

## Thunderstorms

We've all heard the rumble of thunder and seen a lightning flash. But did you know that lightning is always present in a thunderstorm? These dramatic storms can cause damage with heavy rain, hailstorms, flooding and high winds. Lightning can also damage buildings and start fires.



Thunderstorms are caused in warm, humid conditions, when moist warm air rises rapidly. They can form anywhere, but it's more usual to see them in the afternoon and evening. The high winds of a thunderstorm cause ice and water particles in the atmosphere to bump against each other at high speeds. This causes an 'electric charge' to build up. The top of the thunderstorm has a 'positive charge' while the bottom builds up a 'negative charge'.

Objects on the ground are positively charged, so if a strong negative charge in the cloud connects with something on the ground (usually something that sticks up like a mountain, a church steeple, a tree or a person), the lightning strikes with a bright flash of electricity. Lightning can strike the air or inside clouds, too. There are about 5–10 times as many 'cloud flashes' as 'cloud-to-ground' flashes.

The thunder we hear is caused by a lightning strike. Lightning makes the air around it expand and shrink rapidly. This creates a sound wave that we hear as thunder. We see lightning before we hear thunder, though, because light travels faster than sound.

Did you know?

- There are about 100 lightning strikes on the Earth's surface every second. A bolt of lightning can contain up to one billion volts of electricity.
- Lightning kills around three people in the UK each year and injures around 30. Worldwide, the death toll is about 2,000 people per year.
- During a thunderstorm you should go inside. Never stand under a tree or hold something metal, like a metal umbrella. Lightning is attracted to metal and travels through water, too. Never swim outdoors during a thunderstorm.
- The largest hailstone ever recorded was 8 inches (20 cm) across and weighed approximately 2 pounds (0.9 kg). It fell during a thunderstorm in South Dakota, USA, in 2010.

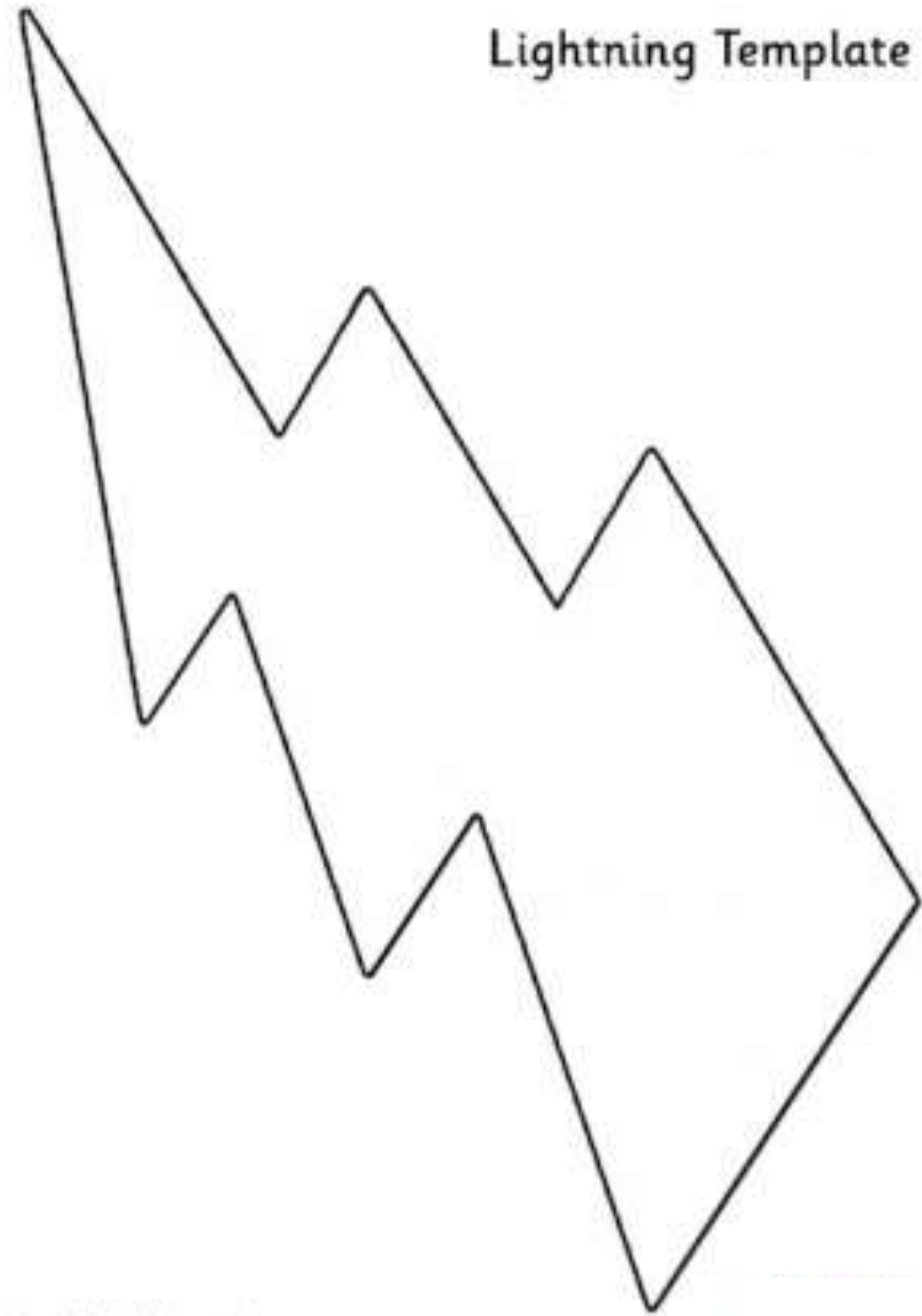
On 19 July 2017, southern England and Wales experienced extreme thunderstorms with more than 100,000 lightning strikes in one night. The storms brought torrential rain, severe hailstorms and flash flooding. Many properties were flooded, power networks damaged and travel services disrupted. The lightning strikes also sparked house fires.



Thunderstorms always come with lightning, and this amazing photo captures a real burst of electricity across the sky. Not a good time to be outside!

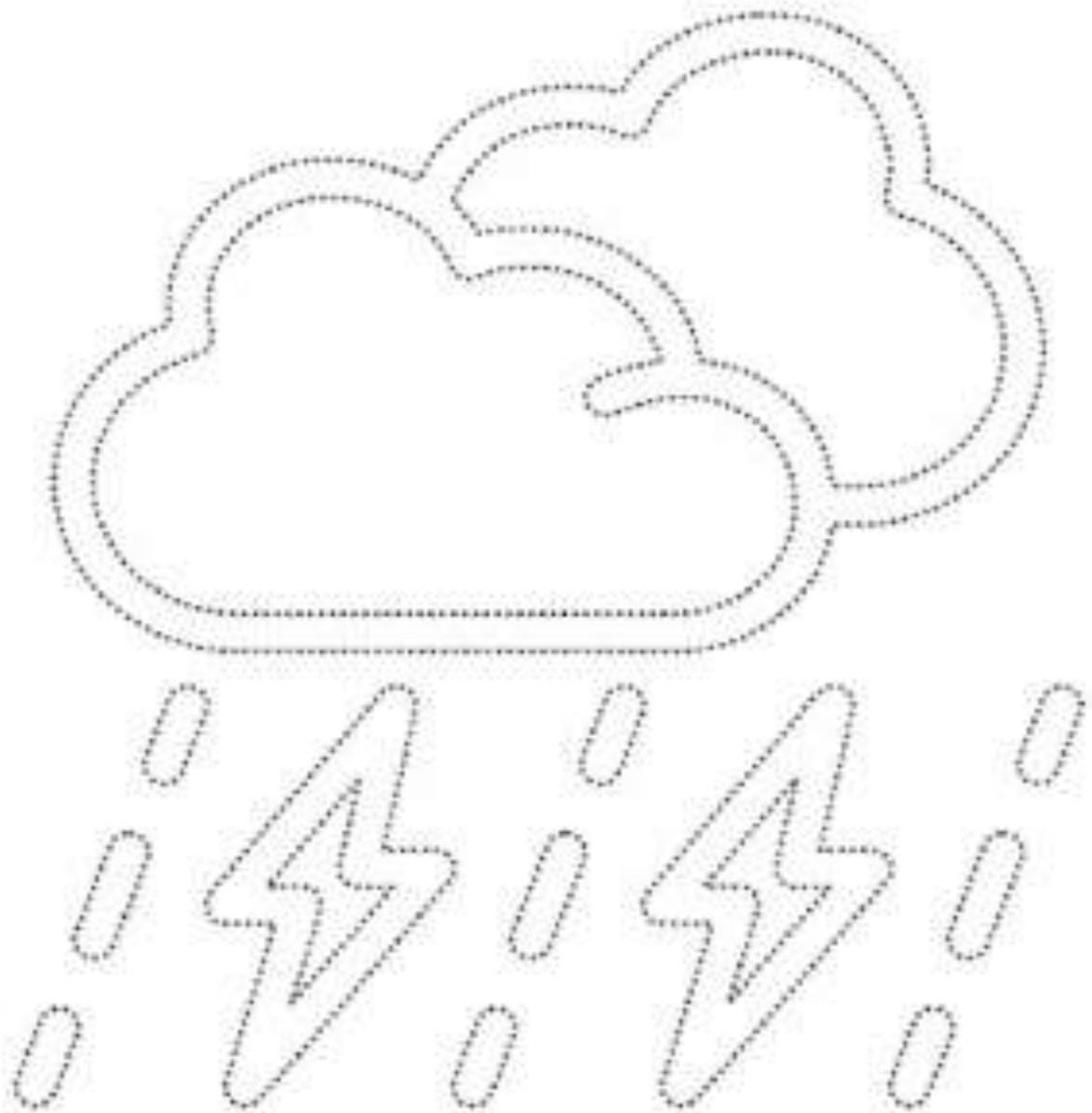
Make a flashy display with the help of this lightning template!

## Lightning Template



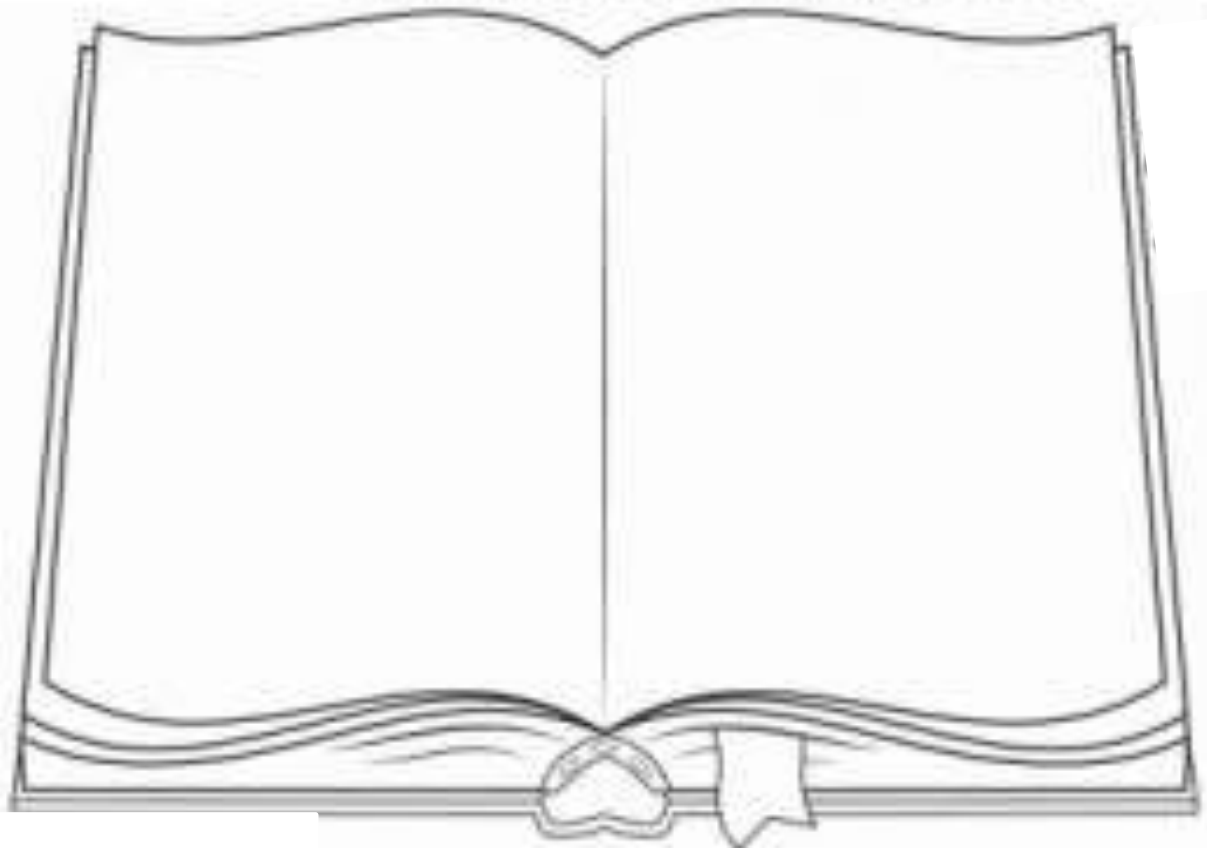
Trace over the clouds, lightning bolts and rain and you will have your own thunderstorm picture! I should think those clouds need to be coloured a dark grey, don't you?

## Trace the Storm Cloud



Can you imagine there is a big thunderstorm overhead and describe what you see, hear and feel in this diary? Maybe you've experienced a thunderstorm before and you can use the experience to add to your diary entry?

## Thunderstorm Diary Worksheet



## Thunderstorm Playdough Mat

Can you use playdough to finish the thunderstorm picture?

Use your playdough to add more clouds, rain and lightening to this stormy sky.



Use your own experience of a thunderstorm, or do a little research, then write a newspaper report using this thunderstorms newspaper writing prompt as a starting point.

# Village News

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No. 12354

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Design a poster telling people how to keep safe during a thunderstorm.

## Thunderstorms Safety Poster

Design a poster to alert people to the dangers of thunderstorms and offer advice on what they can do to stay safe.

