

FIRST NAME :

LAST NAME :

Let's start at the source
to protect our water,
our health, and
our planet!



WATER FAMILY
DU FLOCON A LA VAGUE



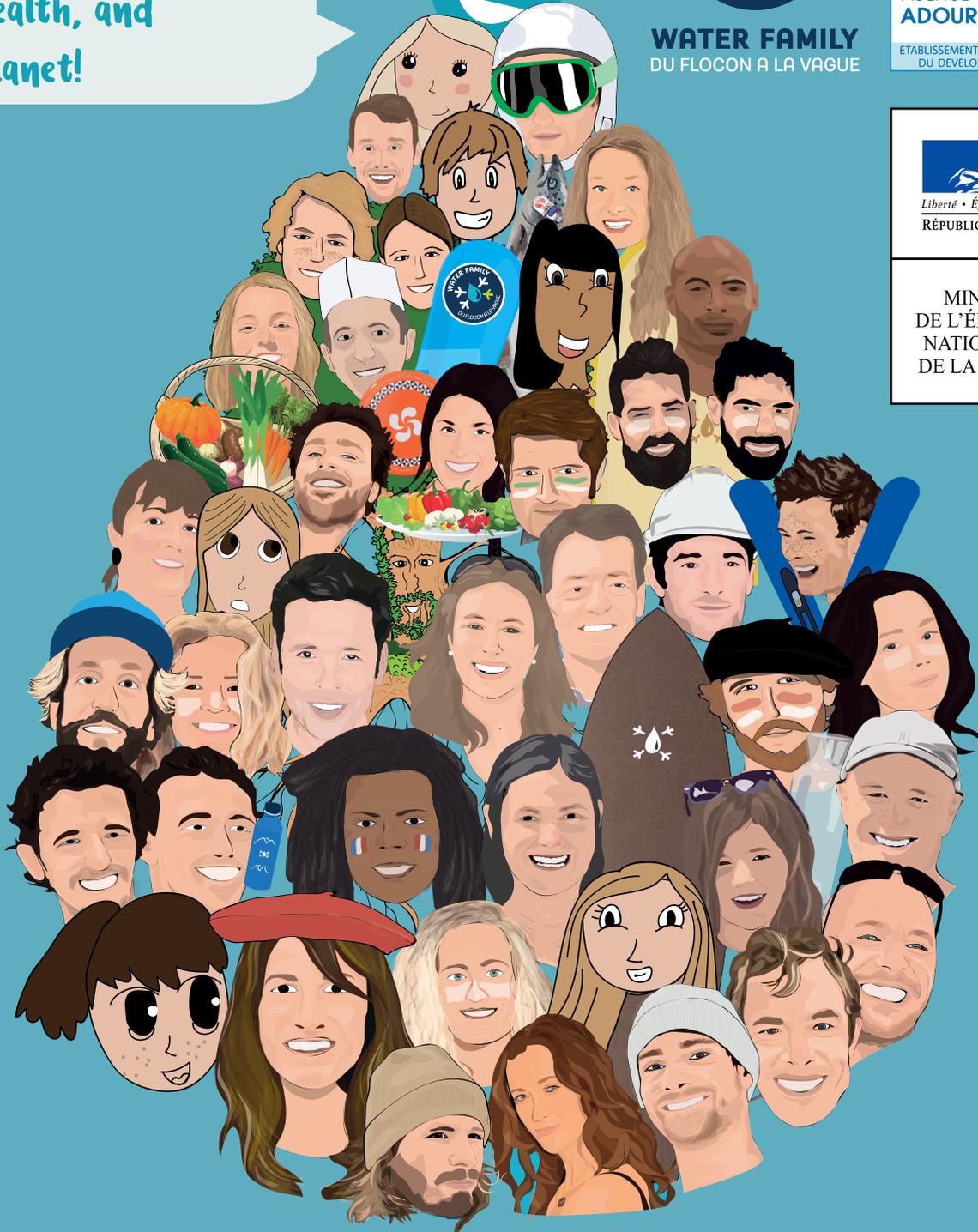
AGENCE DE L'EAU
ADOUR-GARONNE

ETABLISSEMENT PUBLIC DU MINISTÈRE
DU DÉVELOPPEMENT DURABLE



Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

MINISTÈRE
DE L'ÉDUCATION
NATIONALE ET
DE LA JEUNESSE



BE WATER RESPONSIBLE
AND JOIN THE WATER FAMILY

THE WATER FAMILY, «from snow to surf»

The Water Family - From Snow to Surf is a recognized association under the 1901 law for the **public interest**.



The Water Family grew out of a passion for nature-based activities and environmental protection. Since 2009, we've developed **teaching materials for schools and businesses** to help learn about water and our health while adopting best practices.

It's an open family offering everybody (youth, partners, affiliates, parents, educators...) **the opportunity to become water preservation ambassadors by simple daily actions.**

The Water Family is over **150 ambassadors, awareness building with 18000 young people and 1000 professionals** by our side...and you...and you guys!

Dixente Lizarazu, Mathieu Crépel, Ophélie David, Tony Estanguet, Roland Jourdain, Marc et Thomas Lièremont, l'Aviron Bayonnais Rugby Pro, Christophe Willem, Jacques Gamblin, Raphaël Ibañez, les frères Karabatic, Jan Kounen et sa famille, Jean-Pierre Vidal, Stéphanie Barneix, Rico Leroy, Guy Forget, Xavier et Polo de Le Rue, Julien Lizeroux, Valérie Nicolas, Tessa Worley, Vincent Duvignac, Stéphane Iralour, Louison et Zoé Grosjean, Damien Castera, Justine Mauvin, Pauline Ado, Justine Dupont, Édouard et Antoine Delperro, les « Lost in the Swell », Benjamin Dutreux, le team Ocewood, Marianne Bréchu, Aurélien Ducroz, Gauthier De Tessières, Julie Pomagalski, Florence Masnada, Fabrice Jeannet...

Our 3 core activities:



WATER ACADEMY

Educate and create awareness around water protection through our interactive teaching program and activities.



18 000
young people made aware of virtual water and sustainable consumer practices



WATER EXPERTISE

Accompagner les structures vers plus d'écoresponsabilité tout en valorisant leurs bonnes pratiques.



1 000
professionals per year trained through our program



WATER EXPERIENCE

Partake in a bonding experience around our shared common values.

Reconnexion
sports nature

#AGISSONSÀLASOURCE



Some water facts

65 %

of the human body is water. Clean water is essential for our health!

1 %

of the water on Earth is water we can use (97% saltwater and 2% fresh water inaccessible).

1 billion

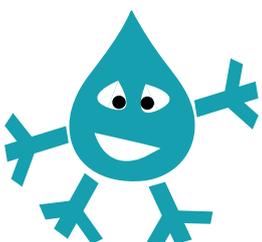
out of the 7.5 billion people in the world, suffer from lack of access to clean fresh water.

4 150 L

of water used every day per person in Europe and more than 200 g of pollutants released!

OBJECTIVES OF THIS GUIDE.

- 1 Understand the **importance** of water
- 2 Identify the **pollutants and uses** (visible and hidden) of water
- 3 Learn about **eco-friendly** habits
- 4 Support each other's **commitments**



Hi I'm Flaggy, I'm the little drop of water from the Water Family! I'll help you along the way in this guide to discover water from A to Z. We'll find out about water in your body, water in the environment, threats to water and, of course, ways to protect it. Ready?

WATER AND ME

OUR BODY IS 65% WATER!

A person weighing 100 kg is 65 kg water.

Le corps humain ne stocke pas l'eau. Elle est éliminée en permanence par les **excrétions** (urine et selles), la **transpiration** et la **respiration** (quand on expire, on rejette de l'eau sous forme de vapeur).

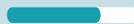
BREAKDOWN OF WATER IN YOUR BODY.



BLOOD
90 %
WATER



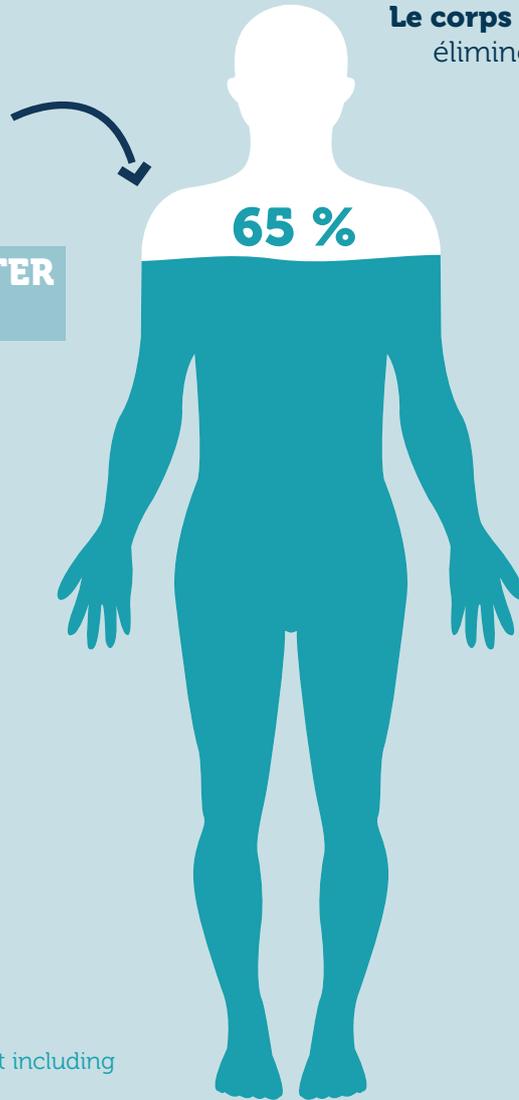
BRAIN
75 %*
WATER



MUSCLE
75 %*
WATER



*% water present in these organs not including the blood component during use



ROLE OF WATER IN THE BODY



Transports mineral salts and micro-nutrients (calcium, magnesium...)



Waste elimination



Temperature regulation (37°C)



Helps with (natural) chemical reactions: neurons, digestion...



POTABLE TAP WATER IS THE MOST CONTROLLED!



In France, tap water is **the most tested food item**. Drinking water is vital and **frequent controls ensure its quality**.

Advantages:

Balanced minerals, neutral pH, zero plastic, frequent quality controls, locally sourced...

70

Parameters tested:

(Bacteria, Hardness, Nitrates, Pesticides, Heavy metals, Endocrine disruptors, Radioactive substances...)

Sport, water and health

KEY FACTS:

-4% = -20%

water in your body (dry lips)

physical and mental capacities



Mathieu Crépel

3X CHAMPION DU MONDE DE SNOW

« Drink small amounts but drink frequently are the keys to performance! »



CRAMPS AND SORE MUSCLES ARE OFTEN LINKED TO POOR WASTE ELIMINATION FROM OUR BODIES.
Water quality and good hydration are essential to good waste transportation!

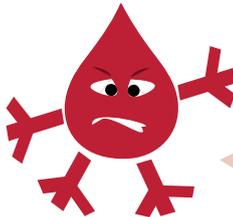
- Wake up**

Rehydrate the body
- Before meals**
 X2 (lunch, dinner)
Stimulate digestion
- After meals**
 X2 (lunch, dinner)
Improve digestion
- Before classes**

Help focus in class
- Before bedtime**

To have beautiful aquatic dreams

It's really important to quench our water requirements: **drink 1.5 L of water and eat foods with high water content** to ensure a total daily intake of 3.5 L (the human body loses about 3.5 L of water per day).



Only water, fruit and vegetables will hydrate... But not soft drinks or energy drinks!

Quiz

Which parameters are tested for in potable water testing?

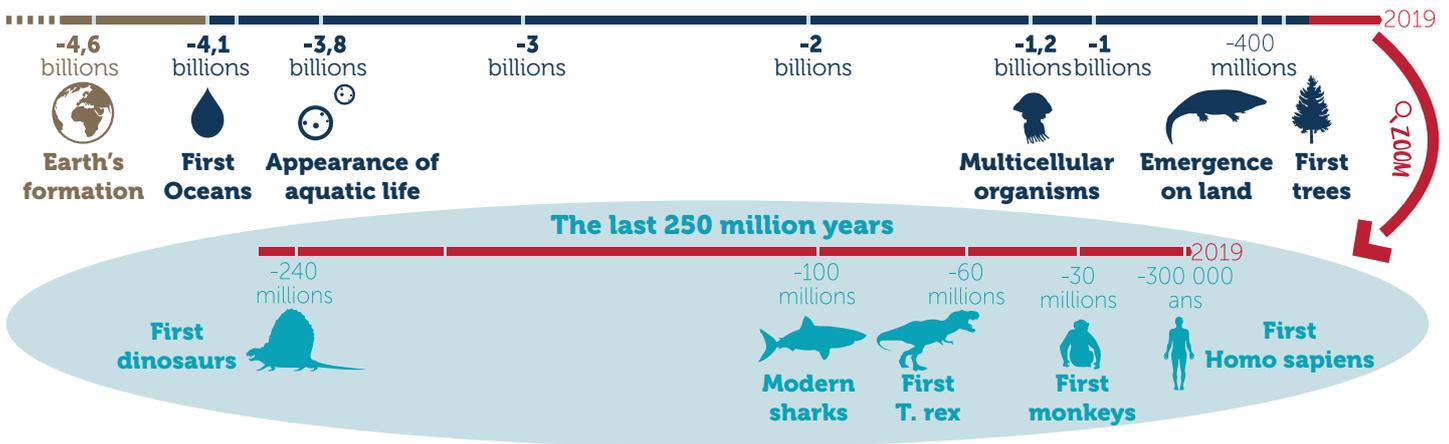
What are two actions water helps the body with?

What percent of the human body is water?

THE GREAT WATER CYCLE

Water – source of life

THE EARTH IS **THE ONLY PLANET** IN THE SOLAR SYSTEM **WITH LIQUID WATER**, ALLOWING **THE DEVELOPMENT OF LIFE** AROUND **3.8 BILLION YEARS AGO**.



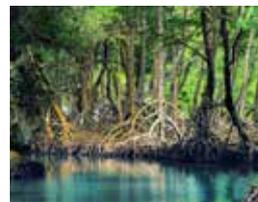
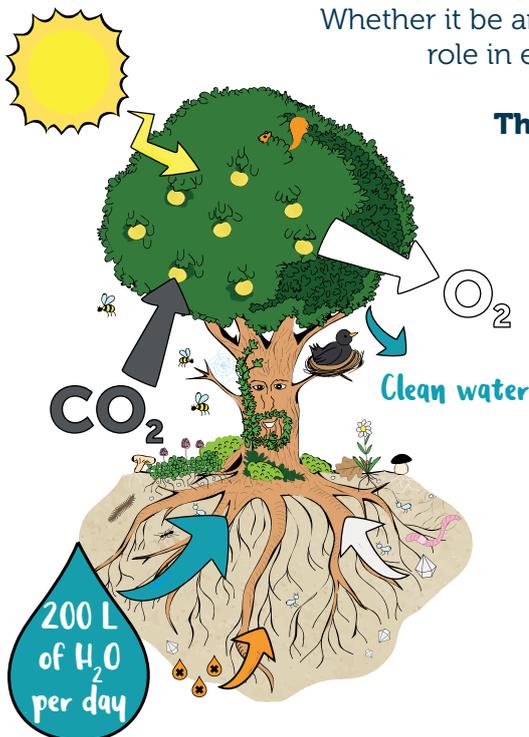
Life on our planet has evolved to produce a diversity of organisms, **all containing water**, living or extinct (plants, animals, bacteria, and dinosaurs...). Life exists without oxygen and without light but **never without water**.

Water and ecosystems

AN ECOSYSTEM = A LOCATION + THE ORGANISMS THAT INHABIT IT

Whether it be an aquatic or a terrestrial environment, water plays a fundamental role in ecosystem health! The other important parameter for ecosystems is biodiversity (the diversity of living things and their interactions).

The greater the biodiversity, the greater the ecological stability!

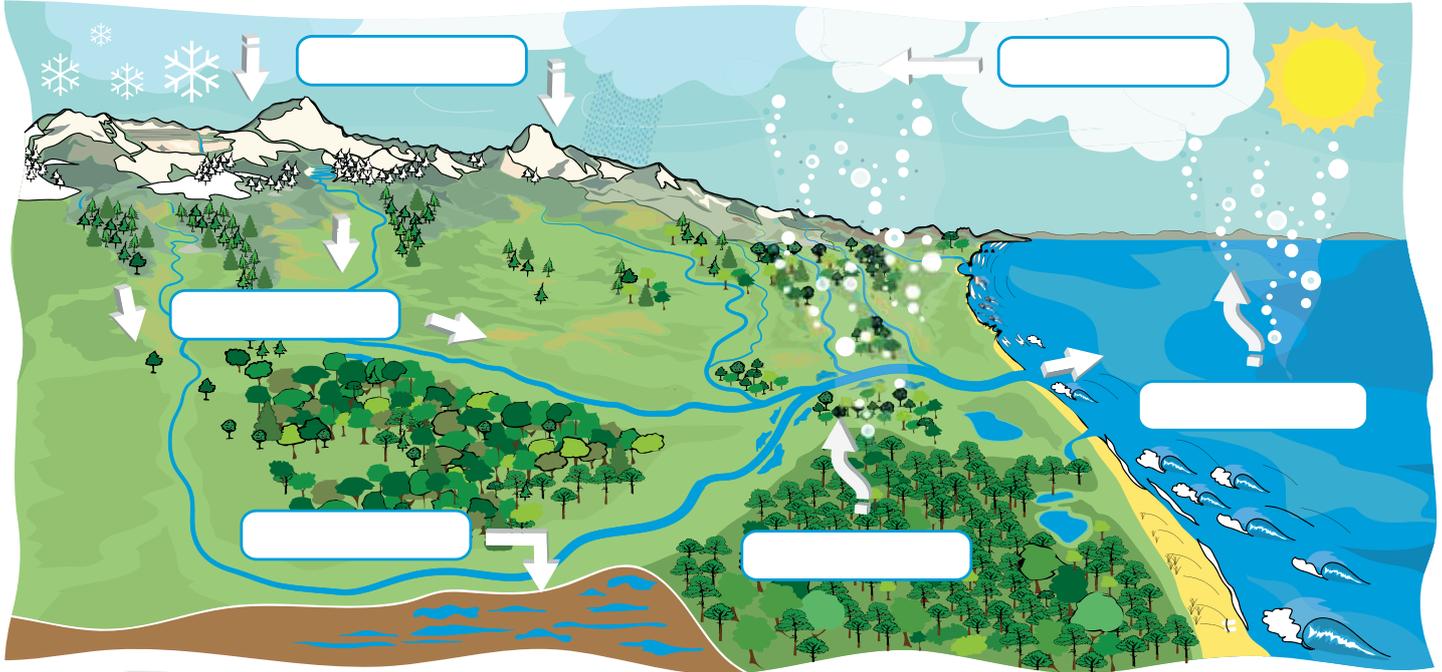


I'm your friend, a tree. On land I guarantee the biodiversity: I improve the soil, I provide habitat and shelter for many species, I treat water and contribute to the water cycle thanks to evapo-transpiration.

Find more tree information on p. 19 and 20 or at www.programme-larhbrealecole.org

Climate and the water cycle

FROM THE OCEANS TO THE ATMOSPHERE, FROM THE MOUNTAINS TO THE RIVERS AND RIGHT INTO THE EARTH ITSELF, WATER EXISTS IN 3 STATES: LIQUID, GAS (VAPOUR), SOLID (ICE). IT CAN BE FRESH OR SALTY.



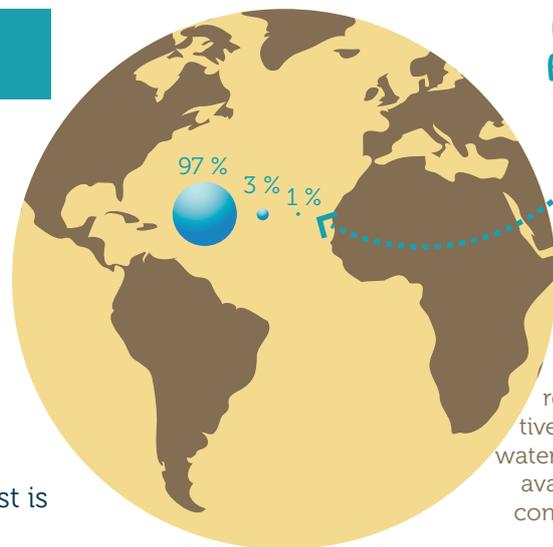
Water is in constant circulation between the four great reservoirs: oceans, atmosphere, continental (rivers and aquifers) and the biosphere (all the ecosystems).

A precious resource

THE EARTH'S WATER IS ALMOST ENTIRELY IN THE OCEANS.

97% OF ALL WATER IS SALT WATER, leaving only 3% fresh water...

But of the 3% **only 1% is available** because the rest is locked in glaciers or underground.



Amount of fresh water available...

The three blue spheres represent the relative quantities of salt water, fresh water and available fresh water compared to the size of the Earth.

Complete the Great Water Cycle with the following words:

Evaporation - Runoff - Precipitation - Infiltration - Condensation - Evapotranspiration

In 1900 we were fewer than 2 billion humans for 1% of the fresh water available on Earth. Today we are 7.5 billion! In your opinion:

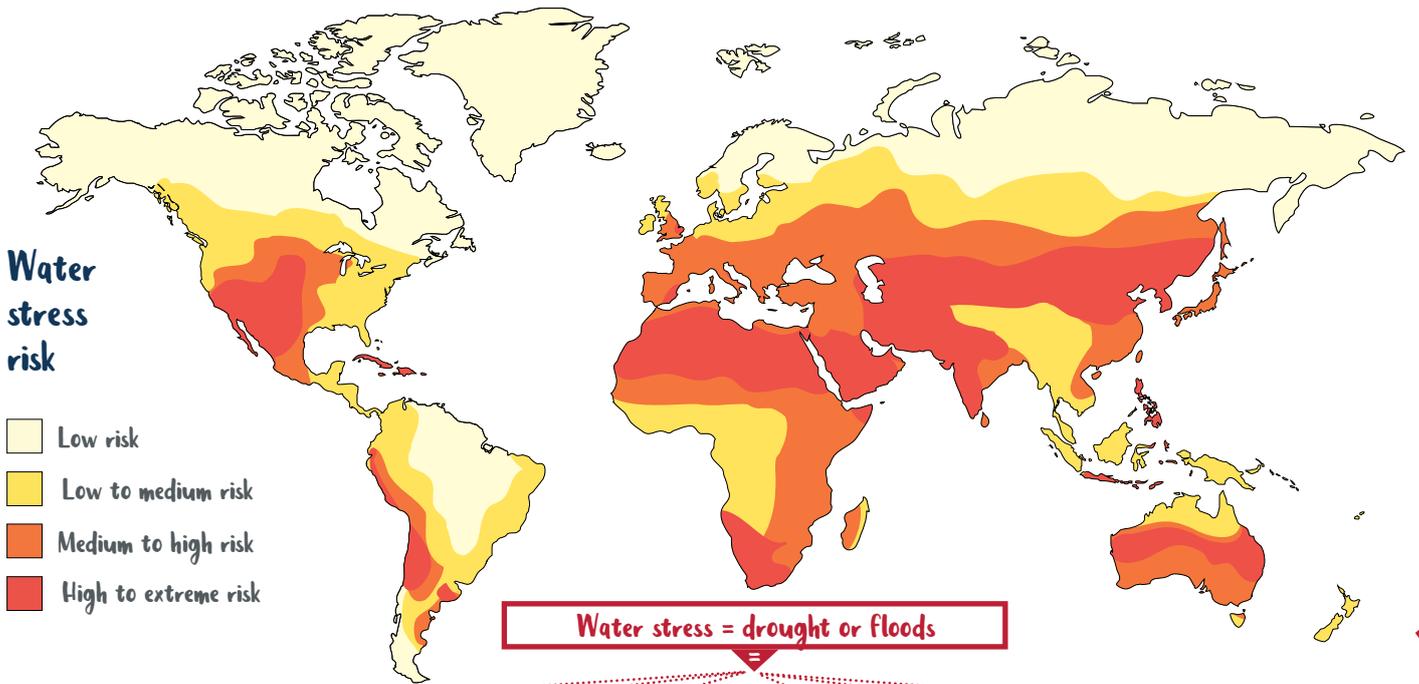
- the quantity of fresh water has increased?
- the quantity of fresh water has stayed the same (and we have to share it)?



UNDER THREAT - WATER

Distribution and unequal access

Water is unevenly distributed between countries and **2.1 billion people don't have access to potable water!** Water stress (drought or flooding) is the cause of water shortage for humans and the environment.



Water and people

Fresh water is **the most important natural resource** on Earth directly generating **78% of employment worldwide**. It is essential to the **development of human civilization**.

The problem is that human activities impact the quality and the quantity of available water. Consider tourism ->



Agriculture
(46 %)*



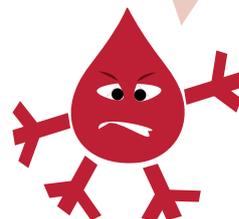
Drinking water
(34 %)*



Industry
(12 %)*



Energy
(8 %)*



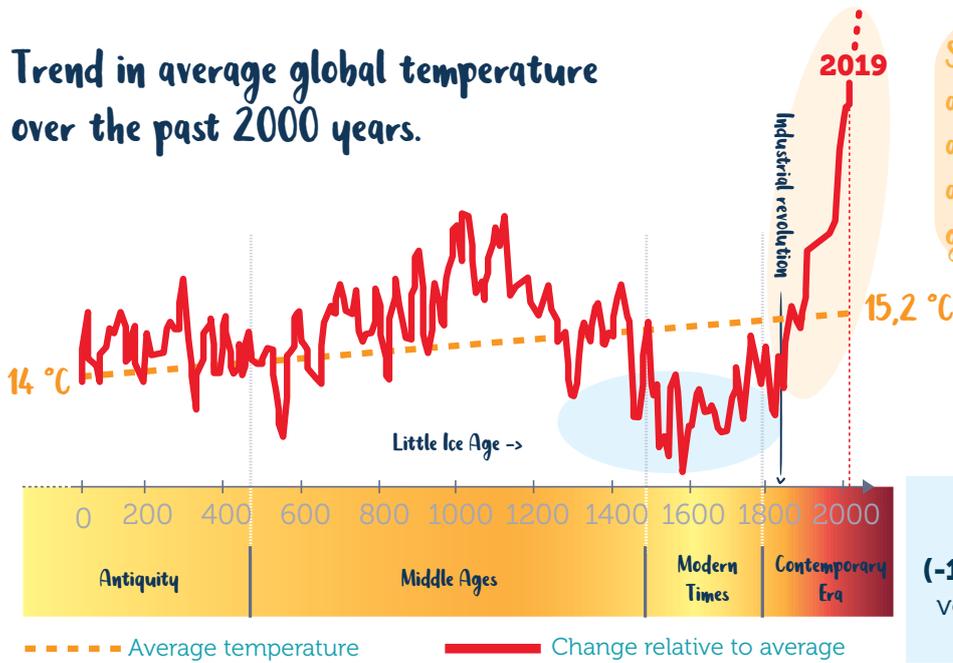
*example of water extraction % in Nouvelle Aquitaine in 2015



Bathing water quality

Climate change

Trend in average global temperature over the past 2000 years.



Since the Industrial Revolution, human activities have intensified (energy, agriculture, transportation...) causing an increase of 1.2°C of the average global temperature (over 150 years).



The Little Ice Age (1300-1800 A.D.) was a **period of natural cooling (-1°C)** of the Earth linked to repeated volcanic eruptions and a decrease in solar activity.

+1° C OF WARMING = +7% EVAPORATION = + WATER STRESS!

Water pollution

Aquatic habitats have the ability to purify water*. It's the excess pollution from our activities that degrades water quality. **This threatens our health and all life on Earth...**

THERE ARE 3 FAMILIES OF POLLUTION:

- 1. MACRO POLLUTION** (plastic, for ex.): they disturb and enter the food web.
- 2. MICROBIAL POLLUTION** (bacteria, viruses...): these are the N°1 cause of mortalité worldwide.
- 3. CHEMICAL POLLUTION** (endocrine disruptors, pesticides, nitrates...): there are more than 100 million chemical substances. Some are toxic at low doses, others in combination become toxic (cocktail effect) and bioaccumulate in the food web.

*Aquatic environments have the ability to clean water all by themselves.



Label the three images above with the right pollution group.

Link these kinds of pollution to the right group.



- | | |
|--|--|
| <ul style="list-style-type: none"> Endocrine disruptor • Plastic bag • Bacteria • Pesticides • | <ul style="list-style-type: none"> • Macro pollution • Microbial pollution • Toxic chemical pollution |
|--|--|

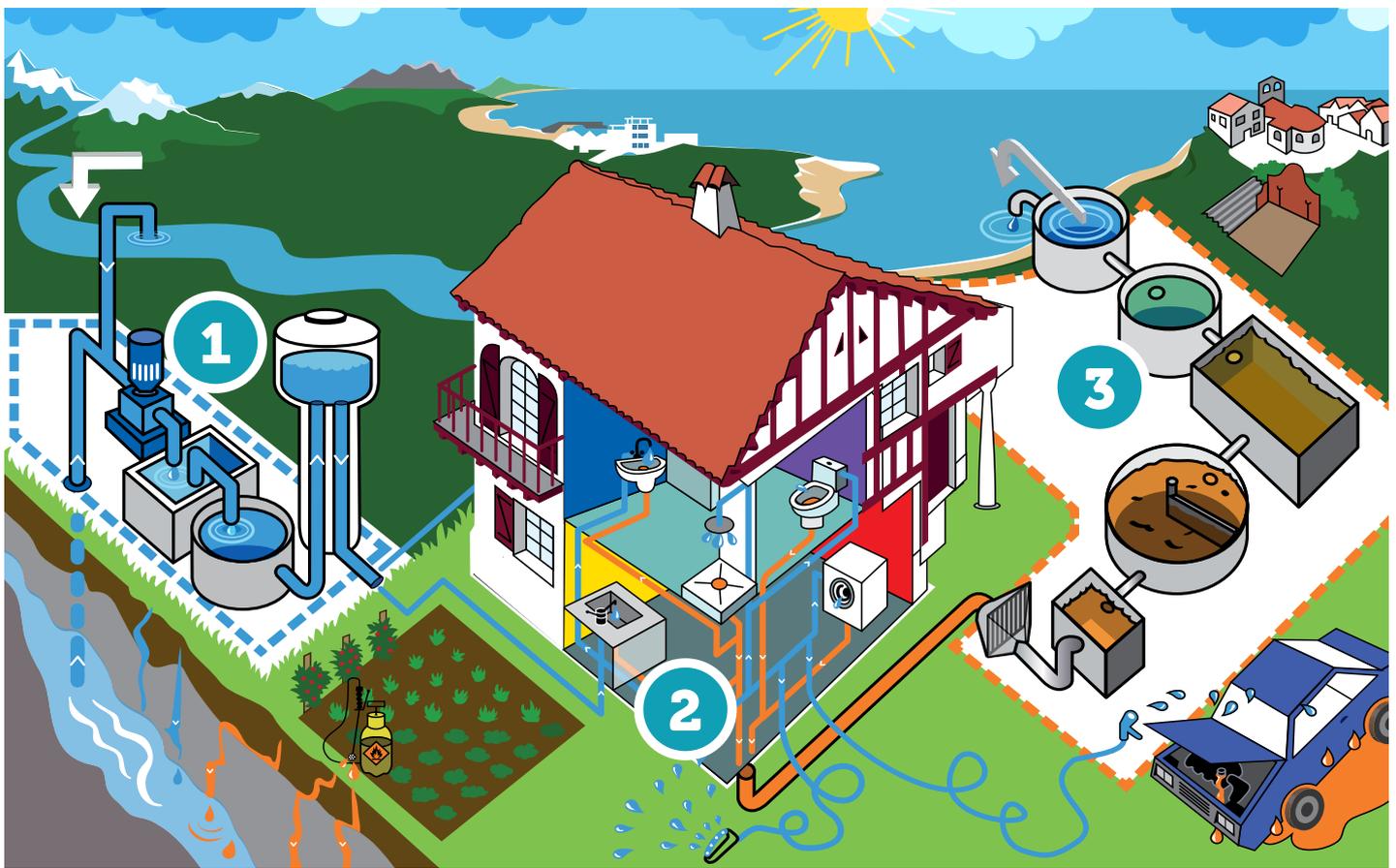
THE LOCAL WATER CYCLE

At home, domestic water use

On top of the natural water cycle, we have the «**local water cycle**». This describes the home-based **non natural use of water: from the resource to the tap and from the tap to the natural environment**.

Components:

1. a system for ensuring potable water - **the water treatment plant**
2. **potable water consumption and waste water disposal**
3. waste water is cleaned and return to the environment - **the waste water treatment plant**



On average, every European uses 150 L of water every day



+ 15 g of pollutants are generated by each person every day

Endocrine disruptors, paints, solvents, detergents and other chemicals

Research to eliminate these pollutants is ongoing and the treatment methods are improving. The Adour-Garonne Water Agency and Suez, teaching and technical partners, support sustainable solutions in eliminating pollution at source, as well as treatment at the watershed scale.



Reduce sources of domestic pollution

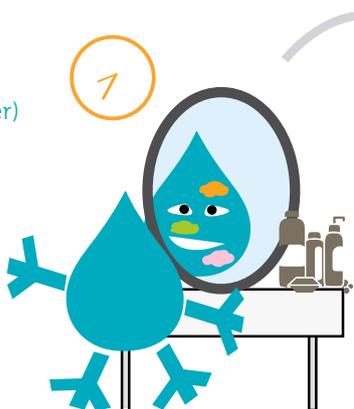
The case of cosmetics

A cosmetic can be either a toxic chemical or natural product in contact with the skin. How much do we use every day?

Let's follow Flaggy for a day:

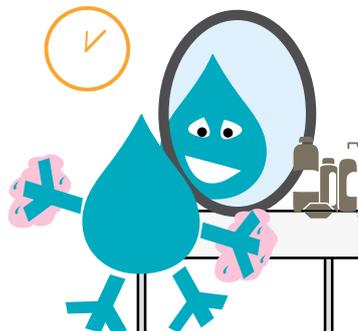
Morning

- 1 soap (shower)
- 2 deodorant
- 3 perfume
- 4 makeup



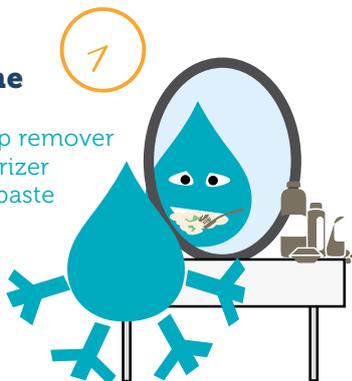
Lunch

- 5 hand soap



Bedtime

- 7 soap
- 8 makeup remover
- 9 moisturizer
- 10 toothpaste



Return from work

- 6 Household cleaning products



CHOOSE SOMETHING GOOD FOR YOUR HEALTH!



KEY FACTS:

10

On average, 10 cosmetic products are used every day per person

40

Every cosmetic product contains an average of 40 chemical products

400

A European has an average of +400 chemical products on their skin every day!

60 %

The skin absorbs 60% of the cosmetics it is in contact with...
The remaining 40% are washed into the domestic water cycle

ENVIRONMENTALLY FRIENDLY WATER FAMILY TIPS



Justine Dupont

**SURFING CHAMPION
& BIG WAVE RIDER**

«I choose environmentally friendly cosmetics, good for my health, rivers and the tap.»

You can also make your own nature-based products!
See some recipes for home-made products on p.21



Here's some real labels to get you started!

VIRTUAL OR INVISIBLE WATER

Visible water = 5%
of our daily use

150 L
of water used

Shower, sink, toilets, washing machine...



15 g
of pollutants emitted

Cosmetics & cleaning products

Cosmetics

Reminder: a European adult carries, on average, about **400 chemical products** on their skin every day! **At home, the most important habit for skin protection is to use natural products.**

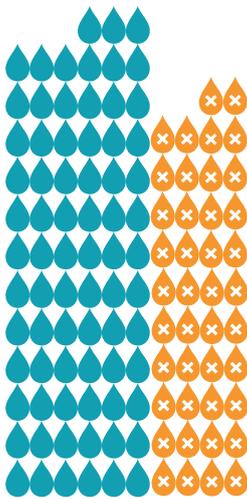
Goods & Transportation

= 500 L
 = 10 g

420 g
35 000 L

1,22 kg
555 L

230 g
11 000 L



1 pair of jeans



1 computer



1000 km by car

1 000 L
of water used

50 g
of pollutants emitted

The objects we use every day **are usually made far away with very polluting substances** (rare minerals, dyes, coatings...)! Our modes of transportation usually rely on **fossil fuels which are increasingly challenging to extract, generating significant amounts of pollution in the process.**

Virtual water = 95%
of our daily use

4 000 L
of water used

It's water that we don't begin to end in its lifecycle



CO

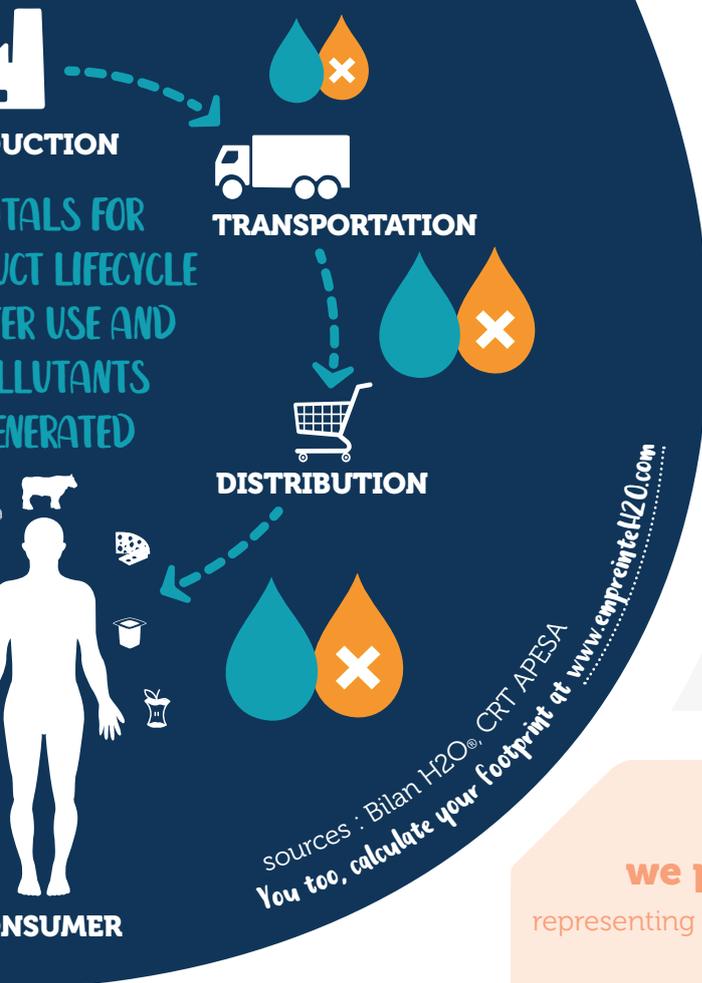
EVERY DAY I USE
4150 L OF WATER
(OF WHICH 4000 L
IS INVISIBLE)

ual
ter
5 %
ily use

200 g

of pollutants emitted

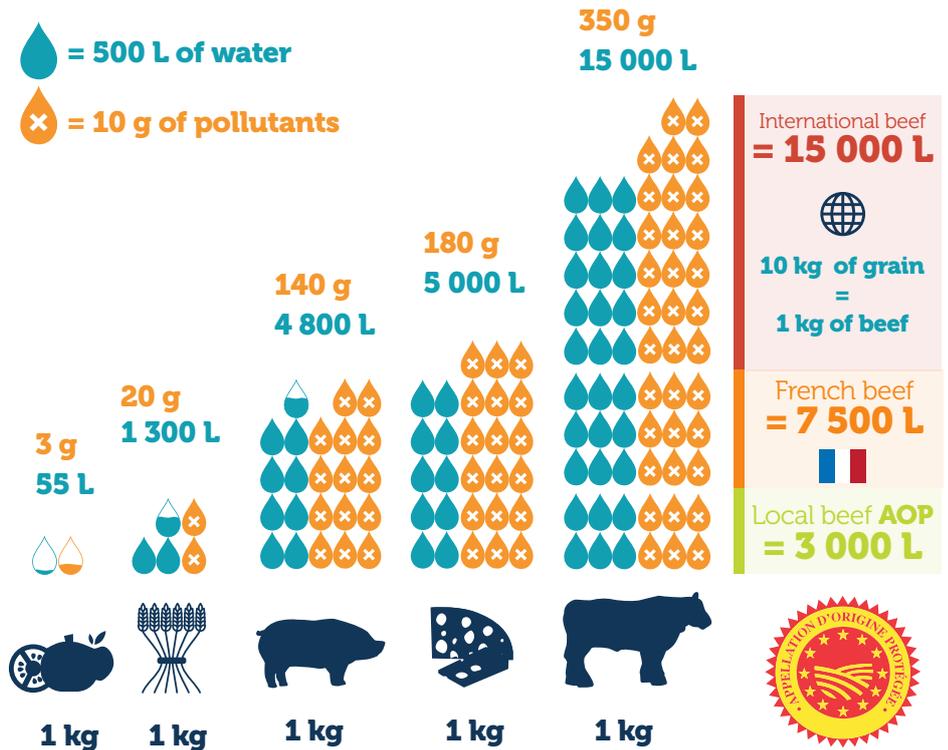
It's not visible but is used from
the production of the product and food
cycles.



Food

= 500 L of water

= 10 g of pollutants



3 000 L

of water used

150 g

of pollutants emitted

Everything we eat requires water at some stage in production. **Intensive agriculture, long-distance transport, pesticides and chemical fertilizers make food production our #1 water impact.**

Food waste



1/3 of the food

we produce goes to waste or is lost,

representing 1 000 L of wasted water and + 50 g of pollutants emitted
(per person daily)

GOODS & TRANSPORTATION

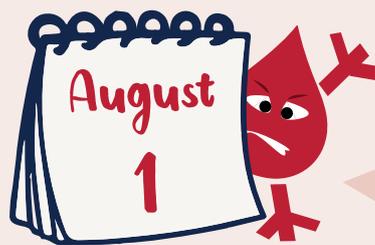
Limited resources

OUR ACTUAL PRODUCTION SYSTEM IS LINEAR!



As a result :

- the use of non-renewable resources is limited
- overconsumption of water and the generation of pollutants
- unacceptable working conditions

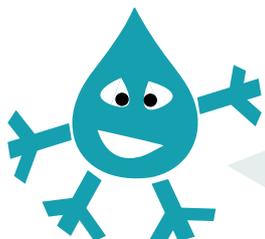


Earth Overshoot Day is the day on which we have used more ecological resources than the Earth can replenish in the same year. In 2018, for the entire planet, the day was August 1st but in France it was May 5th!

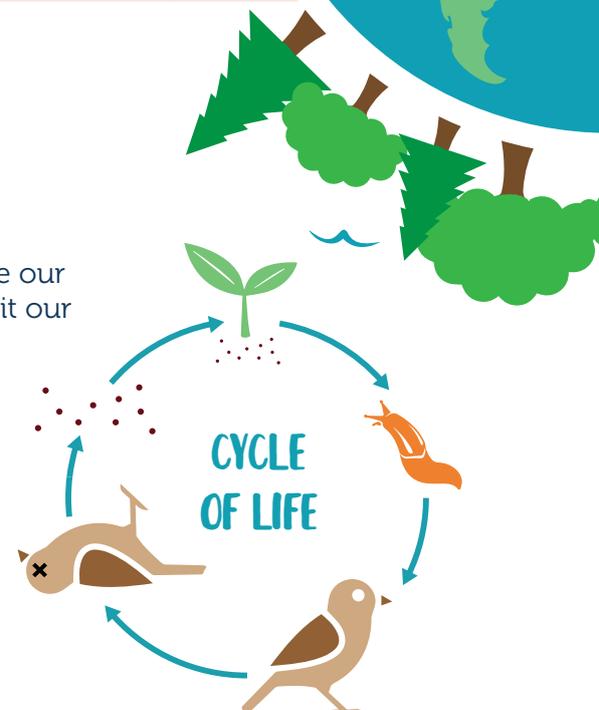


Everything on Earth is circular...

A **circular economy** just makes **good sense**. It challenges us to use our natural resources more wisely to save water, avoid polluting and limit our waste production.



You just need to look to nature and the cycle of life! Nothing is lost, nothing is created, and everything is transformed.



THE CONCEPT OF WASTE DISAPPEARS!



12 000 L
of water used

280 g
of pollutants emitted

Millions of smartphones are thrown away every year...Not designed to last, hardly recyclable, it **built-in obsolescence**! Choosing brands that encourage **repair, re-use** of the electronic components and the **reduction** in wastes produced shifts consumption to a circular pattern. **It exists and it's called Ecodesign!**

Less is more!



Low-tech (as opposed to high-tech) solutions are simple, practical, economical and repairable...

The age of low-tech

THE FUNDAMENTAL PRINCIPLES:



Locally produced



Low ecological impact



Do it yourself



Economical



Repairable



Accessible to everyone

Find a low-tech tutorial on p. 22 and tons of information on www.lowtechlab.org

Eco-friendly transportation



When making travel choices, several transport options can reduce our impacts. **Walking, cycling, car sharing, public transport (bus, tram, subway, train).** The benefits include **less pollution, exercise, social interactions, benefits for everybody!**

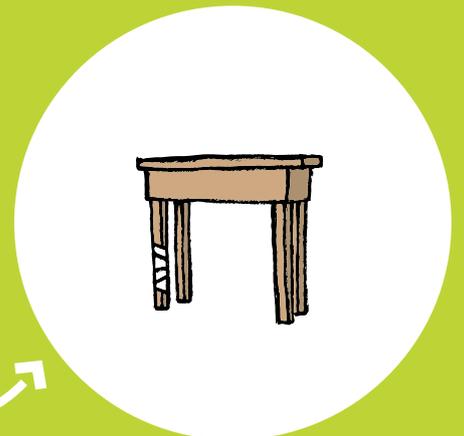
ENVIRONMENTALLY FRIENDLY WATER FAMILY TIPS



Fabrice Jeannet

2 TIME FENCING OLYMPIC GOLD MEDALIST

«When my equipment is damaged, I repair it myself or else I get it repaired locally rather than buying new!»



WATER, SUPPLY & LANDSCAPE

AGRICULTURE REPRESENTS 3/4 OF THE FRESH WATER USAGE IN THE WORLD. IT'S THE SECTOR THAT CONSUMES THE MOST WATER.

1. Intensive industrial agriculture



Chemical fertilizers
Pesticides
Preservatives



Soil erosion and pollution
Intensive exploitation (animals & people)
Low value production



Overconsumption of water
Water pollution
Wasted food



Long distance transport, more packaging
Deforestation and biodiversity impacts
Climate change...



2. Low-input agriculture

With low-input agriculture, fertilizer inputs are adapted **the needs of crops**, the soil characteristics and plant growth. Soil water retention capacity is improved. **Use of chemicals is reduced (but not eliminated...)** and **biodiversity isn't always a priority...**

INDUSTRIAL MODEL

LOW-INPUT MODEL

PEASANT MODEL

The more biodiversity present, the better off the environment is!

Organic, peasant, local and seasonal

3. Organic, peasant, sustainable agriculture

Organic agriculture is a regulated and certified form of agriculture **that is respectful of the environment** (no pesticides or chemical fertilizers...).

Natural fertilizers
Compost
Vitamins



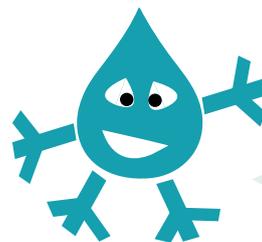
Respects the soil and the landscape
Uses local varieties, considers animal welfare
Provides local employment and value-added goods



Reduces water consumption
Protects water quality
Less food wastage



Less transportation and use of local resources
More biodiversity, more trees
Climate regulation



CSA's are a sustainable solution to procure health, local, in-season food. Find out if there's a CSA provider near you!

ENVIRONMENTALLY FRIENDLY WATER FAMILY TIPS



Voici les vrais labels pour t'aider!

Justine Mauvin
LONGBOARD CHAMPION

«For my nutritional needs, I trust local producers or certified products!»



HOW DO WE GET INVOLVED?

Water Family strategies

Food



Mathieu Crépel

3X WORLD SNOWBOARD CHAMPION

1/3 of the food we produce goes to waste! This represents 1000 L of water. Not wasting food is saving water...



Roland Jourdain

NAVIGATOR 3X WINNER OF THE ROUTE DU RHUM

I live following the rhythm of the seasons. Fruits and vegetables grown near where I live are better for my health and the planet!



Goods & Transportation



Tony Estanguet

3X WORLD & OLYMPIC CANOE CHAMPION

When I buy something, I ask myself if I can buy it second-hand, rent it, share it or if there's a eco-concept version of the product.



Les Lost In The Swell

SURF EXPLORERS

When we're exploring for surf, we choose low impact forms of transportation (bicycle, sailboat), we use low-tech solutions and we practice carbon off-setting by planting trees.



Cosmetics



Ophélie David

MULTIPLE WORLD SKI CROSS AND X-GAMES CHAMPION

I make my own essential oils from flowers and my household cleaning products from white vinegar and baking soda. It's natural, cheaper, good for my health and the environment.



Marianne Bréchu

WORLD FREERIDE RUNNER-UP

For sports related care products, I choose 100% natural essential oils, very effective for my joints and muscles.



#ETTOITUFAISQUOI ?

CHOISIS UN ÉCO-GESTE

et rejoins la Water Family

Food

Goods & Transportation

Cosmetics

ENDORSED BY A WATER FAMILY CHAMPION



WATER FAMILY

HOLDER'S NAME:

DATE:

SIGNATURE:



MINISTÈRE
DE L'ÉDUCATION
NATIONALE ET
DE LA JEUNESSE



WATER FAMILY
DU FLOCON A LA VAGUE



The Water Family practice exercise workbook



Ex N°1: Discover the three lessons trees teach

Ex N°2: Make your own natural products

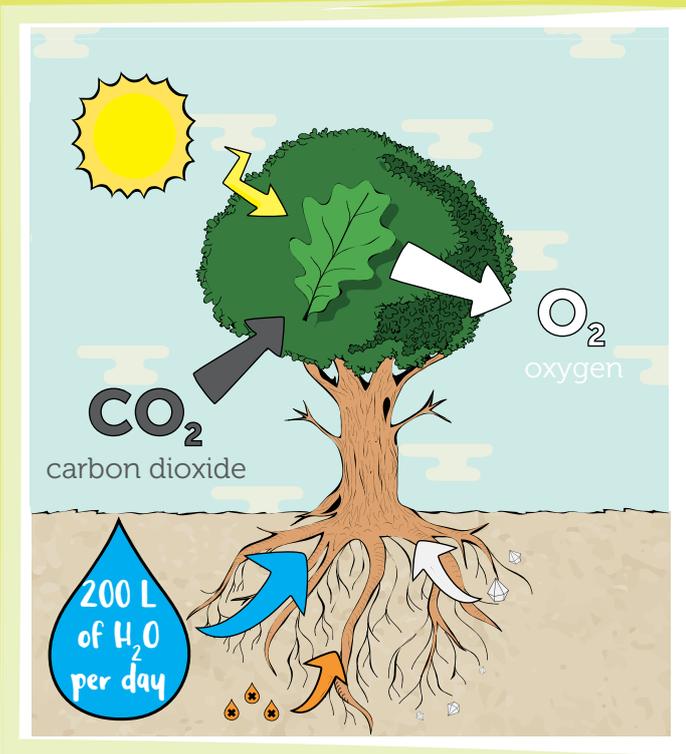
Ex N°3: Make something low-tech

Ex N°4: Cook with a no-waste recipe

You can, like the Fabrice Jeannet family (our two time Olympic fencing champion), make these happen!



Ex N°1: Discover the three lessons trees teach



1. I'm a source of clean air and water Endless source of energy without toxic byproducts

Thanks to the energy of the _____
 the _____ transforms _____,
 the _____ (absorbed by the roots)
 and the _____
 (CO₂). It's called _____ !
 It makes _____ that nourish the tree, releases
 _____ (O₂) and _____
 _____ which evaporates.

1. Using the image, fill-in the missing words with the words below:

photosynthesis - oxygen - sun - water - pure water - carbon dioxide - sugars - minerals - leaves

2. Cross out the one false statement from the three below.

- a. trees can capture, stock and eliminate pollutants from water and soil
- b. trees use only local resources which they don't over-exploit
- c. trees produce persistent toxic chemicals.

2. I provide you stuff, for free

Zero waste, zero garbage and locally sourced resources



Trees build and improve soil

- They're the original agricultural model over the past 350 million years
- They inspire tomorrow's agriculture: agroforestry and permaculture



Trees give life to streams

- Leaves are part of a stream food web
- Logs, branches and stumps create micro-habitats



Trees contribute to the water-cycle

- Evapotranspiration is the water service center for clouds
- Trees can also operate in reverse and can attract rain

- Paper making
- House building
- Shelter and protect biodiversity
- Mushroom picking
- Fruit eating
- Heating
- Toy making
- Musical instrument making
- Having fun
- Fence building
- Health and medicines
- Regulate climate
- Being happy
- Furniture making
- Helping agriculture
- Shipbuilding

3. Connect the services to the correct image

1. Thanks to the energy of the sun, the leaves transform water, and the minerals (absorbed by the roots) and carbon dioxide (CO₂). It's called photosynthesis! It makes sugars that nourish the tree, releases oxygen and pure water which evaporates.

2. false : c 4. b- thanks to their root 5. 1-germination 2-growth 3-fruitletting 4-dispersal



3. We're a team together

The 1st Law of the Jungle is mutual help and harmony

Symbiosis with fungi

- Trees exchange sugars for minerals produced by fungi. The fungi create networks effectively connecting the trees.

Trees share their resources and information

- Trees share nutrients with their offspring, but also with other trees around them. They also transmit information about things like parasites...

Protect the health of those around you to protect your own health

- This is one of the most important principles amongst trees

4. How do trees communicate?

- Wifi
- their root system
- squirrels

Do you know where I come from?

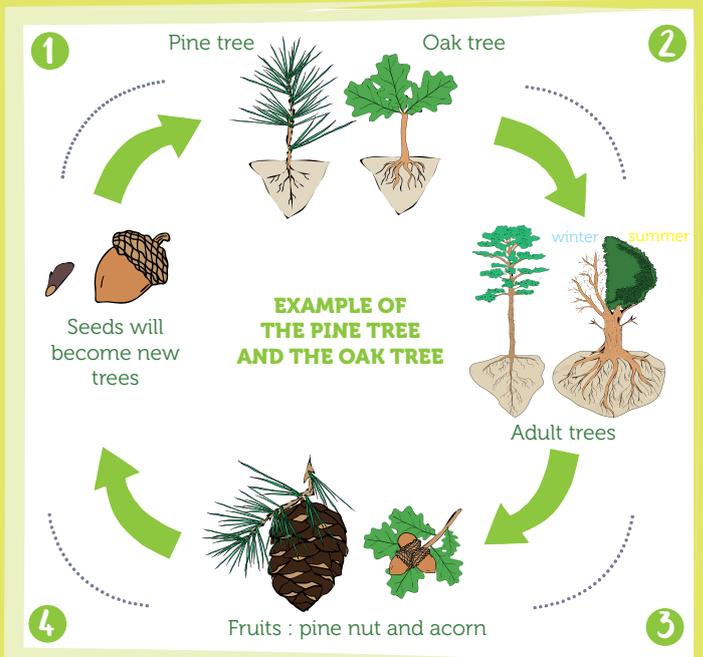
5. Complete the 4 life-cycle stages in the life of a tree with the following words:

fruiting - germination - growth - dispersal

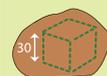
- Old trees remember. They've survived heatwaves, storms, parasite infestations...This information is found in their seeds and produce better adapted young plants!

Garden idea

When you eat a fruit (organic) and you plant the seed in the ground, 1 year later you might have yourself a seedling.



How to plant a baby tree?



1 Turn over the soil for an area covering 30 cm square and 30 cm deep.



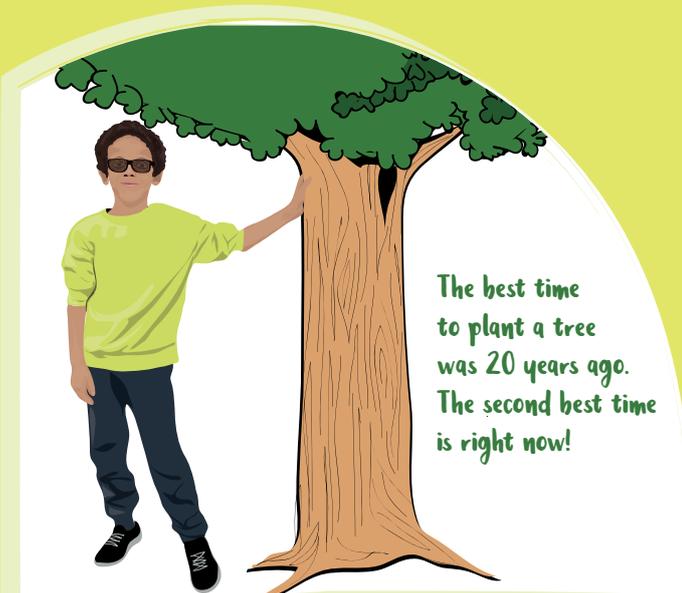
2 Dig a hole 10 cm square and 10 cm deep. Place the plant in the hole.



3 Build up soil around the base 1 to 3 cm high.



4 Don't over compact the soil to make sure the roots can grow. **Water with about a glass** of water every day for the first week. **Stop watering** to encourage the roots to grow downward in search of moisture.



The best time to plant a tree was 20 years ago. The second best time is right now!

Find more information : www.programe-larhbrealecole.org !

Ex N°2: Make your own natural skin products

OIL BODY LOTION

Ingredients

75 mL Organic sunflower oil
10 mL Organic linseed oil
9 mL Organic hemp oil

5 mL Organic pumpkin seed oil
1 mL Tocopherol (vitamin E)
1 drop of essential oil optional
(use caution when using essential oils)



Recipe

To make your oil body lotion, mix the ingredients in a glass container

Properties

Sunflower oil: emollient, non-greasy, nourishes, hydrates.

Linseed oil: rich in omega-3, calmes, antioxidant, regenerates, hydrates.

Hemp oil: softens skin, rich in omega 3, 6 and 9, calmes, regenerates, hydrates.

Pumpkin seed oil: regenerates and nourishes.

1% Tocopherol (vitamin E): antioxidant, preserves the ingredients.



NATURAL LAUNDRY DETERGENT

Ingredients

1 L of water
1 soup spoon of soda crystals
20 g of grated Marseille soap
20 g of liquid black soap

1 drop of essential oil (mint)
(use caution when using essential oils)

Recipe (for 1 L)

- 1- Add all the ingredients into a cooking pot and bring to a boil.
- 2- Allow to cool until warm, then pour the mix into old pre-washed detergent bottles.
- 3- Shake each time before use and pour 100 - 150 ml of water (mustard jar) directly on the laundry.

Tips

For whiter laundry, add 1 tablespoon of sodium percarbonate directly onto the laundry.

Add white vinegar to the laundry softener dispenser to keep colours vibrant as well as reducing the build-up of lime deposits (be careful, vinegar may damage washable diaper elastics)

You can find lots of other recipes and information on natural products in the handy guide
« Les Zenfants presque Zéro Déchet » !



DESERT FRIDGE OR ZEER POT

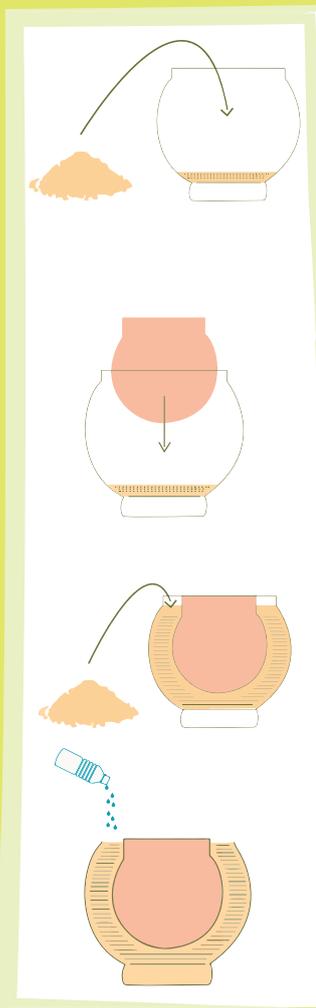
Materials list

1 clay pot (or terracotta) 50 x 46 cm*, 1 clay pot (or terracotta) 30 x 40 cm, approximately 45 kg of fine sand, approximately 15 litres of potable water* and 1 breathable cloth cover or towel.

***A Zeer Pot with a 12 kg food capacity**

***Using dirty water can contaminate the food in the inner pot.**

Similarly, the sand must be free of contaminants like hydrocarbons.



Step 1: outside pot

Add a layer of sand to the bottom of the pot thick enough to ensure the internal pot is at the same height as the external pot.

Add water to make sand moist.

Step 2: inside pot

Place the inside pot within the outside pot. Caution: the pot must be stable and sit on the first layer of sand already placed on the inside of the outside pot.

Step 3: sand

Fill the gap between the two pots with successive layers of sand...

Step 4: water

...without forgetting to wet the sand at each layer.

How it works

The Zeer pot is made from **2 clay pots (or terracotta)** set one inside the other separated by **a layer of moist sand**. The sand is what cools the system. **The water in the sand needs energy to evaporate.**

Thanks to the **heat** of the inner pot, it will supply the needed **energy** to evaporate the water. This **thermal reaction** causes the temperature inside the inner pot to drop and **thereby keep the food fresh.**

Utilisation

- 1- Place the system in a dry, ventilated area, away from direct sunlight.
- 2- Fill the Zeer Pot with foodstuffs.
- 3- Keep the breathable cloth cover moist.
- 4- Add water to keep the sand moist, usually twice a day.

Food items can keep for 15 to 20 days longer than if left in the open and vegetables retain their vitamins.



Ex N°4: Cooking with no-waste recipes

BANANA-BREAD

Ingredients (for 10 people)

150 g of rice flower + 50 g of corn flower (dry)
120 g of raw cane sugar (dry)
1 teaspoon baking soda
1 teaspoon baking powder

2 very ripe bananas
150 mL warm water
70 mL vegetable oil
100g black chocolate (dry)



Recipe

- 1- Mix dry ingredients
- 2- Puree bananas with the oil and warm water then add dry ingredients.
- 3- Cook for 5 minutes at 180 °C then for 11 minutes at 160°C.

Chef's advice:

We tend to let our **bananas over-ripen** and throw them out quickly...all you need is to add the banana puree to a standard cake mix and that's all there is to it! You can try it with other **damaged in-season fruit** like apples, pears...it's always tasty!



BREAD PUDDING «PIZZA» STYLE

Ingredients (for 2 people)

1 day old baguette
2 eggs
20 cL of partly skimmed milk

300 g of in-season vegetables
500 g of left-over cheese or mozzarella
fresh herbs (basil) or olives/walnuts

Recipe

- 1- Cut the baguette lengthwise
- 2- Break and beat the eggs into a large dish, add the milk and beat the mixture. Let soak into the bread at least 10 minutes and then turn the bread over.
- 3- Pre-heat the oven to 200°C. You can either use a pre-greased pan or an oven tray.
- 4- Wash and cut the vegetables into cubes or slices. Slice the cheese.
- 5- Place the baguette halves into the dish or pan. Place the vegetables and the cheese on the bread. Season with salt.
- 6- Optional - before cooking you can add olives or walnuts and after cooking add fresh herbs (basil, rocket lettuce).
- 7- Cook for about 10 minutes. The bread should be lightly toasted on the sides. Add fine-ground pepper and it's ready!

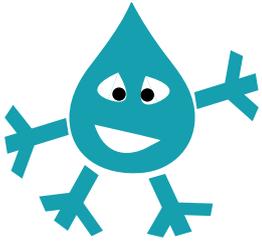
Chef's advice:

The idea here is **not to waste bread or cheese**. But it's also **important to eat vegetables in season!** In the **spring**, you can garnish the bread with asparagus, cauliflower or turnip. In **summer**, tomatoes, bell peppers, aubergines, zucchini...In **fall** and **winter** squash (butternut, pumpkin) spinach, cabbage, carrots (remember to pre-cook)...



Organic, local and in-season!
This is the winning combination for recipes respectful of the environment and our health!

WATER FAMILY GAMES



Go to our internet site: waterfamily.org/wateracademie/ and download our open source games. With each game you'll learn more about each theme from this guide. You can print out the game board, questions cards and play in class, with your family or friends!

1.



THE WATER CYCLE GAME: WATER ODYSSEY

The objective is to understand the importance of the source of life and learn how to protect it across the 4 different geographic terrains: oceans, valleys, plains, mountains through 7 themes: agriculture, tourism, domestic water use, nature, transportation, industry, climat.

Concept co-created with Agence de l'Eau Adour-Garonne and SUEZ

2.



THE HUMAN WATER CYCLE GAME: THREATS AND RESOURCES

Learn about human impacts in accessing water resources for us as individuals, farmers, industry, and learn how to manage this resource.

Concept co-created with CACG (Compagnie d'Aménagement des Coteaux de Gascogne), l'Agence de l'Eau Adour-Garonne et Écocène

3.



SPOT THE DIFFERENCE IN BATHING WATER QUALITY GAME

Learn about how water quality standards are designed and different kinds of pollutants in the water we swim in.

Concept co-created with Communauté d'Agglomération du Pays Basque

4.



THE DOMESTIC WATER CYCLE: THE WATER GAME

Identify our impacts on water and learn how we can consume and pollute less in the different parts of a house.

Concept co-created with Agence de l'Eau Adour-Garonne and SUEZ

5.



THE ECO-SENSITIVE COSMETICS GAME

Learn how to make a low-impact sun screen, good for your health and the environment.

Concept co-created with EQ

6.



IN MY PLATE, OUR BASQUE COUNTRY GAME

Learn about the connections between the food we eat, our health, water, and landscape.

Concept co-created with Euskal Herriko Laborantza Ganbara and Ikas bi

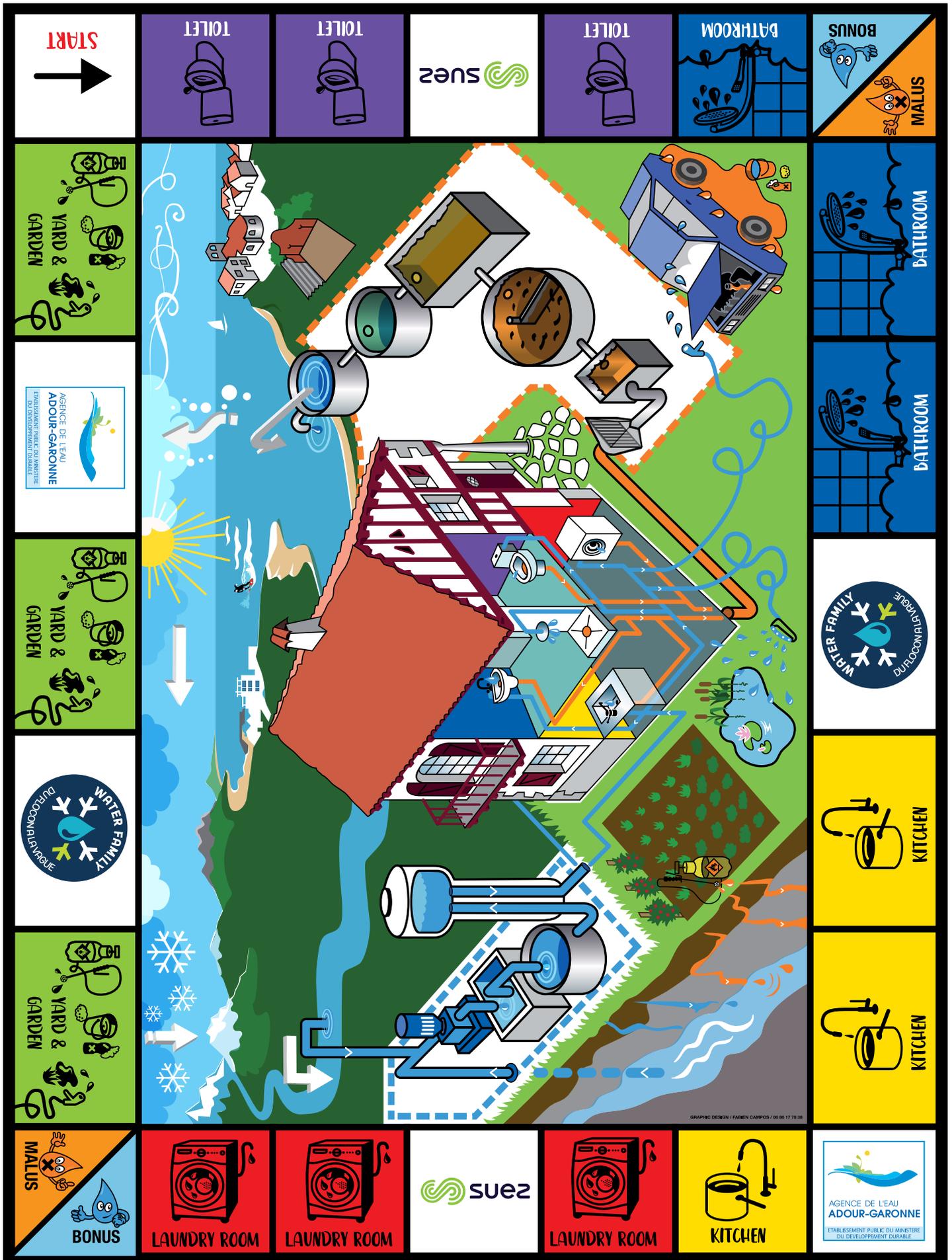
THE WATER CYCLE GAME: WATER ODYSSEY

To start playing, you'll need a dice, pawns or tokens, the downloaded questions, the notes and the rules of the [Water Cycle Game](http://waterfamily.org/water-academie/) at waterfamily.org/water-academie/



THE DOMESTIC WATER CYCLE: THE WATER GAME

To play, you'll need a dice, pawns or tokens, and a download of the questions, notes and rules of the *Water game* at waterfamily.org/water-academie/



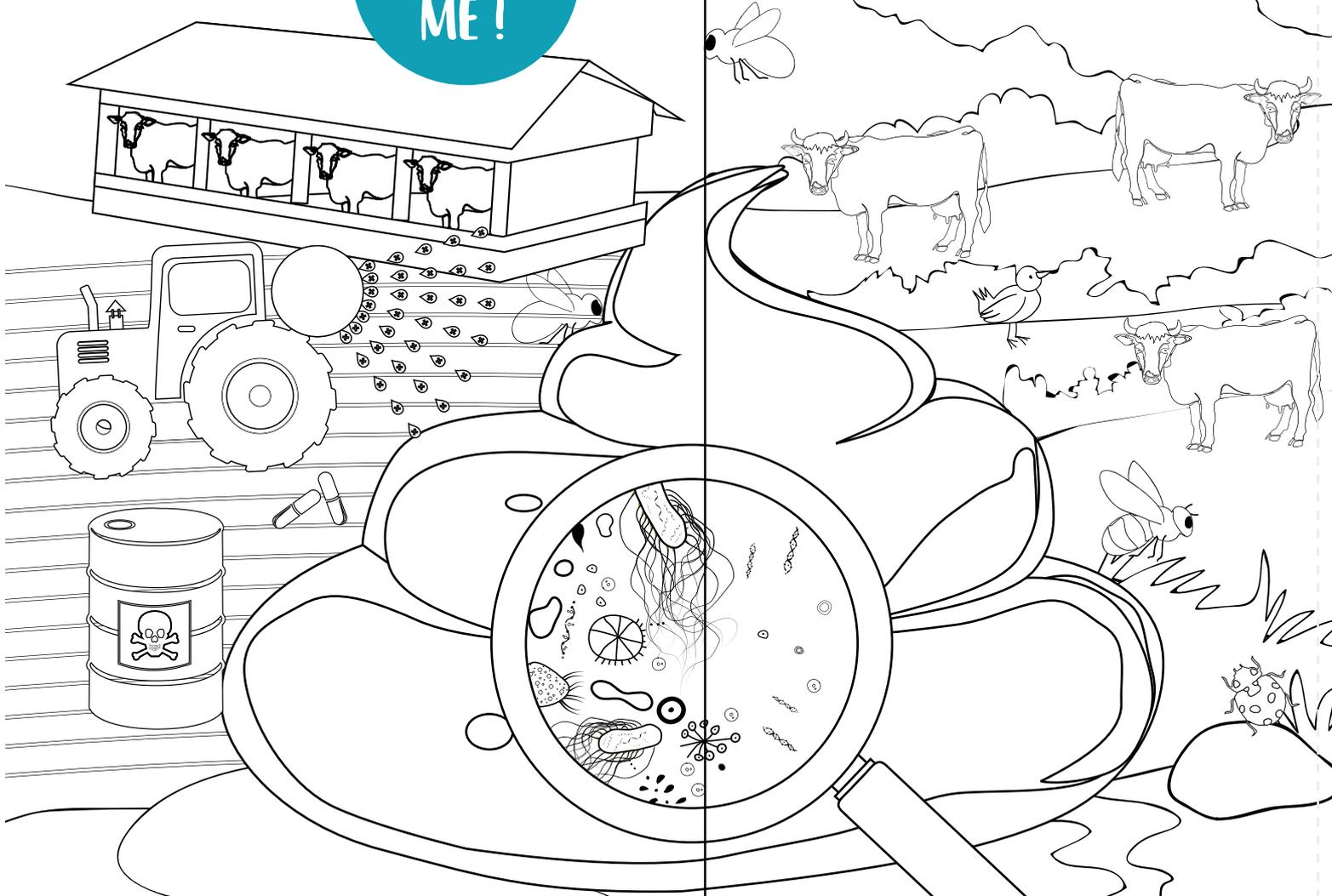
GRAPHIC DESIGN / FABIEN CAMPOS / 06 95 17 79 30

INTENSIVE
INDUSTRIAL
AGRICULTURE

The hidden cycle of MANURE

SUSTAINABLE
ORGANIC PEASANT
AGRICULTURE

COLOUR
ME!



With intensive industrial agriculture, manure contains infectious bacteria (E. coli, fecal coliforms...), residual treatment drugs, pesticides, chemical fertilizers, and endocrine disruptors.

These pollutants persist in the environment and don't degrade naturally, washing into streams, the ocean and our bodies

ATER
MORE POLLUTED

Without chemical additives, cow manure from organic peasant farming can be bio-degraded naturally, be absorbed in the soil, good bacteria, insects, birds: biodiversity is protected.

Eating organic, local and in season is choosing an agricultural model that preserves water quality and our health!

ATER QUALITÉ
PROTECTED



WATER FAMILY

DU FLOCON À LA VAGUE

Pour le modèle rendez-vous sur waterfamily.org/water-academie/

THE WATER ACADEMY

OBJECTIVE? RAISE **AWARENESS AND EDUCATE KIDS** IN PROTECTING WATER AND OUR HEALTH **EVERYWHERE IN FRANCE** VIA:

1. Learning phase

Education is the best way to raise interest and change habits.

-> 1 child made aware = 7 informed adults

-> up to 20 years of age, young people build their personal culture that will inform their future decisions.

Our mission: raise awareness and plant the seed of change by sharing stories, stories that are responsive to the new environmental challenges, stories where together we can change the world of tomorrow.



2. The game phase

Our approach and our tools can be adapted to every level at school so that **learning, playing, experimenting and doing is applied while having fun with what is being learned.**

3. The experience phase : Odyssey Juniors

In a festive end of year atmosphere, the Odyssey Juniors (Biarritz, Saint-Jean-de-Luz, Bayonne, Auray, Brest, Chamonix, etc.) are **brought together** for a chance to exchange and share the Water Responsible program.



ACTING TOGETHER AT THE SOURCE

3 steps to change the world

1. Education

With the help of this guide, explore water from A to Z and where you'd like to start taking part: cosmetics and household products, your stuff, your clothes, how get around and especially the food you eat!

Step by step, your eco-actions will become habits...

Responsibility drives solidarity.
Follow our Water Responsible advice!



2. Buy Responsibly

Have fun with your parents buying eco-responsible products and cooking with recipes from the practical exercises. Plant a tree, make your own products, invent a low-tech.... You can also assess your own H2O footprint: www.empreinteH2O.com

Become Water Wise!

Empreinte
H₂O.com



3. Reconnect with nature

Enjoy nature, discover natural landscapes, join in with water protection or awareness Water Family Days and share your eco-actions to save water and our health at: contact@waterfamily.org

Join the Water Family!



JOIN THE WATER FAMILY www.waterfamily.org



WATER FAMILY
DU FLOCON A LA VAGUE

Starting in 2009, the Water Family works on awareness building with the general public, the younger generations, business and regional water authorities in water protection. Sports champions are also at our side in this awareness-building mission. Our objective is to highlight patterns of water use and pollution, point to good practices, and provide positive actions so that everyone can take part.



The water agency, Adour-Garonne is partnered with the Water Family since its inception. The educational theme of this partnership matches the awareness and knowledge mission that the Agency has developed over several years. The Agency strives to promote: upstream / downstream partnerships for all stakeholders / resource and water quality protection.

Production : G. Oyarzun, R. Hermen, M. Thenet, S. Mauriac, S. de Labarre, C. Benjamin Parisot, E. Mérat, M. Bréchu et toute la Water Family
Printed on sustainable forestry paper with vegetable based inks. All of our CO₂ emissions are offset with PUR PROJECT.
For all enquiries on this guide, please send an email to pedagogie@waterfamily.org