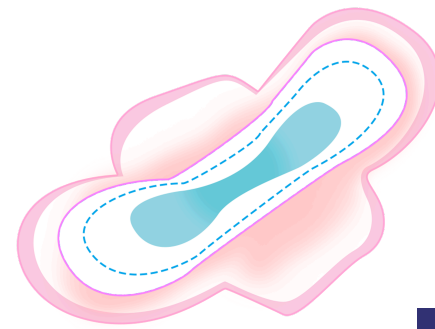
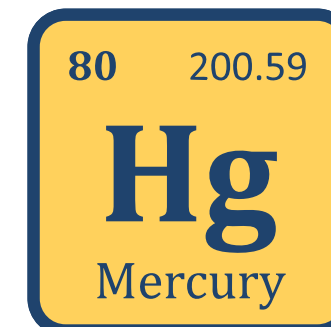
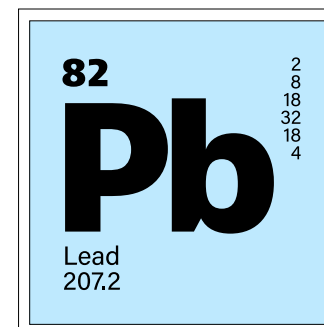




INVISIBLE POLLUTANTS, VISIBLE IMPACTS

INVISIBLE POLLUTANTS,
VISIBLE IMPACTS
UNDERSTANDING PLASTICS,
ENDOCRINE DISRUPTING
CHEMICALS (EDCS), LEAD &
MERCURY



UNDERSTANDING PLASTICS, ENDOCRINE DISRUPTING CHEMICALS (EDCS), LEAD & MERCURY



When you hear the word pollution, what comes into your mind?

Smoke?
Garbage?
Dirty rivers?

Today we're going to discover another kind of pollution—one that is invisible but all around us.



plastic bottle cosmetics food packaging battery mobilephone child

WHAT DO YOU THINK POLLUTION LOOKS LIKE?



1. Smoke
2. Garbage
3. Dirty river
4. Underwater Pollution

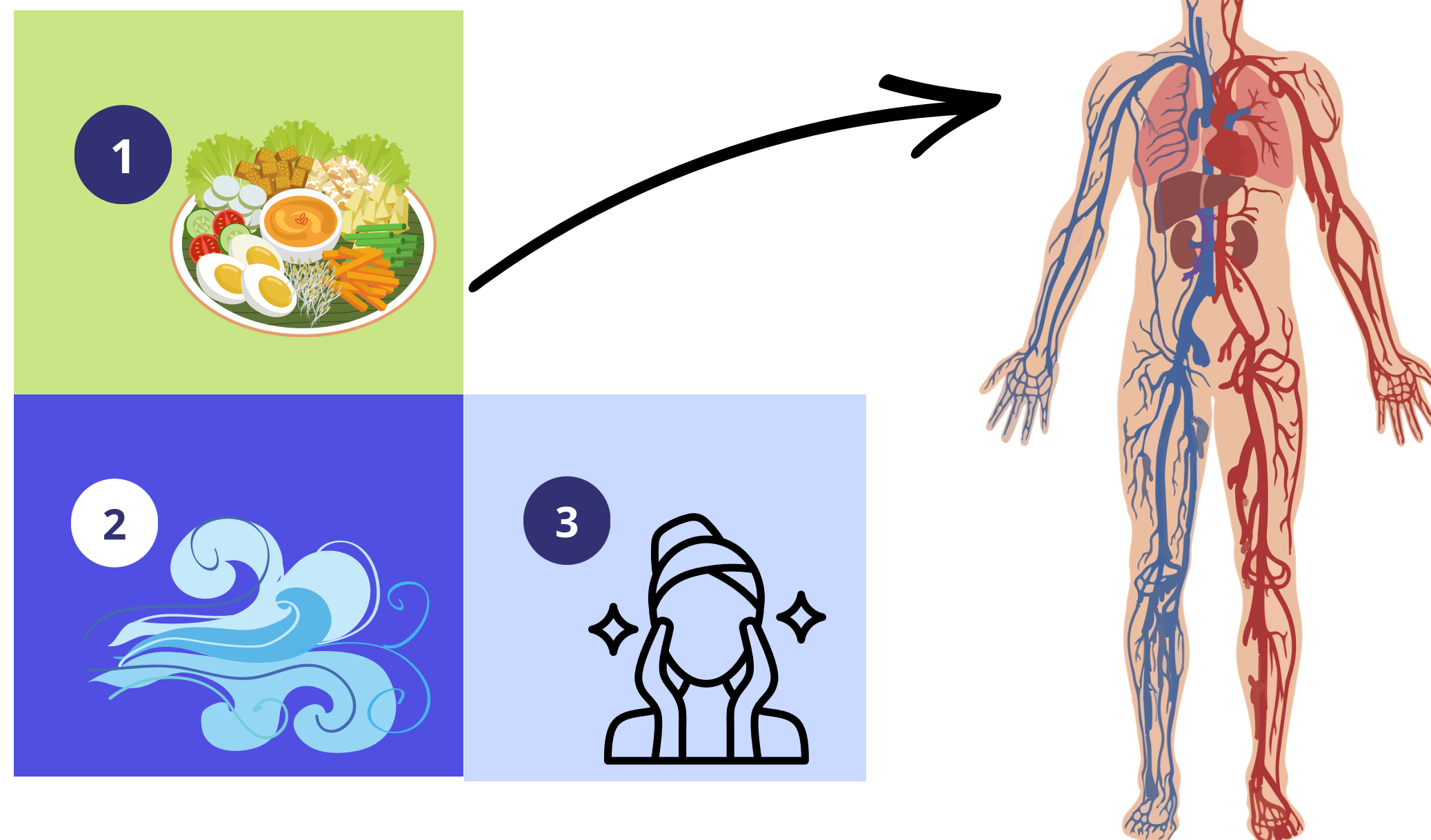
HOW MANY OF THESE DID YOU USE TODAY?



- TOOTHPASTE
- SOAP
- PERFUME
- WATER BOTTLE
- PLASTIC LUNCH BOX
- CHIPS PACKET
- MOBILE PHONE
- COSMETICS
- SANITARY NAPKINS

EVERY ONE OF THESE CONTAINS CHEMICALS !

HOW CHEMICALS ENTER OUR BODY



THREE PATHWAYS

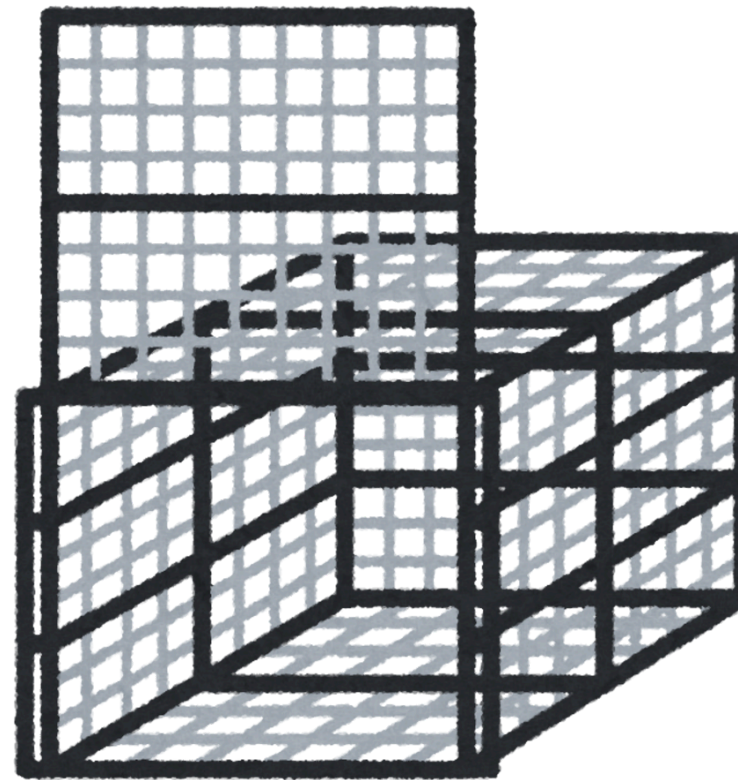
- EAT
- BREATHE
- TOUCH

HAZARD VS EXPOSURE VS RISK

LEARN BY EXAMPLE



Hazard



Exposure



Risk

A TIGER INSIDE A LOCKED CAGE IS DANGEROUS, BUT YOU'RE SAFE.
ONLY WHEN YOU ARE EXPOSED DOES THERE BECOME A RISK.
THE SAME IS TRUE FOR CHEMICALS.

HAZARD VS RISK: THE TIGER EXAMPLE



TIGER IN A CAGE

THE TIGER IS STILL A HAZARD, BUT BECAUSE IT IS SAFELY ENCLOSED, YOUR EXPOSURE IS VERY LOW, SO THE RISK IS LOW.

TIGER WALKING FREELY

THE TIGER IS THE SAME HAZARD, BUT NOW YOU ARE DIRECTLY EXPOSED, MAKING THE RISK MUCH HIGHER.

HOW IS THIS LIKE TOXIC CHEMICALS?

TOXIC CHEMICALS SUCH AS LEAD, MERCURY, BPA, AND PFAS ARE ALSO HAZARDS. THEY BECOME A RISK ONLY WHEN WE ARE EXPOSED TO THEM—FOR EXAMPLE BY BREATHING CONTAMINATED AIR, DRINKING POLLUTED WATER, EATING CONTAMINATED FOOD, OR USING PRODUCTS THAT CONTAIN THESE CHEMICALS.

KEY MESSAGE:

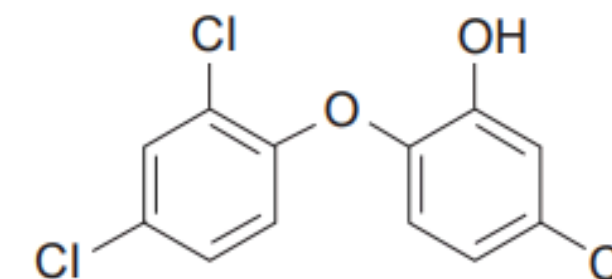
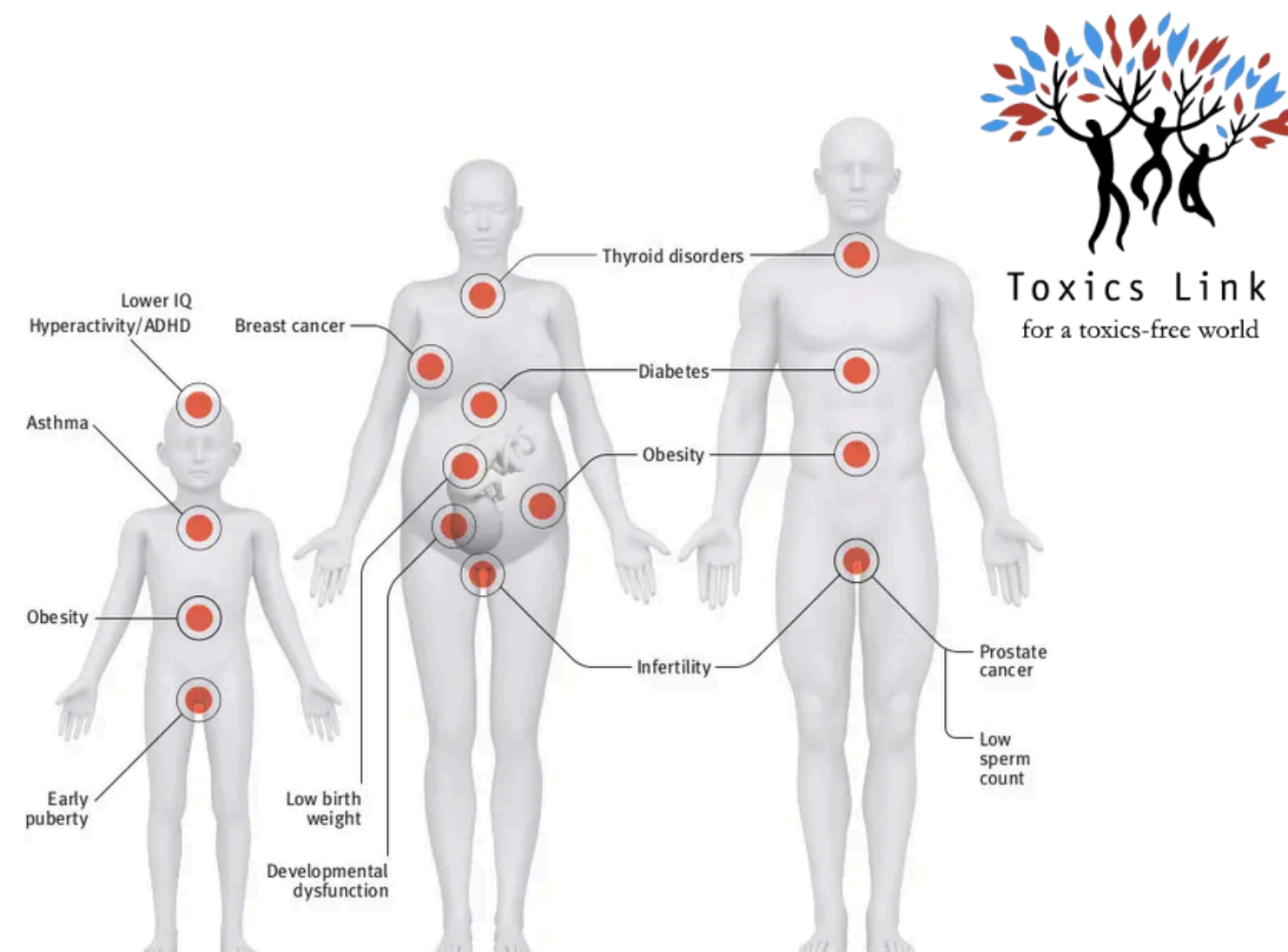
A CHEMICAL MAY BE HAZARDOUS, BUT THE RISK DEPENDS ON HOW MUCH, HOW OFTEN, AND HOW LONG YOU ARE EXPOSED TO IT.

WHAT ARE EDCS?

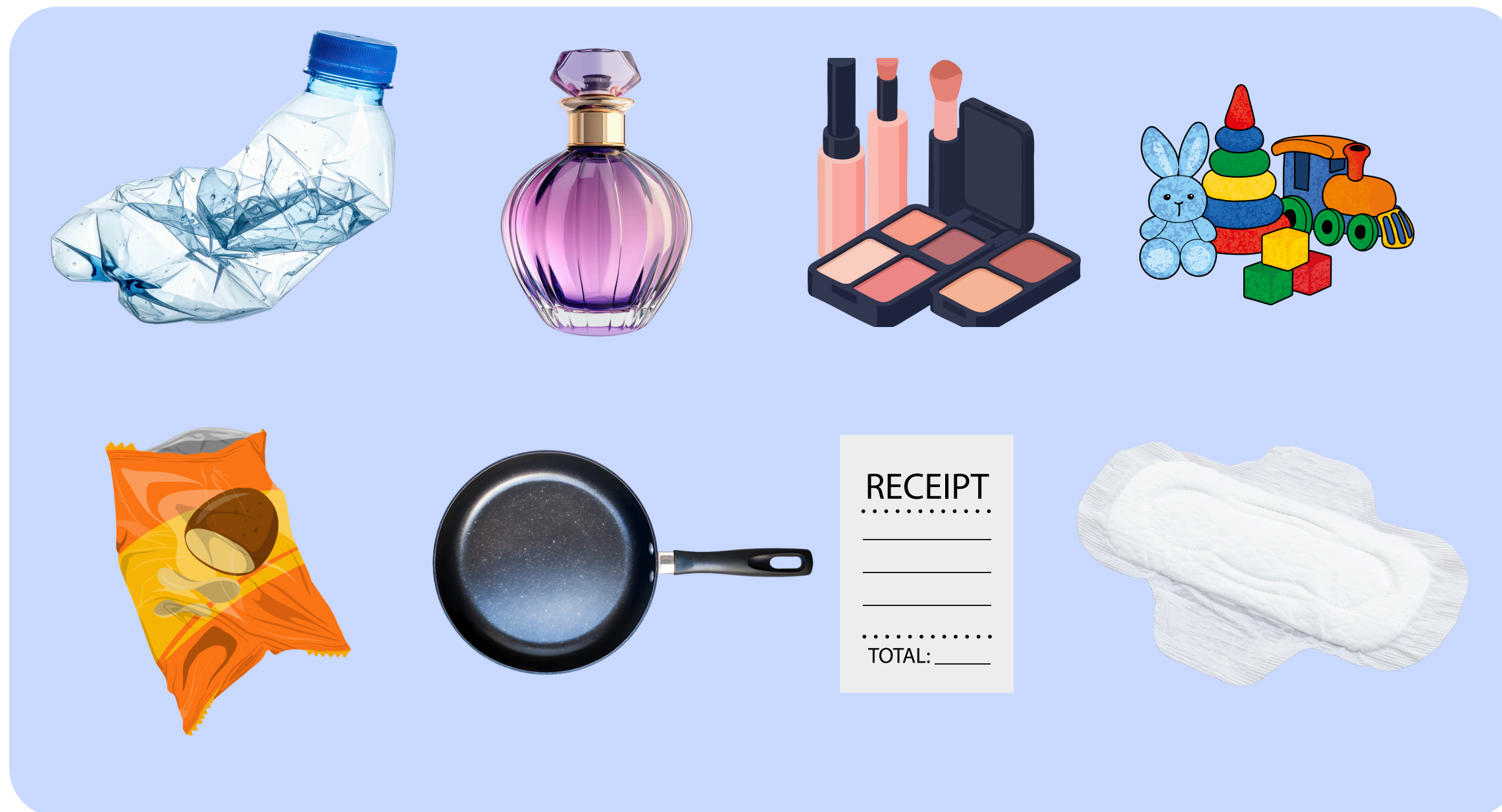
“ENDOCRINE DISRUPTING CHEMICALS”

SOME CHEMICALS CAN :

- ✓ MIMIC HORMONES
- ✓ BLOCK HORMONES
- ✓ ALTER HORMONE SIGNALS



WHERE ARE THEY FOUND?



- PLASTIC BOTTLE
- PERFUME
- COSMETICS
- FOOD WRAPPER
- NON-STICK PAN
- TOYS
- RECEIPT
- SANITARY PADS

"HIDDEN CHEMICALS CAN BE PRESENT IN EVERYDAY PRODUCTS."

WHY TEENAGERS SHOULD CARE ABOUT EDCS

TEENAGE YEARS ARE A TIME OF

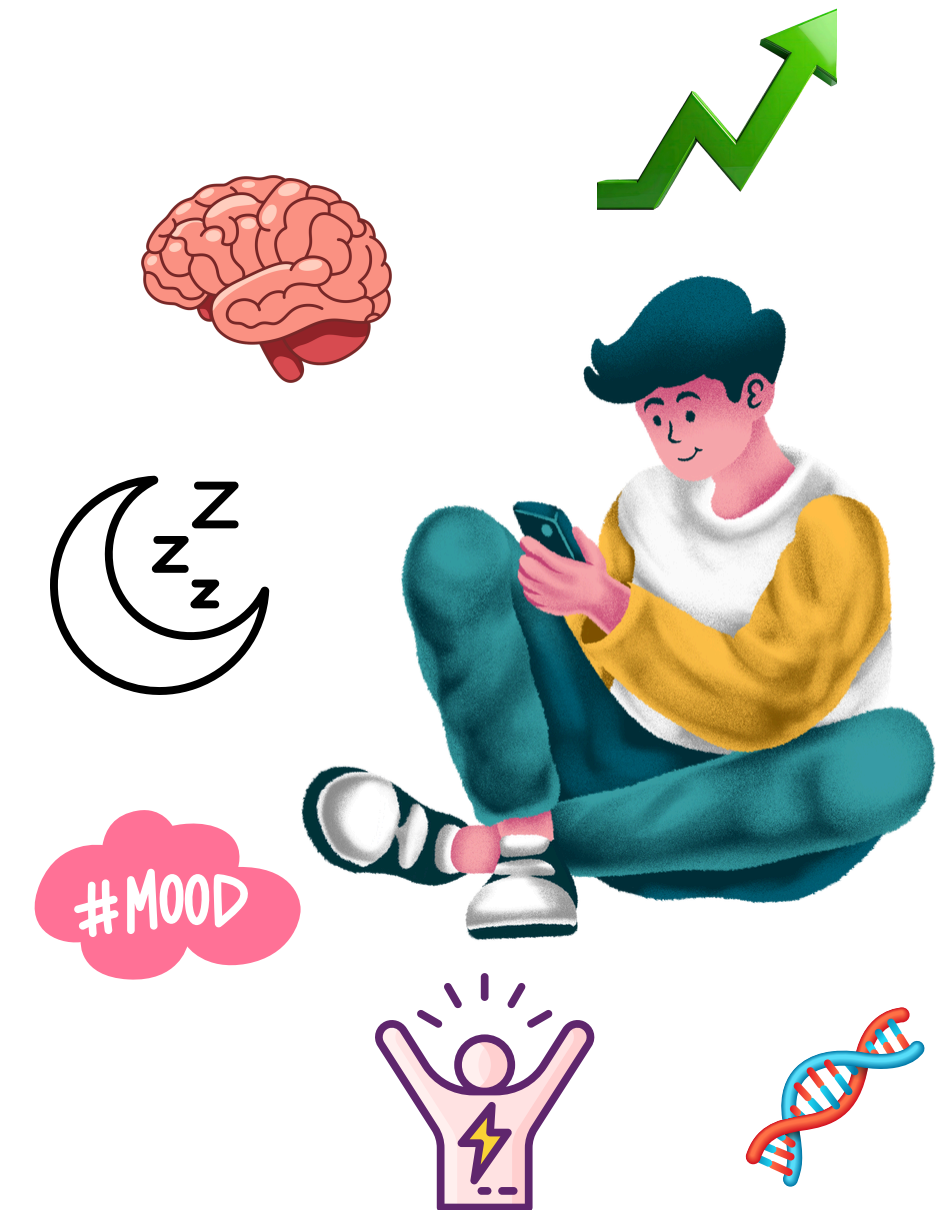
✓ RAPID GROWTH

✓ PUBERTY

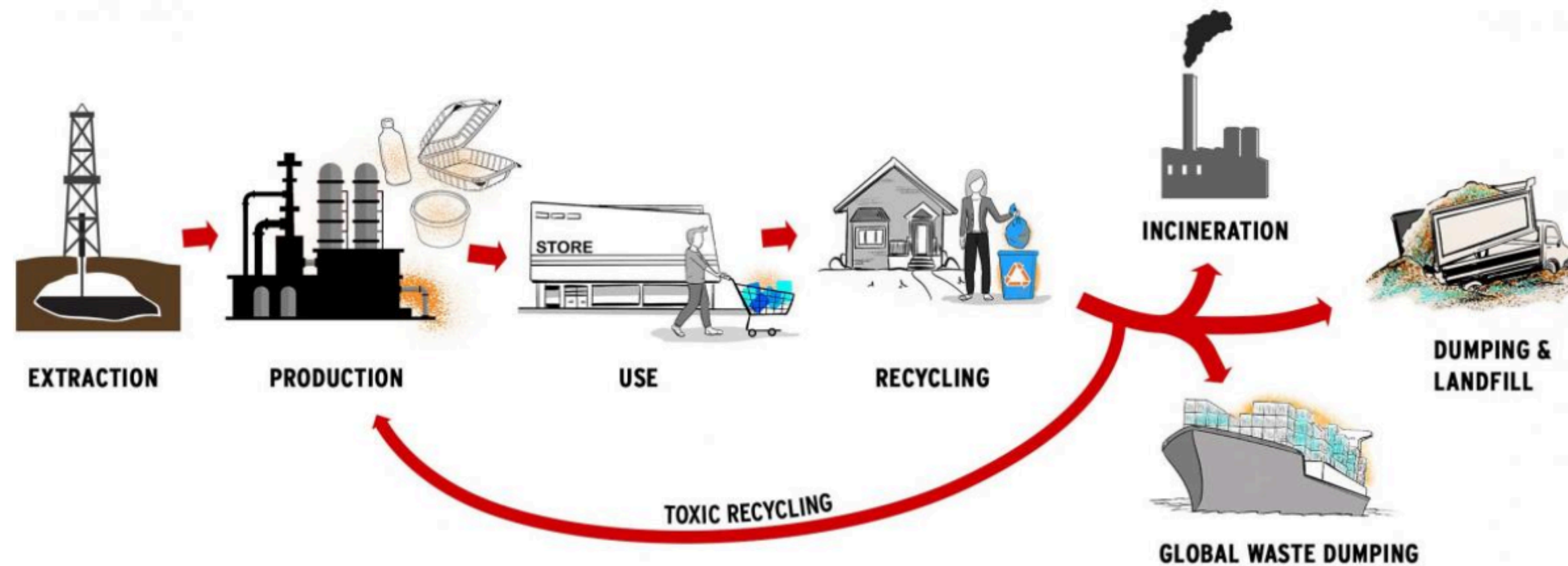
✓ BRAIN DEVELOPMENT

✓ HORMONAL CHANGES

EDCS MAY INTERFERE WITH THESE IMPORTANT PROCESSES.



PLASTICS ARE MORE THAN WASTE



LARGE LIFE CYCLE
↓
OIL
↓
PLASTIC FACTORY
↓
BOTTLE
↓
USE
↓
THROWN AWAY
↓
BREAKS INTO MICROPLASTICS
↓
ENVIRONMENT
↓
FOOD
↓
PEOPLE

CASE STUDY: WHAT HAPPENS WHEN PLASTIC GETS HOT?

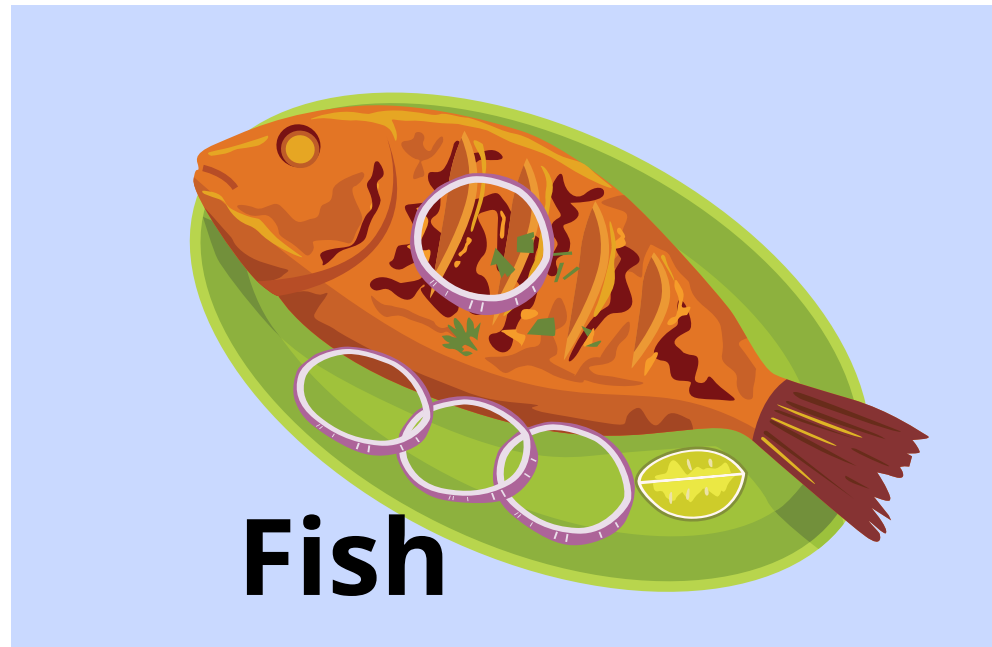
**IMAGINE YOU ARE HEATING FOOD IN A PLASTIC CONTAINER IN MICROWAVE
WHAT MIGHT HAPPEN?**

Heat can increase the migration of chemicals from certain plastic food-contact materials into food, including substances of concern such as bisphenols and phthalates, thereby increasing dietary exposure.



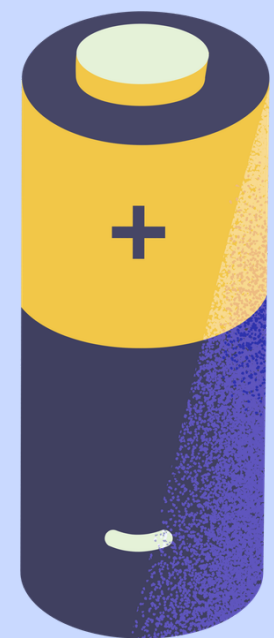
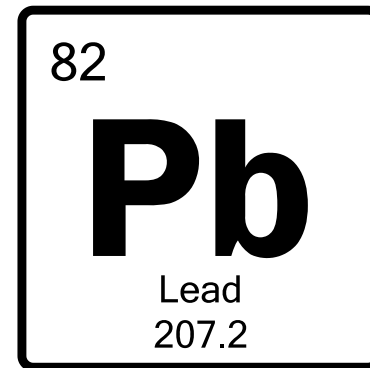
MICROPLASTICS

HOW DO THESE TINY PLASTICS REACH US?



LEAD

Can be found in:



Battery



Old
Paint



E-waste

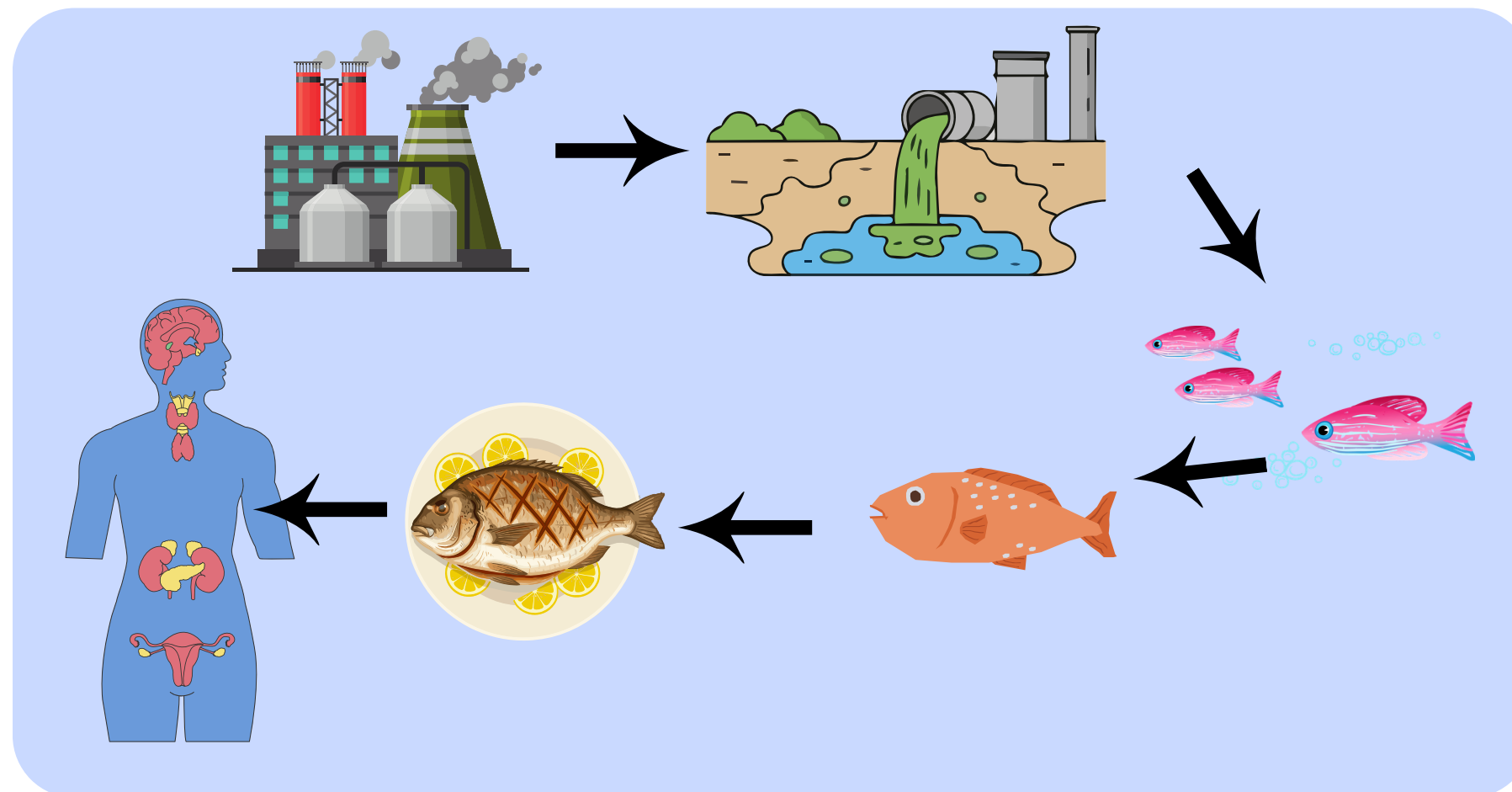
LEAD CAN AFFECT :

- BRAIN
- LEARNING
- MEMORY
- DEVELOPMENT

MERCURY

A neurotoxin, vaporises at room temperature
,present in skin whitening cream

Can be found in:



FACTORY



RIVER



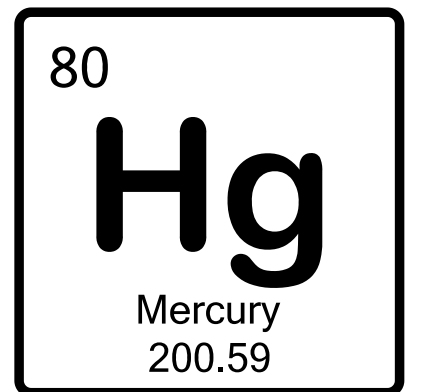
SMALL FISH



LARGE FISH



HUMANS



BIOMAGNIFICATION

CHEMICAL DETECTIVE CHALLENGE



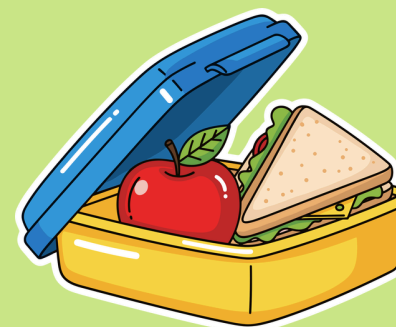
Bottle



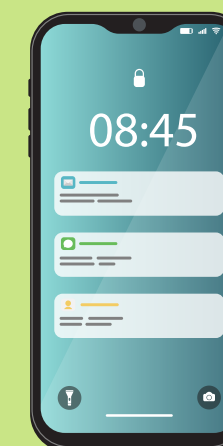
Perfume



**Sanitary
Pads**



Lunch Box



Phone

**WHICH CHEMICAL IS THERE ?
HOW COULD IT ENTER THE BODY?
CAN YOU THINK OF A SAFER ALTERNATIVE?**

WHO CAN HELP REDUCE CHEMICAL EXPOSURE?



Individuals

- Use reusable products
- Avoid heating food in plastic
- Read product labels
- Switch to safer alternatives

Schools

- Environmental education
- Waste segregation
- Reduce single-use plastics

Industry

- Design safer products
- Reduce hazardous chemicals
- Improve transparency and Traceability

Government

- Safety standards
- Chemical regulations
- Mandatory labeling
- Regulating hazardous chemicals such as EDcs
- Waste management policies

**EVERYONE HAS A ROLE.
WHAT IS ONE ACTION YOUR GROUP CAN TAKE STARTING TODAY?**

WHAT CAN WE DO?

Do's



- Glass
- Steel bottle
- Recycle e-waste
- Reduce unnecessary plastic

Dont's



- Heat food in plastic
- Too many single-use plastics
- Throw batteries in dustbin
- Burn waste

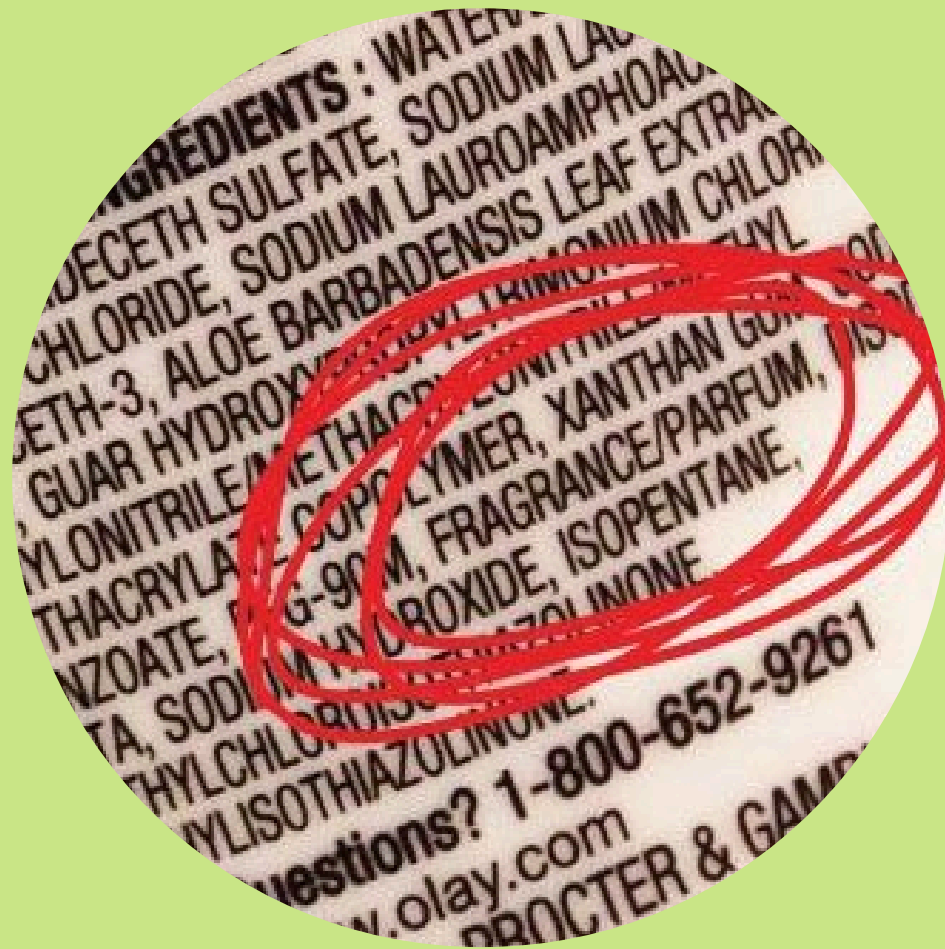
MYTH VS FACT



✗ BPA-FREE MEANS CHEMICAL-FREE
✓ FALSE
OTHER CHEMICALS MAY ALSO BE USED.

✗ NATURAL MEANS SAFE
✓ NOT ALWAYS.

LEARNING TO READ LABELS



What To Look For

- ✓ Ingredients
- ✓ Manufacturer details
- ✓ Manufacturing date
- ✓ Expiry date
- ✓ Safety instructions
- ✓ Customer care information

Label Reading Exercise

Participants examine actual products and identify:

- Ingredients
- Marketing claims
- Missing information
- Potential chemicals of concern

Chemical Red Flags

- Fragrance
- Parfum
- Perfume
- Methylparaben
- Propylparaben
- Butylparaben
- Ethylparaben
- Triclosan
- PVC
- BPA
- BPS
- Phthalates
- Paraffins

TAKE THE PLEDGE



HANDS TOGETHER

I PLEDGE TO

- ✓ **REDUCE PLASTIC USE**
- ✓ **NEVER HEAT FOOD IN PLASTIC**
- ✓ **DISPOSE E-WASTE RESPONSIBLY**
- ✓ **LEARN BEFORE I BUY**

THANK YOU

