

FANTASTIC PLASTIC: WHY DO PLASTIC BAGS SOUND DIFFERENT?

We use thousands of plastic bags each day. Most of them are made of a polymer called polyethylene.

Here you will find out why some plastic bags seem different from others, even though they are made from the same material.

Task A

Sorting out the plastic bags

1. Take a range of plastic bags from different companies. Crumple them to see the different sounds they make. Separate them into two groups – the 'crackly' ones and the 'quiet' ones.
2. Some bags are made out of high density polyethylene. Others are made out of low density polyethylene. High density polyethylene has very different properties from low density polyethylene.
3. Work out how to measure the density of two very different plastic bags to see if high density polyethylene makes bags that are crackly or quiet.
4. How can you be sure your method was accurate? What can you do to make it more accurate?

Task B

Teacher demonstration: melting polythene

5. Your teacher will use a high density polyethylene sample and a low density polyethylene sample, heat each one up on a hot plate and take the temperature when it melts.
6. Which one do you think will melt at the lower temperature?



Do not get close to the hot plate to avoid burns to the skin.