



Institut de Camarles
EXPERIMENTAL SCIENCES
DEPARTMENT

EXPERIMENTAL SCIENCES

Group/class: 1st BAT

ERASMUS + SMART WASTE MANAGERS: WASTE WATER

1. Match the elements of the two columns, **topic** and **definition**, all of them are related concepts to waste water.

Waste water	Any water that has been affected by human use
Surface runoff	Flow of water that occurs when excess of stormwater, meltwater, or other sources flow over the Earth's surface
Waste water treatment	Process used to remove contaminants and turn them into an effluent that can be returned to the water cycle with a minimum impact on the environment.
Waste water Quality indicators	Laboratory and test methodologies to assess suitability of wastewater for disposal or re-use
Pollutant	Substance introduced into the environment that has undesired effects on it.
Human waste (human excreta)	Waste products of human digestive system and the human metabolism (urine and feces)
Biodegradation	It is the breakdown of organic matter by microorganisms, such as bacteria and fungi.
Drinking or clean water	Potable water, water that is safe to drink or to use for food preparation.
Grey water or sullage	Waste water generated in households or office buildings from streams without fecal contamination

2. There are two lists below with different types of pollutants and some examples. First of all, relate pollutants with examples and then make a scheme and classify them into **(1) Biological**, **(2) Chemical or Physical pollutants**. Finally make a padlet or piktochart about POLLUTANTS using this information.

POLLUTANTS	EXAMPLES
Heavy metals	Hg, Pb, Cr...
Bacteria	Salmonella, shigella,...
Organic non soluble particle	Humus, feces, hairs, food, paper fibers,...

Gases	Carbon dioxide, methane, hydrogen sulfide...
Viruses	Hepatitis A, enteroviruses...
Macro-solids	Sanitary napkins, condoms, needles,...
Soluble organic materials	Urea, fruit sugars, drugs, proteins...
Inorganic particles	Sand, ceramic, metal particles...
Soluble inorganic materials	Ammonia, cyanide, thiocyanates...
Protozoa	Entamoeba histolytica, giardia lamblia...
Microplastics	Polyethylene, polypropylene beads, polyester and polyamide
Emulsions	Paints, adhesives, hair colorants, mayonnaise...
Parasites	Helminth and their eggs, ...
Toxins	Pesticides, poisons, herbicides...

3. Search for 5 different ways to **reduce waste water** and make an advertising slogan to convince your classmates.



5 DIFFERENT WAYS TO REDUCE WASTE WATER

FOLLOW THE 3 R'S RULE TO AVOID WASTE WATER

1 MAKE WASHING MACHINES FULL

In this way you don't need to make more washers as you wash more clothes on one time.

2 USE DISHWASHER AND DO NOT CLEAN THE DISHES BY HAND

If you use the dishwasher it wash more dishes and this way you don't use too much water to clean anything.

3 REUSE WATER

If the water is polished, it can be reused, avoiding waste water.

4 DON'T LEAVE THE FAUCET RUNNING WHEN BRUSHING YOUR TEETH.

With this practice you can save up to 30 liters per person per day.

5 DO NOT THROW PAPERS IN THE TOILET AS IF IT WERE A RUBBISH DUMP.

In this way we save liters and liters of water because we do not flush so much, unnecessarily.

