



# A2 Trash Value Challenge

## Mindful waste management



Ingrid Teufel

All Challenges of level A2 are also available in a printed version in German. You can find them at [www.jugendstärken.at](http://www.jugendstärken.at) (Jugend stärken, volume 1 - 4).



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# Empowering Youth with the You<sup>th</sup> Start Entrepreneurial Challenges Programme

## CORE ENTREPRENEURIAL EDUCATION

 <b>IDEA CHALLENGE</b> I can develop an idea.	 <b>HERO CHALLENGE</b> I can learn from role models.
 <b>MY PERSONAL CHALLENGE</b> I can solve personal challenges.	 <b>LEMONADE STAND CHALLENGE</b> I can sell things.
 <b>REAL MARKET CHALLENGE</b> I can develop a business plan for the market.	 <b>START YOUR PROJECT CHALLENGE</b> I can plan and implement my project with a team.

## ENTREPRENEURIAL CULTURE

 <b>EMPATHY CHALLENGE</b> I can empathise with myself and with others.	 <b>STORYTELLING CHALLENGE</b> I can tell stories.	 <b>BUDDY CHALLENGE</b> I can support others in achieving their goals.
 <b>PERSPECTIVES CHALLENGE</b> I can understand I am part of my environment.	 <b>TRASH VALUE CHALLENGE</b> I can create something valuable out of garbage.	 <b>OPEN DOOR CHALLENGE</b> I can network with others.
 <b>EXTREME CHALLENGE</b> I can set and achieve difficult goals.	 <b>BE A YES CHALLENGE</b> I can say "yes" to myself and those around me.	 <b>EXPERT CHALLENGE</b> I can apply learning and communication techniques.

## ENTREPRENEURIAL CIVIC EDUCATION

 <b>MY COMMUNITY CHALLENGE</b> I can do things for the community where I live.	 <b>VOLUNTEER CHALLENGE</b> I can engage in community service.	 <b>DEBATE CHALLENGE</b> I can develop and debate my opinion.
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The You<sup>th</sup> Start Entrepreneurial Challenges Programme is based on the TRIO Model, which is a holistic definition of entrepreneurship that encompasses three areas:

- CORE ENTREPRENEURIAL EDUCATION** – Supports entrepreneurial qualification in a narrow sense: developing own ideas and implementing them creatively and in a well-structured way.
- ENTREPRENEURIAL CULTURE** – Personal development: self-initiative, self-confidence, teamwork, empowering oneself and others.
- ENTREPRENEURIAL CIVIC EDUCATION** – Enhancing social competences as citizens: assuming responsibility for oneself, others and the environment.

"Empowering Youth" is a holistic learning programme for lower secondary school students and promotes personal initiatives and entrepreneurial spirit. It is part of the "You<sup>th</sup> Start Entrepreneurial Challenges" programme. All competence levels (A1 = primary level, A2 = lower secondary level, B1+B2 = upper secondary level) can be downloaded at [www.youthstart.eu](http://www.youthstart.eu) in English, German and other languages. The "Mind & Body" section provides short video clips with physical "activate & concentrate" exercises and the "You<sup>th</sup> Start mindfulness programme".



# Preface

## Empowering Youth ...

... refers to the title, the goal and the content of a practice-oriented, holistic learning programme which was developed for **lower secondary school** students. Bigger and smaller “**challenges**” form the key element of the programme. They function as learning prompts in three key areas that play an important role in empowering young people:

- **entrepreneurial thinking and acting**,
- **personal development** and
- **social commitment**.

Each key area is assigned a different color to help differentiate between them.  
A diagram of the entire programme is included at the beginning of this document.

**Empowering Youth** is part of the “**You<sup>th</sup> Start Entrepreneurial Challenges**” Programme, which aims to foster personal initiative and the entrepreneurial spirit of young people. It was developed in Austria for both primary and secondary school students, and it has been translated into six languages.



**Mindful waste management** is becoming more and more important. In the **A2 Trash Value Challenge** the students learn from the past. They also think about how we can prepare for the future by avoiding, sorting and UPcycling waste today. New value can be created from waste materials – if we use them responsibly and mindfully and if we all contribute!

## The “Youth Start Entrepreneurial Challenges” Programme supports children in developing their potential.

This was proven by a scientific field study which was carried out from 2015 to 2018 in Austria, Slovenia, Portugal, and Luxembourg with about 30,000 children and teenagers.

The research results demonstrate that by working with the programme in lower secondary school, the adolescents’ self-esteem is improved, and teamwork, creativity, and networked and critical thinking are fostered.

The students do not only learn how to communicate empathically and how to treat themselves and others with care and respect; they additionally acquire basic economic qualifications that are vital for their future working life.

We wish everyone working with this programme many inspiring learning experiences!

Eva Jambor and Johannes Lindner, editors

[www.youthstart.eu](http://www.youthstart.eu) | [www.jedekindstärken.at](http://www.jedekindstärken.at) | [www.ifte.at](http://www.ifte.at)

**These symbols will guide you through the challenge. They have the following meaning:**



Instructions for an exercise



Talk to someone about it



Extra tip for you



Think about it



Bonus task



More information can be found in the teacher guide



# A2 Trash Value Challenge








## Mindful waste management

In the **A2 Trash Value Challenge** the students explore the topic of waste in the past, present and future.

They think about how waste can be avoided, sorted and **UP**cycled and they are encouraged to create new value from waste materials (preferably residual waste). A Trash Value Festival makes for creative ways of inspiring others to take a critical look at the topic and to work together to achieve **mindful waste management**.

Explanatory video for the challenge: [www.youthstartchallenges.eu/A2TrashValueEN](http://www.youthstartchallenges.eu/A2TrashValueEN)

## Seven steps to the finish line:

	Step 1 - Going back in time _____	<b>4</b>
	Step 2 - Avoiding waste _____	<b>6</b>
	Step 3 - Sorting waste _____	<b>11</b>
	Step 4 - <b>UP</b> cycling waste _____	<b>14</b>
	Step 5 - Travelling to the future _____	<b>17</b>
	Step 6 - Implementing creative ideas with waste _____	<b>19</b>
	Step 7 - Thinking things over _____	<b>21</b>

### Aim

I can use resources mindfully and create something valuable out of waste materials.







### 1.1. A brief history of waste

Humans have been generating waste throughout their history, but the volume and composition of this waste have changed a lot over time.

#### Ancient Rome, ca. 600 BC

People realised that waste which was left in the streets could lead to the spreading of diseases. This is why they built a big sewer (=Cloaca Maxima), which conducted rubbish and unpurified wastewater into the Tiber River.

#### Middle Ages, ca. 500 to 1500 AD

In the Middle Ages, rubbish and wastewater were simply discarded in the streets. Excrement from free-roaming livestock was also left in the streets. Much of this waste seeped into the ground and reached the water of wells and rivers. Polluted drinking water led to the spreading of diseases.

This is why people began to collect rubbish. It was either buried or heaped into piles. These rubbish piles produced toxic gases. Rats and other animals nested in the piles and transmitted dangerous diseases.

Things that were broken were not thrown away but repaired or used to create new things.



When did people act more progressively? In Ancient Rome or in the Middle Ages? Talk about it.

#### 16<sup>th</sup> century



Detail from the painting "Netherlandish Proverbs", 1559, Pieter Bruegel the Elder



Take a close look at the painting by Pieter Bruegel. What can you discover? What would people never do nowadays? Talk to others about it.

Describe a scene from the picture without pointing to it. Can others find what you are describing?



### 19<sup>th</sup> century

Cities grew bigger and bigger and generated more and more rubbish. Since rubbish and wastewater led to the spreading of contagious diseases, rubbish was removed from the streets and mostly heaped up outside the cities.

“Ragpickers” collected torn clothes and sold them to paper mills. Old iron and other metals were melted and used to produce new things – a perfect cycle.



What worked well in the 19th century? What didn't work so well? How are these things handled today? Talk about it.



You can find more information on waste management in the past in the learning stations “Time Travel: Trash”, see copy templates in the Teacher Guide.

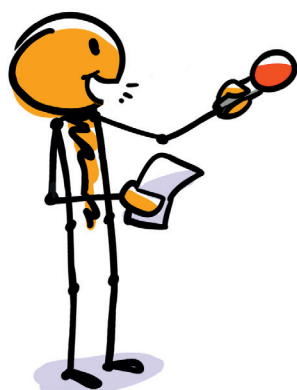


Or you can research online: <https://environmentalchemistry.com/yogi/environmental/wastehistory.html>, <https://sustainingourworld.com/2011/09/22/the-past-present-and-future-of-solid-waste-disposal/> or [www.sewerhistory.org](http://www.sewerhistory.org) (for more information on sewers in Ancient Rome and the Middle Ages). You can also find out what may and what may not be flushed down the toilet today: <https://thinkbeforeyouflush.org/what-to-flush/>.

## 1.2. Waste interview: What was it like in the old days?



Ask people who are over 60 years old about their childhood memories.



- How was waste disposed of back then?
- Was waste sorted at all? How?
- Was there more or less waste than today?
- How was food packaged back then?
- In what did people carry home their groceries?
- Were any waste materials collected? Which ones?
- ... ?
- ... ?



What did you learn in your interviews? What did you notice? What can we learn from the past? Discuss it in class.



Talk about the following sentence:

**If many people in many places take many little steps,  
they can alter the face of the world.**

What does it have to do with waste?



### 2.1. The “three Rs”

All the things we use are made from **resources**. Producing things consumes **energy**. Resources and energy are available only in limited quantities. We need to learn to use them mindfully.

People have never used more energy and resources, nor have they ever polluted the environment more than we do today. Waste that is not properly disposed of also becomes a problem for the environment.

This is why we should process and reuse waste materials – like people did in the past. It is even better to avoid waste altogether. The “three Rs” can help you use resources mindfully:

1. **REDUCE**: Avoid any waste that can be avoided.
2. **REUSE**: Make sure you use/buy materials that can be reused/recycled.
3. **RECYCLE**: Sort waste and make sure it is disposed of properly.



Do you know which materials can be reused or recycled? Do you know how to sort waste correctly? You will learn all about it in Step 3 and Step 4.

### 2.2. How can waste be avoided?

Much waste can be avoided by making conscious buying choices.  
If you want to buy something, you should first think about whether you really need it.



Maybe you already have something similar at home? Or something broken that could be fixed? You can also borrow things that you don't need very often.



In class, discuss the “**Waste Avoidance Pyramid**”<sup>\*</sup> below. What is easy for you, what is difficult?



<sup>\*</sup> Source: [www.wien.gv.at/umweltschutz/abfall/vermeidung](http://www.wien.gv.at/umweltschutz/abfall/vermeidung) (in German)



### 2.3. How much does “your” trash weigh?

1.3 billion tons of trash are generated annually in the European Union (EU). Each person in Europe generates about one kilogramme of trash every day. Packaging accounts for a great part of this waste – 146 kg per person per year, according to the Austrian eco-counselling organisation Umweltberatung. → Source: [www.umweltberatung.at](http://www.umweltberatung.at) (in German)



Think about it and discuss your answers with others.

- Roughly how many kg of waste does your family generate every year?
- How many kg of that is packaging? More or less than half the total volume?



Weigh your garbage for a whole day to see if your estimates are about right.

### 2.4. A rubbish breakfast



Organise a class breakfast. Each of you will bring something.

- What kind of waste is left behind after the breakfast?
- Sort the waste according to materials.
- Discuss the following questions and research online to check your answers.

Which products come with much packaging?

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Which packaging could easily be avoided?

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Which possible ways are there to avoid packaging?

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How can leftovers be avoided?

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What kind of waste is especially bad for the environment? Why?

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Which materials are better for the environment than others? Why?

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Many things you find on the Internet are fake news. The following videos explain what fake news is and how you can find out if a website is trustworthy or not: [www.youtube.com/watch?v=D0Cd9-eJ-No](http://www.youtube.com/watch?v=D0Cd9-eJ-No);  
[www.youtube.com/watch?v=9zECdW-A-rQ](http://www.youtube.com/watch?v=9zECdW-A-rQ)



You can learn to identify fakes with the game “Fake News Alert” from the **A2 My Personal Challenge: Less risk – More Fun** (free download at [http://youthstart.eu/en/challenges/less\\_risk\\_more\\_fun/](http://youthstart.eu/en/challenges/less_risk_more_fun/)).





## 2.5. A success story about waste



Read the story of a teenager whose idea for cleaning up the oceans became a success story:

According to data provided by the United Nations, approximately 13,000 pieces of plastic per square kilometre are floating in our oceans. They are spread all over the world by ocean currents.

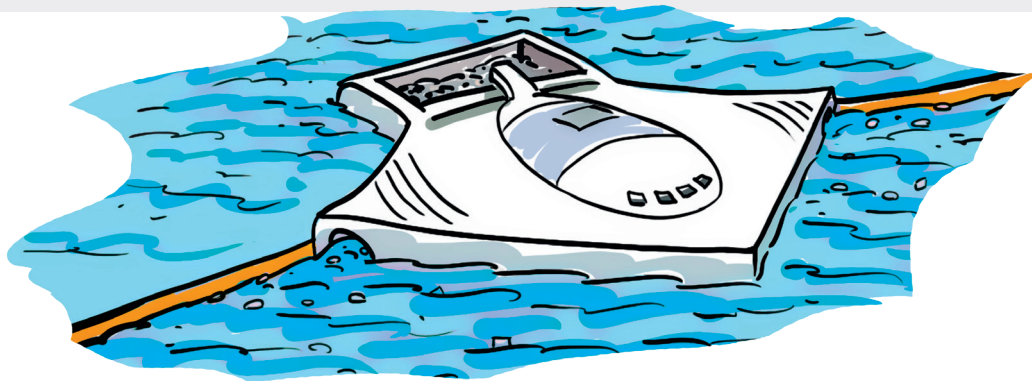
The biggest stretch of plastic waste is called the *Great Pacific Garbage Patch*. It floats in the Pacific between China and the USA and is 16 times the size of Austria. There are four more “plastic islands” that are almost as big.

Unfortunately, plastic needs a very long time to decompose. It breaks up into smaller and smaller pieces. Millions of marine animals and seabirds die painfully from swallowing plastic or from getting entangled in bigger pieces of plastic. Plastic particles that are too small to be seen spread throughout the oceans unnoticed. This means that when we eat seafood, we may also consume tiny pieces of plastic without knowing it.

When Boyan Slat, a high-school student from the Netherlands, was 17 years old, he went diving during a summer vacation in Greece. He discovered countless plastic bags in the ocean. He realised that all that plastic trash in the sea posed a great danger and tried to find a solution. He designed garbage collecting stations that made use of natural ocean currents. He called them *Ocean Cleanup Array*.

During his university studies, Boyan continued to develop his idea further. In order to save marine life, he didn't use nets to collect the garbage, but floating pipes that were anchored in places to which ocean currents would move the garbage patches.

The floating trash barriers reach several metres below the water surface. This way, they can catch the majority of plastic debris drifting in the ocean. Marine animals can easily swim underneath the barriers. Thanks to the construction's pointed form, garbage is automatically transported into the gathering areas.



Imagine you are a reporter:

- Write a newspaper article that encourages your readers to think about the problem and to do something against it.
- Think of questions you could ask Boyan Slat about his project.
- In teams, act out an interview with Boyan Slat as a role play.



In teams, compile an environment quiz:

- Think of quiz questions about this text or any other text on the topic.  
Write down each question on a small piece of paper.
- Discuss how and when you can play the quiz.





## Step 2 - Avoiding waste



Answer the **questions about the text**. Read carefully and circle the correct answer.

1. How many pieces of plastic per square kilometre are floating in the world's oceans according to the UN?				
10.000 plastic pieces	11.000 plastic pieces	12.000 plastic pieces	13.000 plastic pieces	14.000 plastic pieces
2. What is the biggest stretch of trash in the Pacific called?				
<i>Great Ocean Garbage Patch</i>	<i>Great Pacific Garbage Patch</i>	<i>Little Pacific Garbage Patch</i>	<i>Great Atlantic Garbage Patch</i>	<i>Great Pacific Garbage Pitch</i>
3. How big is this man-made island of trash that floats in the Pacific between China and the USA?				
twice the size of Austria	10 times the size of Austria	16 times the size of Austria	100 times the size of Austria	160 times the size of Austria
4. How many plastic islands are floating in the world's oceans altogether?				
two	three	four	five	six
5. What kind of energy do the garbage collecting stations use?				
unnatural currents	none	solar energy	natural currents	batteries
6. Where does Boyan Slat come from?				
Austria	Germany	the Netherlands	Finland	America
7. What did Boyan Slat design?				
floating pipes to gather trash	floating wipes to gather trash	floating pipes to lather trash	floating pipes to gather trash	floating pipes to gather cash



In teams, create a **fact sheet**. Search online for information about and images of the *Great Pacific Garbage Patch*, as well as diagrams of ocean currents.



Find the video **“What really happens to the plastic you throw away / Life of a Plastic Bottle”** on YouTube. Watch it and write down what you can remember. Why is recycling so important? Talk to others about it.

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Compare your research results with the fact sheet “Trash in the Sea” in the Teacher Guide.



## 2.6. Waste experiment: A day without plastic



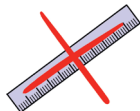
Find the stop-motion animated video **"10 Simple Ways to Reduce Plastic Use"** (ca. 3 min.) on YouTube and watch it. Make a list with all the tips. Put the list up where many people will see it (in the classroom; at home: in the kitchen, on the front door, in the trash room, etc.).

Day 1:

- Pay attention to which plastic objects you use during the day.
- Write down when you used these things and for what purpose.
- In the evening, read through your notes and think about what you could well do without.

Day 2:

- Try to do without plastic for an entire day. This might be very difficult, which just goes to show how much plastic we use every day.



Write down which plastic objects can be replaced by things made from other materials.

Be creative and find solutions that are suitable for everyday life. Talk to others about how they experienced the plastic-free day. Together, compile an "INSTEAD" list.

Plastic ...	instead:
bags	
toothbrush	
ruler	
box	
cup	



Find the 2-minute video **"The Story of a Spoon"** by Greenpeace International and watch it together with others. Is it really too much to ask to wash spoons, plates or cups?

Talk to others about it.



### 3.1. Waste research



At the end of a school day, check the waste in your classroom:

- What kind of waste makes up the biggest part of all the rubbish?
- Is the waste sorted and disposed of correctly?
- No? Together, think about how you can contribute to correct waste disposal!



Research at home, too. Discuss and ask yourselves:

- Which materials make up our waste?
- What do we throw away most often?
- Could we have reused anything?
- Do we sort and dispose of all our trash correctly?



You can use the “Trash Detective” cards from the Teacher Guide to make a waste check at your school or to “reckon with” the waste generated at a hot dog stand.

### 3.2. Creative waste sorting



Together, think about how you can contribute to correct waste disposal. Maybe you need additional waste bins for your classroom or your home? From what could you make such containers?

Make sure you label your bins clearly.



Research funny labels for waste bins (online or on public containers).

If you can find any public containers with funny labels, take pictures and use them as inspiration for your own creative labels.





### 3.3. Sorting waste pays off!



By sorting and recycling waste correctly we can spare natural resources, help **save energy** and contribute to **climate protection**.



For used resources to be reused and processed, waste needs to be sorted correctly.

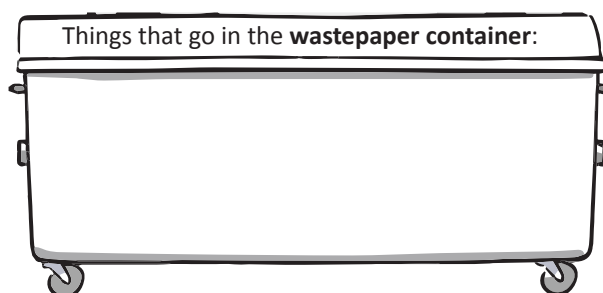
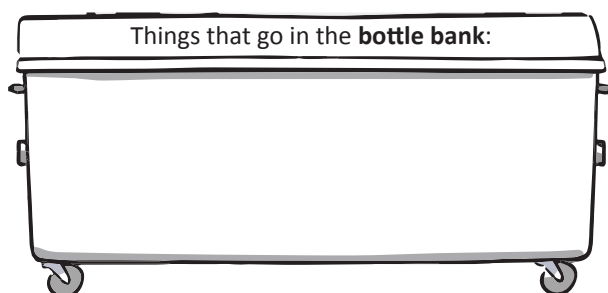
**WHAT** goes **WHERE**? Use a magnifier and sort the “rubbish” from the box correctly.

Is there anything else that sometimes lands in your waste bins? Add it!

Glass bottles, chemicals, jam jars, prescription drugs, PET bottles, newspapers, cans, cardboard, computers, ashes, plant protection, bottle caps, exercise books, tin lids, books, bathtubs, mobile phones, paint and varnish, greaseproof paper, tea bags, laundry detergent bottles, hygiene products (e.g. pads, tampons, ...), TV sets, mirror glass, toasters, cut flowers, yogurt cups, cleaning agents, fruit and vegetable waste, crisps & snack packaging, pickle jars, catalogues, tin foil, cat litter, glossy magazines, lightbulbs, batteries, furniture and furniture components, mineral oil, crystal tableware, food, ...

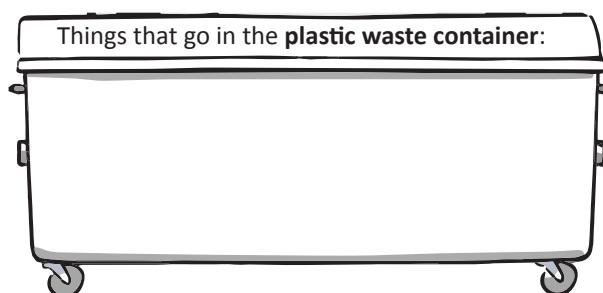
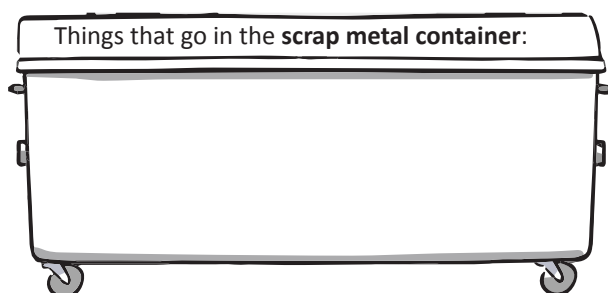


The copy templates in the Teacher Guide contain a tile game on this topic!



**WHY** throw things in the **bottle bank**? **Glass** can be recycled any number of times.

**WHY** throw things in the **wastepaper container**? **Waste paper** is the most important resource for the paper industry. Most paper and cardboard packaging is largely or exclusively made from waste paper.



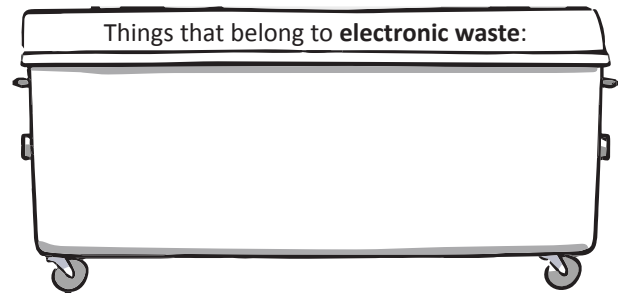
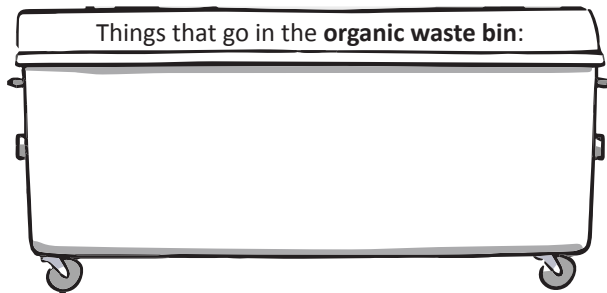
**WHY** throw things in the **scrap metal container**? If **scrap metal** is reused, much energy can be saved compared to the production of new metal from ores.

**WHY** throw things in the **plastic waste container**? Fibres and granulates can be produced from many kinds of **plastic**. These resources can be used to create a variety of new products. Parts of used PET bottles can be turned into new PET bottles.

The details of local sorting and recycling rules may differ. If you are unsure about something, you can ask your teacher about the local rules or research them online.



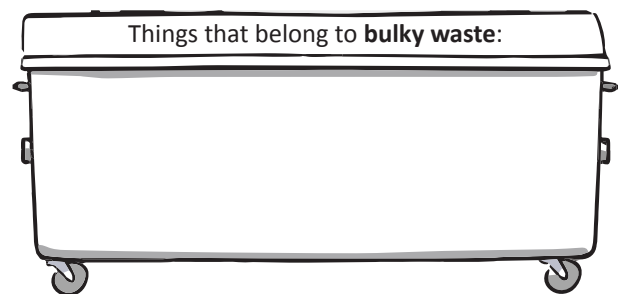
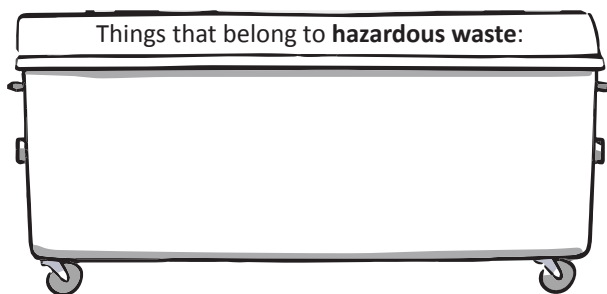
## Step 3 - Sorting waste



**WHY** throw things in the **organic waste bin**? Sorted **organic waste** is composted.

Compost can be used to fertilise soil in an environmentally friendly manner. Unfortunately, much organic waste is still put into residual waste bins.

**WHY** collect **electronic waste**? **Used electronics** contain valuable resources, but also hazardous materials that need to be disposed of properly. Used electronic devices can be brought to recycling centres or returned to retailers free of charge at the purchase of a new device.



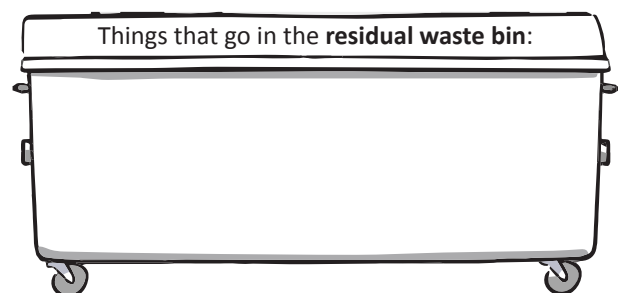
**WHY** collect **hazardous waste**? **Hazardous waste** is any dangerous waste generated by households. These materials are processed or burned in special facilities and must not be disposed of with residual waste. Batteries and battery packs can also be returned to retailers.

**WHY** collect **bulky waste**? This kind of waste is too bulky for residual waste bins and needs to be collected and processed separately.

**WHY** throw things in the **residual waste bin**?

**Residual waste** cannot be recycled. With better waste sorting, however, up to 60 % of the content of residual waste bins could still be recycled.

**Residual waste** is the waste that remains once all recyclable materials have been removed.



Any old clothing and toys that are still usable can be passed on. Anything that can't be used anymore should go into residual waste bins. Cooking oil must be collected in separate containers. Oil should NOT be put into residual waste bins and NEVER poured down the drain!

Fortunately, more and more products are made from biodegradable materials. If these products are disposed of correctly, they turn into new soil. This makes them environmentally friendly.

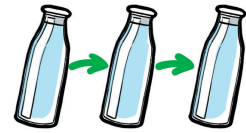




### 4.1. What can be UPcycled how?

#### Reusing

If waste cannot be *avoided*, used things should be **reused**.  
This can for instance be done by repairing things that are broken.



#### Recycling

If waste cannot be *avoided* nor *reused*, it needs to be **recycled**. This is why it is important to sort waste and put it into the right bins (glass, paper, metal, plastic...). Only then is recycling possible.



#### Other USES

If waste cannot be *avoided* nor *reused* nor *recycled*, it can be **burned** to generate energy for district heating.  
However, this also produces toxic gases that pollute the air.

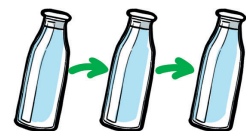


#### Disposal

Only waste that cannot be *avoided* nor *reused* nor *recycled* nor *used in any other way* may be disposed of in **landfills** as **residual waste**.



Think about which objects could be reused instead of thrown away.  
Who could repair them if they are broken?  
Talk about it.



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What do you remember from Step 3?  
Which materials can and should be recycled? Why?



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## 4.2. Waste management and the circular economy

The circular economy presents an alternative to the throw-away society. In a circular economy, materials and products are reused, repaired and processed as often as possible.

Reusing materials is much better for our environment than producing everything from scratch. Recycling plastic also makes a lot of sense.

Plastic is largely produced from crude oil. This is becoming increasingly scarce.

Plastic needs hundreds of years to decompose. This is why more and more plastic waste is floating in the oceans.



As part of its circular economy agenda, the EU is planning to recycle up to 50 % of plastic by 2025, and 55 % by 2030.



You can find out how a German company uses alternative raw materials to produce plastic in the video **“Covestro: Circular Economy – Closing the Loop”** (3.5 min.). Find it online and answer the questions below. If you can’t answer all the questions right away, watch the video again.

- What do more and more people want?

- What are fossil raw materials?

- For what purposes are they still being burned?

- ☐ Driving, heating, industry
- ☐ Diving, eating, dusting
- ☐ Dicing, bleating, in-door swimming

- What must be the new guiding principle? Draw it here:

- The plastic industry can and must support the change to a circular economy, because plastics are used everywhere and they are essential to shape the future. Which alternative raw materials does the company use? To produce what?



Who else has had good business ideas to solve the global problem of plastic? Research online, e.g. with the search terms “plastic” and “circular economy”.

Boyan Slat (**Exercise 2.5. A success story about waste**) also realised that the plastic waste he collected could be sold and processed. Research online to find out more about this.

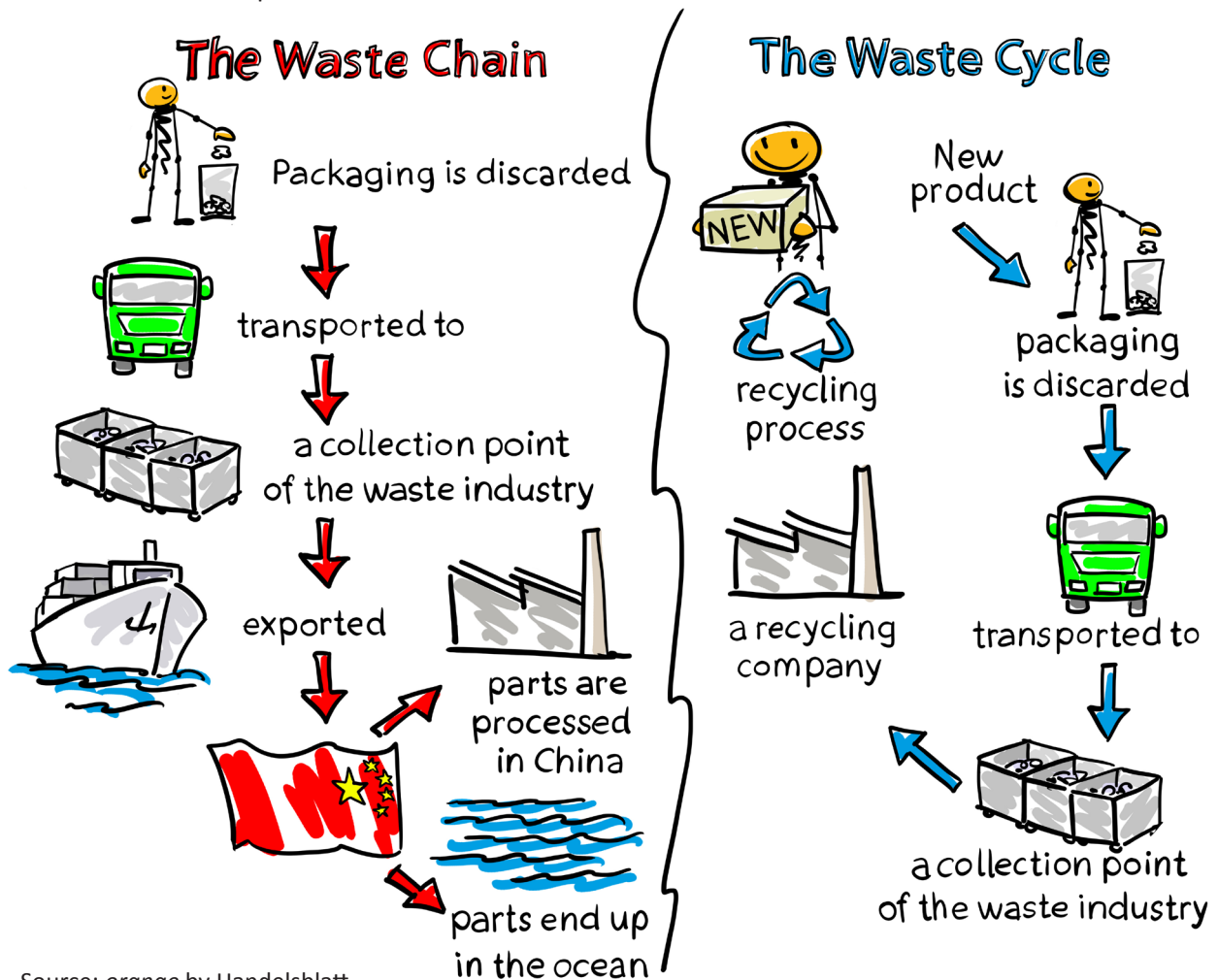


## 4.3. Waste chain or waste cycle?



Look at the diagram below. Compare the “waste chain” with the “waste cycle”.  
Think about the following questions:

- Which method does not export waste?
- Which method transports the waste over shorter distances?
- Which method is less expensive? What do you think?
- Which method processes more waste?



Source: orange by Handelsblatt



Talk to others about the differences between the two methods and their advantages and disadvantages.  
Which method is better for the environment? Give reasons for your decision.  
Write down the results of your joint reflections!

is better for the environment because

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### 5.1. Waste cycles and circular economy as “Global Goals”

In 2015, the global community of the United Nations (UN) agreed on the **Agenda 2030**. Waste cycles and a circular economy play an important role in this agenda, especially for the **Sustainable Development Goals** (=SDGs) 11, 12 and 14.



Read through the three goals. Underline any sentences that are too complicated. Research online by entering the search terms *Global Goals* or *Sustainable Development Goals*.

#### **SDG 11 “Sustainable cities and communities”**

*By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.*

#### **SDG 12 “Responsible consumption and production”**

*By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.*

*By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.*

#### **SDG 14 “Life under water”**

*By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.*

The development of effective waste cycles and a circular economy will also contribute to achieving further goals, such as “**Good health**” (SDG 3), “**Decent work**” (SDG 8) and “**Climate action**” (SDG 13).



Try to explain the goals to others in simpler terms.



### 5.2. Which goal is more important?



Which of the three goals do you think is the most important? Which is the least important?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



Talk to others about it. Give reasons for your decision.  
Together, discuss to which goal you can contribute. How?

### 5.3. Reflecting creatively on the goals ...



Which quote matches which of the three goals?

You can't dispose of waste  
you don't see.

The packaging industry is so creative  
that it is no coincidence waste  
volumes keep increasing.

Be yourself the change you  
want to see in the world.

The biggest threat for our planet is  
the belief that somebody else will  
save it.

Shouldn't we start producing something  
more meaningful than too much trash?



Make a poster with your favourite quote. Write it on a big sheet of paper in creative, decorative letters and add illustrations that match the content.



Write an **optimistic** and a **pessimistic** "Trash Science Fiction" story:

"This is how we'll be living in 2050!"

- Imagine the future with all your senses.  
What do you see, hear, smell, taste and touch? How do you feel?
- Draw a picture about "Waste in the future".
- Write your stories about "Waste in the future".



Talk to others: What can you do to make sure the pessimistic story doesn't come true?



Collect your optimistic pictures and stories in a "Trash Science Fiction" blog.  
Continue to check your blog in the future.

- What did others write or draw?
- What has come true?
- **How did you contribute?**





### 6.1. Philosophising about waste ...



Read the sentence starters below and philosophise about them:

If nothing ever got broken \_\_\_\_\_

If we bought everything new every day \_\_\_\_\_

If there were no packaging \_\_\_\_\_

If any kind of waste could be reused \_\_\_\_\_

### 6.2. What if ...



Think about the questions below. Write down your thoughts.

... everybody bought only regional food products?	
... everybody stopped using plastic – wherever possible?	
... everybody acted respectfully towards others and the environment?	
... everybody made sure to generate as little trash as possible?	
... everybody sorted their waste?	
... everybody disposed of their waste in the right places?	

### 6.3. Telling trash stories ...



Go on a photographic safari with your smartphone, taking pictures of rubbish in the streets, in parks, ...

- Use your photos as inspiration for trash stories.
- Tell the story of how a piece of trash came to be thrown away, from its own point of view.
- Interview a piece of trash and ask it: Who threw you away? Why? How long have you been lying here? For what did people use you before they threw you away?

Collect your pictures and stories in a book or blog about waste.



What sounds like trash? How do I make a waste ABC?

Ask about “A creative look at trash” in the Teacher Guide!



### 6.4. Waste debate



Think about questions for a debate about waste and debate the pros and cons. Each question starts with “SHOULD”:

e.g. **Should people sort their trash?**

- You can debate the questions in pairs or in teams.
- Before the debate starts, draw lots to see who will represent which opinion:
  - PRO means YES, I agree.
  - CON means NO, I don't agree.
- It is important that **all** of you express your opinions **politely** and **respectfully**.



You can also debate the questions silently by yourself.

Write down your arguments. This is a good preparation for a real debate.



You can practise debating and finding arguments in the **A2 Debate Challenge** (free download at [http://youthstart.eu/en/challenges/from\\_listening\\_to\\_debating/](http://youthstart.eu/en/challenges/from_listening_to_debating/))

### 6.5. Waste avoidance plea



Together, write an appeal to your fellow human beings, asking them to avoid waste.

Put it up where many people will see it!



### 6.6. Trashy rhythms



In class, make creative use of waste and produce your own hit song with “trashy rhythms”. Here's how it works:

- Take packaging waste from the bin (clean it if necessary).
- Together, find objects that can be used as percussion instruments (e.g. an empty rubbish bin turned upside down to make a drum).
- Once everybody has a percussion instrument, see which sounds you can produce with your instruments by beating, stroking, scratching,...
- One of you plays a rhythm. The others repeat it twice. Then somebody else plays a rhythm. The others repeat it, etc.



Go with the rhythms – and enjoy making music together!



Record your “trashy rhythms” session with a mobile phone. The audio files might make a good soundtrack for a video about waste.



### 6.7. Listening to ... trash (mindfulness exercise)



You can also use waste materials to practise mindful listening.

Collect packaging waste. If necessary, clean it.

Drop a piece of trash, making sure the others cannot see it, but can hear the sound it makes.

The listeners will try to guess what you dropped to the floor.

(Before you begin, establish whether guesses will be said out loud or written down.)



### 6.8. A sporty way to pick up litter ...

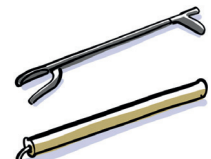


“Plogging” combines physical exercise with environmental protection: It means picking up litter while walking or jogging. The name “plogging” comes from the words “plocka upp” (which is Swedish for “pick up”) and “jogging”.

Why don't you try plogging with your friends or families? You could be a role model to others!

Please be sure you have enough gloves, trash bags and litter sticks.

- You can buy grabbers; they are also useful at home.
- You can also use simple wooden sticks with nails to spear trash.  
You can easily make these yourselves.



You can also use plogging apps to collect data on where rubbish is found (e.g. the free app “Go Plogging”: <https://apps.apple.com/us/app/go-plogging/id1426236544>).

### 6.9. Creating value from trash ...



Collect (clean) packaging over a period of 3 days.

Bring it to school. Put all your packaging waste on the floor and sort it by material.

Which material is the most common?



Together, think about these questions:

- Is this packaging really necessary?
- Is it oversized?
- Could these things be packed in a more environmentally friendly way? How? Using what?
- **Can we use these materials to create something new, something of value? What?**



Use the waste to make unusual works of art and organise an exhibition that will get the visitors thinking about the issue of waste.



You can also collect trash in woods or parks and **UPcycle** it into works of art. Research information about hygiene rules first.



How can you present your objects effectively and give each other feedback for your presentations?  
Ask your teacher for checklists.



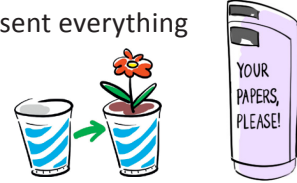
### 6.10. Organising & hosting a Trash Value Festival



In class, organise a Trash Value Festival at your school, where you can present everything you have learned and created on the topic of waste.

What do you want to tell the visitors?

Write down what is especially important to you:



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Discuss how you can present your messages most effectively.

Brainstorm ideas:

e.g. an exhibition about waste in the past and present, posters about sorting and avoiding waste, a presentation of self-made **UP**cycling objects, crazy packaging,...



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Organise the festival together:

- When will it take place?
- Where at your school? (In the classroom, hallway, gym,...)
- Whom do you want to invite?
- Which tasks need to be done before the festival begins?
- Who will be in charge of what?



Imagine you could advertise your festival in a newspaper.

Design an advertising poster (individually or in teams).

Come up with a short promotional message for an online ad.



Act out a TV interview for a news show or record a short promotional video. Present your most important messages and briefly explain why you are organising the festival.





### 7.1. How well can you do that already?



Carefully read the sentences below and think about how well you can do these things.  
Mark the area under the symbol that fits the best.

Here is what the four symbols mean:



I can do that in most cases.



I can do that in some cases.



I can rarely do that.



I need a lot more practice for that.

I can learn lessons for the future from the history of waste.				
I can avoid waste.				
I can sort waste.				
I can dispose of waste materials in the right containers.				
I can understand that resources (e.g. oil) are limited.				
I can identify waste problems and view them as challenges to be solved.				
I can develop ideas to help fight the problem of waste.				
I can develop creative ideas to solve waste issues.				
I can plan waste projects together with others.				
I can <b>UP</b> cycle waste by making new things out of used things.				
I can develop creative <b>UP</b> cycling ideas together with others.				
I can work with others and contribute my personal strengths.				



I have ...

- ... researched the history of waste.
- ... thought about how waste is generated.
- ... studied ways to avoid waste.
- ... learned about correct waste disposal.
- ... reflected on possible ways to **UP**cycle waste.
- ... developed creative ideas with waste.
- ... collected waste and used it to make something new.

This is very important to me because \_\_\_\_\_

\_\_\_\_\_





## 7.2. Questionnaire for the Trash Value Challenge

1. What has the Trash Value Challenge taught you for your future?	
2. What do you find especially interesting?	
3. What would you like to learn more about?	
4. What do you already know much about?	<input type="radio"/> waste disposal <input type="radio"/> waste avoidance <input type="radio"/> recycling <input type="radio"/> <b>UP</b> cycling <input type="radio"/> waste sorting
5. What would you like to research further?	
6. What will you pay attention to in the future?	
7. What will you do to generate less waste?	
8. How will you inspire your family to pay more attention to waste avoidance, waste sorting, recycling and <b>UP</b> cycling?	



Discuss your answers with others.

## Additional activity:

- Trash Value Festival for children and teenagers in Austria: [www.ifte.at/trashvalue](http://www.ifte.at/trashvalue) (German only)

## Links for further reading:

- Waste in the past:  
<https://environmentalchemistry.com/yogi/environmental/wastehistory.html>  
<https://sustainingourworld.com/2011/09/22/the-past-present-and-future-of-solid-waste-disposal/>
- Sewers and wastewater:  
<http://www.sewerhistory.org/>  
<https://thinkbeforeyouflush.org/what-to-flush/>
- Tips for avoiding or reducing waste:  
<https://www.epa.gov/recycle/reducing-waste-what-you-can-do>  
<https://ksenvironmental.com.au/10-tips-on-how-to-avoid-or-reduce-waste/>  
<https://myplasticfreelife.com/plasticfreeguide/>
- Videos and lesson plans on the topic of waste:  
[www.norwexmovement.com/kids/videos-lesson-plans/](http://www.norwexmovement.com/kids/videos-lesson-plans/)

## Recommended videos:

- On plastic:  
What really happens to the plastic you throw away / Life of a Plastic Bottle: [www.youtube.com/watch?v=6xINyWPpB8](http://www.youtube.com/watch?v=6xINyWPpB8) (ca. 4 min.)  
A Plastic Ocean (kids' version): [www.youtube.com/watch?v=3EqyvqMXODc](http://www.youtube.com/watch?v=3EqyvqMXODc)  
The Story of a Spoon (Greenpeace International): [www.youtube.com/watch?v=eg-E1FtjaxY](http://www.youtube.com/watch?v=eg-E1FtjaxY)  
10 Simple Ways To Reduce Plastic Use – For Kids!: [www.youtube.com/watch?v=XVUux3boWk](http://www.youtube.com/watch?v=XVUux3boWk)
- On the 17 Sustainable Development Goals (SDGs):  
The World's largest lesson: [www.youtube.com/watch?v=cBxN9E5f7pc](http://www.youtube.com/watch?v=cBxN9E5f7pc)

All Challenges of level A2 are also available in a printed version in German.

You can find them at [www.jugendstaerken.at](http://www.jugendstaerken.at) (Jugend stärken, volume 1 - 4).



**Empowering Youth** is a holistic learning programme for lower secondary school students. It is part of the “You<sup>th</sup> Start Entrepreneurial Challenges” programme.

All **competence levels (from A1 = primary level to B2 = secondary level II)** can be downloaded for free at [www.youthstart.eu](http://www.youthstart.eu) in **German, English** and, in some cases, in five other languages.

The “**Mind & Body**” section provides short video clips with physical “activate & concentrate” exercises and the *You<sup>th</sup> Start mindfulness programme*.



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