

Clever Paint



Smart Pigments



PHOTOCHROMISM is the change of colour due to light. This works by the molecules changing their chemical structure after absorbing **UV LIGHT**, usually from the sun. One of the most famous reversible photochromic applications is color changing lenses for **sunglasses**.

THERMOCHROMIC paint is a relatively recent development in the area of color-changing pigments. After absorbing a certain amount of **HEAT**, the **crystallic** or **molecular structure** of the pigment **reversibly changes**. It then absorbs and emits light at a different wavelength (hence a different colour) than at lower temperatures.

Thermochromic paints are seen quite often as a coating on coffee mugs, whereby once hot coffee is poured into the mugs, the thermochromic paint absorbs the heat and becomes colored or transparent, thus changing the appearance of the mug.

All **GLOW-IN-THE-DARK** products contain **phosphors**. A phosphor is a substance that **radiates visible light** after being **energized**.

To make something glow-in-the-dark you want a phosphor that is energized by normal light and that has a very long persistence. Two phosphors that have these properties are zinc sulfide and strontium aluminate.

Paint Your Own Pottery

You Will Need:

- ❖ unglazed bisque pottery
- ❖ thermochromic, photochromic paint or kiln paint
- ❖ paintbrushes
- ❖ heat gun (to be used by demonstrators only)
- ❖ UV lamp and dark box

Instructions:

1. Paint your pottery using the paintbrushes provided and your choice of paint and design. If you intend to get your pottery fired ensure that you use the kiln paint – however please note that we cannot currently fire any pottery.
2. If you want to see your pottery change colour with heat ask a demonstrator to heat it with a heat gun.
3. If you want to see any glow in the dark paint working, place your pottery in the dark box.
4. If you want to see any UV active pigments glow, ask a demonstrator to show you with a UV lamp.

NOTE: This pottery is unglazed; it cannot be used for the consumption of food or drink. A coat of varnish can be applied to improve durability of all items.

