

Unit 5B

Analysing Data and Asking Questions: Using Complex Searches

Unit 5B

This unit helps children to question prepared databases using more than one variable.

Vocabulary

And =<

Or =>

Resources

Information workshop : Birds and Monarchs
Internet Machine

Assessment

All children will be able to carry out searches using 2 or more criteria.
Most children will be able to use AND OR =< or => in their searches.
Some children will be able to carry out computer searches to check hypothesis.

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Lesson 1

Teacher Task

Open database 'Monarchs' get class to look at how data is organised.
Remind them about records and fields.

Remind them how to carry out simple searches using = and sorting on one field.

Discuss questions which require other types of searches:

Which Monarchs lived for 20 years or more?

Discuss how when searching a vast amount of information stores you need to be specific (on the W.W.W.).

Demonstrate how to use =< (more than) and => (less than) in a search.

Pupil Task

Ask Partner (1) to pose questions to another using more than and less than.

I.e. How many Monarchs rules for less than 2 years.

Partner (2) researches.

Swop over at half time.

Learning Outcome

Children can use =< and => in their searches.

Lesson 2

Teacher Task

Show class how to use AND in a search.

Pupil Task

In groups of 4 create a search question using 'AND'. Pass question onto another group - to find answer.

Now check the answer by searching using each criteria separately.

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Learning Outcome

Children can use AND in their searches.

Lesson 3

Teacher Task

Show class how to use OR in a search.

Pupil Task

As per lesson 4 using 'OR'.

Learning Outcome

Children can use OR in their searches.

Lesson 4

Teacher Task

Demonstrate using search engine how information can have no relevance.

I.e. Birmingham (will bring up U.S.A.).

Discuss how to modify searches by tightening question.

I.e. Birmingham AND NOT U.S.A. or
Birmingham, U.K.

Pupil Task

Type in football - Print out pieces of information and give them to groups. Allow 5 / 10 mins skim reading.

Groups report back on how relevant their piece is and why it might not

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be the information they sought.

Learning Outcome

Children can skim read information to check its relevance and modify their search strategies.

Children can recognise that material held on I.T. systems comes from a variety of sources.

Lesson 5 + 6

Teacher Task

Introduce a project, using birds database

Talk about the limitations of using printed graphs to spot relationships in data.

Remind children how to search using:-

AND then OR

I.e. Birds that are over 20cm long AND lay more than 5 eggs.

or Birds that are over 20cm long OR lay a clutch of more than 5 eggs.

Graphs need to be printed for both questions and children need to write out / discuss the differences.

Pose open question for Class discussion:-

Find evidence (graph) to prove or disprove
That the number of eggs produced by a bird
Is equal to its size.

Learning Outcome

Children can use AND and OR to search data when looking for relationships.

Children can use graphs to provide supporting evidence for their conclusions.