

## Investigation 12.B: Distinguishing Sights and Sounds

**Question:** What range of sights and sounds can you distinguish?

### Part 1: Distinguishing Shades of Colour

#### Hypothesis

Write a hypothesis about which factors might affect your ability to distinguish different shades of a colour.

#### Materials

- liquid food colouring
- 5 beakers (100 mL) or 5 clear containers of equal size
- water

#### Procedure

1. Read the procedure, and create a table to record your data.
2. Put an equal amount of water (about 50 mL) into the five beakers (or clear containers).
3. Label the beakers 1 through 5, so that the labels can be concealed. Put 1 drop of food colouring in the first beaker, 2 drops in the second, 3 drops in the third, 4 drops in the fourth, and 5 drops in the fifth. Jiggle the beakers gently to mix the samples.
4. Have someone else change the order of the beakers. Then try to arrange the beakers from darkest to lightest colour. Check your success, and record results in the following table.

Conditions	Actual order of beakers	Perceived order of beakers







