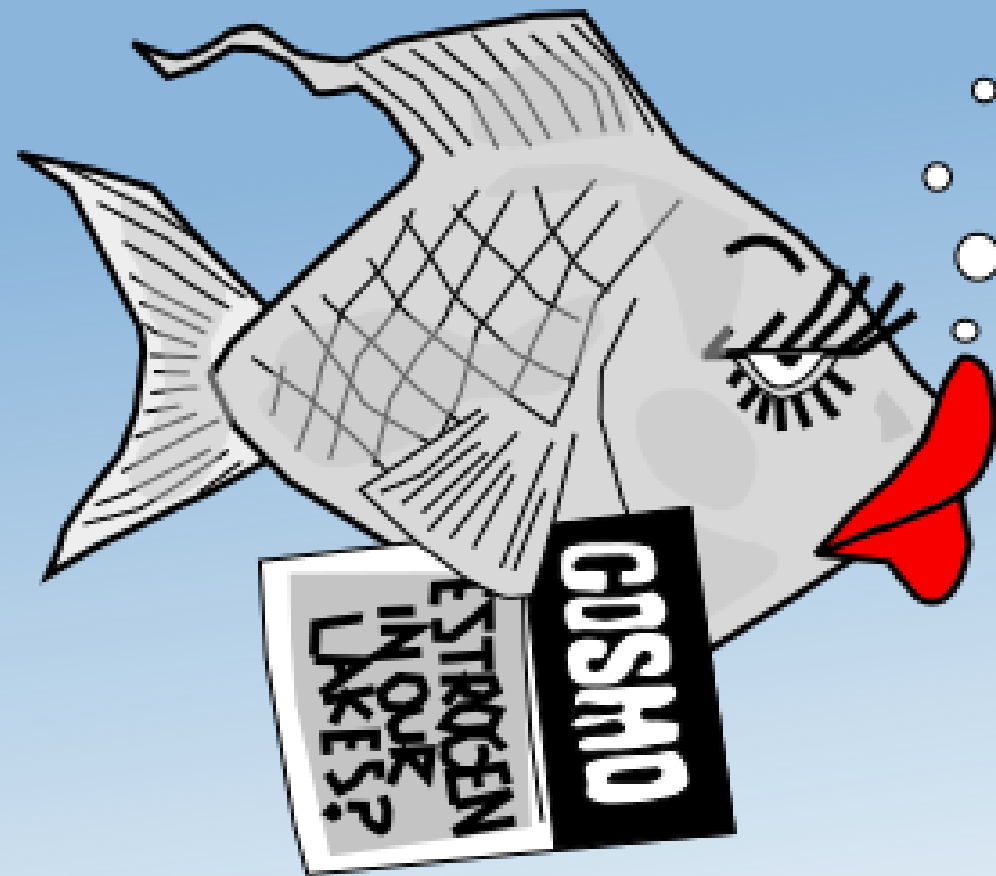
30-90%

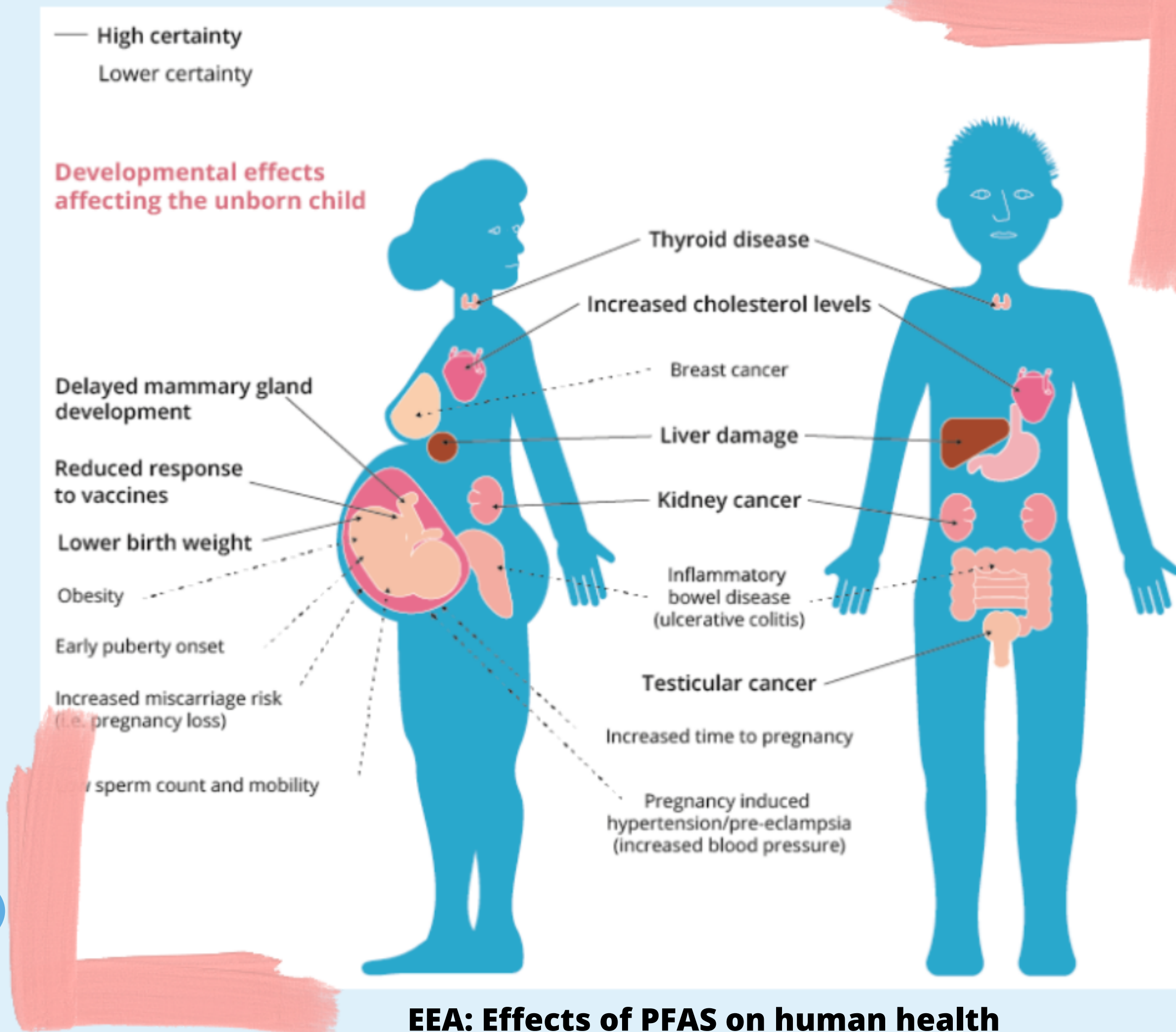
ORAL DOSES EXCRETED AS ACTIVE SUBSTANCES

Pharmaceuticals administered to humans or animals are excreted via urine and faeces, with 30 to 90% of oral doses generally excreted as active substances (BIO Intelligence Service, 2013).

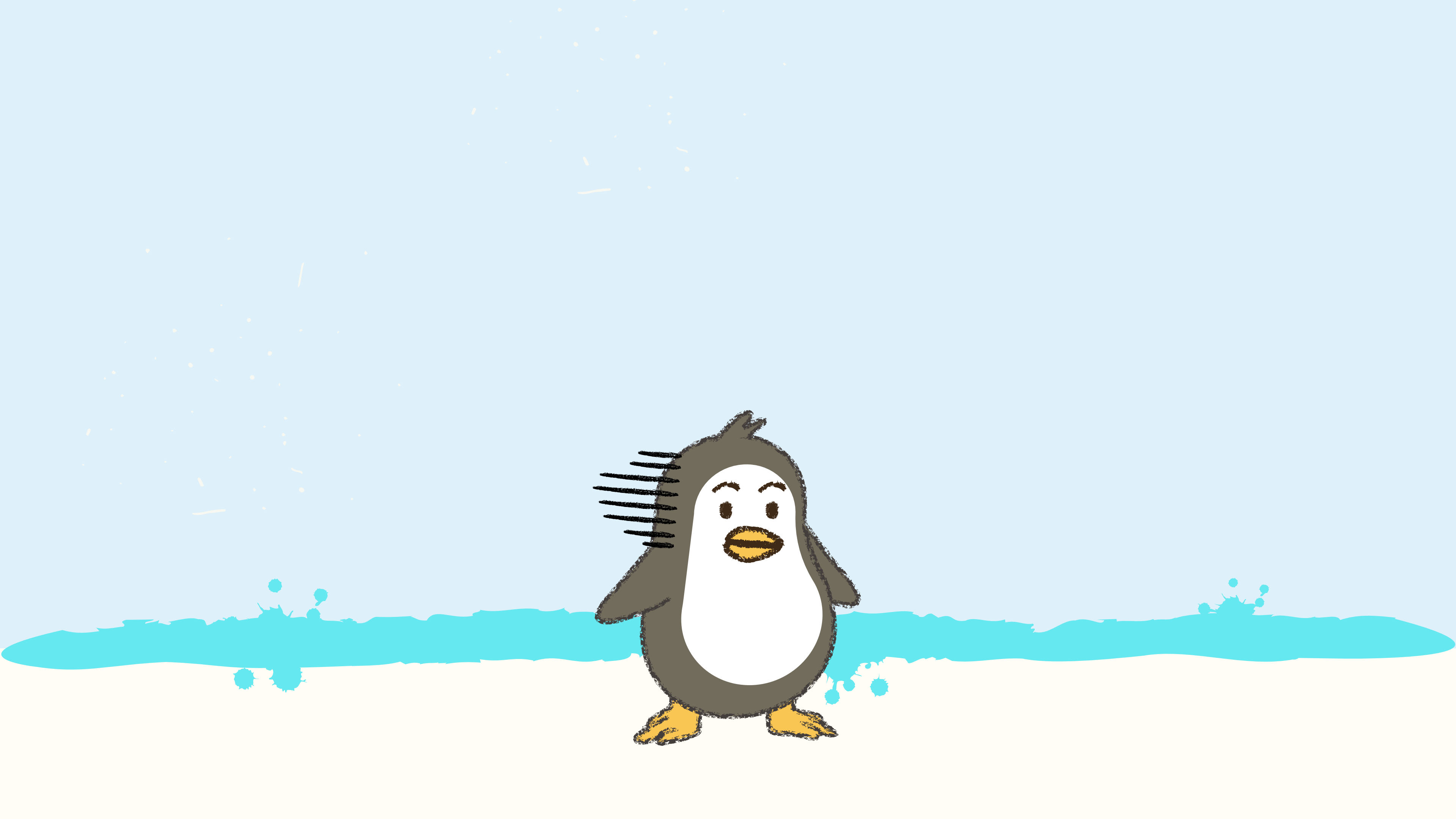


FACE IT
JACKI...
YOU'VE
CHANGED...

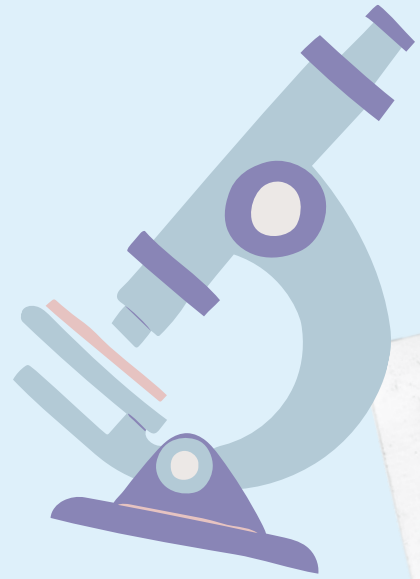
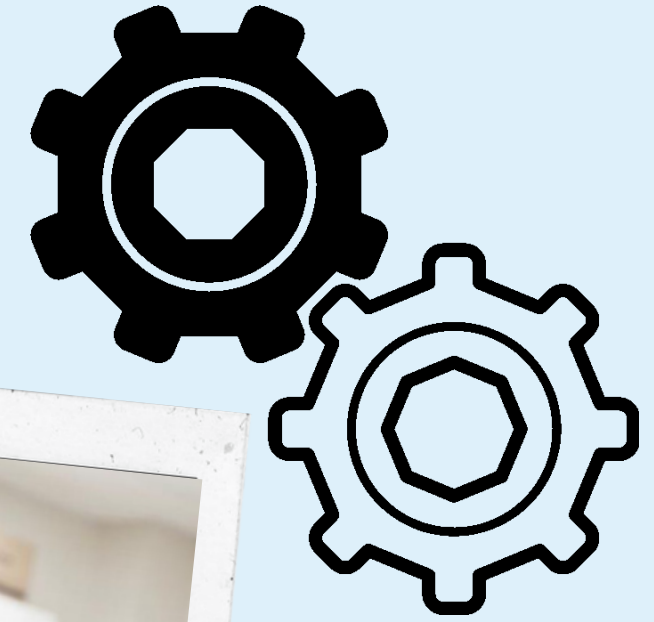




EEA: Effects of PFAS on human health



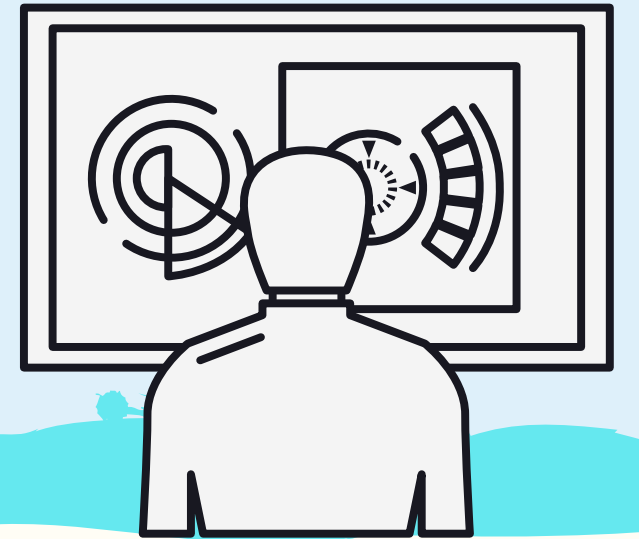
What do I do?



BIO



TECHNOLOGY



Environmental biotechnology

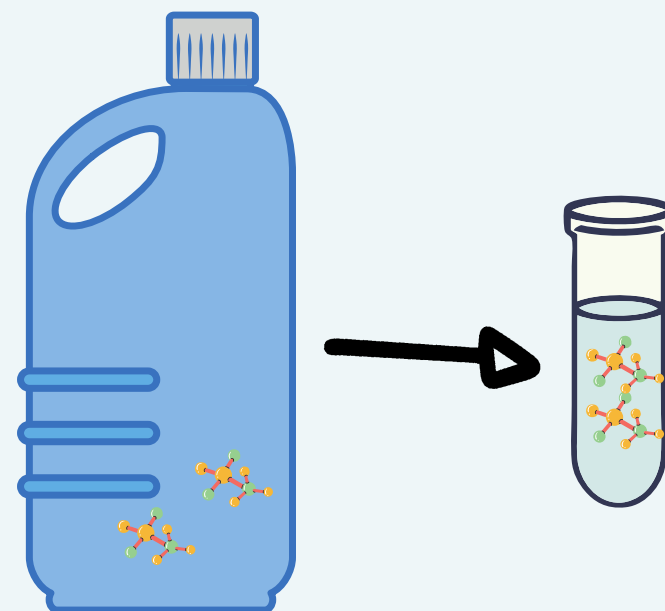


Monitoring

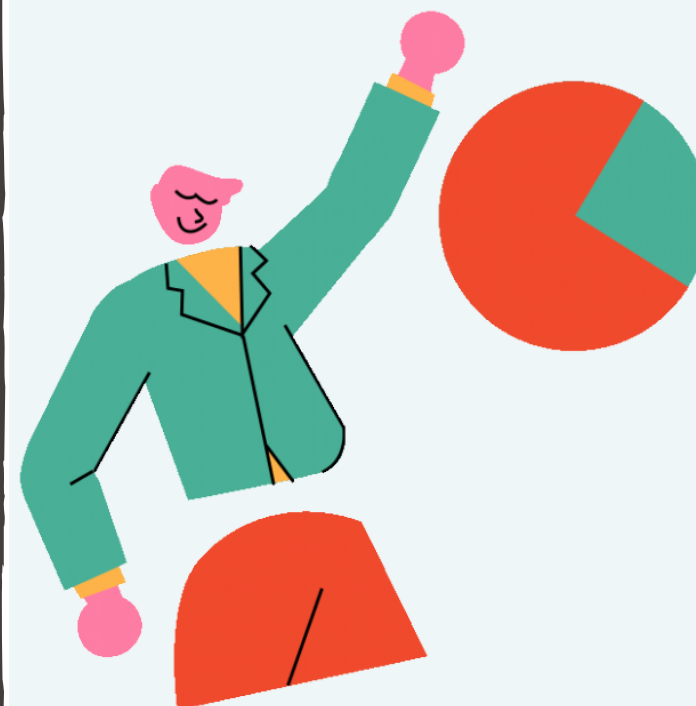
WANTED

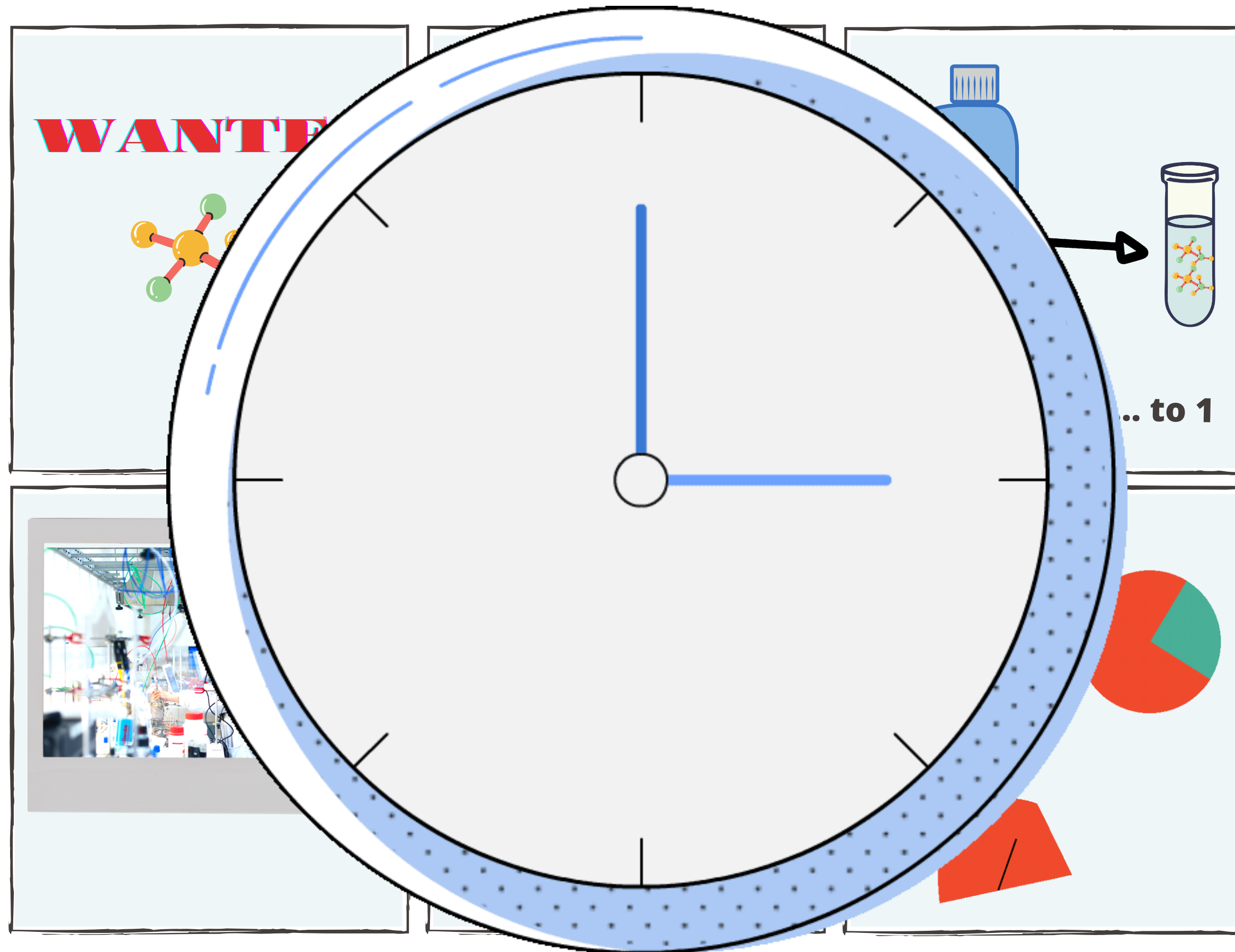


1 liter



concentration to 1 mL

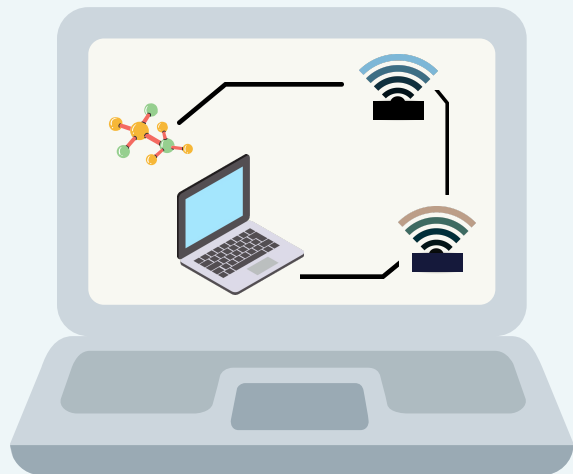
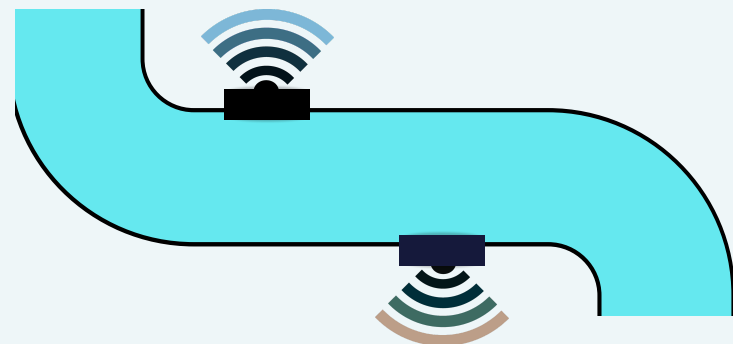
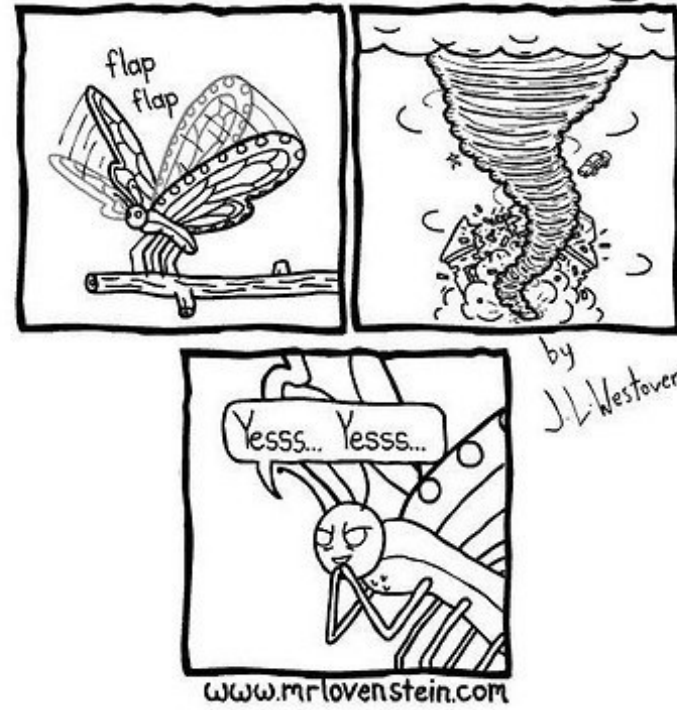




WANTED

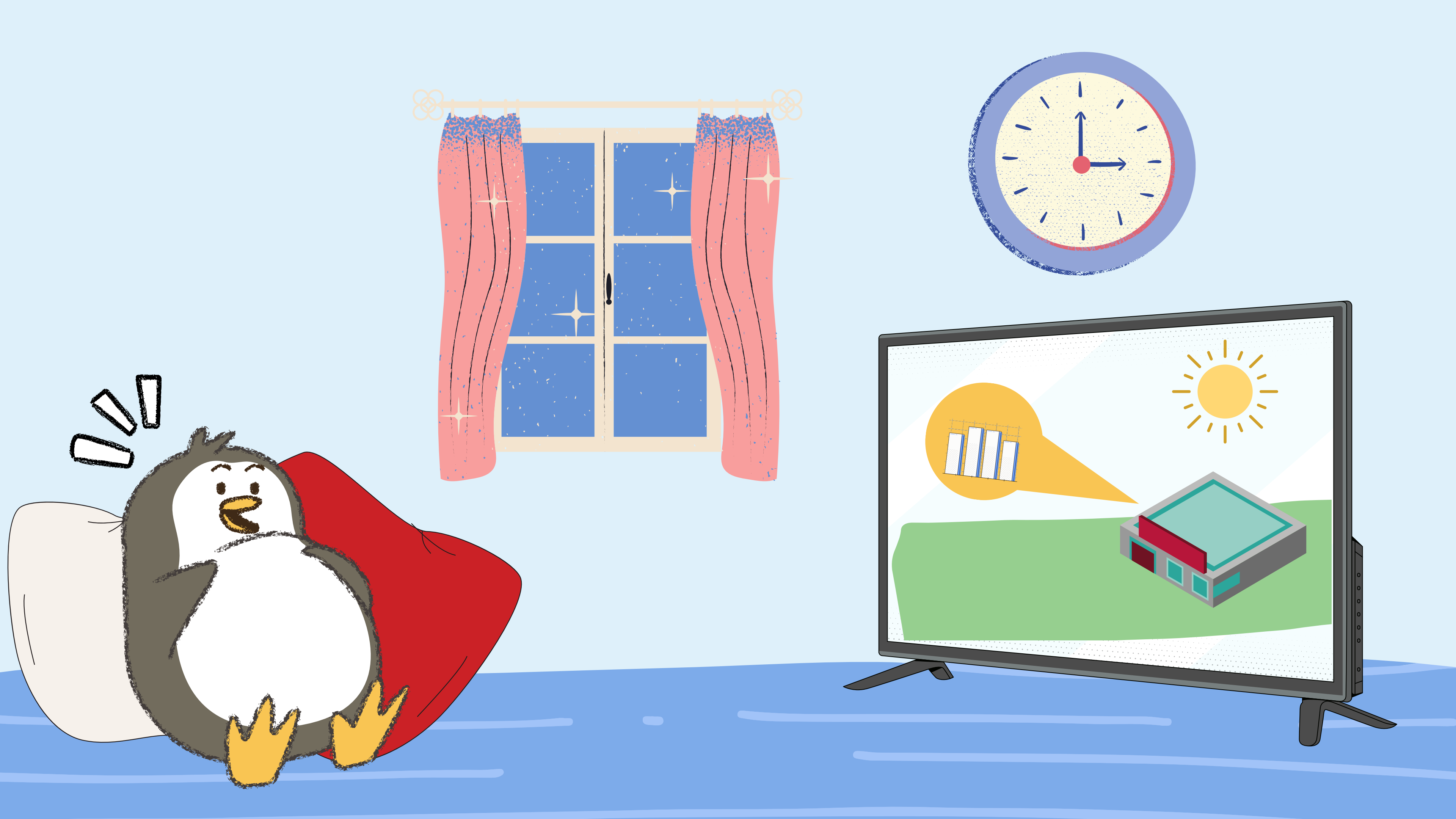


The Butterfly Effect.



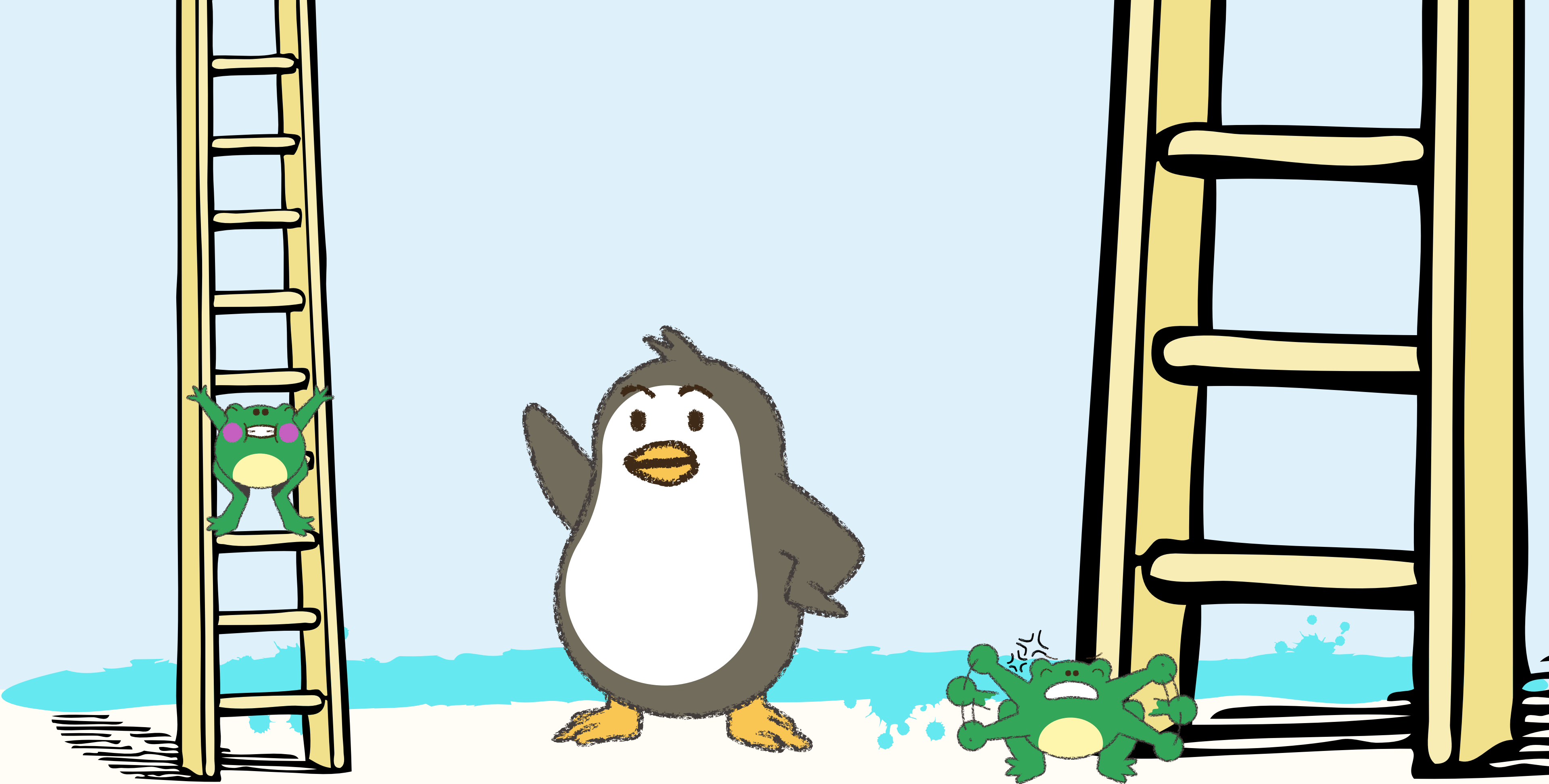
SOFTWARE SENSOR





What can YOU do?





Dispose of medications properly



Reduce chemical use in your home



Be careful how many things you use



Be careful how many things are inside

the simpler, the better



**SODIUM PALMATESODIUM
PALM KERNELATEAQUA /
WATER / EAUPERFUME /
FRAGRANCEGLYCERINSODIUM
CHLORIDEPALM KERNEL
ACIDLIMONENETETRASODIUM
ETIDRONATETETRASODIUM
EDTAMANGIFERA INDICA
(MANGO) FRUIT EXTRACTCI
77491 / CI 77492 (IRON
OXIDES)2366v0**



**SODIUM TALLOWATE,
SODIUM COCOATE, AQUA,
GLYCERIN,
PARFUM, OCTYLDODECANOL,
LANOLIN ALCOHOL (EUCERIT®),
PANTHENOL,
GLYCERYL GLUCOSIDE, SODIUM
THIOSULFATE, SODIUM CHLORIDE,
TETRASODIUM ETIDRONATE,
DISTEARDIMONIUM HECTORITE,
METHYL BENZOATE, BENZYL
ALCOHOL, LINALOOL, LIMONENE,
GERANIOL, BUTYLPHENYL
METHYLPROPIONAL, CI 77891**



Be careful what you buy

Be skeptical of products that are labeled with words like “natural,” “botanical,” or “pure.”



Cosmethics

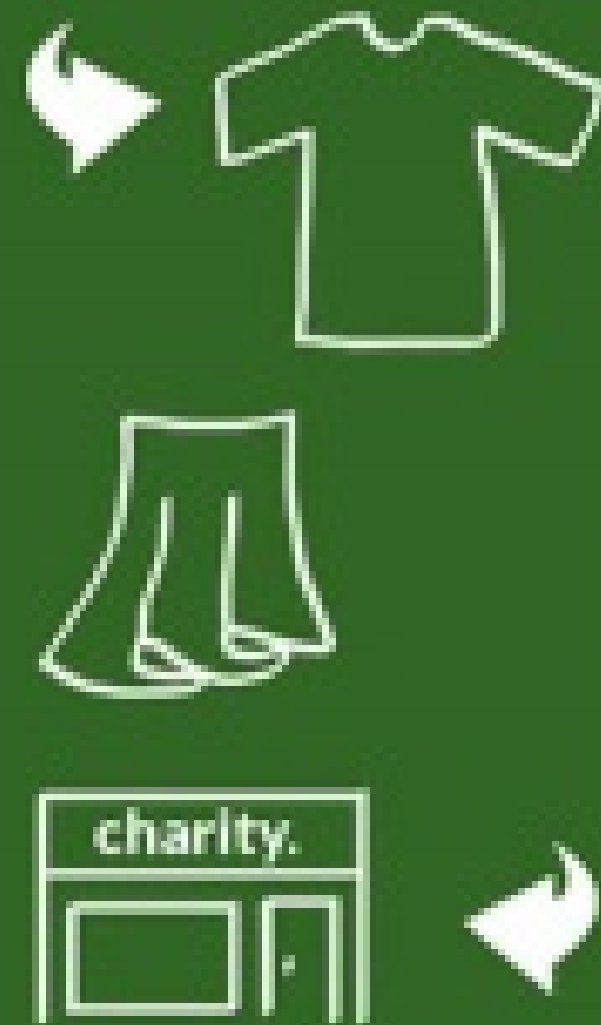


3 x R

Reduce



Reuse



Recycle



THANK
YOU



MADE BY:
AGNIESZKA CUPRYS



E-mail:
agnieszka.cuprys@nmbu.no



Questions?

