

What is a firework?

Teacher sheet

Equipment

Apparatus

For each group of students:

- Eye protection
- Match or splint to light the sparkler
- Heatproof mat

For the whole class:

- Bucket of cold water for the burnt sparkler
- Bag to collect party popper materials

Chemicals

For each group of students:

- Party popper(s), one or more
- Sparkler(s), one or more

Health, safety and technical notes

- [Read our standard health and safety guidance.](#)
- Wear eye protection.
- It is the responsibility of the teacher to carry out appropriate risk assessments.

Principal hazards

- Sparklers and party poppers

Procedure for students

1. Fire the party popper upwards.
2. Watch what happens.
3. Write down in the table what you saw, smelt and heard.
4. Clear up the mess!
5. Light the sparkler, holding it over the heatproof mat.
6. When the sparkler burns out, put it into the bucket of cold water.
7. Write down what you saw, smelt and heard when the sparkler was burning.

Note: This resource can be downloaded as part of a set of activities investigating the chemistry behind fireworks (<https://rsc.li/33xDXc1>) or for use with a lesson plan on the same topic (<https://rsc.li/3br6O3U>).

Possible observations

Firework	What I saw	What I smelt and heard
Party popper	Flash or spark Smoke Paper streamers coming out Base of popper blown away	'Fireworks smell' / smell of caps like in cap gun 'Bang' or 'pop' sound
Sparkler	Sparks in streams Bright yellow light Sparkler melting and dropping down Solid stuff disappearing	'Metallic' burning smell Fizzing noise