What is the Dew Point

The dew point is the temperature at which the air cannot hold any more water vapor. That’s when the moisture in the air begins to condense—to turn back from water vapor to droplets. This temperature will change from day to day depending on the temperature of the air and the amount of moisture in it. The closer the dew point temperature is to the air temperature, the more likely we are to have fog or rain or snow.

You can use simple equipment to determine the day’s dew point, but you must set it up outdoors.

**What to do:** Write down the temperature of the air.

Remove the label from the can. Fill the can with water, and then make sure the outside is dry. Place the thermometer in the can.

Add ice to the water, a cube at a time. Carefully stir the water with the thermometer. Watch both the outside of the can and the thermometer closely.

**What happens:** Liquid begins to form on the outside of the can—and the temperature goes down.

The temperature—at the point when liquid begins to form—is at or near the dew point—the temperature at which the relative humidity is 100 percent. When water cools off and condenses on an object the droplets are called dew. Dew forms when damp air touches anything that cools it to below its dew point—the point at which it cannot hold any more water.

When air currents are rising rapidly, cooling takes place high in the air and clouds form. When gentler air currents mix cool air into warmer air, fog forms.

Dew usually forms on grass or on plants that have cooled off. The temperature at which this happens depends on the amount of water vapor in the air. If it’s small, dew may not form until the temperature drops to 32 degrees F (0 degrees C) or even below freezing. When it’s that cold frost forms. If the air contains a great deal of water vapor, dew will form at 68 degrees F (20° C).

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**YOU NEED**

- pencil
- paper
- empty can
- water
- room thermometer
- ice cubes