

TEACHERS NOTES

Early Level Teaching Resource

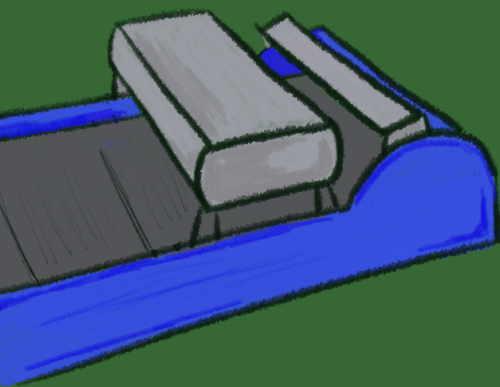
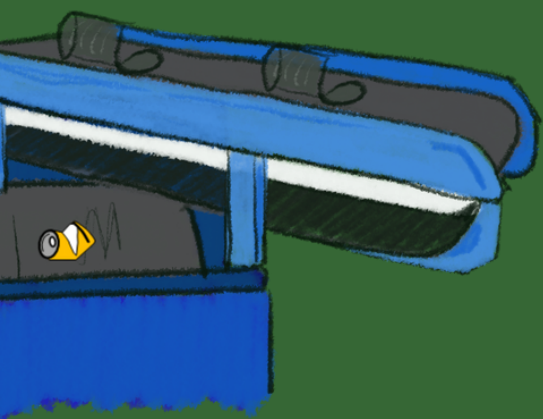


INTRODUCTION

You are teaching a generation of young people who will have a huge impact on our environmental future. Lessons about recycling, sustainability, and eco-friendly practices are incredibly important. To help bring these important topics to your classroom, we have put together this easy to use resource which introduces the topics of recycling and sustainability and goes on to reinforce key messages and encourages young people to really think about the impact they could have by making a few small changes.

Levenseat's School resource embraces the clear values, purpose and principles set out by 'A Curriculum for Excellence' and the emphasis on the coherent education from ages 3-18. These relevant recycling and resource awareness activities for children and young people, therefore, aim to lay the foundations for future learning as they progress through the education system and provide an enjoyable and educational experience for children that will:

- Provide young people with key waste reduction and recycling messages and create a positive image of the waste management sector.
- Offer real- life context for learning.
- Allow for opportunities to develop skills for learning and skills for life, in order to live a more sustainable life.
- Develop young children's literacy, numeracy and health and wellbeing, whilst allowing them to learn about recycling, sustainability, and eco-friendly practices.
- Support children in developing the four capacities: confident individuals, responsible citizens, effective contributors and successful learners.
- Ensure cross-curricular links are made on the general themes of waste management, recycling, caring for the environment and renewable energy.

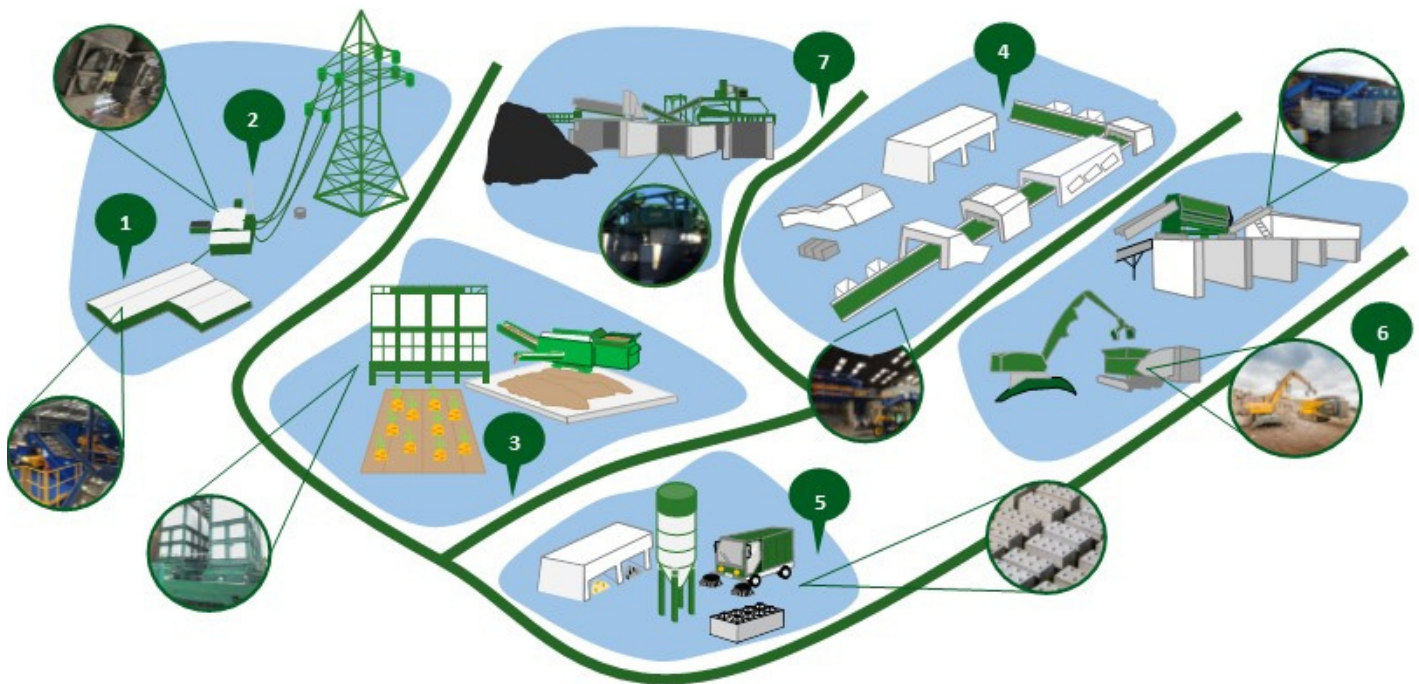


LEVENSEAT

Levenseat has been a key player in the Scottish waste and resource management sector for over 35 years. We are an industry leader in the field of converting wastes into resources, leading the way to a more sustainable Scotland. Set to manage 750,000 tonnes of recyclates and resources per year, we are committed to developing new solutions to recover the best resources and provide customers with environmental and economic solutions.

We also play a key role in educating communities, businesses, and councils on the value of resources and the part they can play to reduce waste and embrace the principles of a circular economy.

Levenseat process 4 waste streams for Scottish Borders, Residual waste (black bag waste) street cleansing material, commercial and industrial waste, and bulky household waste (i.e. mattresses and couches, etc) we are pleased to be working with you to help bring the world of resource recovery and recycling to the classroom.



1. Materials Recycling & Fuel Preparation
2. Power Plant
3. Organics Recycling
4. Container Materials Recycling Facility
5. Concrete production
6. Materials Processing
7. Minerals Recovery Plant

LESSONS

INTRODUCTION



Lesson one is designed to introduce children to the topic of recycling.

Prior to the lesson beginning, gather a few items of rubbish and put them in a plastic bin bag.

Ask the children if they know what it is. The answer is a bag of rubbish. Pull out each one individually and ask the children if they know what each one is? Ask the children if they know what recycling is? ask them if they think any of the items should have been recycled?

Other questions to explore are:

- Where does it come from? A: every household produces waste
- What is recycling? A: Recycling is when we take the rubbish and recover the material it is made from and turn it into something new.
- do you know what happens to your waste after you put it in the bin?

Discuss the questions as a class and explain that the class is going to read a story about Ali the mini can who goes on an adventure after he is put in the general waste bin.

The book is 16 pages long but there are natural breaks along the way. The book is also available as a picture book with the words removed.

[Powerpoint version](#) [Electronic book](#)

LESSONS

CORE LESSON

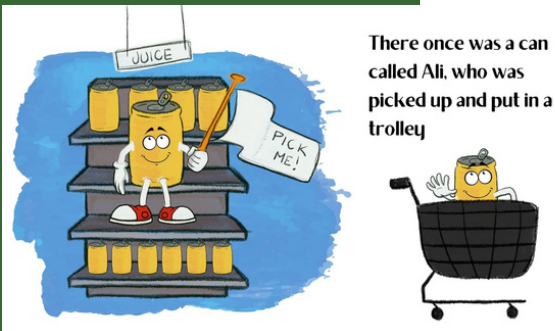


The adventure starts with Ali in the supermarket excited about the thought of being bought and going home to a family who recycles.

Sadly, Ali is put in the wrong bin and he's worried about where he will go. The Children will learn about each stage of the materials recovery process by following Ali on his journey.

Questions to ask:

- What did Michael do wrong?
- What should Michael have done differently?
- Do you know what Ali is made from? A: aluminium, is 100% recyclable, and can be recycled over and over again
- Do you or anyone you know ever put cans in the general waste bin?

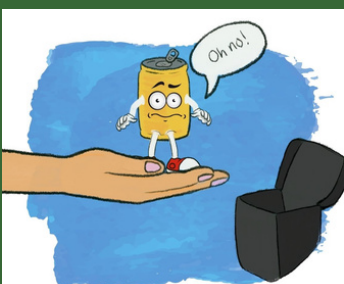


There once was a can called Ali, who was picked up and put in a trolley



Ali met Michael. Michael was thirsty, he drank Ali on the first day!

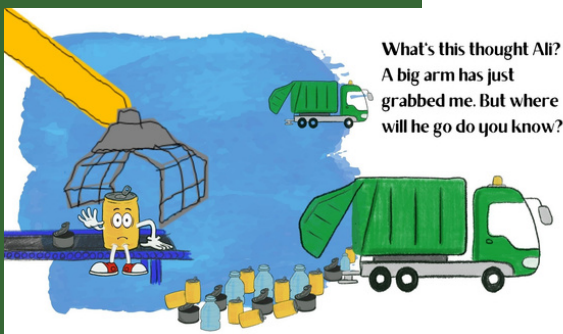
He gulped him down in one swallow, but the worst news was still to follow.



You see Michael didn't know how to recycle! And so Ali went in the wrong bin and that's where his journey begins.

LESSONS

CORE LESSON



Ali is picked up by the bin lorry and taken to Levensat. He still doesn't know what is happening or where he will end up, he's worried about being left at the landfill.

Questions to consider:

- Who picks up your waste?
- Do you know where it goes after it is picked up?
- Where do you think Ali is going?

Finally, Ali meets Sandy and Mandy who are part of the 'Handy' team. Mandy explains what will happen and Ali feels better about moving on to the next stage.

This would be a good opportunity to talk about the Handy team, though not essential.

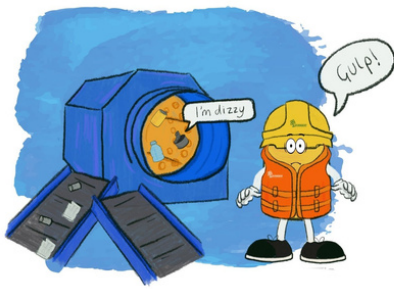
Ask the children:

look at the picture what job do you think Mandy does (she is holding a spanner as a hint) she is in the engineering team and helps maintain and repair equipment. Another good point to make is that girls can be Engineers too.

Ali puts on his safety gear and is now happier to proceed through the plant.

LESSONS

CORE LESSON

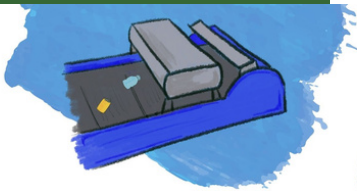


The first stop was a large trommel, round and round it went but where would the waste be sent?

It went on a rollercoaster ride where the waste would divide.

Ali now learns all about the big pieces of equipment and how valuable materials are recovered from the general waste bin

A trommel is like a big sieve that goes round and round and divides the materials into small and large piles



Optical sorters saved the plastic, isn't that fantastic, but where will it go, do you know?



Optical sorters pick out the plastic to be recycled. If the material is too dirty from being mixed up with other waste, (such as food waste and fluff from your Hoover, etc.) the optical sorters might not be able to see it.



Next was the metals, pots, pans and old tin cans.

They were recovered by the magnet, great we are saving the planet.

But where will it go, do you know?

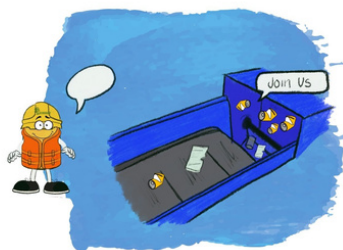
Metals are recovered by a large magnet. Everything from tin cans to pots and pans

Now Ali sees all his friends at the eddy current. An eddy current uses electricity to ping the aluminum onto its own belt.

What is this machine? There are more cans than Ali has ever seen.

It's an eddy current, it uses electricity to recover aluminum so simplistically.

Ali has found his friends, is this where his journey ends?



The cans explain it's not where the journey ends they need to go on to be recycled. But what happens to all the waste that can't be recycled? Ask the children:

why do you think people have put recycled material in the wrong bin?

what do you think happens to the waste that can't be recycled?

Don't worry said his friends it's not where it ends, now that the waste is all divided our families are united.

Metal, plastic, paper, there is no waste here. Even the fluff goes on to make better stuff.



This is a good place for a natural break if needed. For younger children, you may want to skip the energy section and jump to the last page.

LESSONS

CORE LESSON

The fluff thought
Ali, how can that
be?

The fluff is a fuel
just like gas, coal
or oil. It helps us
heat water and
brings it to a boil.



Ali learns that waste that can not be recycled does not go to landfill and is instead used to make energy

It's not easy explaining this to young children but the steps are:

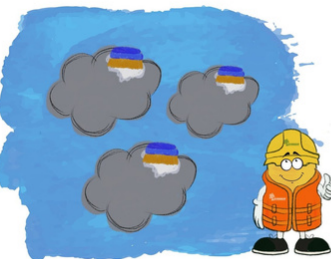
1. the non-recyclable waste is shredded (cut into small pieces) and mixed to the right formula
2. We use waste as a fuel, just like coal or oil. the fuel is heated and makes gas
3. Gas is burned to boil water and make steam just like on a hob with a pot of water.
4. The steam turns the turbine and generates electricity for the grid.
5. Emissions are cleaned.
6. The Levensat facility produces enough electricity to power 25, 000 homes.

Ali does a much better job of explaining it in the book

We mix it and blitz it to make our top-secret fuel position.

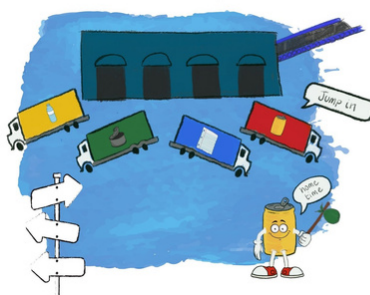
We treat it and heat it to make our own gas, which is burned to make steam just like your kettle

The steam turns the turbine and electricity is created. It goes to the grid to power 25,000 homes, it's estimated.



Any dirty gas emissions are cleaned, scrubbed and filtered.

They go back out safely through our very large chimney.



So next time you put something in your bin, be sure to remember the story of Ali and everything it took to reunite him with his family, to be recycled - finally.

Your town is landfill-free let's use the right bins and keep it that way.

The end.

Finally, Ali is ready to go home with all the other cans, he'll go to a smelter and be recycled back into an aluminium or maybe even a car.

Questions to ask the children:

- Did you know your waste was used to make Energy?
- Are you happy for Ali that he was reunited with his family?
- What can you do to help?



INTERACTIVES

As a fun way of reinforcing the children's learning, we have created a few interactive resources. We intend to create more, let us know if there is anything, in particular, you would like.

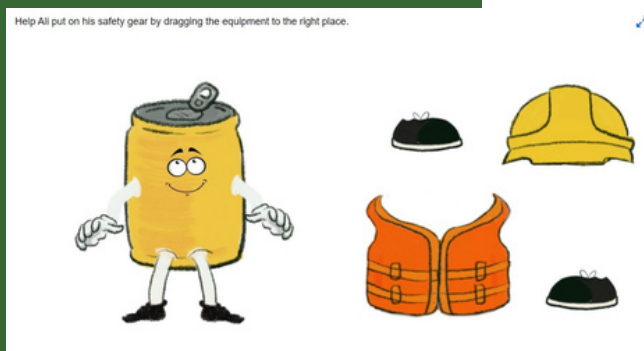
WHICH BIN DOES IT GO IN?



Can the children choose the right bin for their waste and recycling? Click [here](#)

Take part individually, in a group, or as a class.

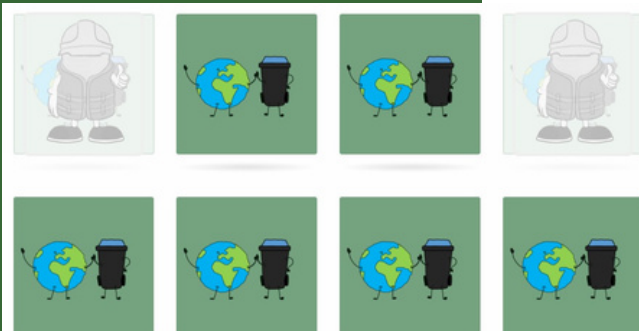
HELP KEEP ALI SAFE



Can you help Ali put his safety gear on so he can work at Levenspit?

Click [here](#)

MEMORY PAIRS



Match all the pairs in this game of memory.

Click [here](#)

ADDITIONAL INFORMATION

01

Our web address is levenseat.co.uk/community/learn-with-levenseat/

02

Send in examples of your work, we'd love to feature you on our website

03

We really need your feedback to make this work

WHAT I HAVE LEARNED

We really would love to hear from you, has the resource made a difference? is there anything you would change? can you think of anything we have missed?

We hope you enjoyed using this pack, recycling really is a fun topic and it's something we all have to do so why not learn more. More topics will be added including what we recycle your street sweepings and large household items.

