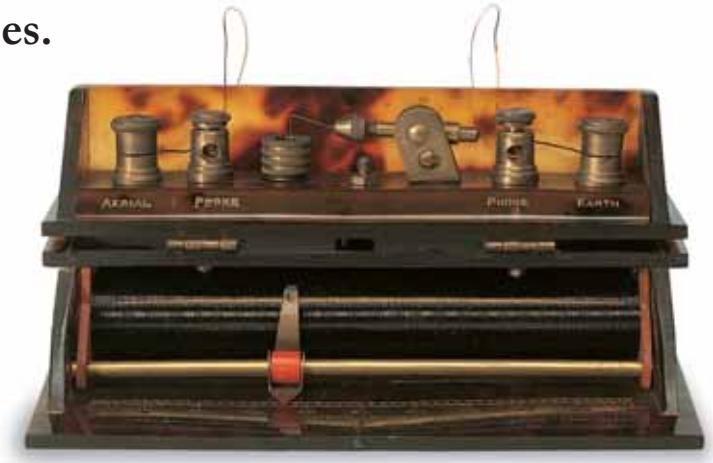
10 Using plastics

Plastics are 'designer' materials. They are all ARTIFICIAL and have millions of uses.

The first plastic was made by Alexander Parkes, in Birmingham, in 1862. It looked like tortoiseshell (Picture 1). But soon so many new plastics were invented that plastic was given the title of 'the material of a thousand uses'.

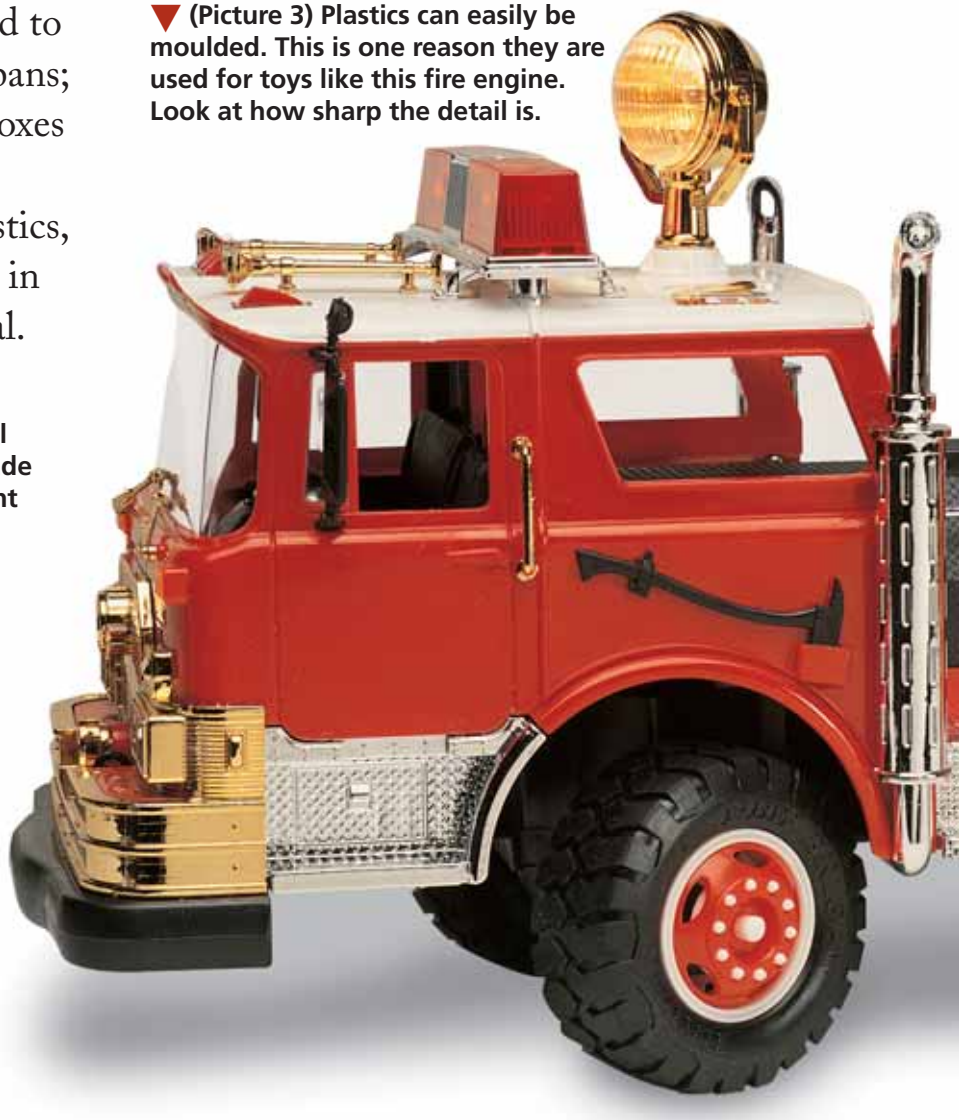
Plastics are now used everywhere (Pictures 2 and 3). For example, Terylene® is used to make the thread for clothes; Lycra® is used to make stretchable sportswear; Teflon® is used to make the surfaces of non-stick saucepans; and polythene is used for the lunch boxes you take to school.

These, and thousands of other plastics, are quite different from anything else in the world because they are all artificial.

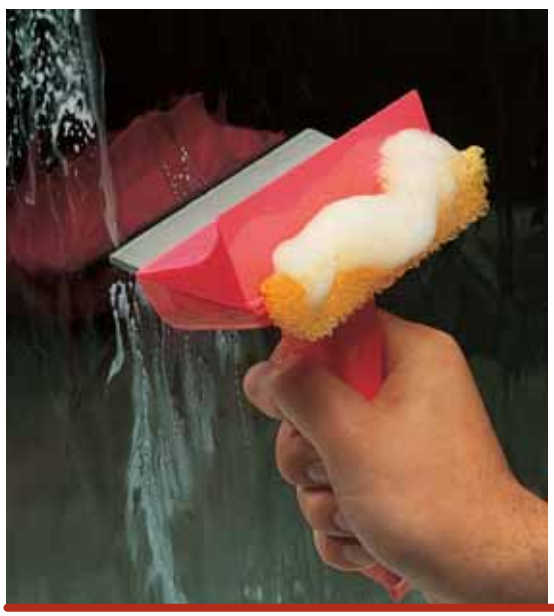


▲ **(Picture 1) This very early radio used a case made of one of the first kinds of plastic. Notice the tortoiseshell look.**

▼ **(Picture 3) Plastics can easily be moulded. This is one reason they are used for toys like this fire engine. Look at how sharp the detail is.**



▼ **(Picture 2) The squeegee is made from several plastics. The handle is hard, shiny plastic, the blade is soft, elastic plastic and the back is an absorbent plastic sponge.**



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Plastics and heat

Plastics will not let heat pass through them easily. This is why you can use plastic to keep things warm. However, many plastics melt easily (Picture 4). Also, when some plastics burn they give off poisonous fumes.

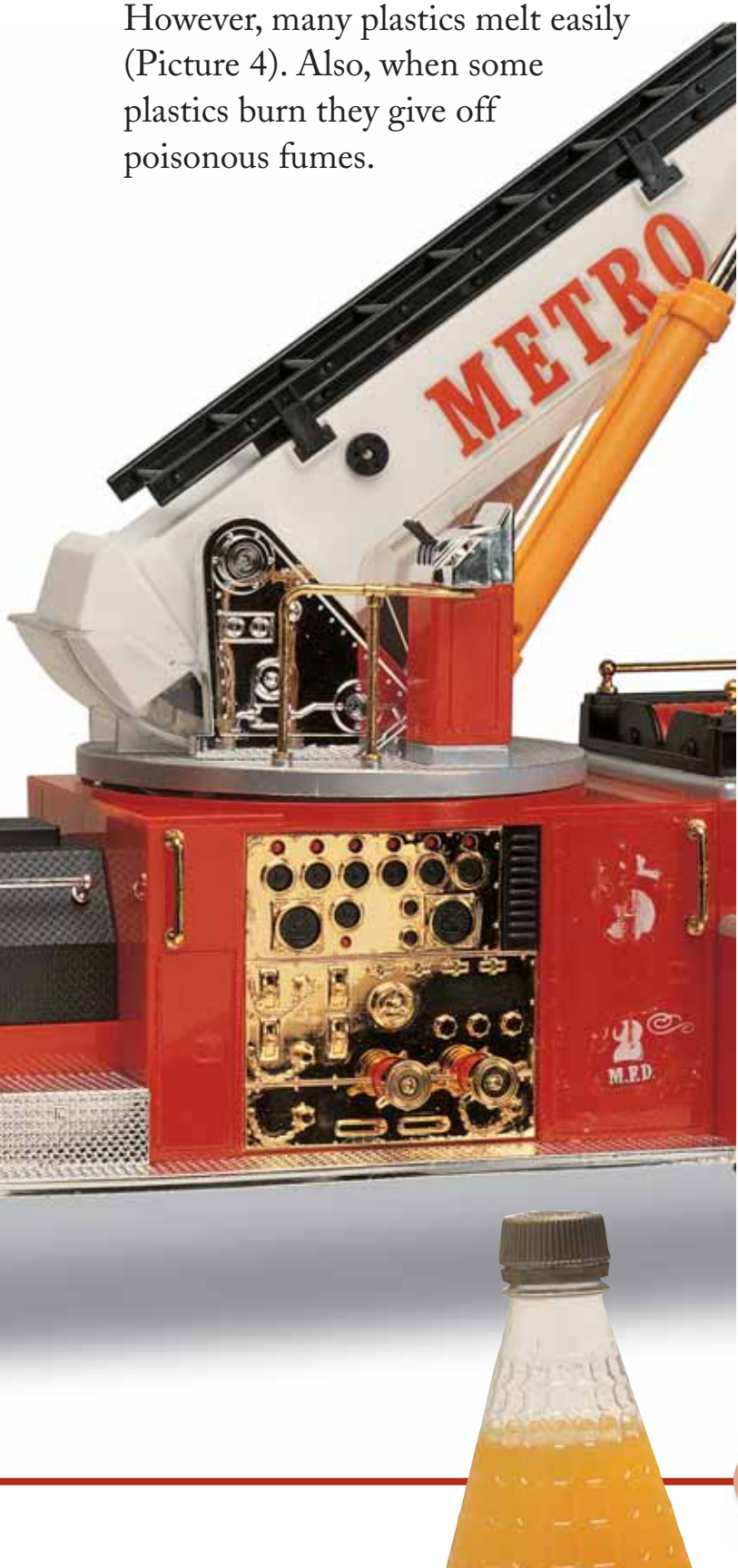
▲ **(Picture 4) Because plastics melt easily, you must iron clothing made from artificial materials, like Lycra® and polyester, with a cool iron.**

Plastics and electricity

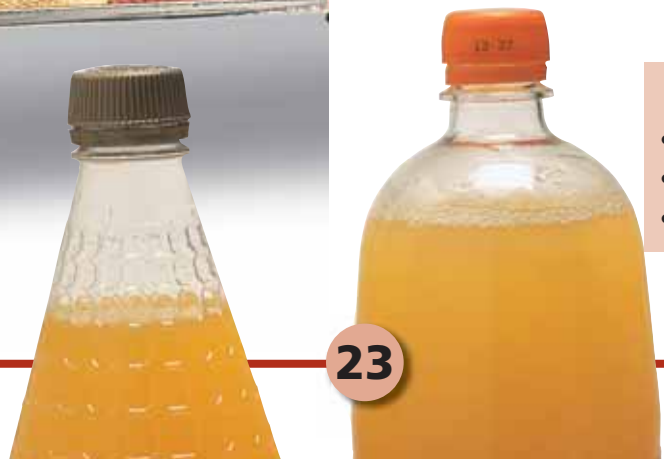
One of the most important uses of plastics is to protect us from electricity. No electricity passes through plastics, so they can be used for cables and cases, and for plugs and sockets.

Plastics are light and strong

Many plastics are light, very strong and waterproof. They can also be made transparent (Picture 5). This makes plastic ideal for things like packaging food, and even computers (Picture 3, page 15).



▼ **(Picture 5) Plastics can be made transparent, watertight, airtight, strong and flexible. They can be used for bottles and food bags.**



Summary

- **Plastics melt easily.**
- **Plastics are light and strong.**
- **Plastics are good insulators.**

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