

Lightning Rods and Lightning Strikes

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The **frequency and intensity** of <u>lightning strikes</u> are rising globally, driven by <u>climate change-</u> **induced** increases in **temperatures** and **atmospheric moisture**, as warm air and moisture promote cloud formation and **charge separation.**

- **About Lightning Strikes:** Lightning is a **natural electrical discharge** that occurs during <u>storms</u> due to a buildup of **static electricity** in the atmosphere.
 - This buildup happens when water droplets in clouds freeze into ice crystals, which rub against each other, generating a static charge that ultimately results in lightning strikes.
- About Lightning Rod: A <u>lightning rod</u> is a conductive object installed at the <u>highest point of</u>
 a structure to attract lightning and provide a controlled path for its discharge.
 - Lightning moves towards the object with the highest electric potential.
 - The shape of the **rod** creates a **stronger** <u>electric</u> <u>field</u>, ionising the air around it and providing a **route for the current to flow**. The rod directs lightning into the ground, where the earth safely absorbs and dissipates the charge.

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