

## how to play the game

The game can be played by between 2 and 6 players. All 30 cards in the deck are shuffled and dealt to the players and held face down – no peeking!

The player on dealer's left starts, they turn over their top card and decide which of the 4 categories to play as trump. **It is always highest value wins.** The player then declares the trump category to their opponents. All players then read out the same category value from their top card. The player with the highest score in the category wins, takes all cards played that round, and starts off the next round. If two or more cards have the same highest value, then all the cards are placed in the middle and another round is played, the winner of that round then takes all cards from the two rounds.

### How are the eco action's values calculated?

Data on the carbon savings made from recycling or reusing, rather than landfilling, the various materials featured on the cards are derived from official government figures (where possible) and/or other publicly available, verified sources. A number of assumptions have been made in order to calculate average annual savings. Typically, the carbon savings stated are for one tonne of the material featured on the card being reused, recycled or avoiding the use of it completely. A number of the actions feature the process of recycling the waste material into new versions of the same product, commonly known as 'closed loop' recycling. Here the savings come from reduced energy consumption in making the recycled product and/or reduction in the need to use virgin materials such as metal ore or oil.

## what do the categories mean?

### **Carbon savings** (CO<sub>2</sub>eq kg per year)

The carbon savings are calculated using UK government figures (Defra/DECC GHG reporting guidelines) or are estimated using other publicly available data. They are commonly expressed as ‘carbon savings’ but are more accurately known as carbon dioxide equivalent (CO<sub>2</sub>eq) savings that include other powerful greenhouse gases such as methane and nitrogen oxides. Savings are generally made by avoiding dumping the material in landfill where it rots and produces methane predominately. Some materials such as plastics, metals and glass do not rot or breakdown easily, hence in these cases the carbon saving from not landfilling the material is relatively small or negligible. Where discarded materials are used to produce a recycled version of a similar product, for eg plastic remade into recycled plastic bottles, the carbon saving is significant as the use of the raw material, typically oil – a fossil fuel, is greatly reduced.


### **Eco stars** (range of 1 to 5)

A score from 1 (low) to 5 (high) applies. Where people have to change their daily habits and repeat the action frequently a higher score is given. So, for example, where people have to carry out the action daily, like recycling or reducing the use of paper, plastic and glass, then these actions score highly. Where an action is a one-off, or is carried out infrequently, such as recycling tyres or textiles, then this scores lower. Industrial processes, making new products out of old materials, score low here as they do not require effort from individuals.

Category values are to be taken to be illustrative only and were correct at time of printing (2016). All are subject to change.

## Resources saved

The icons represent the following resources (range 1 - 6):

-  **Energy:** represents energy savings, eg a reduction in gas/electricity used at home or in industrial processes.
-  **Water:** water consumption is reduced by, for eg, replacing deep baths by short showers or in reducing water use in industrial processes.
-  **Land/space:** reduction in amount of landfill space required through reducing and recycling waste.
-  **Transport:** reduction in need to transport materials and products. Eg reducing the need to transport plastic water bottles by drinking tap water instead.
-  **Fossil fuel:** reducing need to produce plastic, typically made from oil, a fossil fuel, by, for eg, using re-usable bottles or swapping plastic items for other materials.
-  **Glass:** reducing production of new glass, by reducing use or recycling old glass bottles into new bottles.
-  **Plastic:** represents reduction in use of plastic, eg bags, bottles, toys and packaging.
-  **Paper:** reducing need to produce, use and dispose of paper. Through printing on both sides, using hand driers instead of paper towels or reading emails on screen.
-  **Wood:** less wood going to landfill through re-use or recycling into new products. Also by reducing virgin wood pulp use in paper by using recycled paper stock.
-  **Fabric:** reducing the amount of fabric that ends up in landfill by re-using, donating clothes and recycling fabrics.
-  **Metal:** reducing the amount of metal in landfill by recycling tins, cans, foil and re-using metal furniture.

## eco action waste hierarchy (range of 1-6)

### Best environmental practice



#### 6. reduce waste at source

Not creating the waste in the first place eg using up leftovers, and/or avoiding excess packaging

#### 5. re-use products personally

Using the product repeatedly, eg re-using bags, finding other uses for products and upcycling items

#### 4. donate products for re-use

Once you have finished with an item, donate to charity for re-use, eg donating clothes & toys

#### 3. closed loop recycling

Conversion of waste into a new product of the same type – eg recycling old plastic into new plastic products

#### 2. open loop recycling

Converting waste materials into different new products, eg using glass recycle to make hardcore surfaces

#### 1. disposal in landfill\*

If nothing else can be done with the waste material, it is sent to landfill and buried (or burned to create energy)

### Last resort option

\*Please note, 'energy recovery from waste' is an alternative to landfilling

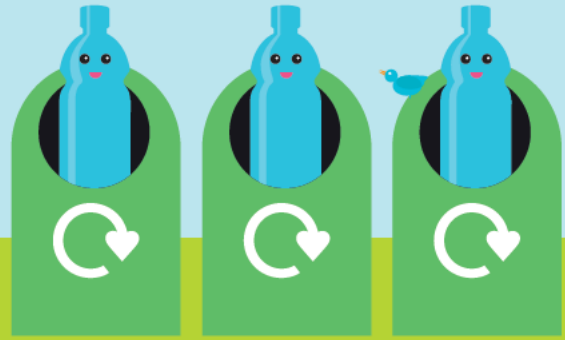
## re-fashion fashion



Cotton production accounts for 3% of total global water use. Donating clothes to charity saves energy, resources, as well as water. The carbon saving is from 1 tonne of old clothes diverted from landfill through re-use.

Carbon	552
Waste hierarchy	4
Resources	5
Eco stars	3

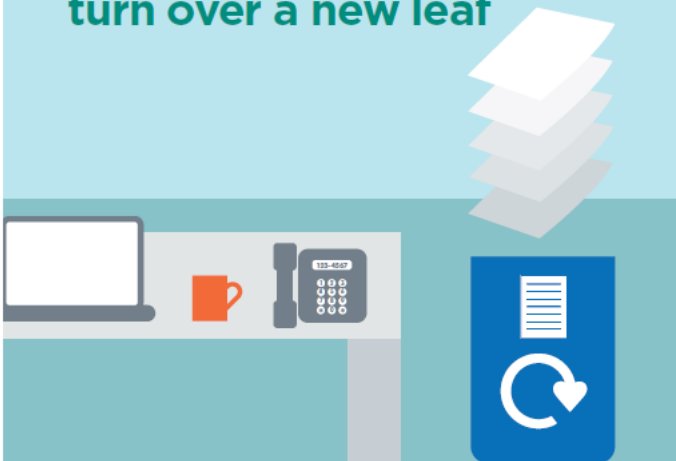
## plastic's not fantastic



Plastics are normally made from oil – a fossil fuel – and take 100s of years to decompose in landfill. By reusing and then recycling plastic we keep it out of our land and oceans where it can do harm to wildlife.

Carbon	13
Waste hierarchy	2
Resources	2
Eco stars	5

## turn over a new leaf



Paper recycling has many benefits: it keeps bulky paper waste from landfill where it rots quickly to produce methane – a greenhouse gas; it saves trees and can be recycled into new paper products.

Carbon	469
Waste hierarchy	3
Resources	2
Eco stars	5

## food for thought

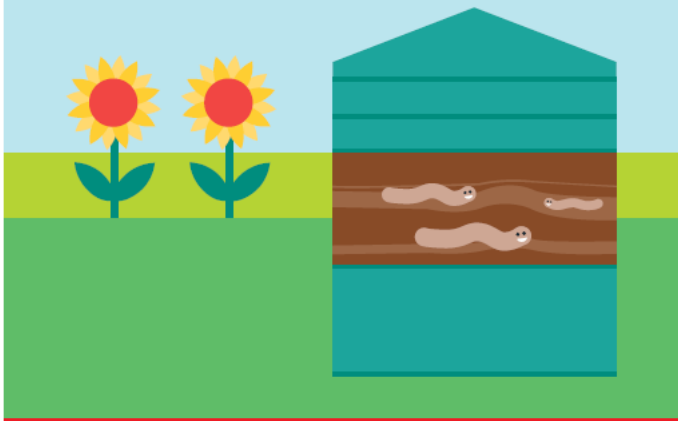


Don't bin your food waste, it ends up in landfill and rots, creating methane, a greenhouse gas. Start a compost heap, or use the council's food waste collection, to turn scraps into useful, peat-free compost.


Carbon	717
Waste hierarchy	3
Resources	1
Eco stars	5



## for peat's sake








Don't bin your grass cuttings and plant trimmings, create a compost heap instead and let it brew. It'll save you buying shop bought compost that contains peat – a valuable finite resource and a fossil fuel!

Carbon	206
Waste hierarchy	3
Resources	 1
Eco stars	2

## ask for tap



It takes 162g of oil and 7 litres of water to make a 1-litre plastic bottle, and 2.4 million tonnes of plastic is used annually to bottle water. So don't buy it, carry a reusable bottle with you and always ask for tap.

Carbon	4070
Waste hierarchy	6
Resources	     4
Eco stars	4

## return, refill, reuse








Empty ink cartridges can be returned to the manufacturer to be refilled. Donate your empties to charity as they can make money from them. Saving based on one tonne of plastic cartridges refilled not binned.

Carbon	3206
Waste hierarchy	3
Resources	  2
Eco stars	2

## don't dump, donate



If you're doing a refurbishment, make sure you donate your unwanted furniture to a local good cause rather than sending it to landfill. Saving is for a desk and chair donated, rather than dumped in landfill.

Carbon	117
Waste hierarchy	4
Resources	     5
Eco stars	2

## use a bowl



Don't wash dishes or clean your veggies under a running tap, it uses at least 6 litres per minute. Fill a washing up bowl instead, it only uses 8 litres per bowl. Saving based on average annual number of dishwashes.

Carbon	101
Waste hierarchy	6
Resources	⚡ 2
Eco stars	5

## heavy metal forever



Recycling tins and cans prevent them ending up in landfill where they take up lots of space. No carbon saving is made from keeping metal out of landfill as it doesn't easily decay or rot when buried underground.

Carbon	0
Waste hierarchy	3
Resources	🔥 2
Eco stars	3

## water waste



Silent toilet leaks are not easily detected by eye or ear, but they can waste tens of 1000s of litres yearly. Annual carbon saving from not wasting clean, treated water is based on fixing one leaky loo.

Carbon	44
Waste hierarchy	6
Resources	🔥 1
Eco stars	1

## don't bin old books




Once you've finished reading a book, don't throw it away, donate it to a charity shop or other good causes, this will allow others to enjoy reading it too. Carbon saving is from diverting 1 tonne of books from landfill.

Carbon	490
Waste hierarchy	4
Resources	🔥 📖 2
Eco stars	2

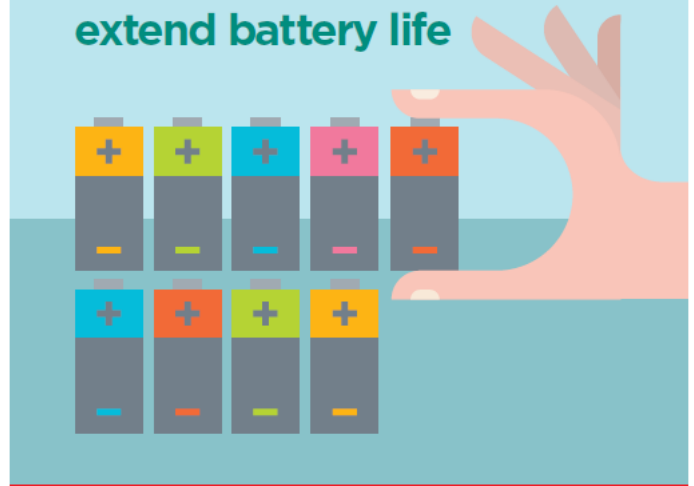
## throwaway society




In the UK we create 200 million tonnes of general waste per year, with households responsible for over 26 million tonnes of it. If we recycle as much as possible, waste is kept from our landfill sites.

Carbon	438
Waste hierarchy	2
Resources	 6
Eco stars	1

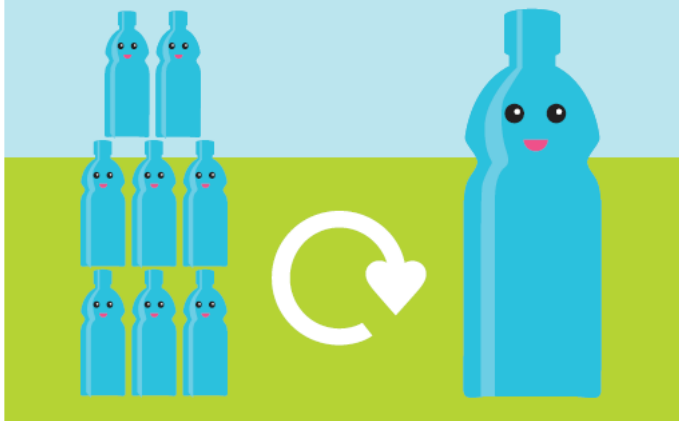
## extend battery life



Batteries contain nasty chemicals. If they are thrown away they will eventually leak and contaminate land and poison wildlife. Many shops provide battery recycling bins, so dispose of them responsibly.

Carbon	10
Waste hierarchy	2
Resources	 2
Eco stars	2

## shiny new plastic from old




Old plastic can be easily be recycled into brand new bottles. As plastic is most often made from oil, a fossil fuel, then recycling it into new plastic products not only reduces landfill, but also cuts carbon emissions.

Carbon	881
Waste hierarchy	3
Resources	 2
Eco stars	1

## rocking that wood



Recycling wood into new products helps save it from ending up in landfill where it will slowly rot. Re-using old wood to make new items helps preserve virgin wood sources and forests too.


Carbon	637
Waste hierarchy	2
Resources	 2
Eco stars	1



## ditch the disposable



Disposable paper cups cannot be easily recycled because of their waterproof plastic coating. Ditch your daily disposable for a reusable mug and feel smug knowing you are reducing your daily landfill waste.

Carbon	40
Waste hierarchy	6
Resources	 4
Eco stars	4

## donate IT equipment



Upgrading your computer, printer, screens or mobile gadgets? Then why not donate them to a good cause, this extends the life of these devices and keeps them from becoming electronic (aka WEEE) waste.

Carbon	17
Waste hierarchy	4
Resources	 5
Eco stars	1

## plastic bags are rubbish




The average person uses 130 plastic bags a year and usually has a drawer full of them at home. Do yourself a favour and remember to take bags with you when you go shopping, you'll save 5p every time too.

Carbon	9
Waste hierarchy	5
Resources	 3
Eco stars	3

## a lot of hot air




Use a hand drier instead of paper towels, this saves on the purchase, transportation and disposal costs of the paper. Paper towels often have to be landfilled, rather than recycled, as it can be classified as hazardous waste.

Carbon	939
Waste hierarchy	6
Resources	 3
Eco stars	3

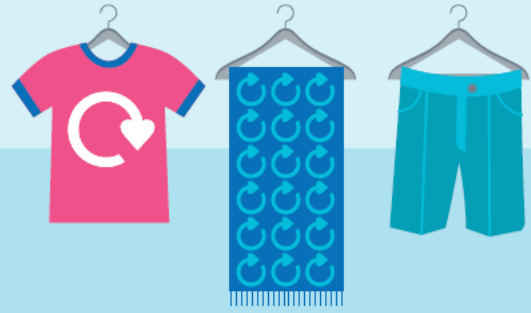
## flatten those cartons




All of the soup and drink cartons we use are typically made from a special material called Tetra Pak™. It can be recycled, but only using a special process, so check if your council provides carton recycling.

Carbon	150
Waste hierarchy	3
Resources	 4
Eco stars	3

## recycle textiles




Once your old clothes and other fabrics such as bedclothes and towels are worn through, don't bin them. Companies take old textiles and make them into new fabrics. Saving is for a tonne of textiles remade into new fabrics.

Carbon	22310
Waste hierarchy	3
Resources	 3
Eco stars	2

## oils make fatbergs




Pouring waste oils and fats down our sinks and drains is bad news. They end up solidifying in the drainage tunnels and forming 'fatbergs' which clog the sewers. Don't dump it, bottle and bin it, or pour onto your garden, instead.

Carbon	0
Waste hierarchy	1
Resources	 1
Eco stars	3

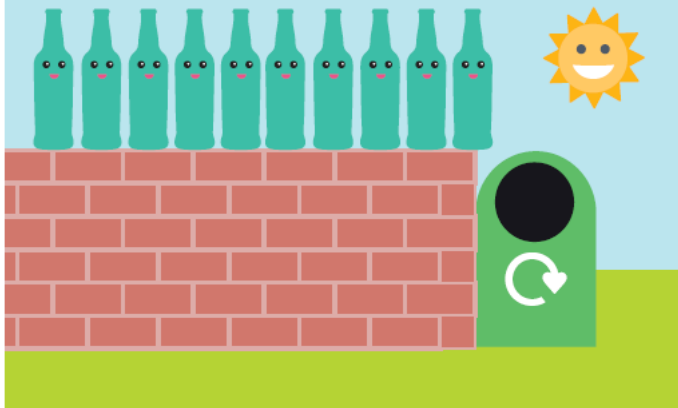
## bin it, don't flush it




Did you know that flushing baby wipes, nappies and cotton buds down the loo contributes to the fatbergs that are clogging up our sewers and causing serious blockages? Make sure you bin them, don't flush them.

Carbon	4
Waste hierarchy	1
Resources	 1
Eco stars	5

## ten green bottles



Glass is a very inert material, if it ends up in landfill it remains there, taking up space. Glass can be recycled endlessly and can be used to make more glass or used in other products – so don't bin it, recycle it.

Carbon	5
Waste hierarchy	3
Resources	 1
Eco stars	5

## doing the can-can




It takes 80% less energy to recycle aluminum than to make tins from virgin materials. Carbon saving is based a tonne of aluminium recycled into new cans and tins rather than making them from mined metal ore.

Carbon	9898
Waste hierarchy	3
Resources	   3
Eco stars	1

## circular economy



Once tyres have worn down and are unsafe for their primary use they can be recycled for lots of other purposes such as playground surfaces. So make sure old tyres are properly recycled, not thrown away.

Carbon	3408
Waste hierarchy	2
Resources	 1
Eco stars	1

## double up & turn over




If you print two pages onto one side of paper and also print on both sides, known as duplexing, you can cut paper use by up to 75%. This will save lots of trees, landfill space and money on buying paper and inks.

Carbon	939
Waste hierarchy	6
Resources	  2
Eco stars	4

## use reusable nappies



Daily in the UK, 8 million nappies are thrown away. Disposables take 100s of years to degrade in landfill and have other negative impacts throughout their manufacture and transport. Try to use reusable nappies instead.

Carbon	200
Waste hierarchy	6
Resources	 4
Eco stars	5

## choose preloved toys



Many toys are durable and can be used happily by more than one child - check out local charity shops or car boot sales, and remember to donate them back once outgrown to close the re-use circle!

Carbon	32
Waste hierarchy	4
Resources	 3
Eco stars	2