


Questioning

Effective Searching

- Unit Outcome - to create and use binary trees and data bases.

Date	Objective (s)	Task/activity	Resources	Key Vocabulary	Lesson Outcome
Lesson 1 Questioning	<p><u>NC objective:</u> use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p><u>Lesson objectives:</u> I understand that the information on pictograms cannot be used to answer more complicated questions.</p>	<p><u>Main Teaching</u> Share the learning objectives and success criteria with the children. For this lesson, we will be thinking about the houses that the children live in and producing simple pictograms of the data (Or change to suit topic). Show the children the presentation - Types of Houses. Discuss the features of each house type. Give out Lesson 1 - Worksheet 1 - All About My Home and encourage children to draw what their home looks like, what it is made from, how many rooms it has and how many people live there. On the whiteboard, collate some of the information from the children's pictures. You could collate the results in the 2Calculate file Types of Homes or on the whiteboard. Explain how to design and create a simple pictogram using the information collected from the children. You can use the sample 2Count pictogram 'Houses' or create one of your own. Demonstrate: • Clicking in the rectangle then selecting an image to represent the answer or using the paint button to draw the picture. • Clicking on the + or - to record the data. See the example on the following page.</p> 	<p>Unless otherwise stated, all resources can be found on the main unit 2.4 page. From here, click on the icon to set a resource as a 2do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you don't lose this page. • Lesson 1 - Worksheet 1 - All About My Home. (at the end of this document). • 2Publish Presentation - Types of Homes. • Types of Homes Spreadsheet. • Example Pictogram Types of Homes Pictogram. If you wish children to use the example pictogram, then it can be set as a 2Do for the class. • Other examples can be created to be used in Step</p>	<p>Pictogram - A diagram that uses pictures to represent data. Question - A sentence written or spoken to find information. Data - Facts and statistics collected together that can provide information. Collate - Collect and combine (texts, information, or data). Binary Tree - A simple way of</p>	<p>To understand that the information on pictograms cannot be used to answer more complicated questions.</p>

Questioning

Effective Searching

- Unit Outcome - to create and use binary trees and data bases.

		<p><u>Differentiated Activities</u> The children can then create and fill in the data in their own 2Count pictogram. Some children might need to use the sample and just enter data rather than create from scratch. Set this as a 2do for those pupils. Ask the children to use the pictogram to answer some simple questions whose answer can be ascertained from the pictograms or the results collected in step 5. • How many people live in semi-detached houses? • Do more people live in flats than bungalows? • How many houses have four people living in them? With the class, look at what information the pictograms can't provide you with. For instance: • How many semi-detached houses have four people living in them? • How many people living in bungalows have four or more rooms? . Can the children think of any questions of their own that the pictograms cannot answer?</p> <p><u>Challenges</u></p>	<p>7 if you feel that pupils will not be able to create a pictogram from scratch. These could be set as 2dos. Suggested topics are: - Number of people in our homes - Number of rooms in our homes However, be sensitive to variations within the class and select a non-sensitive topic for your individual class makeup.</p>	<p>sorting information into two categories. Avatar - An icon or figure representing a person in a video game, Internet forum or other online format. Database - A computerised system that makes it easy to search, select and store information.</p>	
--	--	--	--	---	--

Questioning

Effective Searching

- Unit Outcome - to create and use binary trees and data bases.

Lesson 2	<p><u>NC objective:</u> use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p><u>Lesson objectives:</u> I can use a range of yes/no questions to separate different items.</p>	<p><u>Main Teaching</u> Share the learning objectives and success criteria with the children. Recap the learning from the last lesson. Show the children two different objects and show how we can use simple questions with a yes/no answer to separate them, e.g. cube and sphere - has the shape got straight edges? Show the children four characters from the Purple Mash avatars. Choose one. Explain how we can use a range of yes/no questions to separate the avatars so we can select one. Discuss how we can ask questions relating to hair colour, gender, glasses etc.</p> <p><u>Differentiated Activities</u> In pairs give children a copy of the Lesson 2 - Purple Mash Avatar Game. The children cut up the 12 images and then they play a game like Guess Who? Remind the children they can only use questions with a yes/no answer.</p> <p><u>Challenges</u></p>	<p>Unless otherwise stated, all resources can be found on the main unit 2.4 page. From here, click on the icon to set a resource as a 2do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you don't lose this page. • Guess Who? board game. • Purple Mash Avatar Game (at the end of this document). • Purple Mash Large Avatars Pictures (at the end of this document).</p>		<p>To use a range of yes/no questions to separate different items.</p>



Computing Medium Term Plan- Spring Term 1 Y2



Questioning

Effective Searching

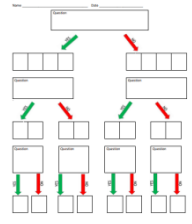
- Unit Outcome - to create and use binary trees and data bases.

Lesson 3	<p><u>NC objective:</u> use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p><u>Lesson objectives:</u> I understand what is meant by a binary tree. I can design a binary tree to</p>	<p><u>Main Teaching</u> Share the learning objectives and success criteria with the children. Recap the learning from the last lesson. Look at the Purple Mash large avatar pictures. With the class, discuss a yes/no question that could split the avatars into two groups. The ideal question will divide the avatars into approximately equal groups. This will result in the fewest (average) number of steps to the solution for all of the avatars. Write the question onto paper/whiteboard and then put 'yes'/'no' arrows on the floor or Blu-Tack them to the board. It is advisable to enlarge the arrows onto A3 paper. Separate the avatars into the two groups, choose one group and then think of what question could be used to split this group into a smaller group? Repeat until all the children are sorted individually. Select one child and check that the binary tree works and leads to the correct child.</p>	Lesson 3 - 'yes' and 'no' arrows (at the end of this document). You will need several copies in order to construct a paper binary tree on either the floor or the wall (depending on your classroom layout). • Whiteboard/paper. • Large avatar pictures from the last lesson. • Lesson 3 - Worksheet 1 - Purple Mash Avatar Binary Tree. (at the end of this document). One copy per child/pair. •		<p>To understand what is meant by a binary tree. To design a binary tree to sort pictures of children.</p>

Questioning

Effective Searching


- Unit Outcome - to create and use binary trees and data bases.

	<p>sort pictures of children.</p>	<p><u>Differentiated Activities</u> The children should complete their own binary tree using the Purple Mash Avatars and outline sheet.</p> <p><u>Challenges</u></p>	<p>Lesson 3 - Purple Mash Avatar Binary Tree Outline.</p>  <p>These will need to be enlarged to A3 size and printed for each child/pair.</p> <ul style="list-style-type: none"> • Glue, scissors and Blu-Tack. 		
Lesson 4	<p><u>NC objective:</u> use technology purposefully to</p>	<p><u>Main Teaching</u> Share the learning objectives and success criteria with the children. Recap the learning from the last lesson. Open the</p>	<p>Unless otherwise stated, all resources can be found on the main unit 2.4 page.</p>		<p>To understand that answers are limited to</p>

Questioning

Effective Searching

- Unit Outcome - to create and use binary trees and data bases.

	<p>create, organise, store, manipulate and retrieve digital content.</p> <p><u>Lesson objectives:</u> I understand that answers are limited to 'yes' and 'no' in a binary tree. I understand that the user cannot use 2Question to answer more complicated questions. I can use a simple binary tree.</p>	<p>2Question database - Avatars. Handout Lesson 4 - Worksheet 1. Choose a child and then work through 2Question - Avatars and see if you can find out the name of the child.</p> <p><u>Differentiated Activities</u> The children use 2Question - Avatars sheet 1 and work out the names of the different children. Collect the children together and discuss the correct answers. A copy of the answers is provided for you. Discuss with the class the limitations of the information in 2Question (questions are limited to 'yes' and 'no' answers; we are unable to ask questions such as 'children wearing a sweater and glasses'). What other questions couldn't be answered using 2Question?</p> <p><u>Challenges</u> .</p>	<p>From here, click on the icon to set a resource as a 2do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you don't lose this page. • 2Question database - Avatars. Set this as a 2Do for your class. • Lesson 4 - Worksheet 1</p> 		<p>'yes' and 'no' in a binary tree. To understand that the user cannot use 2Question to answer more complicated questions. To use a simple binary tree.</p>
Lesson 5	<p><u>NC objective:</u> use technology purposefully to create, organise,</p>	<p><u>Main Teaching</u> Share the learning objectives and success criteria with the children. Recap the learning from the last lesson. With the class, recap the limitations of the questions we can ask about information</p>	<p>Unless otherwise stated, all resources can be found on the main unit 2.4 page. From here, click on the icon</p>		<p>To understand what is meant by a database. To use a</p>



Computing Medium Term Plan- Spring Term 1 Y2



Questioning

Effective Searching

- Unit Outcome - to create and use binary trees and data bases.

	<p>store, manipulate and retrieve digital content.</p> <p><u>Lesson objectives:</u> I understand what is meant by a database. I have used a database to answer simple and more complex search questions.</p>	<p>stored in a binary tree. Explain that, this time, we are going to look at a database that allows us to ask more than one question. Open the database - 2Investigate - Avatars. Click on one of the children and look at how the information is stored . Show the children how to use the Find tool. This tool can be used to allow us to search using multiple questions</p> <p><u>Differentiated Activities</u> Hand out the worksheet - Lesson 5 - Worksheet 1 - Avatar Database Questions. Children should open the database from their 2Dos and use it to answer the questions.</p> <p><u>Challenges</u></p>	<p>to set a resource as a 2do for your class. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you don't lose this page. • 2Investigate - Avatars Database set this as a 2Do for the class. • Lesson 5 - Worksheet 1 - Avatars Database Questions</p>		<p>database to answer simple and more complex search questions.</p>
--	--	---	---	--	---

Questioning

Effective Searching

- Unit Outcome - to create and use binary trees and data bases.

Lesson 1 – Worksheet 1 – All about my home

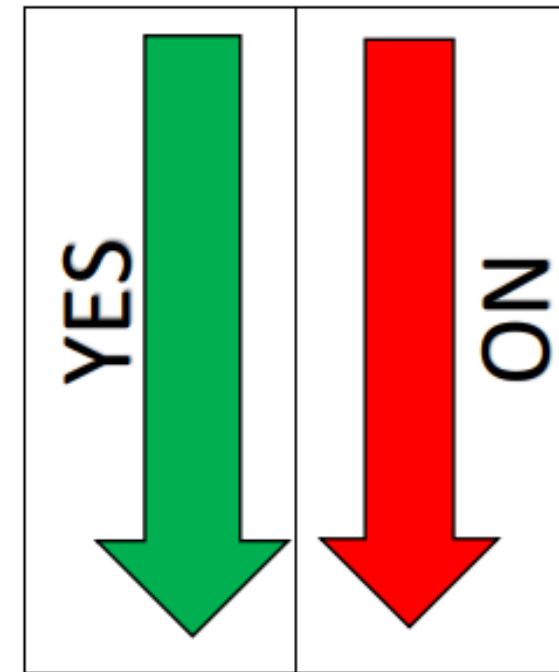
Name _____ Date _____

My home is a _____	My home is made out of _____
My home has _____ rooms	_____ people live in my home
Other information about my home.	

Lesson 2 – Purple Mash Avatar Game



Lesson 3 – YES / NO arrows



Questioning

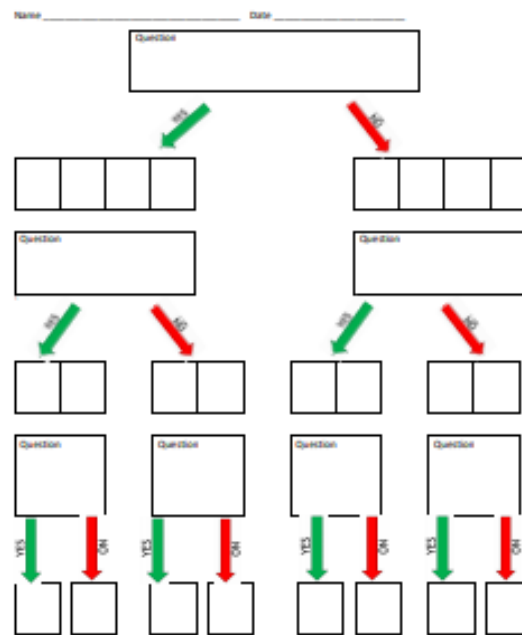
Effective Searching

- Unit Outcome - to create and use binary trees and data bases.

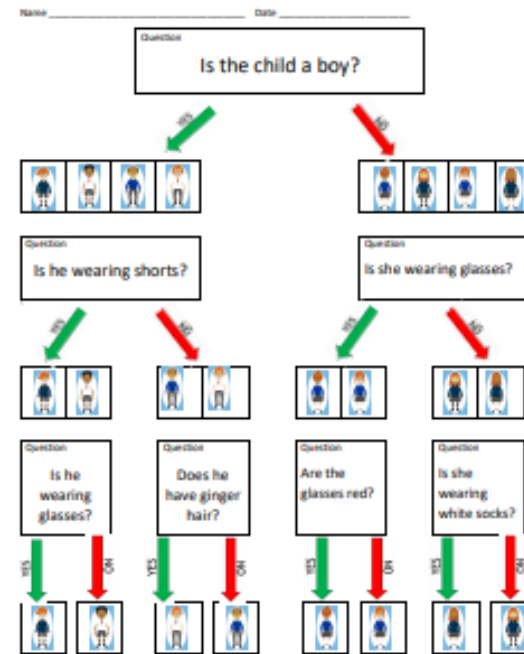
Lesson 3 – Work Sheet 1 – Purple Mash Avatar Binary Tree



Lesson 3 – Purple Mash Avatar Binary Tree Outline



Lesson 4 – Name the Avatars Binary Tree



Questioning

Effective Searching

- Unit Outcome - to create and use binary trees and data bases.

Lesson 4 – Worksheet 1

Name _____ Date _____

Use 2 Questions to find the names of these pupils.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Lesson 5 – Work Sheet 1 – Avatars Database Questions

Name _____ Date _____

Avatars Database Questions
QUESTIONS (1)
 Getting started with simple searches

1. How many boys are there in the class?
2. Which children in our class have blonde hair?
3. How many children are wearing a tie?
4. How many children are wearing a blazer?
5. How many children have glasses on?
6. How many children are wearing shorts?
7. Which child is wearing a T-shirt?

Lesson 5 – Work Sheet 1 – Avatars Database Questions

Name _____ Date _____

Avatars Database Questions
QUESTIONS (2)
 Moving on with more complicated searches

1. What are the names of the boys wearing glasses?
2. Which children are wearing a tie and a blazer?
3. How many blonde children are wearing glasses?
4. How many children are wearing a blazer or a shirt?
5. How many children have ginger or brown hair?
6. Who is wearing a shirt and glasses?
7. Which children are wearing a blazer and are not wearing glasses?