



## Woodlice habitats – Practical guidance

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### Equipment and materials

#### **Per class**

Collection of woodlice from local habitat – around 200 woodlice needed

#### **Demonstration 1**

##### **Per station:**

Dry boiling tube with bung

Blue cobalt chloride paper (dry)

Boiling tube rack

#### **Demonstration 2**

##### **Per station:**

Choice chamber

Filter paper – as moisture reservoir

Calcium chloride granules – as desiccant

Opaque cover – to make areas of the choice chamber dark

#### **Class practical 1**

Choice chamber

Filter paper – as moisture reservoir

Calcium chloride granules – as desiccant

Lamp

#### **Class practical 2**

Choice chamber

Filter paper – as moisture reservoir

Calcium chloride granules – as desiccant

Piece of OHP acetate, large enough to cover the choice chamber, or graph paper

OHP or other pens

### Health & Safety and Technical notes

Before carrying out these practical activities, users are reminded that it is their responsibility to carry out a risk assessment in accordance with their employer's requirements, making use of up-to-date information.

[Read our standard health & safety guidance.](#)

Cobalt chloride: Toxic and dangerous for the environment. Handle the papers as little as possible and wash hands after handling. Students with skin allergies should not handle the papers directly, wear nitrile gloves or use forceps.

Wash hands after handling cobalt chloride papers and calcium chloride. Individuals with known skin allergies should wear gloves or use forceps to handle cobalt chloride paper.



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Calcium chloride: Irritant, wear eye protection when handling.

The choice chambers and boiling tube need to be set up in advance of the lesson.

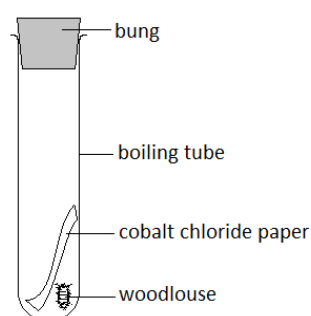
Detailed instructions for handling woodlice, collecting and keeping woodlice are at [www.nuffieldfoundation.org/practical-biology/using-choice-chamber-investigate-animal-responses-stimuli](http://www.nuffieldfoundation.org/practical-biology/using-choice-chamber-investigate-animal-responses-stimuli)

Detailed instructions for setting up choice chambers are at [www.nuffieldfoundation.org/practical-biology/using-choice-chamber-investigate-animal-responses-stimuli](http://www.nuffieldfoundation.org/practical-biology/using-choice-chamber-investigate-animal-responses-stimuli).

### Procedure

#### Demonstration 1 – Woodlice with cobalt chloride paper

**1** Advance preparation: About 10 minutes before observations are to take place, place a piece of dry cobalt chloride paper and a woodlouse into a boiling tube, and close with a bung. Place the boiling tube in a rack.

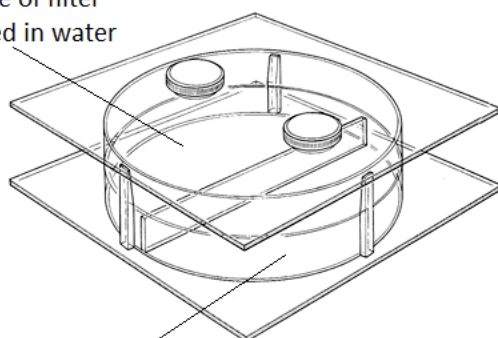


#### Demonstration 2 – Choice chambers

**1** Advance preparation: Set up a choice chamber about 30 minutes to 1 hour before observations are to take place. The choice chamber should offer woodlice two environments (damp or dry) and has been covered so that all are dark.

**2** Place 10-20 woodlice in the choice chamber.

damp - piece of filter paper soaked in water



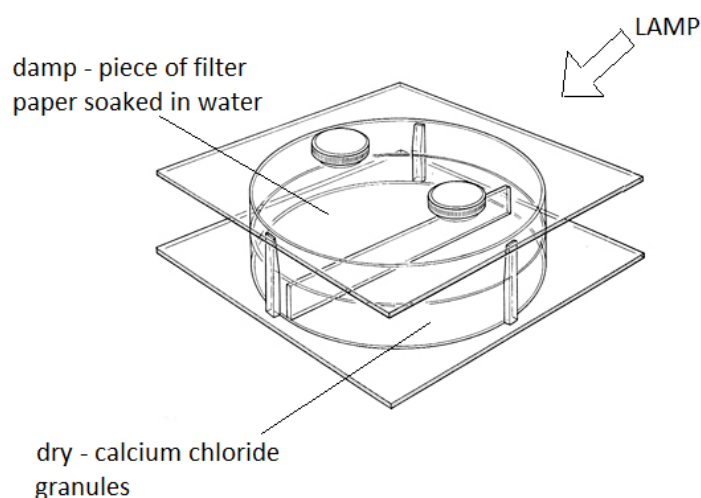
dry - calcium chloride granules



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### **Class practical 1 - Woodlice will settle in brightly-lit areas as long as the air around them is damp**

- 1** Advance preparation: Set up a choice chamber about 30 minutes to 1 hour before observations are to take place. The choice chamber should offer woodlice two environments; damp or dry.
- 2** Position a lamp so that it illuminates the choice chamber and both sides are brightly lit.
- 3** Place 10-20 woodlice in the choice chamber.
- 4** Observe their final positions. The woodlice are likely to stop moving too much after about 5-10 minutes.



### **Class practical 2 - If conditions change, woodlice tend to move to a new, more suitable place because they move around more in bright, dry conditions and slow down when they reach a darker, damper area**

- 1** Advance preparation: Set up a choice chamber (the same as for practical 1) about 30 minutes to 1 hour before observations are to take place. The choice chamber should offer woodlice two environments; damp or dry. This choice chamber will not be brightly lit.
- 2** Place 1 or 2 woodlice in the choice chamber. Each woodlouse needs a different observer. If 2 woodlice are used it helps if they look different and can be identified.
- 3** Monitor the movement of each woodlouse. Either use a piece of acetate on top of the choice chamber and trace the path the woodlouse takes, marking its position every 30 seconds, or use graph paper placed beside the choice chamber and estimate its position every 30 seconds, joining the dots to show the woodlouse's track in the choice chamber. Continue monitoring for about 5 minutes.