

### Celebrity Snapper

The exciting activities of *Celebrity Snapper* provides links to Life Processes and Living Things with direct links to light and shadows and how we see things (Sc, 3f, 6f).

#### Key Science Concepts

- **Transparent materials and objects let a lot of light pass through them.**
- **We see light because it enters our eyes.**
- **Light can be reflected. We see things because light from them is reflected into our eyes.**
- **Shiny surfaces reflect light better than matt ones.**

#### Background Knowledge

Light is made up of seven colors (the colors of the spectrum: red, orange, yellow, green, blue, indigo, and violet). When all these colors are mixed the result is white light. We see objects that emit light such as lights, candles, the Sun and flames. We see objects that reflect light. Red objects reflect red light, yellow objects reflect yellow light, white objects reflect light of all colors, and matte black objects reflect no light.

When we see things, light enters our eye through the pupil. Light that is reflected from an object passes through the pupil and forms an inverted image on the retina. Nerves send messages to the brain and the brain interprets these so that we see the object the right way. In dim light the pupils dilate (open wider) to admit more light. In bright light they contract to let in less light.

#### Before the Reading

Have students complete the word search. Then have them write the definitions for the words.  
\*key provided

#### During the Reading

Have students use the cluster map to record information they learn about photography during the reading.

#### After the Reading

Have students write a journal entry about their own photography experience incorporating what they have learned about the science of photography.

#### Challenge Activities

Have students use mirrors to direct a beam of light so that it hits a target, with scores for hitting different segments, such as bull's eye. Or ask them to use the mirrors to make a beam of light travel around a large box.

Test materials of different colors to find the ones that reflect the most light. Place them in a box with holes made in the top and a 'viewing' hole at one end. Students can count how many holes have to be uncovered to let in enough light to make them visible. The fewer holes uncovered, the more reflective the object.

Make pinhole cameras from large coffee cans. The cans should be painted matte black inside. Prick a pinhole in thick aluminum foil and tape across a hole in the can of about 3cm across. Line the cans with photographic paper and determine optimum exposure for taking pictures (about 30 seconds in sunny summer conditions).