



a WOW Lab  
**BLUEPRINT**

# Quanta of Colour

## Introduction

This activity brings cutting-edge science into the classroom. Nanotechnology is a growing field that crosses the disciplines of physics and chemistry, and it has an increasing number of applications in medicine. Nanotechnology deals with materials and structures that range in size from one to one hundred nanometres—thousands of times smaller than the width of a human hair. One such nanomaterial is the quantum dot.

A quantum dot is a nanoparticle that has electronic characteristics. It has promising applications in solar cells, transistors and medical imaging. This activity explores molecular self-assembly, fluorescence and the effect of temperature on the rate of chemical reactions. It provides students with the opportunity to create quantum dots. The safety and simplicity of the synthesis allow the students to actively engage in the activity.