Topic: Waste & garbage management

1st term - school year 2024-25 - school group 'Iqbal Masih' of Bientina and Buti (province of Pisa) - Italy

Hello everyone! Nice to meet you!

We are the Italian Eco-Delegates!

We're a group of 12-year-olds from different classes.

Our names are Matilde, Lorenzo, Bianca, Pietro, Carolina,

Hajar, Giorgia, Brando, Adele, Diego, Gabriele and Sara.

WHAT WE DID

Earlier this year, we did some **surveys** and **missions**, and we did **activities** in class and out of school

- about waste and garbage management
- about how waste sorting and recycling works in our school and region (Tuscany)

… and we came up with some **ideas** **on how to improve waste sorting** in our school.

IN OUR SCHOOL

We noticed that **the most common types of waste in our classroom bins** are: paper, tissues, tin foil and plastic wrap, food scraps, broken pens, pencil shavings and some plastic bottles.

IN OUR SCHOOL

…we recycle paper and cardboard in one bin, and plastic packaging, drink cartons and aluminum packaging in another bin.

…we don't recycle anything else (organic waste, glass, electrical or electronic waste).

7 Ecodelegates **out of 12** think **waste management in our school could be better**

3 of us are **unhappy** with how we manage waste at school

only **2** of us are quite **happy** about it

In short, **we need to improve**!

We said **we know which bin to use for different types of waste** at school.

But why then are recycling bins often filled with the wrong things?

- perhaps some people don't know which bin to use for each type of waste

- or maybe some people don't realize that recycling is important, so they don't pay attention.

In our opinion, **students are the ones who make the most mistakes** with recycling.

However, **some school staff** do too.

OUR PLAN TO IMPROVE RECYCLING AT SCHOOL IS TO

- Put clear labels on each bin

- Ask the Municipality to provide us with organic waste bins and bins to put in the garden

- Ask our teachers for more activities about waste & waste management at school and out of it (field trips to pick up trash, clean-up events)

With our **English teacher**, Ms. Morganti, we understood the difference between:

- **Linear economy**: if we use things once and then we throw them away. This produces a lot of trash and harms the environment

- **Circular economy**: if we reduce, reuse, and recycle waste to create new products. Less waste means a cleaner and healthier planet

LINEAR ECONOMY

TAKE   MAKE   DISPOSE

CIRCULAR ECONOMY

MAKE   USE   RECYCLE

The **5R strategy** is a way to save resources and money:

- **Refuse** things you don't need
- **Reduce waste**: buy and use fewer things and choose products with less packaging
- **Reuse objects**: for ex., use a glass jar again and again to preserve food instead of single-use packaging
- **Repair** things that are broken instead of buying new ones
- **Recycle**

TO REDUCE WASTE, we propose to **avoid unnecessary waste** or **replace it with eco-friendly objects**, for ex.:

- Use fewer tissues, only when needed
- Use both sides of the paper
- Just drink from the cup (instead of using straws)
- Bamboo toothbrushes or toothbrushes with replaceable heads
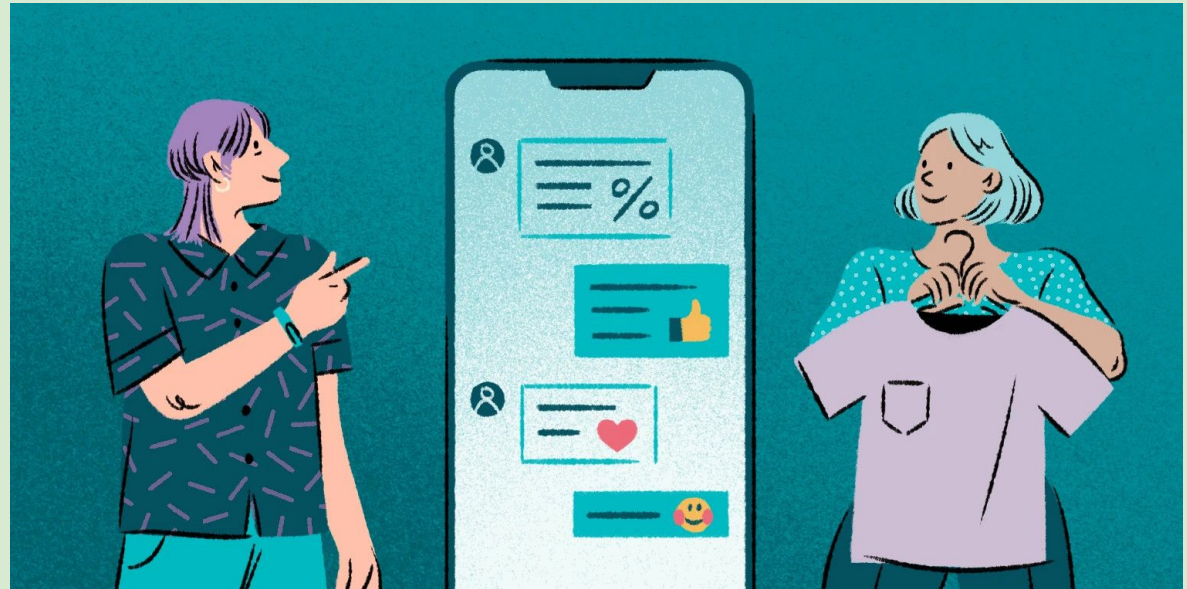- Buy loose fruits and vegetables

TWO SIDES ARE BETTER THAN ONE

Choose reusable things, for. ex.:

- Store snacks in reusable containers (instead of single-use snack bags)
- Use aluminium bottles (instead of plastic ones)
- Glass cups, metal cutlery and reusable plates (instead of single-use tableware)
- Use cloth bags (instead of single-use bags)
- Rechargeable batteries (instead of single-use ones)
- Refillable containers for soaps

About **REUSING… Vinted** is a popular online platform for **buying or selling second-hand clothes**.

It is available in over 20 countries.

SPEAKING OF WASTE SORTING…

We learned that **all packaging in Italy** must have **by law** an **ECO-LABEL** since **January 2023**.

This label says:

- The type of material (for ex. GLASS or PLASTIC)
- The code for the material (for ex. PET 1 means "plastic for bottles")
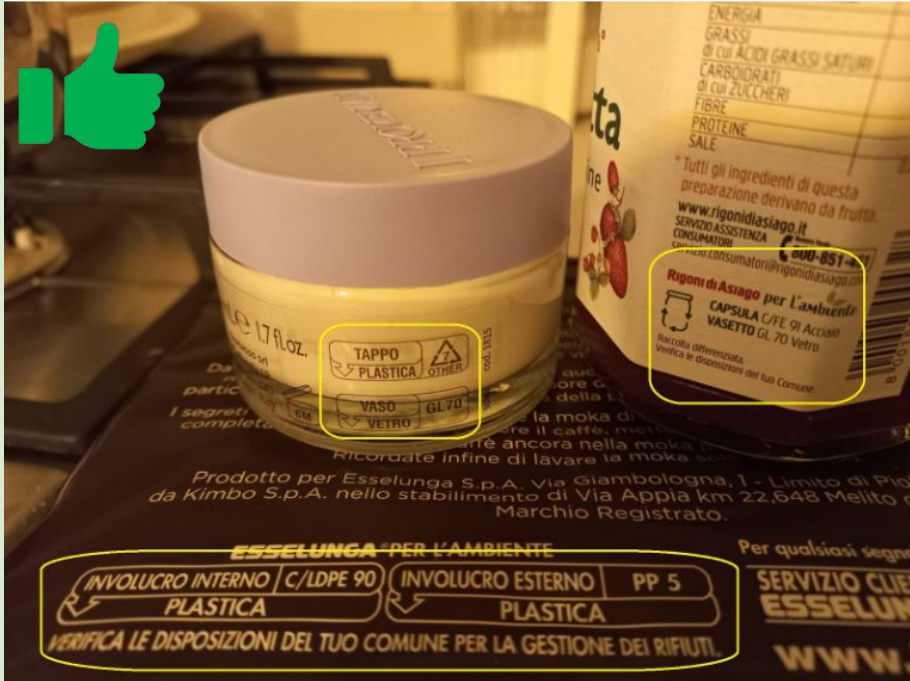
So, now it's easier to know how to sort packaging!

In our region (Tuscany), **cartons for drinks** (Tetra Pak cartons marked with the code C/PAP 84) go in the yellow multi-material bin.

But wait! In other regions of Italy, you put drink cartons in the blue paper bin.
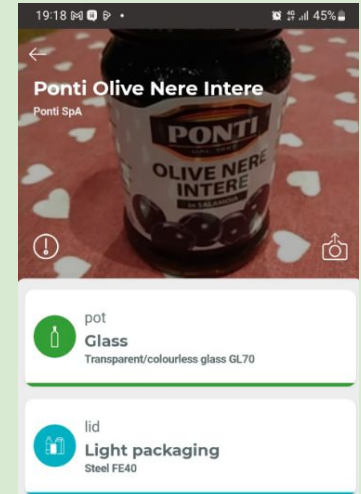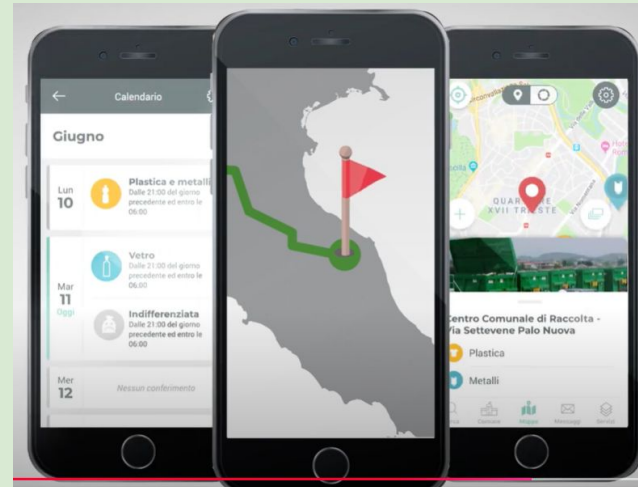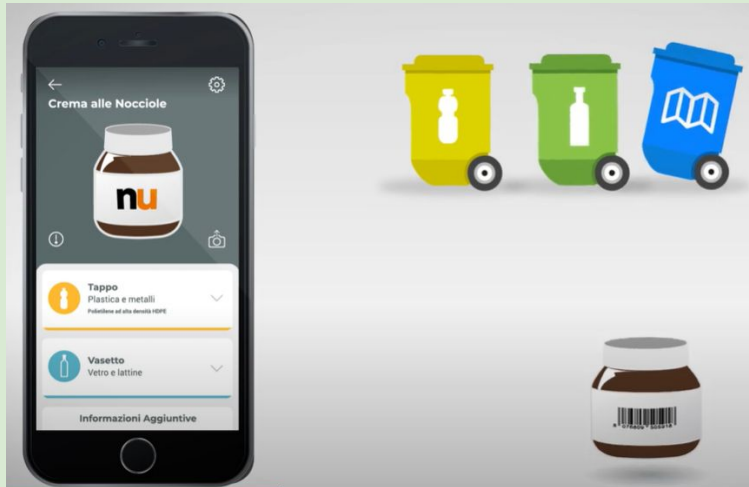
Before you buy something, **look at the label**:

- and choose products <mark style="background-color: #00ff00">made from recycled materials or that can be recycled</mark>

- Avoid buying things that <mark style="background-color: #ff0000">cannot be recycled</mark> and will just become trash and pollute our planet.

We learned about the ==JUNKER APP==, made by an Italian startup. This app helps people **sort their waste correctly**.

You scan the **barcode** of a product, and the app will tell you what materials it's made of and how to sort it, **based on where you are**, in 12 different languages.
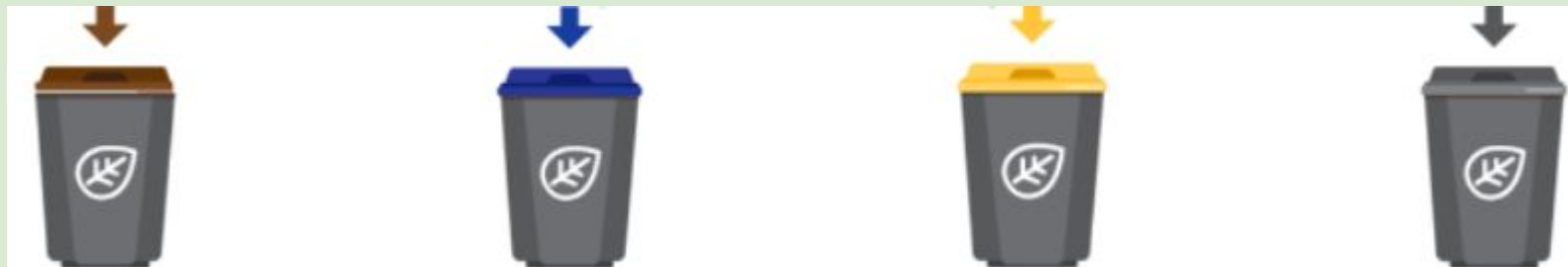
At school, we met an **expert** from the environmental association **Legambiente**:
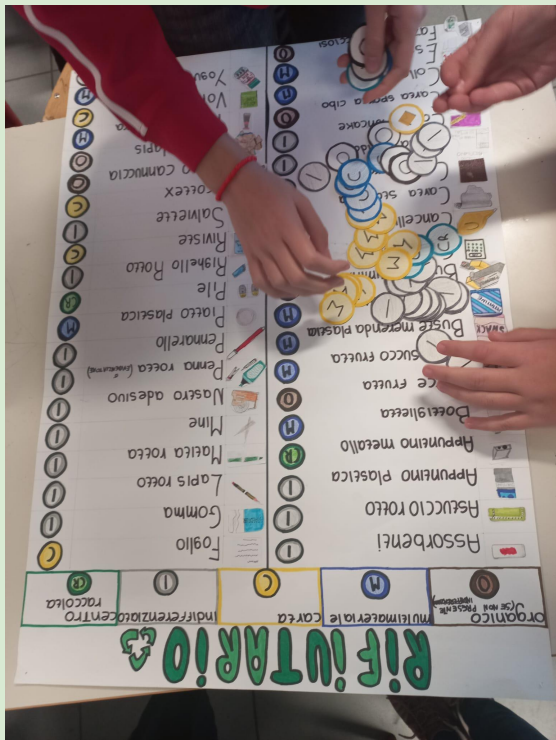
- we talked about **waste pollution** and the importance of **recycling**

- we read the **GeoFor guide**, which tells us **how to sort our trash** in our region and to which waste collection center we should take some types of waste (electronics, batteries, old appliances, oils and expired medicines).
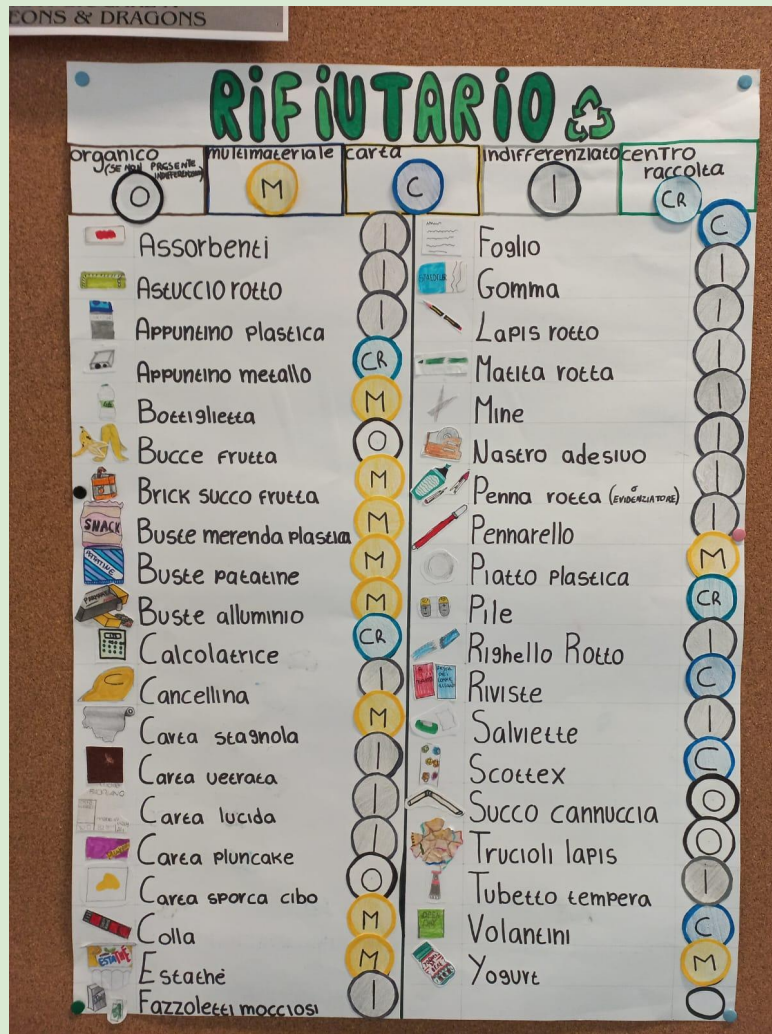
In our region, we have **6 trash containers**: **green** for glass; **brown** for food waste; **gray** for trash that can't be recycled; **yellow** for recyclable materials (plastic packaging and bottles, cans, aluminium and steel packaging, and drink cartons); **blue** is for paper and cardboard.

With our **science teacher**, Mr. Bartalozzi, we made a **waste guide** for our school hallway

RIFIUTIMETRO SCOLASTICO

I= INDIFF.   C.R.=CENTRO RACCOLTA   C=CARTA   O=ORGANICO   M=MULTIMATERIALE

Oggetto	Codice	Oggetto	Codice
ASSORBENTI	I	FOGLIO-CARTONCINO	C
ASTUCCIO ROTTO	I	GOMMA	I
APPUNTINO PLASTICA	I	LAPIS	I
APPUNTINO METALLO	C.R.	MINE	I
BOTTIGLIETTA D'ACQUA	M	NASTRO ADESIVO	I
BUCCE FRUTTA - CIBO	O	PENNA	I
BRICK SUCCO	M	PENNARELLO	I
BUSTE MERENDINE	M	PIATTO DI PLASTICA PULITO	M
BUSTE PATATINE	M	PIATTO COMPOSTABILE	O
BUSTE ARGENTATE	M	PILE	C.R.
CALCOLATRICE	C.R.	RIGHELLO	I
CANCELLINA	I	RIVISTE	C
CANNUCCIA SUCCO	O	SCOTTEX PULITO (SE CON DETERGENTE/DISINFETTANTE = INDIFFERENZIATO)	C
CARTA STAGNOLA	M	SALVIETTE	I
CARTA VETRATA	I	TRUCIOLI LAPIS	O
CARTA LUCIDA	I	TUBETTO COLLA	I
CARTA PLUMCAKE	I	TUBETTO TEMPERA	I
CARTA SPORCA CIBO	O	VOLANTINI	C
COLLA	M	YOGURT	M
ESTATHÉ	M	ZAINO VECCHIO O ROTTO	C.R.
FAZZOLETTI MOCCIOSI	I		

… then we used **Canva** to make a **smaller guide** to put near the trash bins at school

We visited the **Revet recycling plant**. This company collects and recycles plastic, steel, aluminum, Tetra Pak (drink and food cartons) and glass in our region.
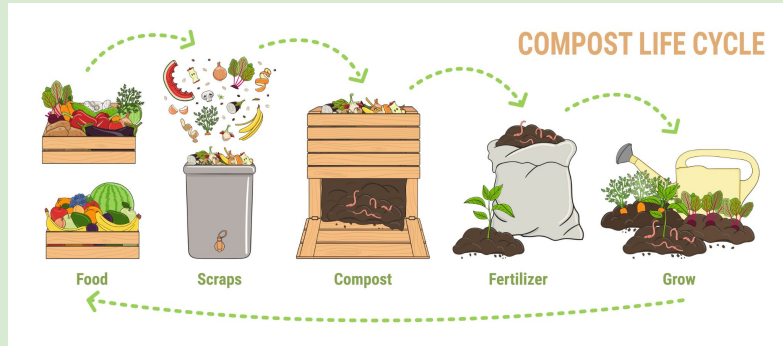
This **spring**, we'll be at the **Bientina market** with a **stall**. We'll give people advice on recycling, do some fun quizzes and share ideas on how to reduce waste.

With our **tech teachers**, Ms. Balloni and Ms. Capo, we learned about **RECYCLING DIFFERENT MATERIALS**.

For ex., **ORGANIC WASTE** (like food scraps) can be turned into **compost**, a rich soil which helps plants grow.

COMPOST LIFE CYCLE

Food   Scraps   Compost   Fertilizer   Grow

GLASS

A glass bottle, which takes 4,000 years to decompose if abandoned, can be recycled endlessly without losing quality.

Glass recycling

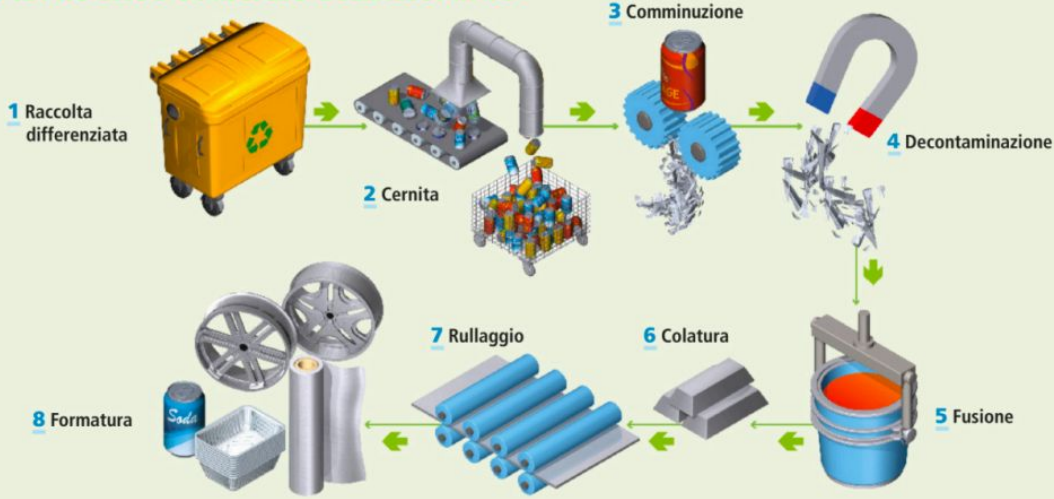**ALUMINIUM** is 100% recyclable. Most of the aluminum produced in Italy is recycled.

If we use the aluminum we already have to make new things, we save the energy needed to extract new aluminum from bauxite rock.

MULTIMATERIALE

Aluminum recycling

IL PROCESSO DI RICICLO DELL'ALLUMINIO

1 Raccolta differenziata

2 Cernita

3 Comminuzione

4 Decontaminazione

5 Fusione
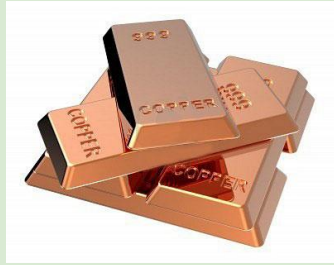
6 Colatura

7 Rullaggio

8 Formatura

PLASTICS can be recycled many times to make benches, scooter parts, clothing and many other things.

The seats at the stadium in Pontedera, a city near us, are made from recycled plastic

MULTILAYER MATERIALS are made of several layers.

For ex. Tetra Pak boxes for drinks are made of plastic, aluminum and cardboard.

COPPER is a red metal found in minerals.

It is important because we use it for many things
(electrical wires, coins, pipes, building parts, statues).

But Europe has very few copper mines (most of
copper comes from other continents).

The good news is that we can recycle it! In fact, about
half of the copper used in Europe is recycled.

Copper can be recycled again and again without losing its quality.

Copper recycling

RECYCLING TEXTILES

In **Prato**, a city in our region, old rags are transformed into new clothes, filling materials, felt, panels and packaging, and so on.

REUSING CLOTHES

Some organisations (like Croce Rossa Italiana and Caritas) provide **containers** in which people can drop off unwanted clothes in good condition; then they give them to people in need.

ELECTRICAL AND ELECTRONIC WASTE

Don't throw away smartphones, lamps, old fridges, washing machines, and similar items in the regular trash.

Instead, take them to a recycling center, because they contain:

- polluting and toxic substances

- and useful materials (copper, aluminum) to make new products.

In Ms. Capo's **tech class and** in Ms. Morganti's **English class,** we talked about **FOOD WASTE**.

Food waste is when we throw away food that could still be eaten.

A lot of food is wasted:

- we could use it to feed hungry people

- it's a huge waste of the resources which are used to produce it (water, fertilizers, energy)

Even in wealthy countries like the **UK**, millions of **people don't have enough food**.

At the same time, a lot of food is wasted:

- in the **farm**
- when it's **not stored properly**
- if it's damaged during **transport**
- because **producers**, **shops** and **restaurants** often throw away food that **doesn't look perfect**
- at **home**: when we buy or cook too much, we throw away leftovers or let food expire; or we throw away food after the 'best before' date because we think it has gone bad
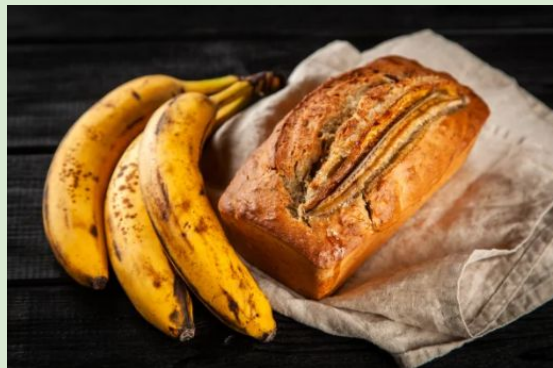
To reduce food waste and hunger:

- Charity organizations (like the Italian Banco Alimentare, the British FareShare and the French Les Restos du Cœur) collect extra food and give it to people in need

- Shops, restaurants, and cafés can sell extra food or food close to its expiration date at lower prices, on-site or through apps like *Too Good To Go*

Still to reduce food waste and hunger… families should buy only the food they need, plan meals better, store food correctly, use leftovers, and eat foods after their 'best before' date (as many are still safe)
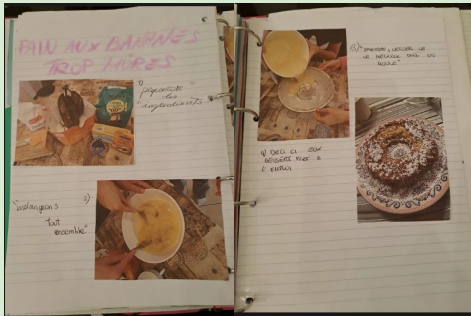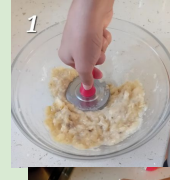

use by
refs to food safety, foods should not be eaten after that date

best before
refers to food quality, foods can often be eaten after that date

eufic

With our **French teacher**, Ms. Santorsa, we chose some **zero-waste recipes in French** to try at home, we took photos while cooking and wrote captions in French for each picture.

For ex. *A soup made from the tops of carrots, chips or a quiche made from potato peels,*

a tart made from apple peels, *bread from too ripe bananas.*

Ms. Fulgheri, **our French teacher**, assigned us a task to be completed in groups: **make a video about a zero-waste recipe**. So we:

- Started the video by showing the ingredients
- Filmed ourselves preparing the dish and explained each step in French
- Added some background music

With our **Italian teacher**, Ms. Marcone, we read a story about the **fictional city of Leonia** by Italian writer Italo Calvino.

In Leonia:

- People enjoy throwing away old things and buying new things every day
- The city looks clean because the street cleaners clean it, but there's a lot of hidden trash under and around the city

Still with **Ms. Marcone (Italian)**, we are reading the novel **"The Revenge of the Forest"** by Teo Benedetti. This book tells the story of a family who joins a volunteer group and goes to a natural park to clean up litter left by visitors.
But they don't know that in the forest lives a spirit angry with humans…

ABOUT SUSTAINABLE ART...

This Christmas, a 12-meter tall **Christmas tree** was installed in the center of **Pisa**.

It was made by the students from some local schools with old **plastic bottles and containers**.

This big cone was lit up with energy-saving lights.

This project showed that old things can be used to create something beautiful and reminded everyone how much waste we produce.

We didn't do this project, but we did something similar last year...

In fact, in **2023**, with our **Art teacher**, Ms. Basile, we made these **flower-shaped stars** with **recycled materials**:

- Plastic bottle bottoms
- Polyester balls
- Cardboard rolls from toilet paper and paper towels

Still about **SUSTAINABLE ART**…

in **January 2025**, our Art teacher (Ms. Basile) and our Tech teacher (Ms. Capo) are leading a workshop for students of our age.

Students create pictures of **animals with recycled cardboard**, in the style of the Futurist artist **Depero**. This project will connect pupils with Nature.

From left to right, some works by Depero: *Parrot* (1920), oil on canvas; *Horse Racing Among the Clouds* (1924), painting; *Elasticity of Cats* (1939/43), oil on canvas; *Nuclear iris: The Rooster* (1953), poster.

THE END