

SUSTAINABLE DEVELOPMENT
Anglais en série Technologique
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(à partir du programme suggéré par collègue technique)

I) Watch video1: sustainability explained through animation (1'.58'' / travail d'1h)

<https://www.youtube.com/watch?v=B5NiTN0chj0>

- a. Watch the video in small groups. (2 or 3 times) (Il faut 1 salle avec ordi)
- b. Find a definition for sustainability. (Each group will give their answer orally to the class / teacher chooses the best one and writes it on the board...)
- c. Find the 4 care instructions that we need to follow if we want to live sustainably. (orally + these will be written on board and notebook)
(Il est possible de regrouper la classe pour vérification avec arrêt sur vidéo avec prof si temps restant)

II) Watch video number 2 sustainability film for kids (2'.58'' / travail d'1 h)

<https://www.youtube.com/watch?v=IT9iHuK9Do>

- 1) Watch the beginning of the video shown by teacher.
 - a. Who does the character with the shape of a globe represent?
 - b. Teacher stops the video just before the answer is given.
In the kitchen, how can you make a contribution to sustainability?
Complete the board of the cartoon orally first then take the notes.

It's easy to do something good for the environment in the kitchen

- Close the fridge immediately to save energy
- Use a lunchbox instead of a new paper bag every day

- 2) Watch the following extract
Same work

It's easy to do something good for the environment in the living room

- Switch the TV off instead of using standby
- Turn off the lights when you leave the room

- 3) Watch the end of the cartoon
Same work

It's easy to do something good in the bathroom

- Switch the water off if you don't need to
- Use towels more than once

NB. plusieurs développements possibles avec 'you must / you can't / you should...'

III) Life cycle assessment (2 à 3 heures selon effectif)

As consumers, we buy millions of products every year. And just like us, these products have a life cycle. Life cycle assessment is the process of evaluating the total effects that a product has on the environment over its entire existence.

From the extraction of raw material to the end of life recycle, reuse, disposal...

Students work in small groups : they choose 2 products and prepare a grid with the pros and cons

To do so, you can use different documents on internet:

Diesel fuel and petrol, plastic packaging and paper packaging, natural lawn and artificial lawn, polystyrene chips and corn chips, saltwater pool systems vs chlorine pool systems etc....

**EO: One or 2 of students of the group will explain it to the class orally.
(Other students are welcome to ask questions)**

Conclusion

Question to students : Why do life cycle assessment? How can it contribute to sustainability?

Students try to find answer with the help of the teacher (group work possible)

- minimize the magnitude of pollution
- conserve non-renewable resources
- conserve ecological systems
- develop and utilize cleaner technologies
- maximize recycling of materials and waste
- apply the most appropriate pollution prevention and/or abatement techniques

IV) Sustainable Debate : The development of Asian countries (2 à 4 hrs)

Is sustainable development compatible with a fast development?

I used videos on *YouTube* but had to cut one of them which was too long.

The videos look at the challenges now facing Asia : how to develop their economies while at the same time handling the growing pressure from the developed world to protect the environment, fight pollution and deal with climate change.

a. Students are given a work sheet for each video to help them understand.

They work in small groups and prepare an oral account on what they have understood.

- Video 1 on the development of tourism in Vietnam. (BBC/ 3.09 mns)
<https://www.youtube.com/watch?v=u4BrH2crccQ>
- Video 2 on the growing car industry and air pollution in India (Financial Times/4.55mns)
<https://www.youtube.com/watch?v=j4AmRtelWbc>
- Video 3 on palm oil exploitation in Malaysia (vidéo trop longue : 10.55mns: j'ai utilisé format factory pour la couper et en garder 6mns.)
<https://www.youtube.com/watch?v=ch7THUnLyRA>

b. One or a few students of each group will in turn explain the situation to the class.

The pros and cons will be written on board.

The other students will be given the opportunity to ask questions to these students.

(A general debate may be organized by teacher at the end of this work. (ce débat doit être préparé à l'avance et les élèves auront des consignes précises)The Asian countries want the same fast development as the western countries. Are we allowed to stop them?

Can we have a low carbon future with a burgeoning free market economy?

Pour ma part, j'ai opté, pour ce qui suit après avoir trouvé des idées dans science et vie....

V) Give an example of a new scientific breakthrough to help the sustainable development of our planet.

Exposés des élèves: exemples proposés par prof/ autres exemples des élèves possibles

- **Skytran**

The Israel Aerospace Industries campus near Tel Aviv will soon host an experimental new method of urban travel, developed by a company that wants to change how people get around large cities.

According to the planners, the SkyTran system will provide a cheaper, faster, more environmentally friendly and comfortable alternative to cars and buses, reducing congestion and pollution in Israel's largest metropolitan area.

SkyTran is a high-speed, energy-efficient, transportation system, designed to transport passengers in a safe, green, and economical manner. The system is a network of computer-controlled, 2-person "jet-like" vehicles employing state-of-the-art passive Magnetic Levitation (MagLev) technology.

- **El Hierro Island** will be the first autonomous world energy

The Spanish island of El Hierro, in the Atlantic, will launch in June 2015 a draft energy self-sufficiency, which will ensure one hundred percent of its needs from renewable energies.

- **Solar wind energy tower in San Luis** (New Mexico)

Change is in the wind for the quiet border town of San Luis. The farming community might soon be home to a massive solar wind tower - the sheer enormity of which would make it a new Arizona landmark.

NB. L'évaluation peut être envisagée dans la prise de parole des élèves tout au long du projet (EO en continue) mais on peut aussi, à un moment donné, demander aux élèves de revoir les notes prises avec le prof et leur donner un petit test écrit (EE) sur certains éléments communs donnés à la classe entière après leur avoir demandé de revoir précisément ces éléments.

TO HELP STUDENTS UNDERSTAND VIDEO NEW DELHI FACES POLLUTION CRISIS

USEFUL VOCABULARY

- (to) breathe : respirer
- Bronchitis : bronchite
- (to) ease: faciliter
- Filthy: sale
- Flyovers: autoponts ? bretelles d'autoroute suspendues
- Hazards: dangers
- Health: santé
- (to) increase: augmenter
- Liability: responsibility
- (to pour): ici : arriver en masse
- (to) tackle : s'attaquer au problème de
- (to) trigger : déclencher

TO HELP YOU UNDERSTAND THE VIDEO

1. **About what is said by the journalist at the beginning of the video.**

What happened 10 years ago in Delhi? What about now?

2. **Anumito Roychobury, director for science and environment**

What does he point out? Main idea ?

3. **A paediatrician**

Consequences for people's health

4. **A patient**

What happened last November?

5. **Victor Mallet, Financial Times**

What does he show?

What does the government do about the situation?

TO HELP STUDENTS UNDERSTAND THE VIDEO ON VIETNAM

VOCABULARY

Rickshaw : cyclo-pousse

Wage : salaire

Beyond : au-delà

Scramble for : s'arracher, se précipiter, faire des pieds et des mains

Smokestacks : cheminées

Hiring : embaucher

Shell : ici) la structure

Overwhelmed : submergé

QUESTIONS TO HELP YOU UNDERSTAND THE VIDEO ?

- 1) What is said in the introduction ?
- 2) What does the general manager of the Nam hai hotel think?
- 3) What does Peter Ryder say and why?
- 4) Has the journalist James Fahn the same opinion as Peter Ryder?
- 5) Who does Peter Ryder speak about? Does he think that he is concerned with sustainable development?

TO HELP STUDENTS UNDERSTAND THE VIDEO ON PALM OIL

VOCABULARY

Growth : croissance

To increase : augmenter

Income levels : niveaux de vie

Scheme : plan, projet

Plot : terrain

Crop : récolte

To slash (ici) : réduire

We can afford : nous pouvons nous payer

Supplier : fournisseur

Greenhouse gas polluter :

Welfare : bien être

Praise : louange

To curb bad practices :

Clean up your act ?

QUESTIONS TO HELP YOU

- 1) What is said in the introduction ?
- 2) What does Mr Chandran points out? Is he for the development of Palm oil or against?
- 3) What about the local producer of palm oil, Safidin Nordin?
- 4) What is the paradox that Camilla Toulmin underlines? What does Europe want and what is the consequence?
- 5) What does John Sauven (green peace) insist on?
- 6) Malaysia is becoming aware of the environmental problem ? What is their new initiative ?
- 7) What is the opinion of Carl Nielsen, director of United plantations?
- 8) What is the conclusion of the journalist ?

WHAT IS SUSTAINABILITY ? VIDEO 2 mns

Sustainability means that things can keep going, can sustain themselves, can continue into the future and go on forever.

From a human perspective, Sustainability for our planet means that it can continue to do what it was designed to do, provide fresh air, clean water, produce food and allow all a high quality of life forever.

Unsustainability means that it cannot and that's what where we are now.

20 years ago, scientists in Sweden developed a definition with 4 basic principles. These can be seen as the care instructions for our planet. If we follow them, it is good for our planet and because we are part of the system that is our planet, it is good for us too.

The care instructions are as follows:

- 1) Reduce our dependence on fossil fuels and heavy metals.
- 2) Reduce our dependence on synthetic chemicals that persist in nature.
- 3) Reduce our destruction of nature.
- 4) Ensure we are not stopping people globally from meeting their needs.

Demand for the earth services, clean air, water, food increases as the population increases and living standards rise but the earth ability to provide the services is declining because of the way we are living.

In our search for prosperity, growth and success, we are destroying the system that we, as humans are completely dependent upon: nature.

We, humans, have become a threat to our own way of life. The earth is a system and everything is connected: society, environment and economy.

To live sustainably, we need to follow the 4 care instructions and apply them to everything we do at home and at work.

If we follow these care instructions, we can work together to be sustainable and you will all have a better quality of life : we will waste less, we will pollute less and we will create more things we value in society.

While improving our planet's chances, we are providing us with the very things we need to survive.