La Fresque Océane
The Ocean Collage

© Alice Vitoux

La Fresque Océane/The Ocean Collage - 3 lots/3 lots

Présentation de l'activité/Activity Presentation	15 minutes	
Lot 1 : Apports de l'océan/Input from the ocean	20 minutes	
Lot 5 : Changement climatique/Climate Change	20 minutes	
Lot 6 : Pollutions/Pollutions	20 minutes	
Finitions de la fresque/Finishing the collage	15 minutes	
Présentation du travail des équipes - Débat	30 minutes	

Les sources

La fresque s'appuie sur les rapports des organismes officiels et internationaux qui synthétisent ou produisent de la science.

Les rapports du GIEC, Groupe d'experts Intergouvernemental sur l'Évolution du Climat
Reports by the IPCC, the Intergovernmental Panel on Climate Change

Organisation Maritime Internationale
International Maritime Organization

Plateforme intergouvernementale scientifique et politique sur la biodiversité et les services écosystémiques
Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

Food and Agriculture Organization of the United Nations

Institut Français de Recherche pour l'Exploitation de la Mer
French Research Institute for Exploitation of the Sea

Agence de la transition écologique
French Agency for Ecological Transition

Établissement national des produits de l'agriculture et de la mer
National Establishment of Agricultural and Seafood Products

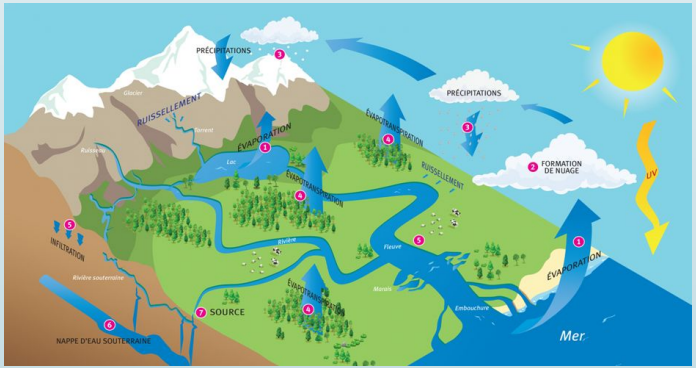
Les services que nous rend l'océan
Services provided by the ocean

- Chaque group répond à la question "Que nous apporte l'océan ?" sur la feuille qui est sur votre table.
- Each group answers the question "What does the ocean bring us?" on the sheet of paper on your table.

Ressources en eau/Water resources

The ocean covers almost 71% of the Earth's surface, and is known as the blue planet.

And it's part of the great water cycle.



One mondial Ocean Seen by a fish

Ressources médical et paramédical
Medical and paramedical resources

An universal blood

1er transporteur universel d'oxygène, capacité à lier 40 fois plus d'oxygène que l'hémoglobine humaine

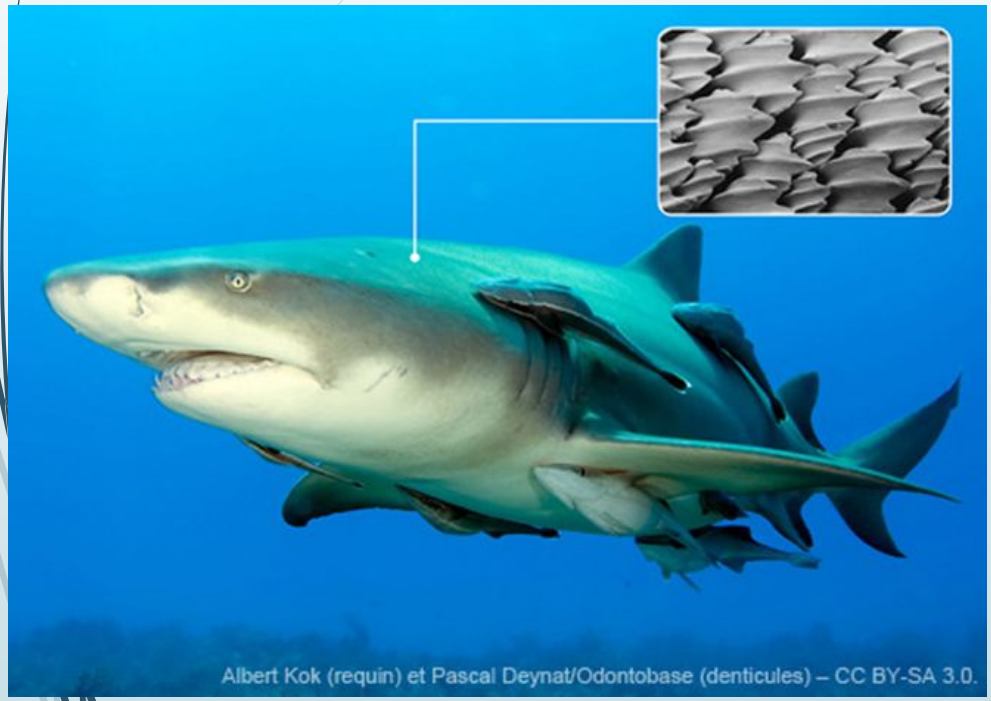
- 1st universal oxygen carrier, capable of binding 40 times more oxygen than human hemoglobin
- This sand worm has an extraordinary blood supply that is currently used to transport transplants for organ donation.

Protection du littoral/Coastline protection

Mangroves: trees with large roots that are regularly covered by water of varying salinity.

Mangroves save lives. This was demonstrated during the tsunami that devastated the Indian Ocean coastline in 2004. Studies show that 100 meters of dense mangroves alone can reduce the destructive energy of a tsunami wave by almost 90%. It is therefore vital to protect these natural ecosystems.

Bioinspiration/Bioinspiration



Sharks are characterized by their hydrodynamics. By studying their skin and the interweaving of skin denticles, engineers have devised a paint (for boats and planes) that reduces the energy used to move.

Les objectifs de développement durable
Sustainable development objectives

- In 2015, the UN defined 17 SDGs (Sustainable Development Goals) to achieve a better, more sustainable future for all
- To reach in 2030
- 17 SDGs to meet the global challenges we face
- The goals are interconnected
- SDG14, aquatic life, is interconnected with the other 16.

Changement climatique/Climate change

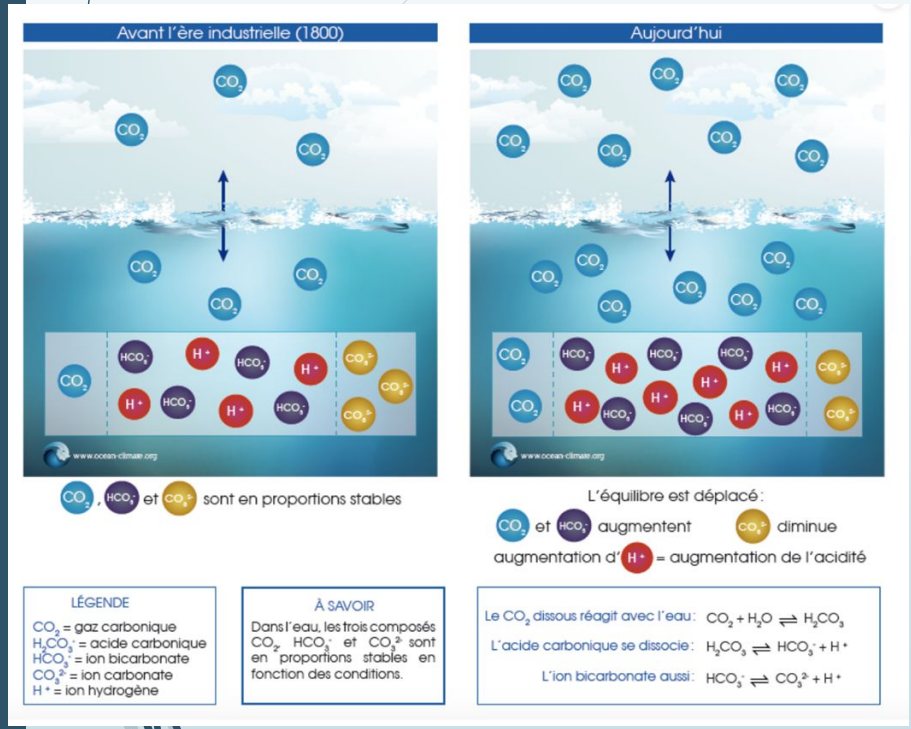
Source : Convention Citoyenne pour le Climat

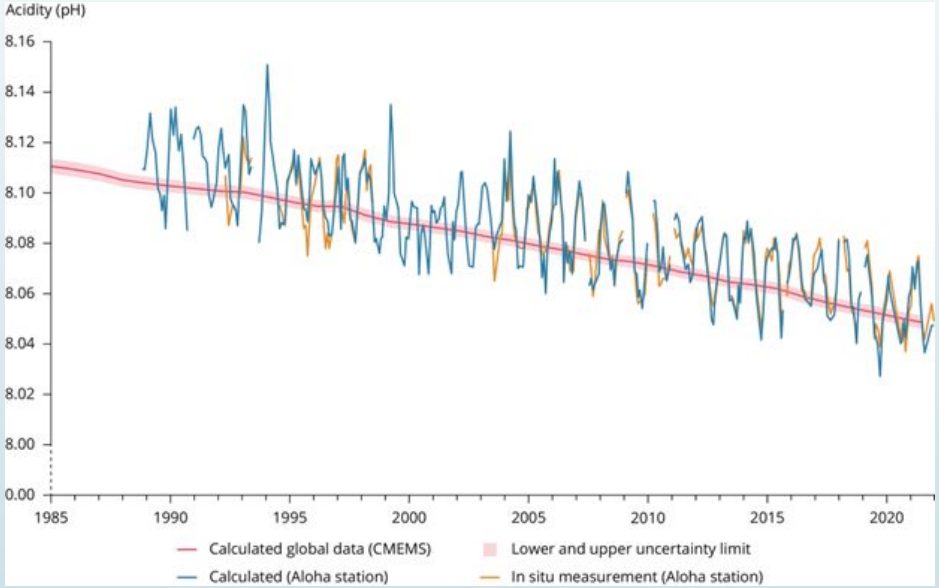
Do you know what the earth's temperature would be if there were no atmosphere and no natural greenhouse effect?

- 18°C

Acidification/Acidification

The pH of the ocean was 8.2 in 1800, and is 8.1 now (increased by 30%).





Decrease in ocean pH measured at Aloha station (University of Hawaii) and annual average pH of surface seawater reported worldwide (Copernicus Marine Service)

Canicules marines/Marine heatwaves

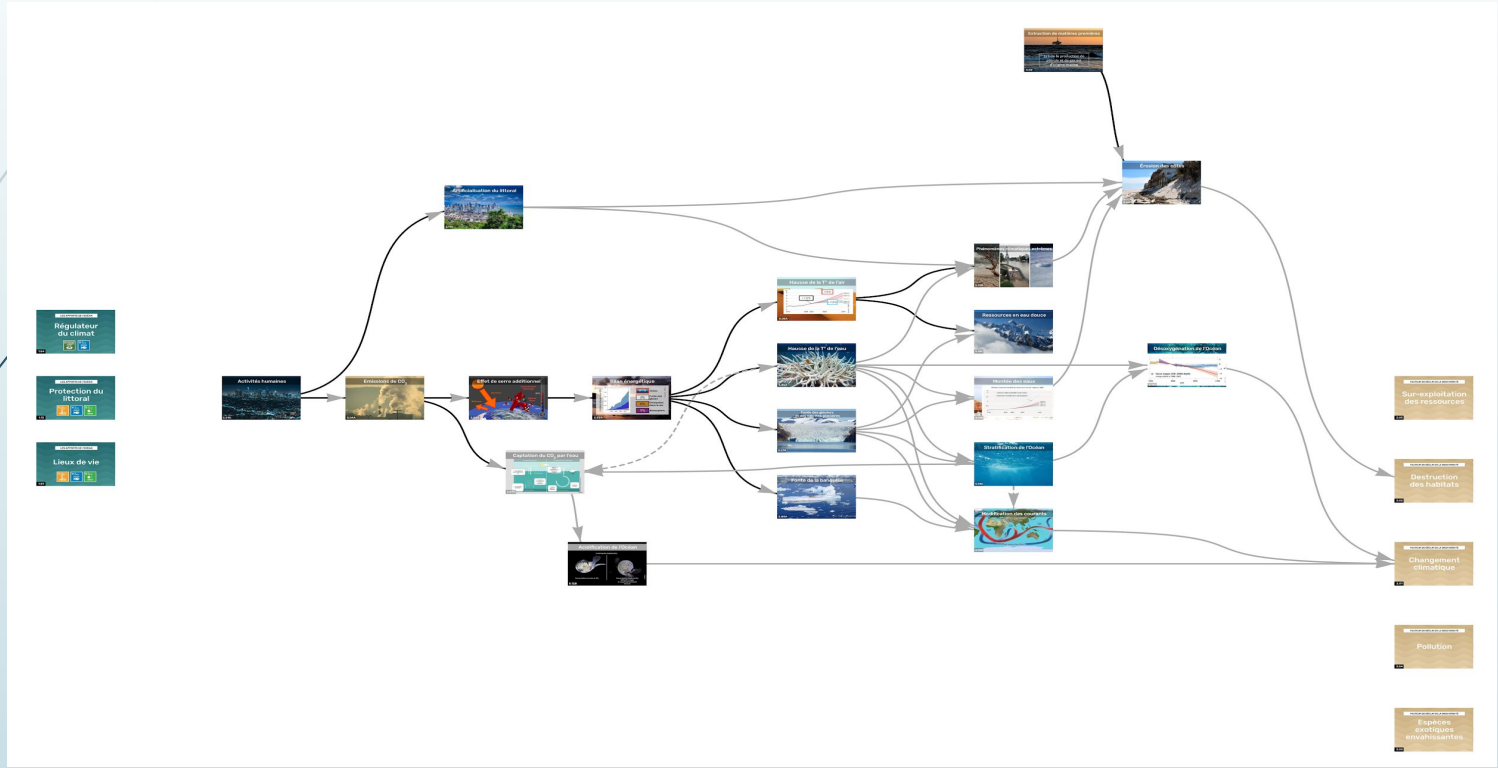
Coral reef bleaching

During marine heatwaves, corals expel the algae that live in their tissues.

The process is reversible, but if the water remains warm for too long, the corals will die.

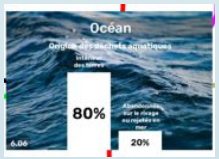
Without symbiotic algae, corals appear white (their tissues become transparent and their calcareous skeleton is visible).

Résolution Lot Changement climatique
Resolution Lot Climate change

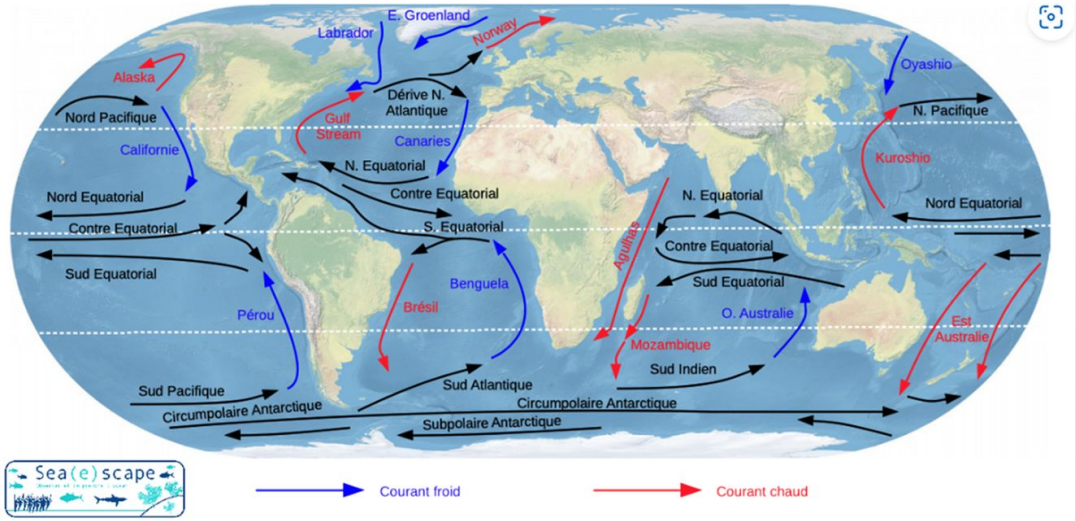


Pollutions/Pollutions

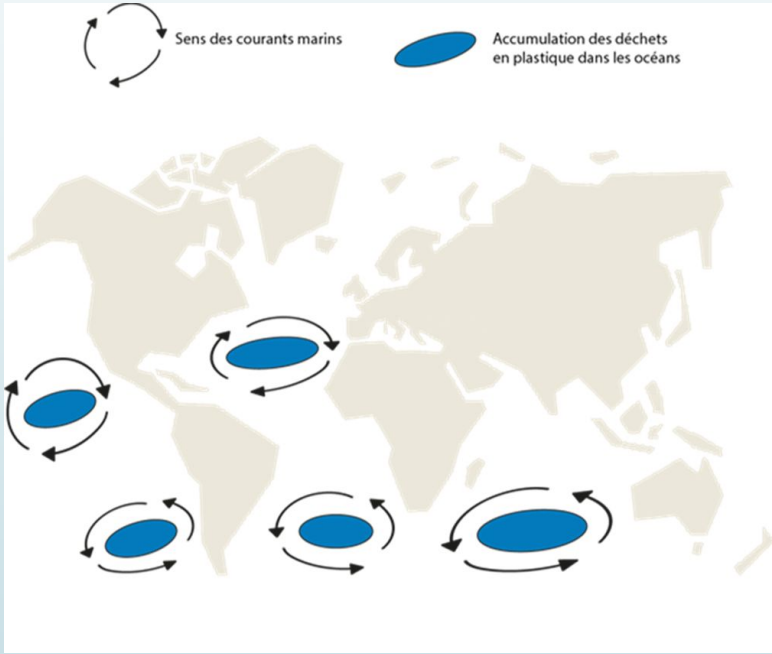
- Display out the 3 “types of pollution” cards (biological, chemical and plastic) and the “Wastewater treatment plant”, “Watercourse” and “Ocean” cards.
- Choose a color for each type of pollution and draw the arrows with the color corresponding to the type of pollution.
- Think of a list of individual or collective actions/innovations/solutions in the field of pollution and write them on the top or bottom of the mural.



Pollution plastique/Plastic pollution

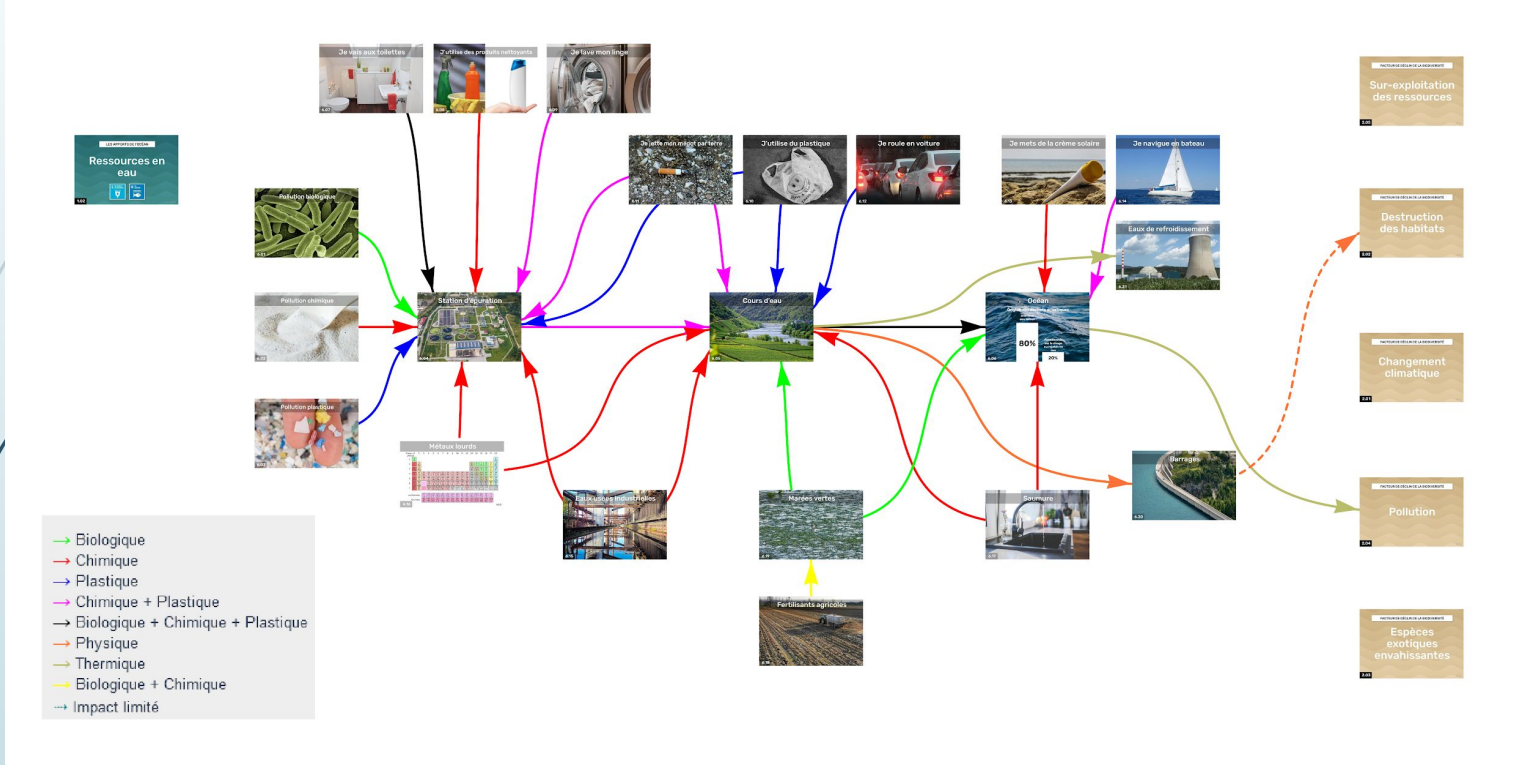


Les vents et la rotation de la Terre créent la circulation de l'eau en surface
-> les courants marins



Surface circulation is linked to winds and the Earth's rotation.

Résolution Lot Pollutions/Resolution Lot Pollutions



Finition de la fresque

- ★ Donnez un titre à votre travail
- ★ Give a title at your work
- ★ Ajouter des couleurs, des symboles, des mots-clés
- ★ Add colors, symbols, keywords
- ★ Faites une photo de votre travail
- ★ Take a photo of your work
- ★ Réfléchir au message : vous avez 30 secondes pour transmettre à votre famille/vos amis ce que vous venez de découvrir, avec des mots très simples. Vous leur dites quoi ?
- ★ Think about the message: you've got 30 seconds to tell your family/friends what you've just discovered, in very simple words. What do you tell them?
- ★ Écrivez ce que vous vous engagez à faire pour sensibiliser le public aux enjeux de l'océan ou pour préserver sa bonne santé !
- ★ Write down what you're committed to doing to raise public awareness of ocean issues or to keep the ocean healthy!

Les messages clés/Key messages

1. L'Océan est essentiel pour notre survie (ressources alimentaires, eau douce, régulateur du climat...), et de manière plus générale, il est central dans le fonctionnement de nos sociétés (économie, culture, transport...).

1. The ocean is essential to our survival (food resources, fresh water, climate regulator...), and more generally, it is central to the functioning of our of our societies (economy, culture, transport...).

2. L'Océan est cependant fortement menacé par nos industries et donc nos comportements individuels et collectifs.

2. However, the ocean is under serious threat from our industries, and hence from our individual and collective behavior.

3. Protéger l'Océan, c'est œuvrer pour l'avenir de la planète, et pour cela nous avons tous des leviers d'action : dans notre quotidien, dans nos choix de consommation, par notre mode de vie, nos vacances, nos engagements associatifs, politiques, ...

3. Protecting the Ocean means working for the future of the planet, and to do that we all have levers for action: in our daily lives, in our consumer choices, in our lifestyles our lifestyle, our vacations, our commitments to associations and politics...