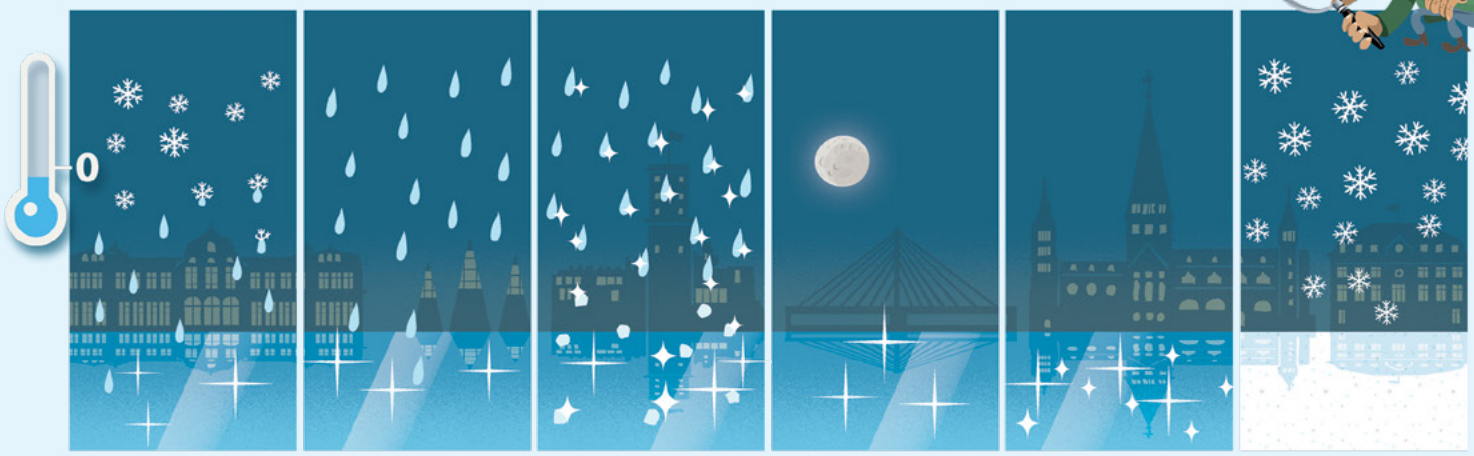
NOT ALL SLIPPERY SURFACES ARE THE SAME

In winter, roads often become **slippery** – and in very different ways.



Freezing rain (black ice)
If it rains on a dry and very cold road, the water transforms into a **smooth layer** of ice.

Instant black ice
If **snowflakes** fall through warm air, they **melt** into raindrops. On a frosty road they turn **in a flash** to black ice.

Sleet (icy rain)
This **consists of** frozen raindrops. They hit the ground as **grains of ice**.

Icy surfaces
If a road is wet and the temperature falls to below 0 **degrees** Celsius, then **puddles** and damp spots **gradually** become slippery ice.

Frost
When air is **damp**, the **water vapour** in the air turns into ice crystals. If the asphalt on the road is cold, the crystals **settle on** the road surface.

Hard-packed snow
If snow remains on the road and cars drive over it, it is then compressed and turns into a slippery road surface.

slippery	*glatt*
black ice	*Glatteis*
smooth	*glatt*
layer	*Schicht*
instant black ice	*Blitzeis*
snowflake	*Schneeflocke*
melt, to	*schmelzen*
in a flash	*blitzartig*
sleet (icy rain)	*Eisregen*
consist of, to	*bestehen aus*
grains of ice	*Eiskörner*
surface	*Oberfläche*
degree	*Grad*
puddle	*Pfütze*
gradually	*allmählich*
damp	*feucht*
water vapour	*Wasserdampf*
settle, to	*ablagern*
hard-packed snow	*Schneeglätte*
instant	*sofort*
sparkling water	*Sprudelwasser*
freezer	*Gefrierschrank*
freezer compartment	*Gefrierfach*
announce	*ankündigen*
audience	*Publikum*
prove	*beweisen*
liquid	*flüssig*
carbon dioxide	*Kohlensäure*
prevent	*verhindern*

INSTANT BLACK ICE MAGIC TRICK

We'll show you a **"magic trick"** how to make **instant** black ice. Great for the next family party. All you need is a plastic bottle of **sparkling water** (carbonated) and a **freezer** or a **freezer compartment**.

Here's how you do it: Secretly put the bottle in the **freezer** for about 3–4 hours. The bottle must not have been opened yet. The freezer should have a temperature of around –17 degrees Celsius.

BE CAREFUL: The water in the bottle should not freeze, it should only get very cold. Secretly get the bottle out of the freezer and **announce** your magic trick: "In a moment I'm going to turn water into ice, just with my thoughts!" Show the bottle of water to the **audience**. Turn it upside down and back again so that everyone can see the liquid water in the bottle. **"Hypnotize"** the bottle and then open it – tarah! The water in the bottle will turn into ice in a flash! Turn the bottle upside down to **prove** that the water is no longer **liquid**.

This is what happened: Because of the **carbon dioxide**, there is overpressure in a mineral water bottle. The overpressure **prevents** the mineral water from freezing, even though the temperature is below 0 degrees Celsius. When you open the bottle, the pressure escapes. You can hear this from the hissing sound. Once the pressure is gone, the water is no longer prevented from freezing. And then you have ice.