The Ecocentric Approach

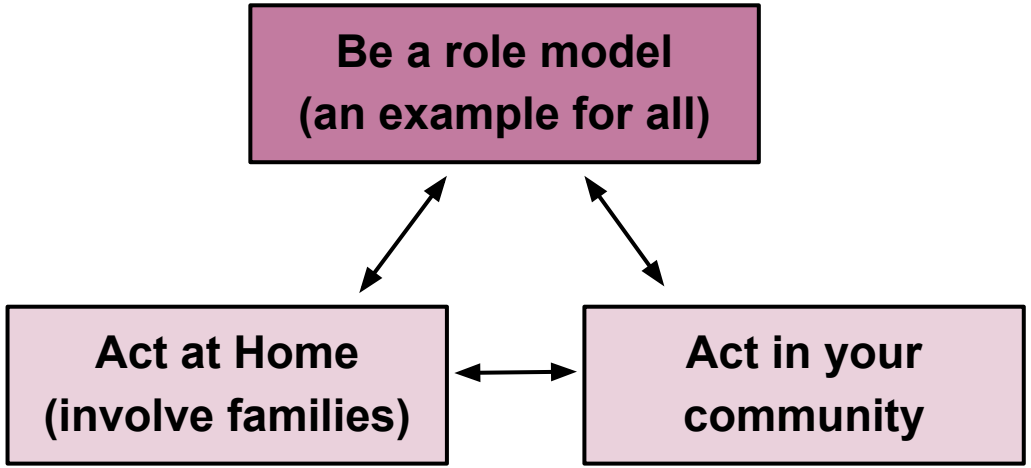
1. Sustainability
2. 4 R's
3. Ecocentrism
4. Compost
5. Climate Change

1. Intro to Sustainability

How can we educate to a Sustainable Culture?

EDUCATION
raise sensitivity

SOLUTIONS
practical activities



FIND A BALANCE and BE HAPPY for what you can do.
Do not set high expectations (hard to save the world - no short term visible rewards)

ACTIVITY

1. Intro to Sustainability

3 min reflection

- **What do you know about zero waste?**
- **What's the main issue in your school?**
- **What's the main issue in you daily life?**

1. Intro to Sustainability

WHAT IS SUSTAINABILITY?

Prioritising the needs of all life forms and of the planet by ensuring that human activity does not exceed planetary boundaries.

1. Intro to Sustainability

3 Pillars of Sustainability

environmental

social

economic

The 3 of them are related to each other
Social and Economic influence the Environmental

1. Intro to Sustainability

Bea Johnson

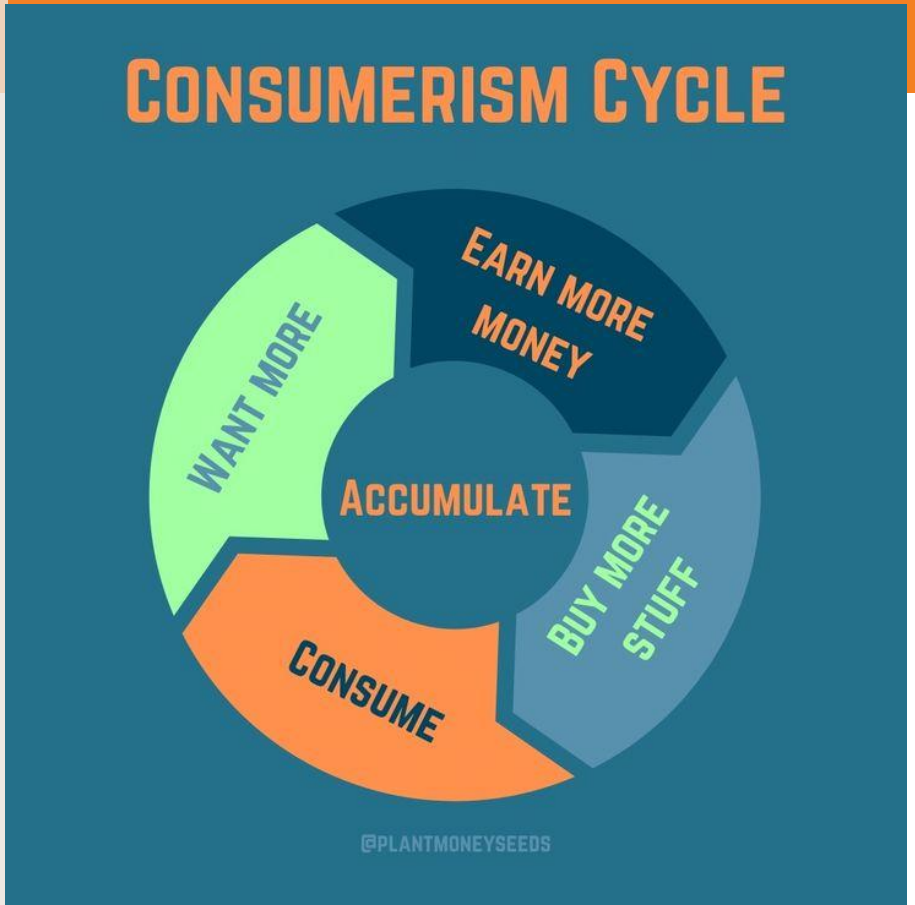
- The Book - Zero Waste Home
- 100 Tips - Zero Waste Home

“Recycling is an aspirin, alleviating a rather large collective hangover… overconsumption”

William McDonough,
Cradle to Cradle

europass Teacher Academy

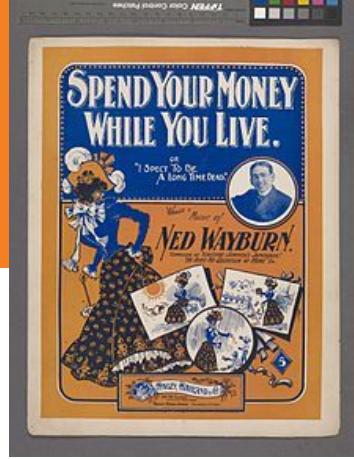
1. Intro to Sustainability



Consumerism is a social and economic order in which the goals of many individuals include the acquisition of goods and services beyond those that are necessary for survival or for traditional displays of status

1. Intro to Sustainability

How can we create a sustainable Culture?



MINDSET PRINCIPLES to limit the Culture of Consumerism

Appreciate little, simple, natural, sustainable things
VS
processed, popular, attractive

Find the beauty with your mind, not with your money

Appreciate the intrinsic value of every object

Learn to be happy with just a few things
VS
have anything - anytime - anywhere

europass Teacher Academy

2. The 5Rs

Or 4…?

REFUSE

what you don't need.
Say no to anything single-use.
THINK REUSABLE.

REDUCE

what you do need.
Choose products with less packaging and purchase in bulk when possible.

REUSE

anything that you can.
Invest in items that can be used more than once.

RECYCLE

what you cannot refuse, reduce, or reuse.
Remember recyclables should be EMPTY. CLEAN. & DRY.

[Importance of 4Rs - Refuse, Reduce, Reuse, Recycle]

2. The 5Rs

5Rs

“ROT”, turning organic waste into **compost**

Cutting waste is simple if you follow 5 steps:

1. **Refuse** what you do not need
2. **Reduce** what you do need
3. **Reuse** what you have / consume
4. **Recycle** what you cannot refuse, reduce or reuse
5. **Rot** (compost) the rest

europass Teacher Academy

2. The 5Rs

A **Sustainable Classroom** is a place of inquiry, discovery, and learning where questions like these are key to new behaviours:

- Do we need this?
- Can we use less?
- Can we reuse it?
- Can we recycle or compost it?
- Can we use it more efficiently?

[Zero Waste Schools Toolkit - Seven Generations Ahead]

It is an intentional shift toward creating a sustainable culture through increased awareness of the “stuff” in our classrooms and how we use it.

europass Teacher Academy

2. The 5Rs

Avoid **single use objects**.

- **Single use plastics**: Disposal plastic bags, bottle, cups, lids, straws, and flatware
- **Freebies**: Hotel room toiletries, party favors, food samples, swag bags from conferences/awards/events/festivals – “oh, but they are free”
- **Junk Mail**: Countless people transfer junk mail from a mailbox straight into the recycling without a second thought

europass Teacher Academy

2. The 5Rs

REDUCE

what you do need.
Choose products with less packaging and purchase in bulk when possible.

<u>Pairing Down</u> is the KEY:
Evaluate **past consumption**: Assess the true use and need for everything in the home and let go of the unnecessary through the process of paring down. Challenge yourself to consider letting go of things you always thought you had to have.

Less means less to worry about clean, store, repair, or dispose of later

Areas to consider include:

- reducing packaging; car usage;
- home size; personal effects (Do I need it?);
- technology (Can I do without?);
- and paper load (Do I need to print it?)
- can I buy a lesser amount (maybe in a concentrated form?)

europass Teacher Academy

2. The 5Rs

REUSE
anything that you can.
Invest in items that can be used more than once.

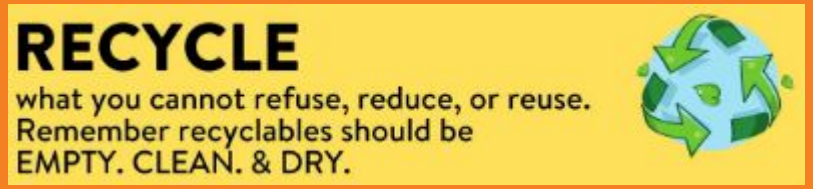
It's a **MINDSET**.
Many objects can be used in a different way.
Just **be creative**!

Reward students' creative behaviours

Extend the life of object through:

- **Repairing**: A trip to the hardware store or a simple call to the manufacturer will solve the problem in most cases
- **Rethinking**: Drinking glasses can double as pen holders, and pens can be refillable so there will be no need to buy new ones
- **Returning**: Sell to local stores things you don't need anymore
- **Rescuing**: Shipping boxes and single-side printed paper can be used again before recycled

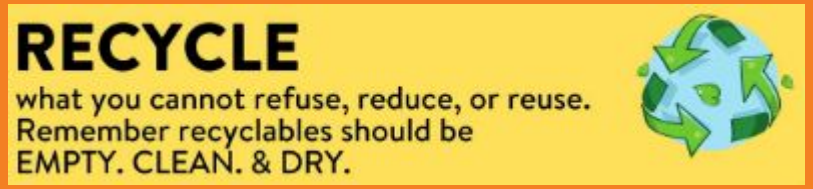
2. The 5Rs



BEST PRACTICES:

- Do some **background research**:
  - Check past recycling efforts at the school. Find out what worked, and identify any obstacles that may have kept the program from running smoothly in the past.
- Set up a **recycling team** and get students and parents involved!
- Conduct a **waste audit**
- Identify **what to recycle**
- Setting up **recycling stations** accordingly
- Set **measurable goals and rewards**
- **Publicize**, **educate** and **inform**

2. The 5Rs



KEEP IN MIND!!!

- Where are you going to **place** your bins?
- Choose the place according to **temperature and sun exposition**
- **Capacity** (one size does not fit all)
- **Restrictive Openings** (openings that are the shape of the material you're looking to collect – round, small openings for cans & bottles, long, narrow slots for paper, etc – will decrease contamination rates)
- **Signage & Label Customization** (you can use **Canva**)
- Adding **QR Code** with tutorials could help (or **HaloAR** alternatively)

ACTIVITY

REFUSE
what you don't need.
Say no to anything single-use.
THINK REUSABLE.

REDUCE
what you do need.
Choose products with less packaging and purchase in bulk when possible.

REUSE
anything that you can.
Invest in items that can be used more than once.

2. The 5Rs

Let's find in the school, things that are not exactly eco-friendly.

Use this TEMPLATE

For each object:

- **Choose which solution you would take**
- **Briefly describe the solutions (you can write on the back of the template)**

Let's use this special AI eco-friendly assistant to get further ideas:

europass
Teacher
Academy

2. The 5Rs

RECYCLE
what you cannot refuse, reduce, or reuse.
Remember recyclables should be
EMPTY. CLEAN. & DRY.

europass
Teacher
Academy

ACTIVITY

2. The 5Rs

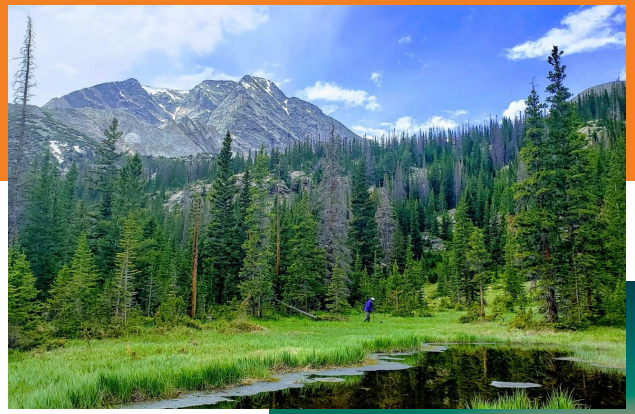
RECYCLE
what you cannot refuse, reduce, or reuse.
Remember recyclables should be
EMPTY. CLEAN. & DRY.

Let’s create our Sign system and informative labels

- **Use Canva (example) to design the panels with sign and information or make a photo-contest**

- **Add educational videos to your panels using QR codes or HaloAR**

3. What's Ecocentrism?



SO WHAT IS ECOCENTRISM?

AND HOW DOES IT DIFFER FROM SUSTAINABILITY?

Ecocentrism is a philosophy or approach that places intrinsic value on all living organisms and all natural environment, regardless of their perceived usefulness or importance to human beings.

"It's one of the main views on sustainability"

(from the GreenComp)

3. What's Ecocentrism?

ECOCENTRISM	SUSTAINABILITY
1. _____	1. Behaviour
2. No spatial limits	2. _____
3. _____	3. Refers to human activity
4. Mainly theoretical	4. _____

3. What's Ecocentrism?

biocentrism → the view or belief that the rights and needs of humans are not more important than those of other living things

technocentrism → Technocentrism is a value system that is centered on technology and its ability to control and protect the environment

anthropocentrism → regarding humankind as the central or most important element of existence, especially as opposed to God or animals.

3. What's Ecocentrism?

Living with an **ecocentric approach** and "learning for **environmental sustainability** has the potential to be a catalyst for change among young and adult generations, through the acquisition of sustainability competences."

(GREENCOMP AIM)

3. What's Ecocentrism?

2 historical references to investigate

Aldo Leopold
Philosopher

Wikipedia

Wikipedia

Rachel Carson
Scientist

List of resources - Ecocentrism

- Ecocentrism: What it means and what it implies
- Ecocentrism in Environmental Ethics - Video & Lesson Transcript | Study.com
- Ecocentric vs. Biocentric Philosophies | Definition & Examples - Video & Lesson Transcript | Study.com
- Ecocentrism: 10 Examples and Easy Definition (2023)
- Environment - European Commission

europass teacher academy online

ACTIVITY

4. Compost

How does your school garden looks like?

Let's share!

If you want, add:

- **Something you like**
- **Something that could be improved**
- **What is it used for?**

europass
Teacher
Academy

4. Compost

Compost is decomposed organic material, like food scraps and leaves, that transforms into **nutrient-rich soil**.

It's **nature's way of recycling** to nourish plants and reduce waste.

europass
Teacher
Academy

4. Compost

Composting reduces landfill waste, helps the soil, cuts greenhouse gases, and nurtures plants.

Fun fact: "Composting is like nature's slow cooker. But instead of making stew, you're making black gold for plants!"

europass
Teacher
Academy

4. Compost

Composting is being used in schools to significantly reduce the amount of food waste and improve the quality of your garden's soil

europass
Teacher
Academy

4. Compost

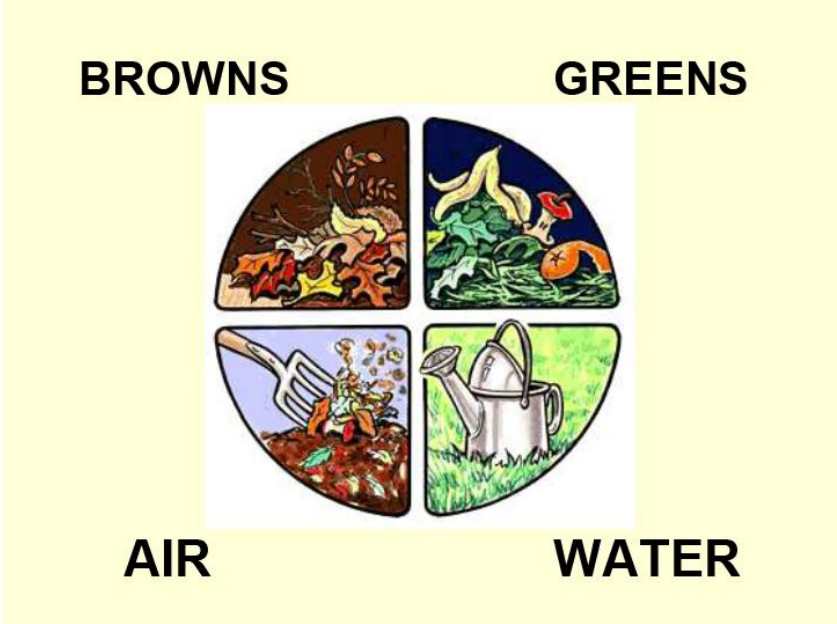
Composting needs the right mix of greens (wet and nitrogen-rich) and browns (dry and carbon-rich). Microorganisms do the hard work of breaking it all down!

4. Compost

Water keeps the compost moist, helping microorganisms break down organic material,

Air provides oxygen, which is essential for these organisms to thrive and decompose waste efficiently.

Without both, composting slows down or can become smelly and anaerobic.



europass
Teacher
Academy

4. Compost

There are different types of composting:

- **Traditional composting** uses piles or bins
- **Vermicomposting** involves worms to break down waste
- **Bokashi** is a fermentation method that works in airtight containers, even with meat and dairy.

4. Compost

Step-by-step video here

Vermicomposting

europass Teacher Academy

4. Compost

DO's

- ✅ Keep a good mix of greens (food scraps, coffee grounds) and browns (dry leaves, cardboard).
- ✅ Turn the compost regularly to give it air (oxygen is a must for happy decomposition).
- ✅ Chop up larger items (smaller pieces decompose faster).
- ✅ Add water to keep the pile moist (like a damp sponge, not soaking).
- ✅ Be patient—composting takes time!

DON'Ts

- ❌ Avoid meat, dairy, and oils—these can attract pests and smell bad.
- ❌ Don't overwater—a soggy compost bin slows the process and can smell.
- ❌ Don’t add diseased plants or weeds—they can survive in compost and spread.
- ❌ Don’t forget to cover—open bins can attract visitors like raccoons or rodents.
- ❌ No plastics or synthetic materials—compost is all about organics!

4. Compost

IN CASE WE STILL HAVE DOUBTS…

- How long does it take?
- How can I use compost when it's done?
- What activities can I do with my students?

Let's just ask our friend

…or study the document from FAO:
Preparation and use of compost

europass Teacher Academy

4. Compost

LEARN MORE ABOUT COMPOST

Organic waste in schools - Climate Choices

Check this “How to make Compost” Canva HERE

europass Teacher Academy

ACTIVITY

4. Compost

Let’s create our Guide for a school compost program

Check the example and design a step-by-step program to implement in your school.

- **How do you create a compost committee?**
- **What instrument do you use to get data about your waste?**
- **Who will you involve in this projects (parents, school cooks?)**
- **Which changes will you have to make in your school?**
- **Will you need money for this?**

Example:
6 Steps To Start An Organic Compost Program At Your School

europass Teacher Academy

Climate Change

1. Definition
2. Causes
3. Impact and consequences
4. Education

europass Teacher Academy

1. Definition

Did Climate Change exist in the past?

Wasn't the climate changing?

europass
Teacher
Academy

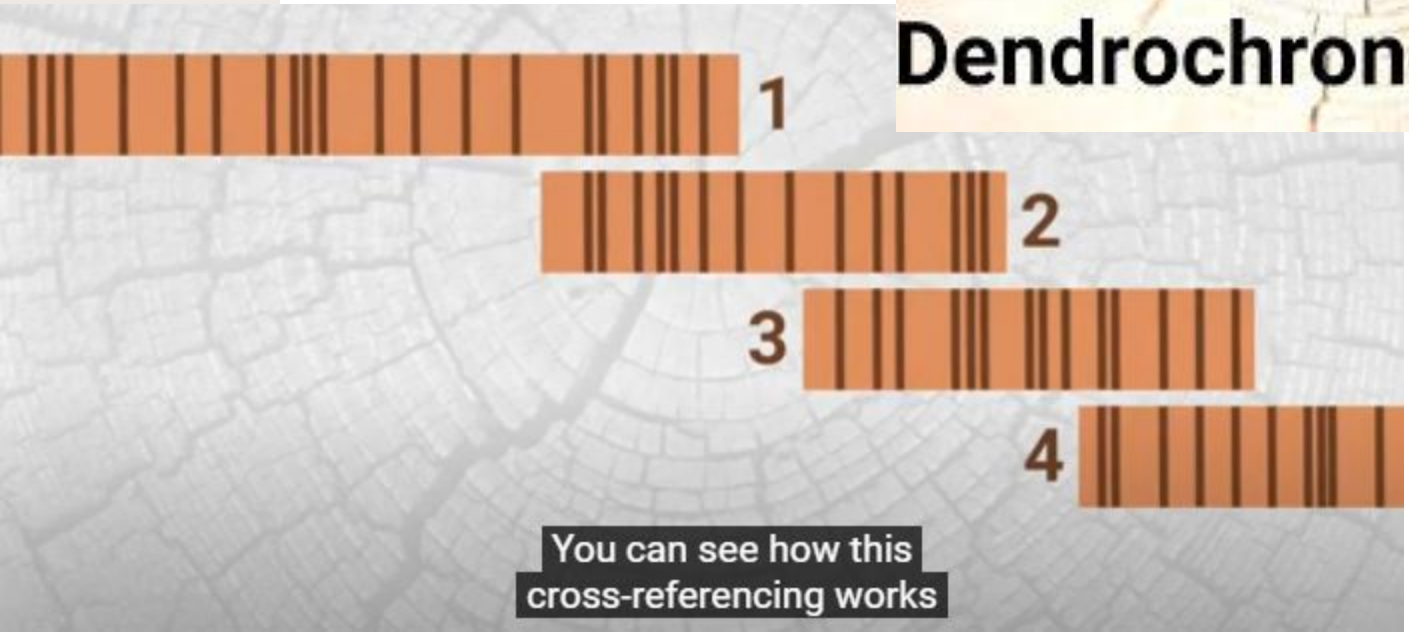
1. Definition

Climate change refers to the long-term changes in global weather patterns and average temperatures caused by human activity, particularly the emission of greenhouse gases such as carbon dioxide and methane

United Nations - climate action

Learn more about **ICE CORES** here **LINK**

1. Definition

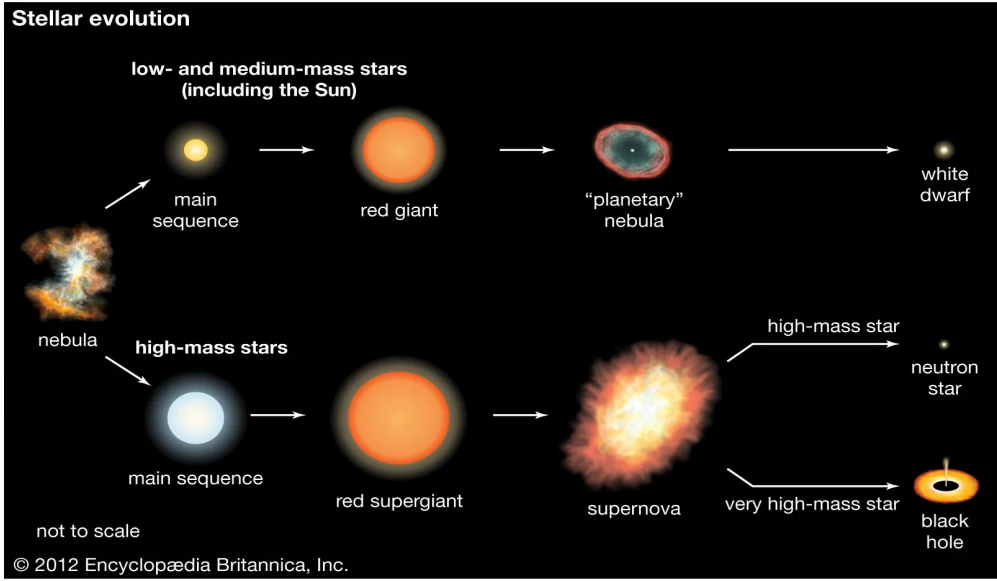


europass
Teacher
Academy

2. Causes

GROUP A: long term

- Sun evolution
- Atmosphere evolution
- Space objects' impact

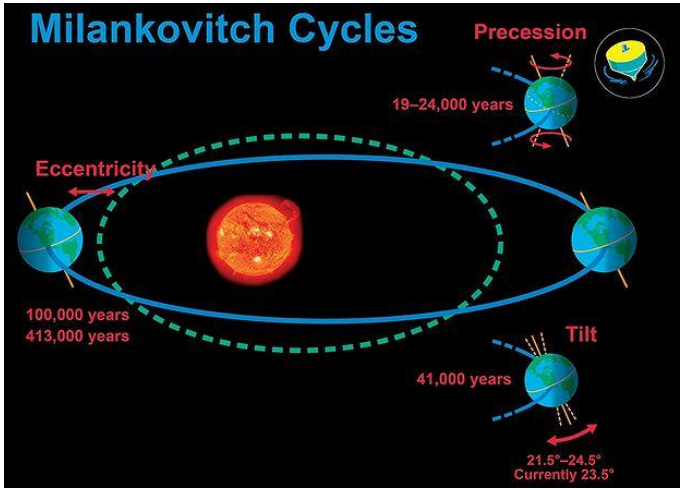


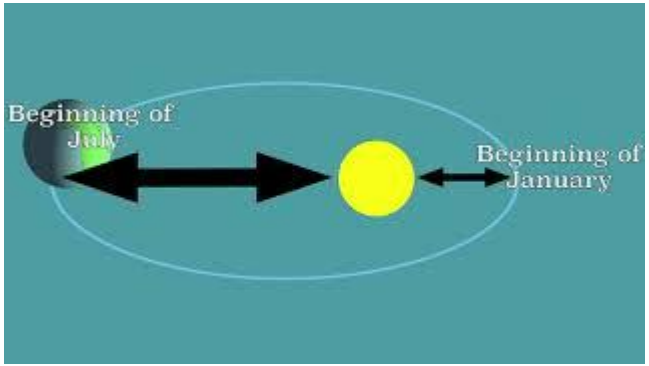
europass Teacher Academy

2. Causes

GROUP B: medium term

- Mountain ranges' evolution
- Milankovitch cycles (LINK)





europass Teacher Academy

2. Causes

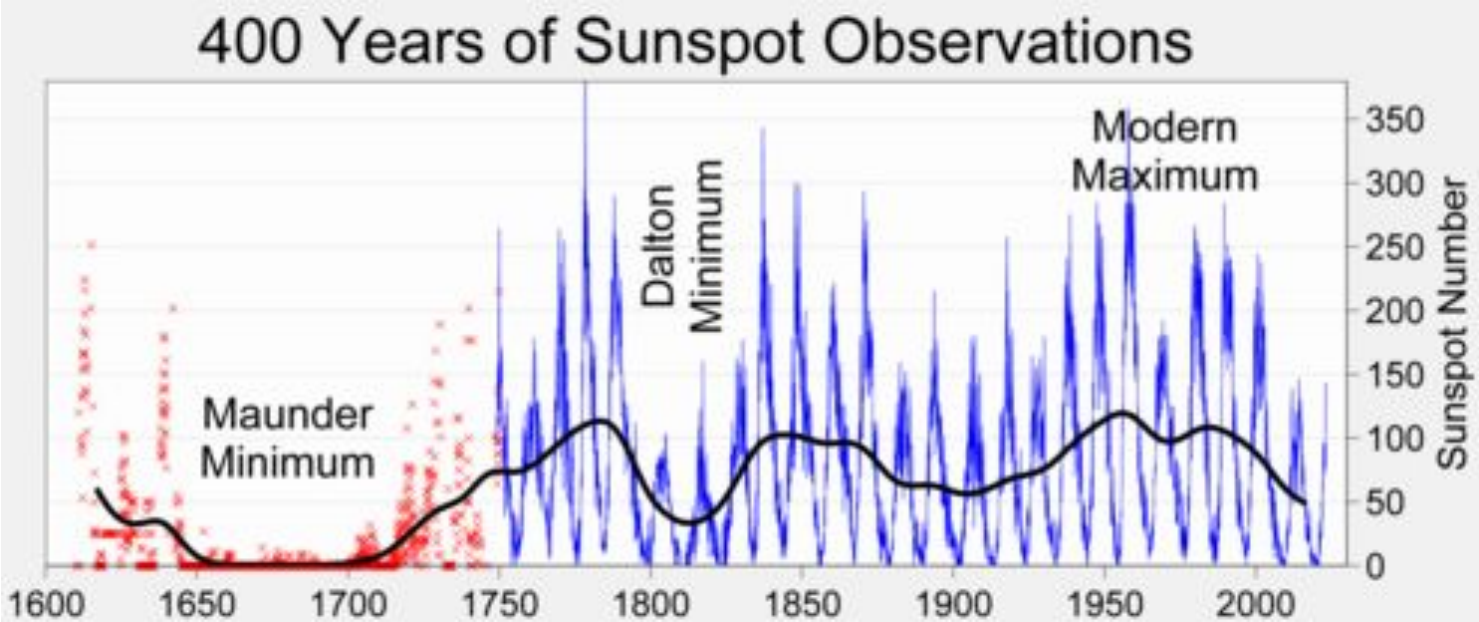
GROUP C: short term

- Solar activity (sunspots)
- El Niño events
- Human activity
- Explosive volcanic eruptions

europass
Teacher
Academy

2. Causes

Solar activity (sunspots)



Sunspots DATA

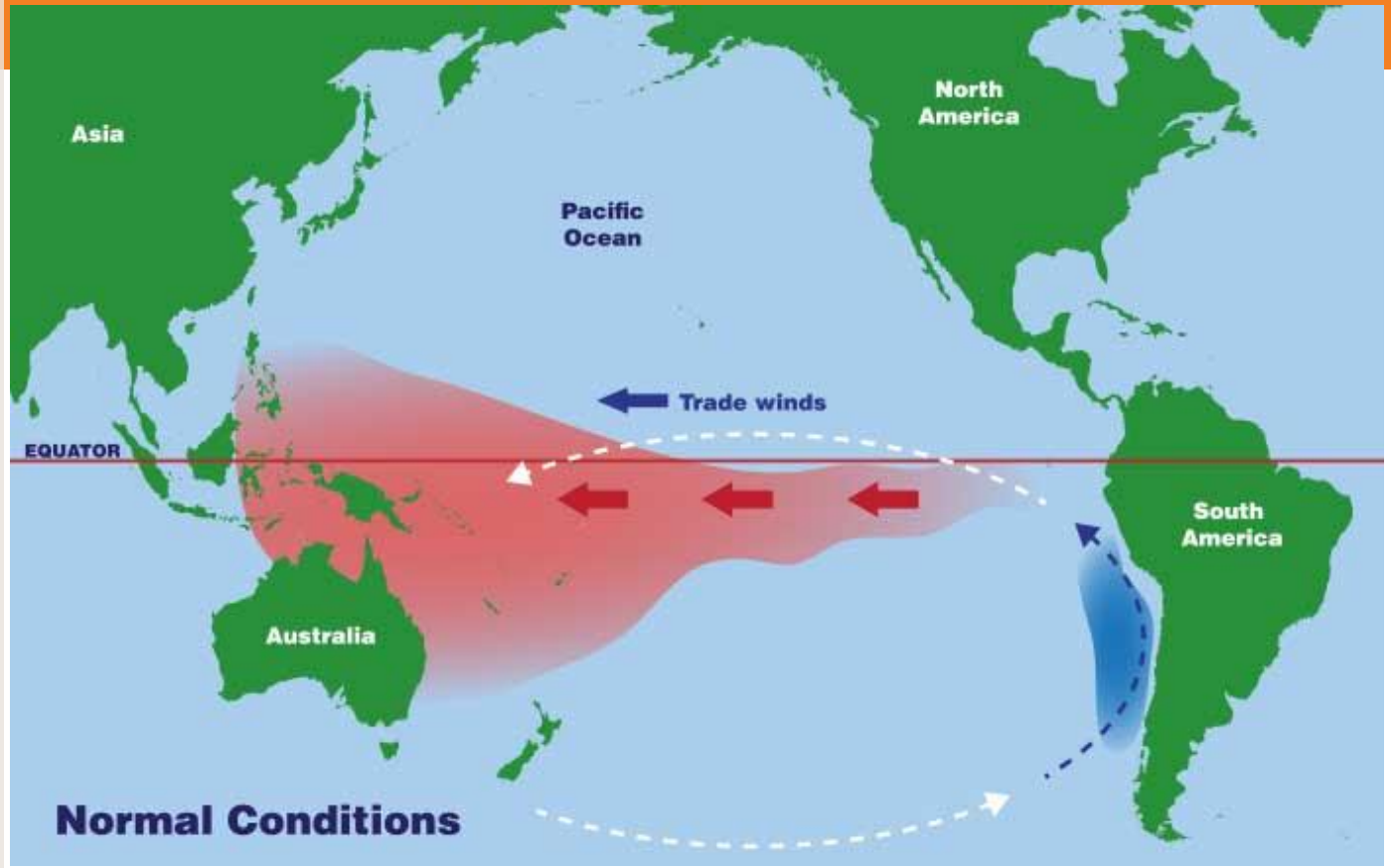
Solar cycle - Wikipedia

europass Teacher Academy

2. Causes

El Niño

[video explanation]



europass Teacher Academy

2. Causes

El Niño

El Niño...what does it mean? Why?

The average period length is 5 years.
When this warming occurs for 9 months or more, it is classified as an **El Niño "episode".**

Connection between
climate
and
economy, society

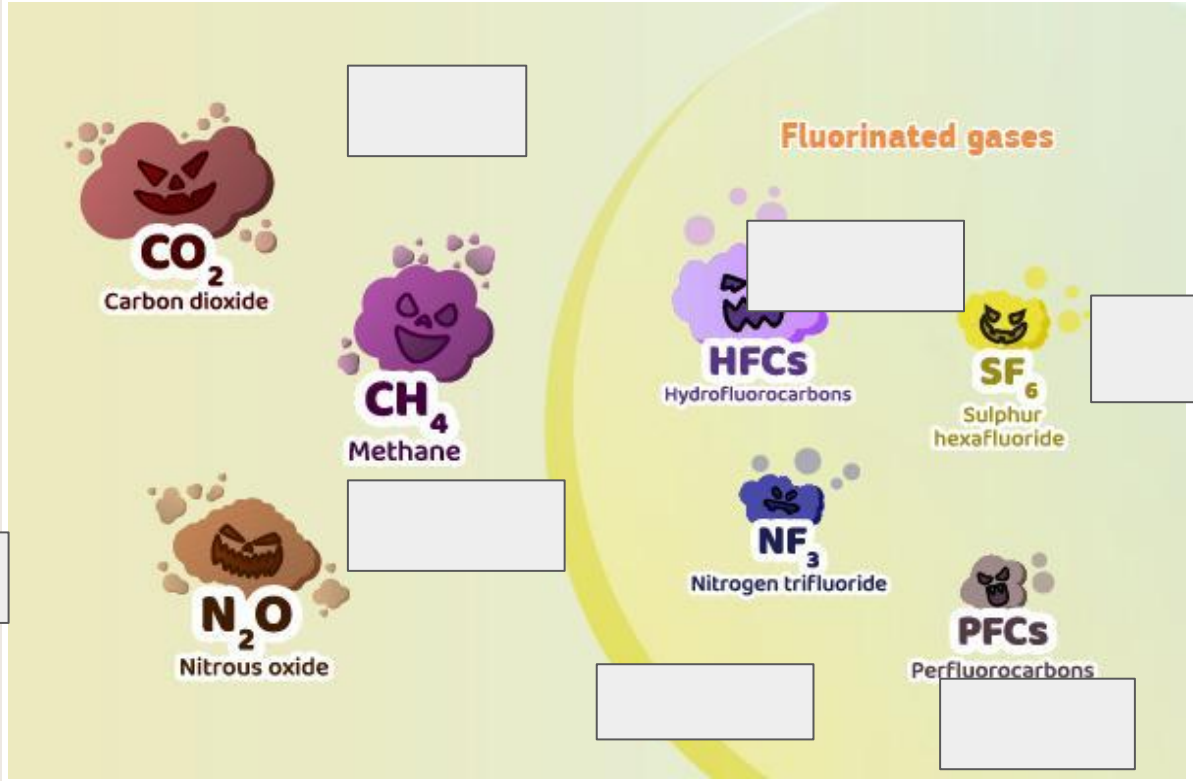
el niño southern oscillation (enso)

FOR MORE CLICK HERE

europass Teacher Academy

2. Causes

Human activity



REENHOUSE GASES

europass Teacher Academy

N_2O Nitrous oxide

CO_2 Carbon dioxide

Burning coal, oil and gas

CO_2 Carbon dioxide

Cutting down forests (deforestation)

N_2O Nitrous oxide

Fertilisers containing nitrogen

CH_4 Methane

Increasing livestock farming

Fluorinated gases found in

Aerosol sprays

Air conditioners

electrical distribution systems (in switchgear)

Refrigerators

Insulation

$HFCs$ Hydrofluorocarbons

SF_6 Sulphur hexafluoride

NF_3 Nitrogen trifluoride

$PFCs$ Perfluorocarbon

europass Teacher Academy

2. Causes

Human activity

More people + Consumerism lifestyle

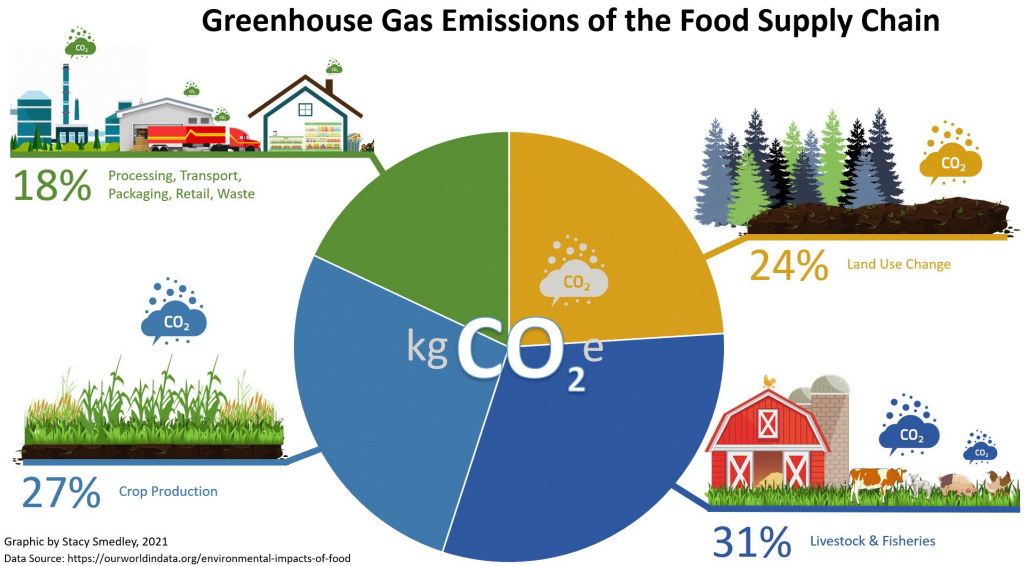
↓

More production

↓

More pollution

GREENHOUSE EFFECT (video link)



Greenhouse Gas Emissions of the Food Supply Chain

Land Use Change

24% of food emissions

Agricultural expansion results in the conversion of forests, grasslands & other carbon 'sinks' into cropland or pasture resulting in carbon dioxide emissions.

'Land use' here is the sum of land use change, savannah burning & organic soil cultivation (plowing & overturning of soils).

Graphic by Stacy Smedley, 2021

Farm

58% of food emissions

31% of food emissions: Livestock & Fisheries
Animals raised for meat, dairy, eggs & seafood production contribute to food emissions. Ruminant livestock produce methane through their digestive processes. Manure & pasture management & fuel consumption from fishing vessels also fall into this category.

27% of food emissions: Crop Production
Direct emissions which result from agricultural production – this includes elements such as the release of nitrous oxide from the application of fertilizers & manure; methane emissions from rice production; & carbon dioxide from agricultural machinery.

Processing | Packaging | Transport | Retail | Waste

18% of food emissions

Food processing (converting produce from the farm into final products), transport, packaging & retail all require energy & resource inputs.

Many assume that eating local is key to a low-carbon diet, however, transport emissions are often a very small percentage of food's total emissions – only 6% globally. Whilst supply chain emissions may seem high, at 18%, it's essential for reducing emissions by preventing food waste.

Food waste emissions are large: one-quarter of emissions (3.3 billion tonnes of CO_2eq) from food production ends up as wastage either from supply chain losses or consumers.

Durable packaging, refrigeration and food processing can all help to prevent food waste.
For example, wastage of processed fruit and vegetables is ~14% lower than fresh, and 8% lower for seafood.

Data Source: https://ourworldindata.org/environmental-impacts-of-food

3. Impact and consequences

NATURAL

SOCIAL

ECONOMY

europass
Teacher
Academy

3. Impact and consequences

NATURAL

- High temperatures
- Drought and wildfires
- Availability of freshwater
- Floods
- Sea-level rise and coastal areas
- Biodiversity
- Soils
- Inland water
- Marine environment

europass Teacher Academy

3. Impact and consequences

- Health
- Vulnerable population
- Employment
- Education

SOCIAL

europass Teacher Academy

3. Impact and consequences

ECONOMY

- Infrastructure and buildings
- Energy
- Agriculture and forestry
- Insurance
- Tourism
- Cross-cutting issues for businesses

europass Teacher Academy

4. Education

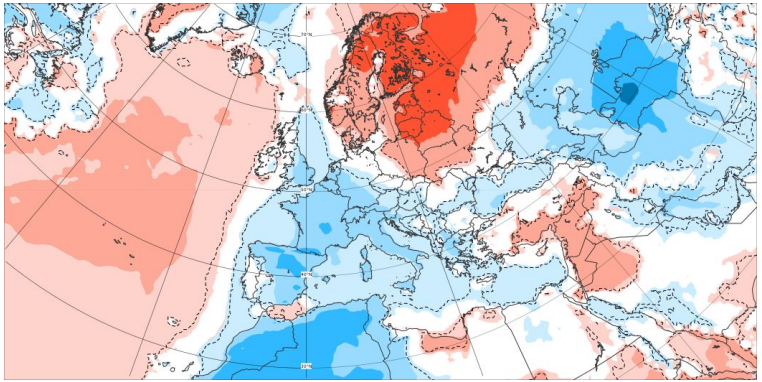
Data analysis

Meteo analysis and statistics

Copernicus - European State of the Climate

ECMWF European Centre for Medium-range Weather Forecast

NOAA national oceanic and atmospheric administration.



europass Teacher Academy

4. Education

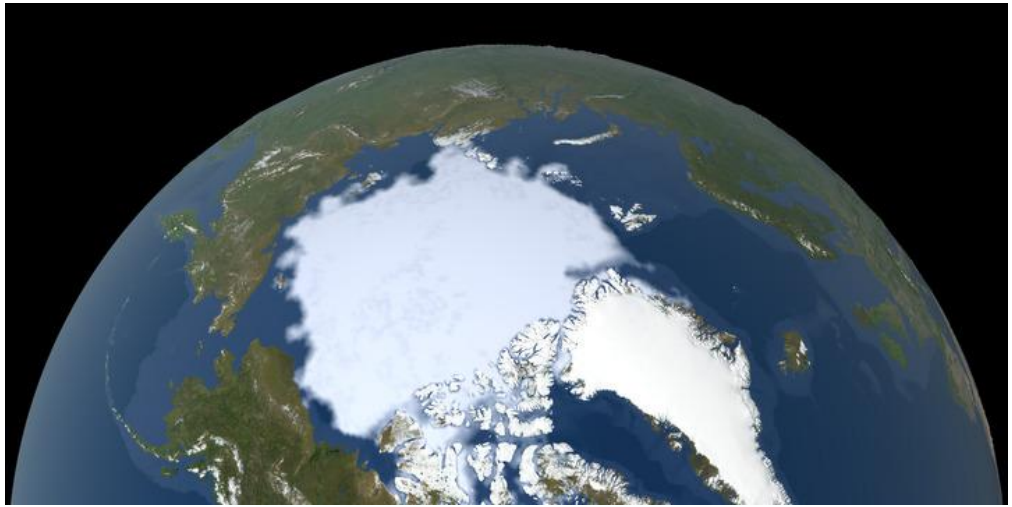
Data analysis

Tools

ClimateCharts.net

Climate Reanalyzer

Climate time machine

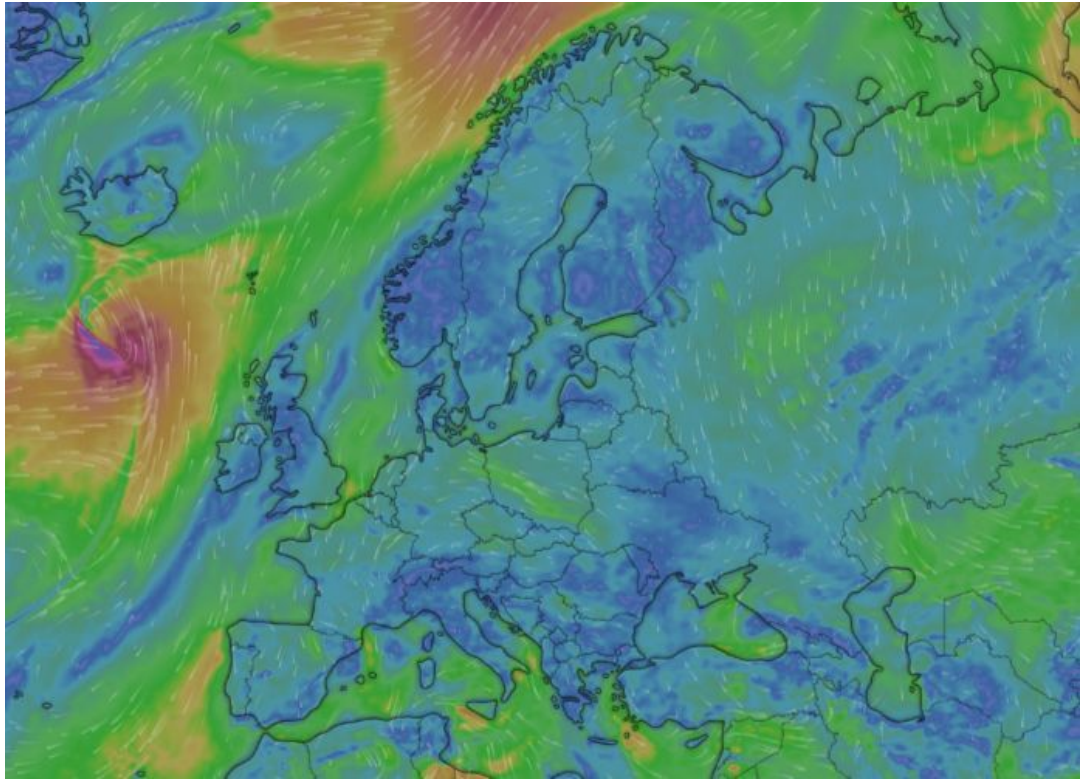


europass
Teacher
Academy

4. Education

Data analysis

Windy



europass
Teacher
Academy