Pyrocumulonimbus cloud

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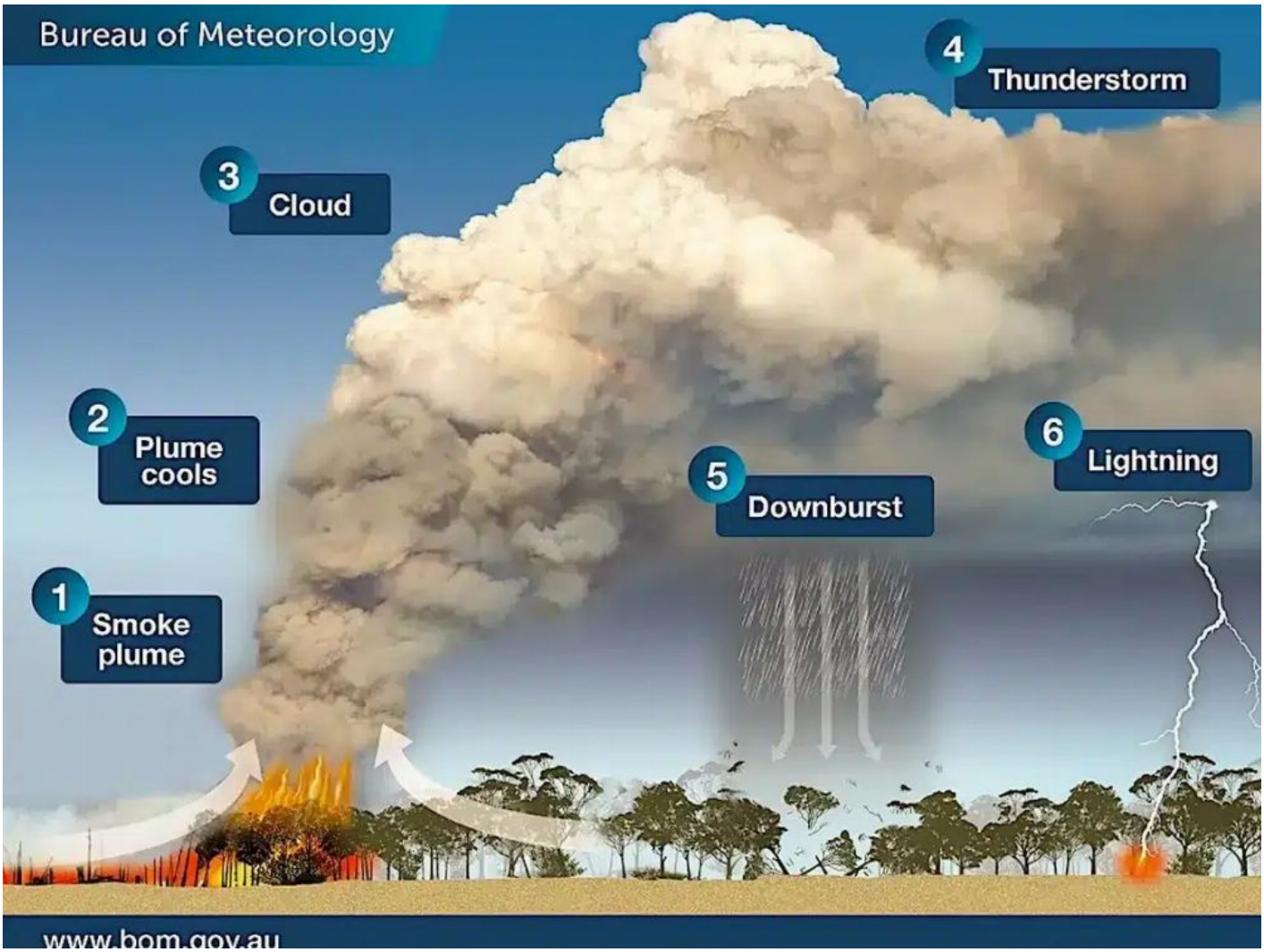

What is a Cumulonimbus Cloud (Cb)?

- It is a **heavy and dense cloud** of **considerable vertical extent** in the **form of a mountain or huge tower**, often associated with **heavy precipitation, lightning,** and **thunder**.
- More commonly known as **thunderclouds**, cumulonimbus is the **only cloud type** that can **produce hail, thunder, and lightning**.
- The **base** of the cloud **is often flat**, with a very **dark wall-like feature hanging underneath,** and may only **lie a few hundred feet above** the **Earth's surface**.
- The **vertical extent** of Cumulonimbus ranges from **3 km to rarely more than 15 km** (10 000 – 50 000 ft).
- Cb **forms when three conditions** are met:
- There must be a **deep layer of unstable air**.
- The **air must be warm and moist**.

- A **trigger mechanism** must **cause the warm, moist air to rise**:
- **Heating** of the **layer of air close to** the **surface**.
- Rising ground forcing the air upwards (**orographic uplift**).
- A **front forcing the air upwards.**

About Pyrocumulonimbus Clouds:

- They are **thunder cloud screated by intense heat from** the **Earth's surface.**
- They are **formed similarly to cumulonimbus clouds**, but the **intense heat** that results in the vigorous updraft **comes from fire,** either large wildfires or volcanic eruptions.
- So it is, for this reason, the prefix 'pyro' is used – meaning fire in Greek.
- They **look much darker than typical clouds** because of their **large amounts of smoke and ash.**
- Pyrocumulonimbus clouds are thought to be **responsible for several aerosol pollutants** (such as smoke and ash) trapped in **the stratosphere** and **upper atmosphere**.
- And **sometimes, lightning strikes generated** from them even can **ignite additional fires.**

Q1: What are Cirrus Clouds?

Cirrus Clouds are delicate, feathery clouds that are made mostly of ice crystals. They are thin and wispy in appearance, often appearing as delicate, high-altitude filaments or strands. Their wispy shape comes from wind currents, which twist and spread the ice crystals into strands. They are usually white or have a light gray color. In the daytime, they are whiter than any other cloud in the sky. They are commonly known as "mare's tails" because they are shaped like the tail of a horse.

Source: How Pyrocumulonimbus clouds are formed when wildfires spit storms, lightning