



MASTERS OF INFINITY

QUESTS



SUPERMARKET SAVIOURS

Your friend is planning a birthday party. You find them in the supermarket with a trolley full of food and drink in recyclable and non-recyclable packaging.

Help them get rid of the things that will feed Land Phil and make better choices. Can they fill their trolley with more recyclable options?

Use the shopping list below to decide which items they can buy. Use the [Infinity Cards](#) and the plastic recycling chart to work out what the item is made from, and if it's recyclable, then complete the table.



IN THE TROLLEY	PACKAGED IN	MADE FROM?	RECYCLABLE? (Y/N/ SOMETIMES)	BUY? (Y/N)	IF NO, SUGGEST AN ALTERNATIVE
Custard	Food can				
Plastic cutlery	Plastic bag				
Fizzy drink	Clear plastic bottle				
Mayonnaise	Glass jar				
Crisps	Crisp packet				
Table cloth	Plastic bag				
Yoghurts	Plastic pots				
Fizzy drinks	Drink cans				
Food trays	Foil				
Fruit	Plastic tray				
Baked beans	Food can				

Use the guide to check whether plastic items are recyclable.

RECYCLABLE PLASTIC

Rigid plastic packaging such as **plastic drink bottles**, **cleaning bottles**, **butter containers**, **yogurt pots**, **salad tubs**, **fruit and vegetable trays**, **plastic milk bottles** and **soap or shampoo bottles**. All these items can be recycled.



NON-RECYCLABLE PLASTIC

Soft plastics such as **crisp packets**, **plastic bags & plastic film** are not collected for recycling in Ireland at the moment and should be placed in your general waste bin.



ENERGY WARRIORS

Task 1

As well as reusing resources, recycling saves energy! Use the statistics on recyclability from the [Infinity Cards](#) to complete the rest of the table below.

MATERIAL	RECYCLING ONE TONNE SAVES HOW MUCH CO ₂ EMISSIONS?	RECYCLING ONE TONNE SAVES HOW MUCH RAW MATERIAL?	RECYCLING SAVES WHAT % OF ENERGY?
Aluminium			
Steel			
Glass			25%
Plastic	1.5 tonnes	2.2 tonnes	

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Task 2

Each of these towns has saved the following amount of recycled packaging. Each pictogram represents one tonne of materials. Count how much packaging material they have recycled to help you complete this task.

TALLAGHT

Tonnes of aluminium _____

Tonnes of steel _____

Tonnes of glass _____

Tonnes of plastic _____

BALLINCOLLIG

Tonnes of aluminium _____

Tonnes of steel _____

Tonnes of glass _____

Tonnes of plastic _____

ATHLONE

Tonnes of aluminium _____

Tonnes of steel _____

Tonnes of glass _____

Tonnes of plastic _____

TUAM

Tonnes of aluminium _____

Tonnes of steel _____

Tonnes of glass _____

Tonnes of plastic _____

Can you work out how much has been saved in CO₂ emissions using what you learnt above? Now rank them from the most energy saving, to the least.

TOWN	GLASS BOTTLES CO ₂ SAVED	PLASTIC BOTTLES CO ₂ SAVED	ALUMINIUM DRINK CANS CO ₂ SAVED	STEEL FOOD CANS CO ₂ SAVED	TOTAL CO ₂ SAVED	MOST TO LEAST ENERGY SAVED (1 TO 4)
Tallaght						
Athlone						
Ballincollig						
Tuam						

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BIN BUSTERS

Your neighbour is putting their bins out. But wait! Where's the recycling?
Think of all that waste going to power up Land Phil!

Task 1

Clearly, your neighbour doesn't know why recycling is so important!
Persuade them of the need to recycle. You could do this through a short speech, letter, poem, song or rap!



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Task 2

Not everyone understands what packaging can go in their recycling bin, and what can't. Make a mini poster for your neighbour to help them in future.

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PROPERTIES POWER UP

Task 1

Match the properties and their definitions.

PROPERTY OF MATERIAL	DEFINITION
Corrosion resistant	Breaks easily
Durable	Does not rust
Malleable	Lasts for a long time
Brittle	See through
Transparent	Can be moulded into different shapes

Task 2

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Use the [Infinity Cards](#) to find the properties of the different materials and write them in the table below, then think about their advantages and what they can be used for.

MATERIAL	PROPERTIES	ADVANTAGES	WHAT THEY CAN BE USED FOR
Aluminium			
Steel			
Glass			
Plastic			

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PROPERTIES POWER UP

Task 3

Ally and her crew are looking for new objects that they can create from recycled packaging. Design items made from the four materials and label them with their features and properties. Be creative! Each person in the team could design a different item.



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