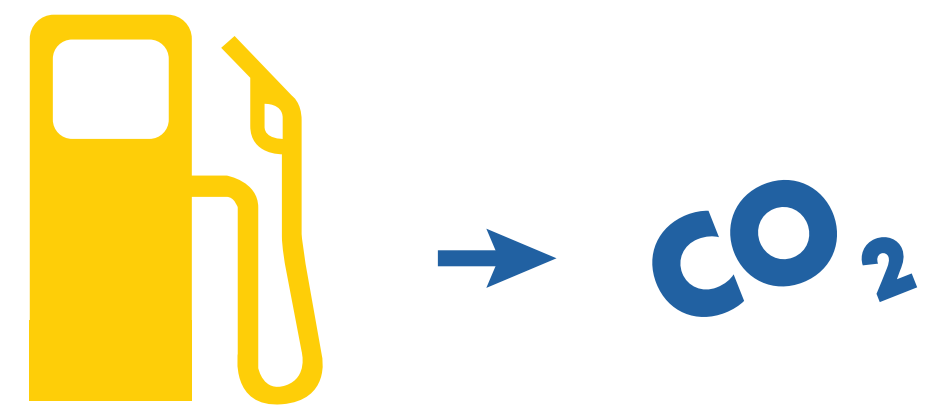


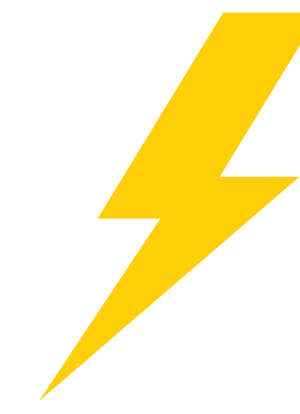
# biodegradation: the liver of the earth

microbes all around are able to break down everything from plants and animals to toxic pollutants

why do microbes degrade chemicals?



many bacteria and fungi can be used to clean up petroleum spills, breaking it down to  $\text{CO}_2$



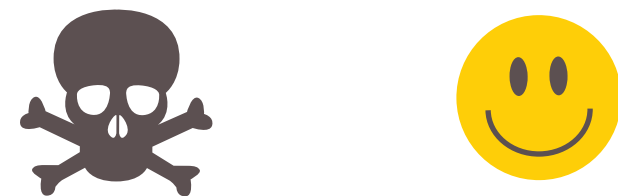
food, fuel, nutrition



while consuming methane, bacteria produce enzymes that just happen to degrade chlorinated solvents



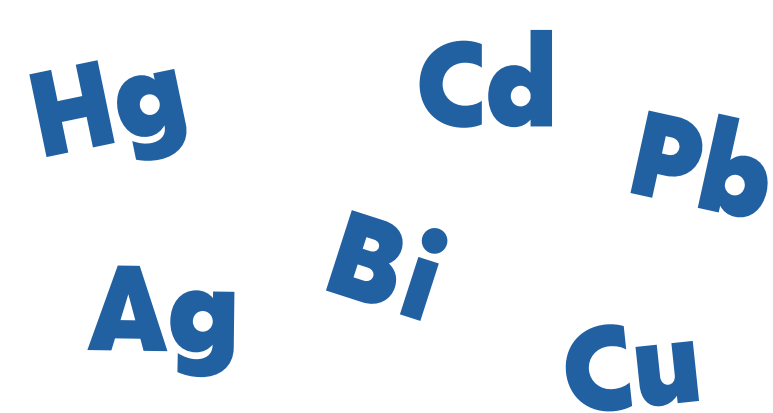
happens by accident ("promiscuous enzymes")



several types of bacteria and archaea have the ability to convert mercury to a less toxic, less mobile form



detoxify their habitat



environmental conditions created by microbes actually convert many other heavy metals into less toxic/mobile forms



indirectly through changes to the environment

## so what's with all the pollution?

a microbe's ability to degrade toxic substances is controlled by:

