**ACTIVITY: Rock fluorescence**

**Activity idea**

In this activity, students use UVA and UVB light sources to identify certain kinds of materials in rocks.

By the end of this activity, students should be able to:

* explain fluorescence
* use UVA and UVB light sources to identify certain kinds of minerals in rocks.

[Introduction/background notes](#Introduction)

[What you need](#need)

[What to do](#Do)



**Introduction/background**

Not all rocks fluoresce. The rocks shown in the picture are specially selected for their fluorescent properties under either UVA or UVB light.

**What you need**

* Access to the article [UV and fluorescence](https://www.sciencelearn.org.nz/resources/1311-uv-and-fluorescence)
* Variety of rocks (from the school, parent collectors, local rock clubs or a university geology department)
* UV source, for example, from a high school physics department or university geology department; a black light or UV lamp (these can be purchased from a lighting store or electronics store such as Jaycar Electronics); or a UV LED pen (these can purchased from a Nature’s Discoveries store)– the pen’s UVA light output is relatively weak and short range so the investigation would need to be conducted in a dark room

**What to do**

1. As a class, read [UV and fluorescence](https://www.sciencelearn.org.nz/resources/1311-uv-and-fluorescence).
2. Have students examine the rocks under UVA light (also called long-wave UV) and, if possible, under UVB (short-wave UV).
3. Have students identify the colour and patterns of colour of minerals that fluoresce in the rocks and compare them with information and pictures found on this website:
[www.wordcraft.net/fluorescent1.html](http://www.wordcraft.net/fluorescent1.html)