

Unit 4C Branching databases

ABOUT THE UNIT

In this unit children learn to use and create branching databases to sort and classify information.

Children will be introduced to 'yes/no' questions which separate a set of objects into two sub-sets. They are shown how to search and create branching databases.

Children will apply what they have learnt in this unit when classifying plants and animals in science.

WHERE THE UNIT FITS IN

This unit builds on Unit 3B 'Introduction to databases'.

The unit assumes that children can divide sets of objects into sub-sets.

TECHNICAL VOCABULARY

- branch

RESOURCES

- a variety of objects for 'keying out', such as labelled rocks, pictures of plants, household objects
- a branching database with a prepared data file of one of the above

EXPECTATIONS

at the end of this unit

most children will:

develop and search a branching database

some children will not have made so much progress and will:

search a branching database

some children will have progressed further and will:

develop and search a branching database using efficient criteria

LEARNING OBJECTIVES	POSSIBLE TEACHING ACTIVITIES	LEARNING OUTCOMES	POINTS TO NOTE
SETTING THE SCENE			
<p>CHILDREN SHOULD LEARN</p> <ul style="list-style-type: none"> • key idea: that 'yes/no' questions can be used to divide a set of objects into sub-sets and that a sequence of 'yes/no' questions can identify an object 	<ul style="list-style-type: none"> ◆ Show the class a selection of about 15 similar objects, such as household objects. Tell the class that you are thinking of one of the objects and that they must work out which one it is by asking 'yes/no' questions, such as, <i>is it made of plastic?</i> Discuss which questions work well and point out that questions about small numbers of objects are unhelpful if the answer is no. Encourage them to use questions which divide the set of objects into two. 	<p>CHILDREN</p> <ul style="list-style-type: none"> • create a series of 'yes/no' questions to identify objects 	<p>Some children will find it hard not to ask questions such as 'Does it have a handle or does it have legs?' Point out that that is really two questions.</p> <p>Children who find the work hard could cover up or remove objects which have been excluded.</p> <p>Children who find the work easy could be encouraged to think of questions which will give the answer in less than four steps.</p>
SHORT FOCUSED TASKS			
<ul style="list-style-type: none"> • key idea: that a tree diagram can be used to organise information 	<ul style="list-style-type: none"> ◆ Show the class how to create a tree diagram of branching questions which can be used to identify each object. ◆ Divide the class into groups and give each group a set of eight pictures. Ask them to create a tree diagram that can identify each picture uniquely. 	<ul style="list-style-type: none"> • produce a tree diagram to identify objects 	<p>Producing a paper-based branching database or 'science key' could make a challenging piece of homework.</p>
<ul style="list-style-type: none"> • technique: to search a branching database 	<ul style="list-style-type: none"> ◆ Prepare a branching database of rocks. Show the children how to search the branching database to identify specimens of rock. Give pairs of children a rock specimen and ask them to use the branching database to identify it. 	<ul style="list-style-type: none"> • search a branching database to identify objects 	<p>Science terminology could be included.</p> <p>A variety of branching databases could be included.</p>
INTEGRATED TASK			
<ul style="list-style-type: none"> • to use a branching database to organise, reorganise and analyse information 	<ul style="list-style-type: none"> ◆ Demonstrate how to create a branching database. Place various musical instruments in front of the children, and discuss their similarities and differences. Label each instrument with its name as it is discussed. Then ask the children to work in groups to create a branching database that identifies each instrument. Ask each group to test the others' databases. 	<ul style="list-style-type: none"> • create a branching database which identifies items uniquely 	<p>This activity gives children experience of designing a system for others to use. The activity could be extended by asking children to produce a branching database to identify the children in their class to a visitor.</p>



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