



Using a choice chamber to investigate animal responses to stimuli

The purpose of this activity is to investigate how woodlice respond to stimuli, in this case: light. Invertebrates (organisms without a backbone) are easy organisms to observe as they are small, easily obtainable and they have clear responses to different stimuli.

Safety

- Follow good hygiene procedures during and after handling invertebrates. For example, wash your hands after handling.
- The bulb is glass and could smash if it is not handled appropriately; glass is sharp and could cut you.

Equipment

- Choice chamber
- Paper to black out half of the choice chamber
- Woodlice (At least 10)
- Container to store woodlice with bark/leaf mould
- Lamp
- Stopwatch

Method

Set up the choice chamber so that half of it is dark and half of it is open to the light. Taping paper to the lid, base and around the sides may be a good way to do this.

Position the lamp over the chamber

Introduce a known number of woodlice, at least ten, to the centre of the choice chamber and replace the lid, ensuring the covered halves line up.

Switch on the lamp

Start a stopclock and on the minute for ten minutes count the number of woodlice in the exposed half. Note down any behaviour you notice too, for example how far into the light half do the woodlice tend to go.

Repeat the experiment three times, if possible with different woodlice.

Ensure at all times that you are extremely careful with handling the woodlice and that they have as natural an environment as possible when not within the choice chamber. Also ensure you thoroughly wash your hands after the experiment has been concluded and you no longer need to handle the woodlice.

Results

Attempt	Number of woodlice in light half of choice chamber	Number of woodlice in dark half of choice chamber
1		
2		
3		
4		
5		
6		