workshop

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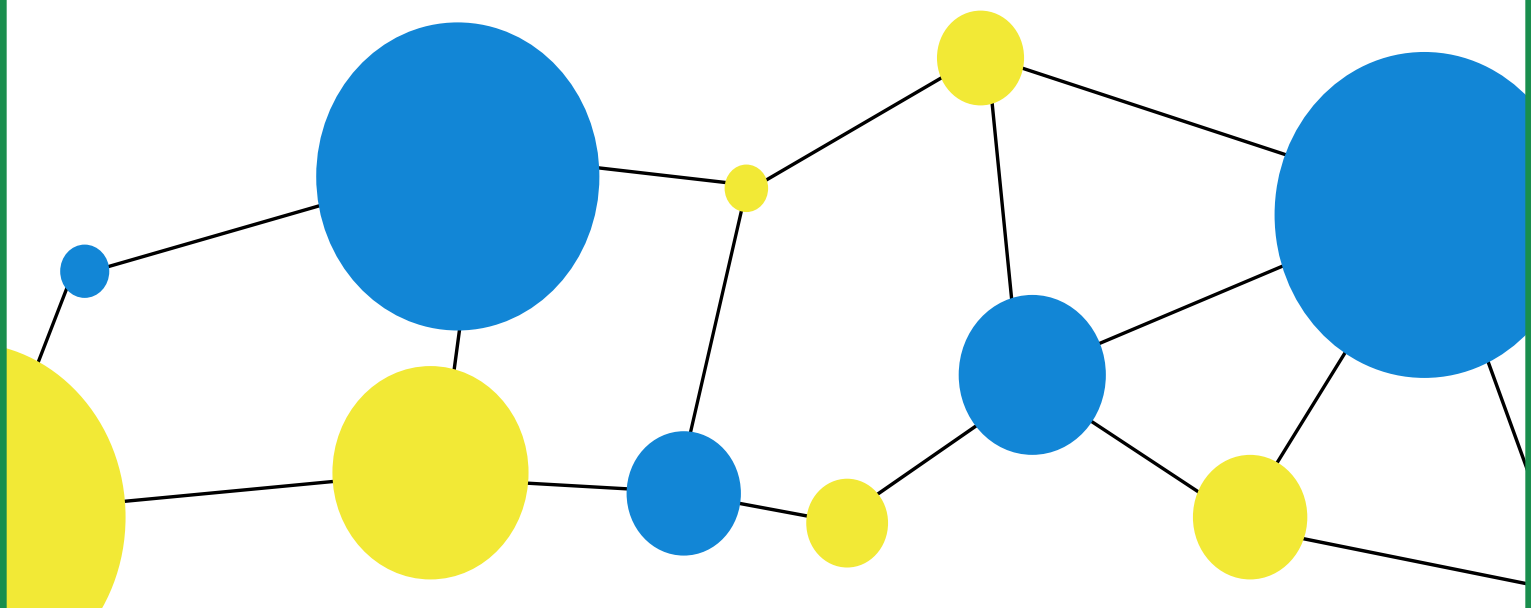
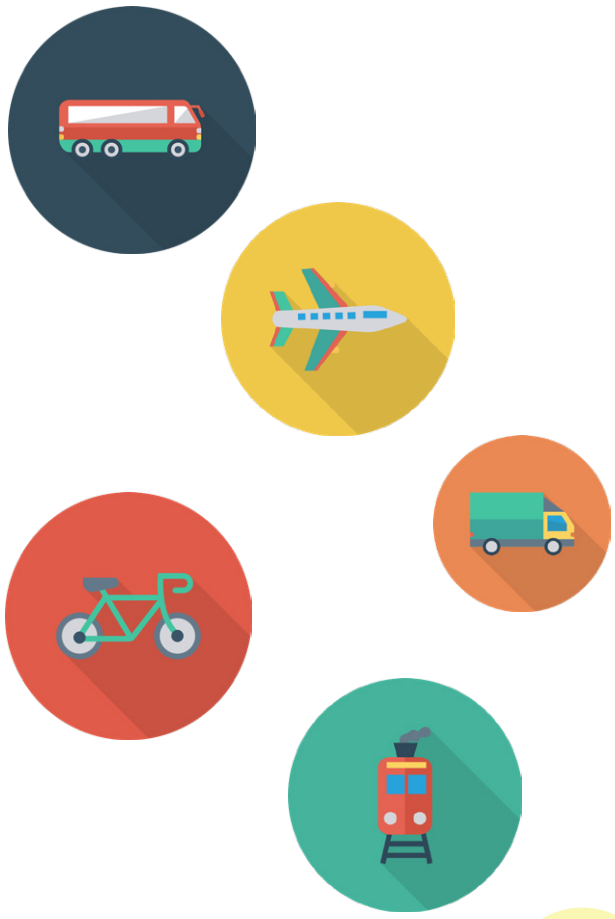
travel and sustainable transport



1 what we want to achieve in this workshop?

In this workshop we will work about travel and sustainable transport. We will learn about which travel and journeys exist currently, (family trip to the village, how to get to school or a business trip to the other part of the world...) and what kinds of transports are used for each, from the most to the least polluting. To do this, we will learn together, as a family, the most sustainable alternatives for each type of trip.



2 goals: after completing this lesson, you will be able to:

1. Circular Economy

To have a basic knowledge of what the circular economy is, meaning, use and objectives.

2. Travel (negative scenario)

· To know what trips or journeys currently exist. Knowing how to classify them from more to less indispensable and polluted.
· To recognise examples and situations of bad practices when travelling, (considering the number of people, distance, transport possibilities...)
· To learn and understand the terminologies concerning these issues, and to be able to explain them (considering the learners' age).
· To know how to get more information using the Internet.

3. Sustainable transport (positive scenario)

· To know how to explain why transport is one of the main sources of emissions and pollution on the planet.
· To recognise examples of good practices.
· To know and explain what sustainable transport is, why it is important to reduce it and replace it with clean and sustainable energy transport.
· To learn and understand the related terminologies to these issues, and be able to explain them (considering the learners' age)
· To know how to get more information using the Internet.

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3 theoretical introduction: what is the circular economy? how can we make our journeys more sustainable?

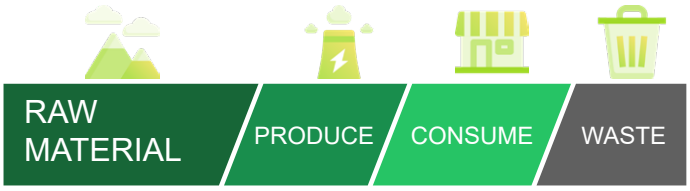
More info links:

- Circular economy for chindren and young video.
- How to avoid climate change video.
- Circular economy (European Parliament)
- New circular economy package (European Parliament)

The circular economy proposes to use as many biodegradable materials as possible in the manufacture of what we need. In this way, the materials can be returned to nature without causing environmental damage when their useful life is over. In cases where it is not possible to use eco-friendly materials, the aim will be to give them a new life by reintroducing them into the production cycle to make a new piece. When this is not possible, it will be recycled in an environmentally friendly way.

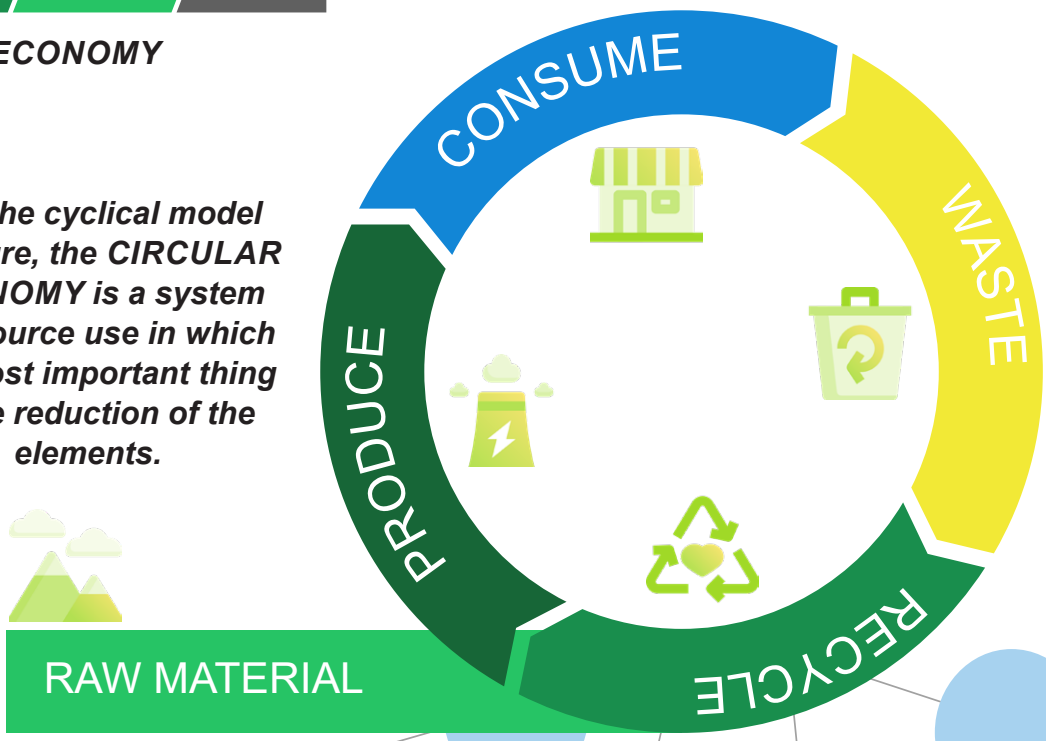
Reasons to say yes to the circular economy
- scarcity of raw materials.
- some countries depend on other countries for their raw materials.
- Weather impact. The extraction and use of raw materials has significant environmental consequences, increases energy consumption and carbon dioxide (CO2) emissions.

Benefits of the circular economy:
- euro million saving
- greenhouse gases reduction,
- pressure on the environment reduce
-security improve of supply of raw materials
-innovation, growth and employment.



LINEAR ECONOMY

Like the cyclical model of nature, the CIRCULAR ECONOMY is a system of resource use in which the most important thing is the reduction of the elements.



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travel: negative scenario

Living condition improvement in developed countries and and transport advances have increased travel (tourism, business, freight...) especially since the beginning of the 21st century.

One of the most important objectives today is to separate the countries' economic growth from the number of vehicles' growth needed to meet their needs:

Cars and road transport is increasing due our lifestyle.

Air transport is growing faster than other transport systems.

Transport infrastructures construction is increasing (roads, railways, airports and terminals, etc.) that promote the use of more polluting transport.

Since the tourism boom in the 1970s, we have learned a lot about travel. We know what the positive side is, but there is also a negative side: transformation of rural areas, towns and cities due to the travellers' continuous transit. Therefore, it is important to find a sustainable travel model both in the journey and in the staying:

- On the road: whenever we travel by motorized means we are emitting greenhouse gases. Air travel is by far the most polluting mode, followed by road transport, especially cars, and finally trains.
- During the stay: we must minimize the "tourist role", integrate ourselves in the place where we are travelling and not aggravate the inequalities that this type of economy generates.

Therefore environmental consequences are growing:

- Loss of biodiversity: due to pressure on natural ecosystems from the loss of natural space, changes in light and humidity conditions...

- Climate change: due to increased greenhouse gas emissions from the burning of fuel.

More info links:

- 10 Negative Effects of Tourism You Should Know About
- Tips on avoiding overtourism
- The World Counts

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tips for a sustainable stay

- Use public or collective transport whenever you can.
- Contribute to the local economy. Ensure that the wealth generated remains at the destination.
- Avoid places that are only designed for tourists and accommodations which generate that inhabitants of big cities are " kicked out " of the city center.
- Choose the hotel with sustainable criteria. The more luxurious they are, the more energy they consume.
- Avoid large resorts close to the beach, especially those that move under the formula of 'all-inclusive'. They do not generate local economy wealth and consume a lot of energy.
- Take care of the space: don't throw garbage or waste.
- In case of natural areas trails: do not leave the pathways, avoid large groups, do not make excessive noise, do not spend the night in places not allowed and avoid leaving organic waste near rivers.

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3b sustainable transport: positive scenario

Sustainable transport is a system that allows people and goods transport at lower social and environmental costs than today, reducing the importance of private vehicle as a transport and oil as an energy source. Sustainable mobility implies many changes in the way we act, changes in energy sources and use of other transports.

Let's see what types of sustainable energy exist:

- wind power, the most widely used form of transport. It has many benefits but is very expensive to install. It produces a great visual impact in fields where the wind can be better harnessed.

- solar energy is used to charge vehicles during the day. At night, the energy charge is slower. It also has an important visual impact due to the solar panels that are needed.

- hydraulic energy, marine, tidal, geothermal or bioenergy, which are less used. The economic expense and the impact of sound, visual and environmental to obtain them are the main factors.

Let's see what types of vehicules are different from gasoline:

Electric cars: It has electric motors and large lithium-ion batteries

Advantages: Zero emissions: they do not emit polluting gases. They reduce environment noise (especially in cities). The cost per 100 km is between €1 and €2 euros (petrol €8 approx.).

Disadvantages: they are more expensive, the price of their batteries is also expensive and their useful life is not very long. Recharging time is slow. Although they are emission-free cars, there are emissions of polluting gases involved in generating electricity for their supply..

Hybrid cars: combine two engines: one internal combustion and one electric, popular choice is gasoline-electric. Its autonomy is similar to traditional cars. They consume a lot of energy on the road but less in the city.

Bi-fuel cars: cars that have a combustion engine and an additional tank of natural gas or liquefied petroleum gas. They consume petrol/diesel and the other alternative fuel (gas, or hydrogen). It has a long autonomy and is more ecological.

More info links:

- Sustainable transport 1. Sustainable mobility, a boost for development.
- Sustainable transport 2. Why cities should adopt the bicycle.

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How to move sustainably:

Walking short distances: it's healthy and not polluting.

Use the "Carsharing" system: dispose of a car whenever you want without the inconvenience and expense of owning it: maintenance, repairs, insurance... You will only pay for the use you make.

If the journey is somewhat longer, use the bicycle.

Try to share the car with colleagues and friends who make a similar journey to yours; this way we avoid single-user vehicles.

Try to avoid using the car on urban and interurban journeys: always use public transport (bus, metro, tram...)

For these long journeys, train is a very comfortable and reliable option, and has less negative consequences for the environment.

For longer journeys or trips, try to avoid using the plane, as its fuel is highly polluting and generates noise pollution.

In tourist trips:

- Avoid "weekend getaways" by plane. These are the least sustainable trips there are, because they require a great expenditure on emissions for a very short time. It would be appropriate that the further distance you travel by air, the more time you spend at your destination.
- Avoid cruises. They generate a high level of pollution: they require high fuel consumption and generate waste during the journey. In addition, we must bear in mind the poor personnel work conditions on these ships.
- Buy products with minimal transport needs and support local producers.

If you cannot avoid using cars, motorcycle, etc... bear in mind:

- Generated emissions . Follow the legislation. Produced noise pollution and how to avoid it.
- Do not drive with continuous acceleration and braking, as this increases fuel consumption, and therefore emissions.
- Always drive at medium speeds and uniformly, consumption is lower.
- If you buy motor vehicles, make sure they are ecological, electric or hybrid.
- Promote improved urban planning as well as the development and improvement of infrastructures that allow for sustainable transport.

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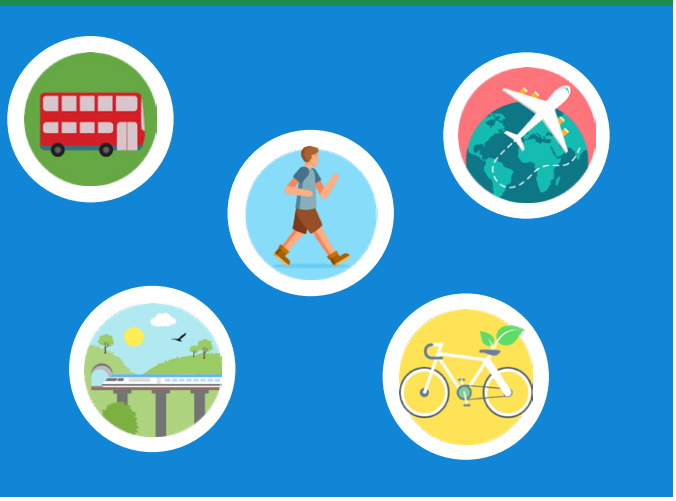
4 tip sheets
travel

Age 6-10. Use arrows to find the most suitable transport for each type of trip:

1. Going to school close home
2. Go to the supermarket. It's a little further than school
3. Go with your parents to visit a friend who lives in another part of the city
4. Go to another country far from yours for a 10-day vacation
5. Go to another city or town near yours for a 2-day vacation



Age 11-15. Could you explain what these word mean?

weekend getaway:

greenhouse gases:

loss of biodiversity:

tourist role:

transport infrastructures:

noise pollution:

Age16-20. Reflect on what are the impacts of tourism through observation of the environment.

Reflect on the positive and negative impacts of tourism. In groups or with your family, share and identify the main impacts (positive and negative) of traveling. Reach an agreement and complete the form:

Impacts	Positive	Negative
Economics		
Environmentals		
Sociocultural		

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4 tip sheets

sustainable transport

Age 6-10. Order with numbers the transports from the most to the least sustainable:

bicycle

electric car

gasoline car

train

plane

boat

electric scooter

+ sustainable • • •

5 role–play

Role-playing game.

This summer you're going on a family vacation. You are eight people and each of you proposes to go to your holiday destination in a way:
Mommy wants to go by plane, Daddy wants to go in three different cars, Grandma and Grandpa want to go in a shuttle bus, and your big brother wants to go in the van.
Choose one character each, make a script that discusses the best and most sustainable way for all eight people to travel to your holiday destination.
In the dialogue, try to justify why you have chosen this way of travelling.

Icons source: "Flaticon", www.flaticon.com

6 more activities

If you want to continue learning about the circular economy, efficiency, sustainability and responsible consume, here you have several links to have more information:

Age 6 -10: Digital Breakouts
Age 11-15: Escape-Rooms
Age 16-20: WebQuest

7 conclusion

To finish this workshop, we invite you to reflect and dialogue on all that we have learned.

What have you learned?

Do you think you are going to change something in your lifestyle to make it more sustainable?

Where could you change (home, family, school, holidays, work...)?

Would you like to share this knowledge with more family and friends?

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