

# HARLOW TOWN CENTRE

## STEAM Activity – Transparent Christmas Decorations



Chocolate and sweet wrappers often get thrown in the bin but did you know they can be the perfect material to make Christmas decorations out of. In this activity you can make a range of different decorations and explore how light passes through different materials.

You will need:

- Sweet wrappers - Mixture of foil, cellophane or other see-through plastic material
- Tissue paper
- Sticky back plastic (or plenty of cellotape)
- Cotton, string or ribbon
- Scissors
- Pen
- Hole punch



### INSTRUCTIONS

1. Choose the shapes of the decorations you want to make and cut out templates to use later.

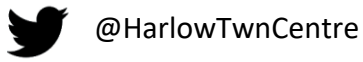


2. Collect together a variety of sweet wrappers, cellophane and tissue paper, making sure you have enough to cover your chosen shapes. Cut the wrappers, cellophane and tissue paper into random shapes.

Hold the different materials up to a light to see how the different materials let light pass through them and choose your favourites.

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3. Measure and cut out enough sticky back plastic to make all the shapes you want. If you do not have sticky back plastic, you can use cellotape by laying out strips of cellotape slightly overlapping each strip until you have the size you need.



4. Fold the sticky back plastic in half (ignore this bit if using cellotape) and peel the non-sticky part back half way so only half of the sticky side is exposed.



5. Now randomly place pieces of your cut up wrappers, cellophane and tissue paper on to the sticky part of the sticky back plastic so they cover it, it is ok to have gaps!



6. Peel away the remaining sticky back plastic backing and fold it carefully back over the original half of the sticky back plastic so that the sweet wrappers and tissue paper are sandwiched between the sheets of plastic. If you have used cellotape, place strips of cellotape over the top covering all the shapes.



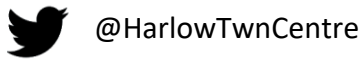
7. Now, place your shape templates on the sticky back plastic and carefully draw around them so you know where to cut to make the shapes you want.



8. And then cut them out and make a hole at the top!

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You should now have a variety of different, brightly coloured decorations, but there is one for step to complete so they can hang on your tree!



9. Using cotton, string or ribbon, thread one side through the hole you have made and then tie it together to create a loop so they can be hung.

They are now ready to be hung on your tree and watch the light reflect off them!



### Exploring Different Materials

With the different wrappers and tissue paper you have collected, hold them up to a light and explore how the different materials let light pass through them.

Trying holding coloured sweet wrappers up against different objects. Can you see through? Do different colours make things appear darker, brighter, warmer, or harder to see?



Clear cellophane and sticky back plastic is **transparent** as you can see through it. Coloured cellophane and tissue paper is **translucent** as it lets some light through it.



Whereas shiny foil is **opaque and reflective**, it does not let light through it. Light that hits it bounces back or is absorbed in the material.

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### Cut Out Decoration Templates

