

The Secret of the Glowing Flowers

September 30, 2024 / DIY / STEM Activities / Chemistry / Ages 3 - 5 / Glowing Flower



Have you ever seen flowers that glow in the dark? This experiment will take you into a mysterious fluorescent world! You'll transform into a "flower magician", using an ordinary highlighter to turn a plain white flower into a glowing miracle of the night!

- Age: 3-5
- Time: Less than 30 minutes
- Mess Level: Messy

Materials Needed:

White flowers (such as carnations or chrysanthemums)
Scissors
Cup
Highlighter
Water
Ultraviolet lamp (black light)



Step-by-Step Instructions:

1. Take apart the highlighter and remove the fluorescent core. Soak the core in a small amount of water, gently squeezing it to dissolve the fluorescent pigment in the water. You'll end up with fluorescent-coloured water.



2. Use scissors to cut the stem of the white flower at an angle to increase the water absorption area. Place the cut flower into the cup containing the fluorescent water, ensuring the stem is fully immersed. Let the flower sit for a few hours or overnight to allow the fluorescent liquid to be absorbed into the petals through capillary action.



3. Prepare the ultraviolet lamp and point it at the flower. You'll see the petals emit a bright fluorescent effect under the UV light.



The Science Behind It:

The principle of the glowing flower is based on capillary action and the absorption of fluorescent substances. In this experiment, the flower absorbs water containing fluorescent pigments through its stem, transporting the fluorescent substance to the petals. Fluorescent substances have the property of emitting light under ultraviolet light. When illuminated by the UV lamp, the fluorescent pigments in the petals will emit a bright glow.

Try using highlighters of different colours to see if they produce different glowing effects!