

# REUSE AND RECYCLE?

## MAYKU-Lamination



Explore the issue of the long lifetime of plastics and the challenges associated with recycling them. Investigate alternatives to traditional plastics in contemporary product design.

Use the Mayku FormBox to recycle plastic bags into various objects.

## CHALLENGES OF PLASTIC RECYCLING

### Teachers introduction to the project:

- Explain how some plastics are easier to recycle than others, but that all of the recycling processes are costly and require additional energy.
- Introduce bioplastics and how some materials like PLA have the properties of plastics, but are made from renewable resources unlike traditional oil-based plastics.
- Give some examples of contemporary design that utilises other materials instead of plastic, like metals or wood, which is more environmentally friendly.
- Show some examples of plastics being reused or “upcycled”.

## TASK – UPCYCLE USING LAMINATION

### WHAT YOU WILL NEED:

- Mayku FormBox
- Vacuum Cleaner
- 4 Plastic shopping bags per student
- Iron (Ideally one iron per 4 students)
- Greaseproof paper
- Masking tape
- Ruler
- Scissors
- Forming Template

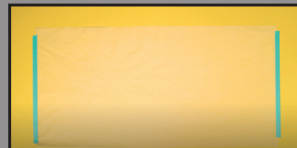
### STEP 1



- Begin by cutting plastic bags into single sheets along the seams of the bag, ensure that any doubled-over edges and reinforced handles are cut off.

- You will need 8 layers of plastic, which would require 4 bags.

### STEP 2



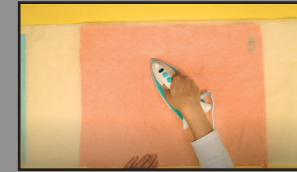
- Tape down a length of greaseproof paper to the table with masking tape.

### STEP 3



- Lay the first two layers of plastic on top of the sheet of greaseproof paper, lining up the edges of the sheets.
- Lay another length of greaseproof paper on top of the layers of plastic.

### STEP 4

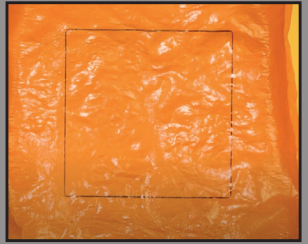


- Use an iron which is turned up to the highest temperature to laminate the plastic sheets together. Begin in the centre and use a circular or zigzag motion to cover the whole area. Ensure you apply pressure and spend enough time across the whole area to fully fuse the layers together.

### STEP 5

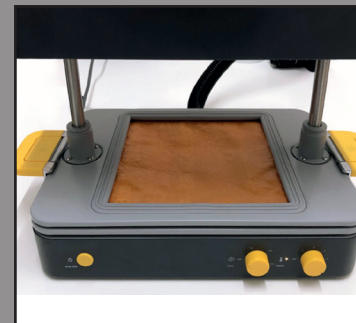
- Fully peel away the top layer of greaseproof paper and check that the plastic is fully laminated.
- Add another layer of plastic to the 2 layers you just laminated and repeat the process.
- All 8 layers of plastic should be laminated together in this way.
- When this is complete, allow the plastic to cool.

### STEP 6



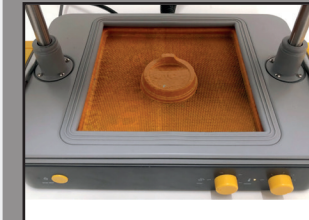
- Trim a 235mm x 235mm square from this sheet with a pair of scissors so that it will fit in the FormBox.

### STEP 7



- Place the template in the centre of the vacuum plate.
- In our example here we have made a recycled coffee cup lid and a mask. A whole variety of objects can be made, try and link this object to a past or upcoming project.
- When the plastic is ready you will see it soften across the whole sheet, be sure not to overheat the plastic.

### STEP 8



- Form the template with the recycled sheet.

### STEP 9



- Allow the plastic to cool and remove the whole thing from the FormBox.
- Gently pop the template out.
- Carefully cut away the excess with a pair of scissors.

## TASK – BENEFITS AND DISADVANTAGES OF RECYCLING

After the activity is complete discuss the benefits and disadvantages of recycling. Compare the properties of the recycled plastic to the original kind used for the object which has been remade.

