

# Fireworks



We have just taken on 30 new workers to make next year's fireworks. Please help me to give them a safety talk they will never forget!

**1** Study the information below and on the separate sheet.

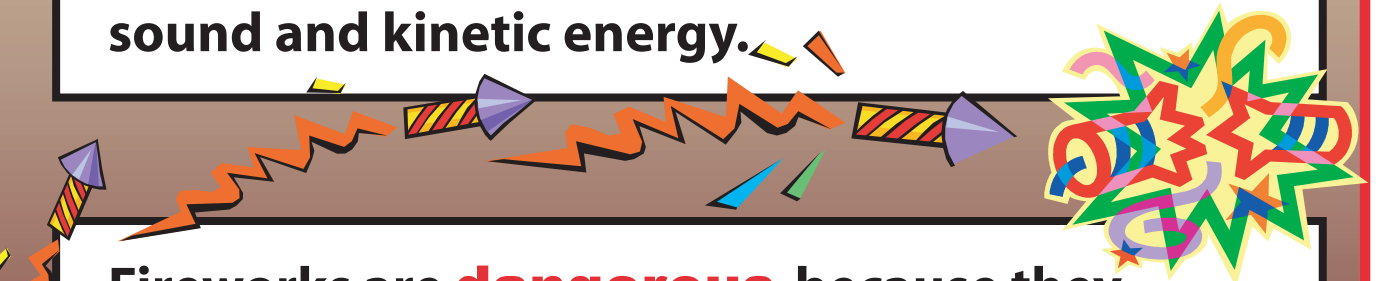
**2** Follow the instructions to make a model firework to give to a new worker at the safety talk.

**3** Plan how to use your model to explain how fireworks work and why they're so dangerous.

## Firework Facts

In every firework, a **fuel** reacts with **oxygen** in a **burning** reaction. Chemical energy stored in the fuel is transferred to heat, light, sound and kinetic energy.

Fireworks are **dangerous** because they contain their own oxygen. This means the fuels inside them can catch fire very easily – sometimes just by knocking them!





# Making your model Firework

◆ Use the information to write and draw on each section.

◆ Cut the body. Roll and stick it as a tube.

◆ Cut the head. Roll and stick it as a cone.



◆ Fold the chemical strip lengthways. Attach it to the cone head and put it through the body.

◆ Attach the streamers to the base of the body.



## Chemical Strip

Choose **one** reaction that happens in a firework. Write the **reactants** in the box below.

Write the **product(s)** for the same reaction in the box below. Link the reactants and products with an arrow so you have an equation.

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**BODY** Say why fireworks are so dangerous. Cover the rest of the body in safety warnings.

**HEAD** Show the energy transfers that happen in a firework



**Streamers**

An interesting fact about sparklers is ...

An interesting fact about firecrackers is ...

An interesting fact about aerial fireworks is ...