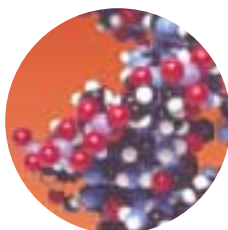


TeachAssist Resource Worksheets

Series 3 of 16



"Woodlice in choice chambers"



TeachAssist Resources

TeachAssist resources are written with the practical needs of science teachers in mind. Each resource covers a practical activity that is integral to the QCA schemes of work to provide quick and easy preparation for practical classes.

Please feel free to photocopy the sheets to suit your needs.

Each TeachAssist resource contains:

- Student worksheet with practical instructions and activities.
- Technicians' equipment list for a class of 30 students.
- Reference to allow trouble-free ordering of materials and resources.

A summary table links each resource to the National Curriculum programme of study which allows TeachAssist practical activities to be quickly included into lesson plans and schemes of work.

If you require other booklets in the series, please telephone the Griffin Education Sales team or send your request to the following address:-

Griffin Education
Bishop Meadow Road
Loughborough
Leicestershire LE11 5RG

STUDENT WORKSHEET

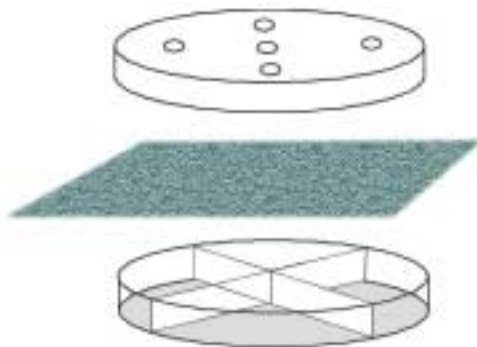


Important information:

Follow all the safety instructions that your teacher gives you.
Wear safety glasses when handling the silica gel. Immediately wash off any that comes into contact with your skin.
Clean your hands when you have finished handling the woodlice.

What conditions are best?

You have to design an experiment that finds out which conditions are best for small invertebrates such as woodlice. You can use a piece of equipment called a choice chamber like the one below.



Holes in the lid allow woodlice to be put into the chamber. Covering the top and sides with card can create light and dark areas.

Trap the fabric between the lid and the base. The woodlice can move freely on this surface.

The base of choice chamber is divided into four quarters. Each one can have a different environment.

Water in one half of the base will create an area with a moist environment. Silica gel in the other half will create a dry environment.

For your investigation, think about these things:


- What conditions will you investigate?
- What will you keep the same and what will you change?
- How will you record and present your observations?
- How will you make sure that your results are reliable?

TECHNICIAN'S EQUIPMENT LIST

QCA Unit 7C: Environments and feeding relationships

Date:	Room	Time/Period:
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Equipment Class of 30 pupils, working in pairs.	Quantity	Check	Out	Back
Choice chambers	15			
Woodlice or other invertebrates in petri dishes	15			
100cm³ beakers for water	15			
Portion of dried silica gel in plastic petri dishes	15			
Spatulas	15			
Card				
Scissors				
Dried cobalt chloride paper in dessicator	30pcs			
Safety glasses	30			



Important information:

- The activity contains reagents and procedures that can be hazardous. It should not be performed unless an appropriate risk assessment has been made.
- Silica gel is classed as toxic and an irritant. It should be handled with the appropriate safety procedures.
- Woodlice can be found in leaf litter and under rotting wood. Put about 6-7 woodlice in a petri dish for each group.
- Put suitable amounts of silica gel for each group into plastic petri dishes.
- If woodlice are not available, maggots from can be bought from an angling shop

ORDER REQUISITION

Equipment	Griffin Catalogue No.	Page	Unit cost (£)	No. Required	Cost (£)
Choice chambers (pack of 5)	YTD-190-M	302	46.85		
Cobalt chloride paper (pack of 10 books)	FB56623	302	2.65		
100ml beakers polypropylene, squat (pack of 10)	BNH-700-050P	364	9.05		
Plastic petri dishes 90mm, triple vent (pack of 600)	FB51506	396	31.95		
Silica gel self indicating, 4-7 mesh (500g)	S/0761/53	195	9.30		
Spatulas stainless steel, 140mm (pack of 10)	FB65079	509	10.30		
Dessicator, borosilicate glass with knob cover	FB35003	See web cat	39.60		
Dessicator disc, perforated metal, 140mm dia	DES-642-050R	394	7.10		
Safety glasses	FB55125	492	2.25		
Total cost					
VAT					
Order total					

Complete the order form above and place your order with Griffin Education in your usual way. Prices are correct at time of print, please contact the Griffin Sales Office or check on the Griffin Education website for the latest prices.

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SUMMARY TABLE

QCA unit	KS3 NC programme	Y7 TeachAssist	Activity	Relevant experience from Key stage 2
7A: Cells	Sc1.2f Sc2.1a	1	How to use a microscope and prepare an onion epidermis slide	Use of hand lenses and basic microscopes. Plants and animals, including internal body organs and plant structures
7C: Environments and feeding relationships	Sc1.2g	2	Using a data logger to monitor environmental conditions	Some use of data loggers How organisms are suited to their environment
	Sc1.1a,c,d Sc1.2h,k,o	3	Wood lice in choice chambers	Asking questions and designing a fair test How organisms are suited to their environment
	Sc2.5b,e	4	Organisms and food chains in leaf litter	How organisms are suited to their environment Food chains as a feeding relationship
7E: Acids and alkalis	Sc3.3d	5	Finding the pH using universal indicator solution	Little or no previous coverage of pH
	Sc1.2g Sc3.3e	6	Using a data logger to monitor changes in pH when an acid is added to an alkali	Some use of data loggers Identification of patterns and trends
	Sc3.3e	7	Investigating the neutralisation of acids with antacid tablets	Use of tables and line graphs to represent data Mixing materials can lead to a change
7F: Simple chemical reactions	Sc3.3a	8	Reactions of metals with acids	Describing how materials change when mixed or heated and how irreversible changes produce new materials
7H: Solutions	Sc1.2a Sc3.1h	9	Purifying salt from rock salt	Use of dissolving, filtering and evaporation to separate mixtures
	Sc3.1h	10	Simple distillation	Knowledge of evaporation as a separation technique
	Sc3.1h	11	Paper chromatography of ink	Separation of colours in food colourings such as sugar-coated sweets
7I: Energy resources	Sc1.2f	12	Using the Bunsen burner	Possible use of methylated spirit burners or candle-burners
	Sc4.1c Sc4.5a,e	13	Demonstrating solar energy: solar cells and absorption of heat energy by different surfaces	Little or no previous coverage of energy
	Sc4.5a	14	Finding the energy content of foods	Little or no previous coverage of energy
7J: Electrical circuits	Sc4.1a	15	Current in series and parallel circuits	Construction of series circuits from circuit diagrams
7K: Forces and their effects	Sc1.2f,g,j,k Sc4.2b	16	Extension of springs and elastic bands	Push and pull in springs Testing elastic band catapults. Some may have extended bands with masses Measurement of forces and weight