Belfield CP School

Medium Term Plan

Subject: ICT	Term: Summer 2	Year: Two
Topic: Questions and answers	Teacher: Mrs Helen Crompton	

SoW / NC	Week	Learning Objectives	Pupil Activities	Assessment Evidence	Resources	Key Vocabulary	EAL	Cross-Curr.Links
Unit 2E	1	Know that information can be represented as graphs but that this can only provide limited answers to questions.	Tell the pupils that this topic is questions and answers. Ask the pupils to think when their birthday is. Make a list of questions with the pupils to ask about the birthdays, e.g. what month is it in? Is it before the 10th? Make a class pictogram of people with birthdays in each month of the year. Using small squares of paper. Ask the pupils to use the pictogram to answer some simple questions, e.g. How many have their birthday in May? Do more people have birthdays in March than February? Now ask the pupils more questions, e.g. When is ###'s Dad's birthday? Does the pictogram or graph provide this information? Discuss. Celebrate chart produced by pupils. Hang in classroom.	Q & A Putting their picture in the correct month.	Teaching Assistant Squares of paper	Birthday Question Sort Graph Information	Oracy 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12. Literacy 2, 3, 6, 8	Science Numeracy Art

Unit 2E	2	Know that there are different types of questions which can be answered in different ways.	Recap last weeks lesson and tell the pupils we will be looking further at questioning. Discuss with the pupils the kind of information that might be useful when looking at buying a new pet. Ask pupils to suggest questions to find out the information needed. Write the questions as a class on the white board. Select one of the questions and ask the pupils what types of answers they would expect. If the question is, Which type of animal would you like? They might suggest a few animals as the answer. Write down the answer. There could be a different answer for each person they consider. If the question is, Does this pet have spots? There can be two possible answers – yes or no. Tell the pupils that these are the types of questions that will be practiced over the next few activities. Play 'Guess Who' using coloured photographs of pupils in the class. (Taken for Science week 2 Summer 2.) Encourage pupils to ask simple questions, e.g. Is it a boy? In response to the answer, pupils turn over the photographs that do not comply. This process should be completed until only one photograph remains. Also use the interactive white board to play two of the sorting activities on http://www.mape.org.uk/activities/sorting	Q & A Correctly playing the sorting games and asking useful questions.	Teaching Assistant Interactive White Board Internet Access White Board Pupils Photographs.	Sorting Questioning Information Collect	Oracy 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12. Literacy 2, 3, 6, 8	Science Numeracy Art

			_games/index.htm					
Unit 2E	3	Use a search tool to find the answers to simple questions. Know that a database provides a means of storing information and can be searched. Create a binary tree.	Recap last weeks activity where different answers were given to a question and for other questions the answer yes or no is given. Tell the pupils that this week we are looking at the yes/no questions and we will be making a binary tree, which will illustrate the way in which a computer 'binary trees' work. Construct a paper-based binary tree using a set of objects such as fruit. Prepare some strips of paper for recording the questions. Cut a set of red arrows for 'no' answers and green arrows for 'yes' answers. Collect a set of fruit, such as banana, apple, apricot, grapefruit, grape. Select two of these pieces of fruit, e.g. the banana and apple. Ask a question to distinguish between them (the answers can be yes or no), e.g. Is it yellow? Put down a red and a green arrow leading from the question strip. Put the banana at the end of the green (yes) arrow and the apple at the end of the red (no) arrow. Now choose another piece of fruit such as a grape. Ask the first question again. This time the answer will be 'no'. Follow the 'no' arrow and construct a question to distinguish between the apple and the grape. The question might be Is it small? Position this question strip at the end of the red arrow with a red and green arrow	Q & A Group one – paper binary tree. Group two - binary tree on the computer.	Teaching Assistant IWB Program Black Cat Branching3. Various pieces of fruit. Small pieces of card. Yr 2 ICT book, page 51. Other concrete materials for pupils to sort.	Binary Tree Questions Information Sort	Oracy 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12. Literacy 2, 3, 6, 8	Science Numeracy Art

			leading from it. The apple should follow the red 'no' arrow and the grape should follow the green 'yes' arrow. Repeat this process with each piece of fruit in turn. Group one – Red and blue HA and AA work on producing their own binary trees, provide relevant artifacts or visual aids available for children to handle so that this is a concrete activity. LA finish the binary tree found in Yr 2 ICT book, page 51. fruit can also be available for concrete help. Group two – Orange and green Work on creating a binary tree with the program 'Black Cat, Decisions 3' Give a full demonstration, HA can work in pairs to create their own, very simple binary tree, using concrete apparatus to assist in the process. AA and LA work as a class on producing a binary tree. After which pupils check to see if it works, using the interactive pen to click on the yes or no buttons. Also use the interactive white board to write the questions for one of the sorting activities on http://www.mape.org.uk/activities/sorting_games/index.htm					
Unit 2E	4	Use a search tool to find the answers to simple questions.	Recap last weeks binary tree work Those that worked on paper last week will be working on the computers this week	Q & A Group one – binary tree on	Teaching Assistant IWB	Binary Tree Questions Information	Oracy 1, 2, 3, 4, 5, 6,	Science Numeracy Art

		Know that a database provides a means of storing information and can be searched. Create a binary tree.	and vice versa. Construct another paper-based binary tree using a set of objects such as vegetables. Prepare some strips of paper for recording the questions. Cut a set of red arrows for 'no' answers and green arrows for 'yes' answers. Collect a set of fruit, such as carrot, cabbage, peas, cauliflower. Select two of these vegetables, e.g. the carrot and cabbage. Ask a question to distinguish between them (the answers can be yes or no), e.g. Is it green? Put down a red and a green arrow leading from the question strip. Put the cabbage at the end of the green (yes) arrow and the carrot at the end of the red (no) arrow. Now choose another vegetable such as a cauliflower. Ask the first question again. This time the answer will be 'no'. Follow the 'no' arrow and construct a question to distinguish between the cauliflower and carrot. The question might be Is it thin? Position this question strip at the end of the red arrow with a red and green arrow leading from it. The cauliflower should follow the red 'no' arrow and the carrot should follow the green 'yes' arrow. Repeat this process with vegetable in turn. Group two – Orange and green HA and AA work on producing their own binary trees, provide relevant artifacts or	the computer. Group two - paper binary tree.	Program Black Cat Branching3. Various vegetables. Small pieces of card. Yr 2 ICT book, page 51. Other concrete materials for pupils to sort.	Sort	7, 8, 9, 11, 12. Literacy 2, 3, 6, 8	

			visual aids available for children to handle so that this is a concrete activity. LA finish the binary tree found in Yr 2 ICT book, page 51. Fruit can also be available for concrete help. Group one – Red and blue Work on creating a binary tree with the program 'Black Cat, Decisions 3' Give a full demonstration, HA can work in pairs to create their own, very simple binary tree, using concrete apparatus to assist in the process. AA and LA work as a class on producing a binary tree. After which pupils check to see if it works, using the interactive pen to click on the yes or no buttons. Also use the interactive white board to write the questions for one of the sorting activities on http://www.mape.org.uk/activities/sorting_games/index.htm					
Unit 2E	5	Know that a database can only answer questions if appropriate data has been entered. Use the search tool on a simple database to find out the answers to specific questions Present findings.	Quickly recap through a question and answer session what we have learned so far this term. Show the pupils five teddy bears. Tell the pupils that we need to sort out the teddy bears and make a binary tree to find out the names of the bears which I will secretly enter into the computer at the end. What questions could we ask to sort out	Q & A Ideas given for questions as to which bear. Use of 'Branching3 program to find the name of a bear.	Teaching Assistant IWB Program Black Cat Branching3.	Binary Tree Questions Information Sort	Oracy 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12. Literacy 2, 3, 6, 8	Science Numeracy Art

			the bears? Get the pupils to give ideas and type them (children involved in typing if possible) into the computer program 'Black Cat Branching 3' When all the questions are typed in teacher types in a name for each of the bears. Put a chair in the middle of the circle and ask a pupil to sit on the chair and think of someone in the class. We then have to find out as a class who that person is. The person sat in the chair can only answer yes or no. Do this with 4 or 5 pupils. While the last activity is going on, pupils come individually to the computer, observed and supported with reading by the TA or Teacher, to using the computer program 'Branching3' to find out the name of the Bear which they choose. The five bears need to be close by to be viewed by the pupils to complete the activity. Go through with the pupils the names of the bears. Tell the pupils which my favorite bear is and work through the activity with the class to find the name of my chosen bear. Tell the pupils that I would like to invite my bear to tea and I would like to know what sandwiches he likes. Could I use the data base / binary tree to find out? Why not? Discuss.					

			Also use the interactive white board to play pupils choice of the sorting activities on http://www.mape.org.uk/activities/sorting_games/index.htm					

Belfield CP School

Lesson plan

Lesson	Year group	Term	Lesson Length	Lesson
ICT	2	Summer 2	2hrs	1 of 5

Aims / Outcomes

Know that information can be represented as graphs but that this can only provide limited answers to questions.

Key Vocabulary

Birthday
Question
Sort
Graph
Information

Introduction

Tell the pupils that this topic is questions and answers.

Main Activities

Ask the pupils to think when their birthday is. Make a list of questions with the pupils to ask about the birthdays, e.g. what month is it in? Is it before the 10th?

Make a class pictogram of people with birthdays in each month of the year. Using small squares of paper.

Ask the pupils to use the pictogram to answer some simple questions, e.g. How many have their birthday in May? Do more people have birthdays in March than February?

Now ask the pupils more questions, e.g. When is ###'s Dad's birthday? Does the pictogram or graph provide this information? Discuss.

Plenary

Celebrate chart produced by pupils. Hang in classroom.

Resources		Assessment Evidence	
Teaching Assistant Squares of paper		Q & A Putting their picture in the correct month.	
Cross Curricular Links	SoW / NC ref and level	Differentiation	EAL

Science Numeracy Art	Unit 2E	Q & A Support given Outcome	Other concrete materials for pupils to sort.

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Lesson plan

Lesson	Year group	Term	Lesson Length	Lesson
ICT	2	Summer 2	2 hrs	2 of 5

Aims / Outcomes

Know that there are different types of questions which can be answered in different ways.

Key Vocabulary

Sorting
Questioning
Information
Collect

Introduction

Recap last weeks lesson and tell the pupils we will be looking further at questioning.

Main Activities

Discuss with the pupils the kind of information that might be useful when looking at buying a new pet.

Ask pupils to suggest questions to find out the information needed. Write the questions as a class on the white board.
Select one of the questions and ask the pupils what types of answers they would expect. If the question is, Which type of animal would you like? They might suggest a few animals as the answer. Write down the answer. There could be a different answer for each person they consider. If the question is, Does this pet have spots? There can be two possible answers – yes or no. Tell the pupils that these are the types of questions that will be practiced over the next few activities.

Play 'Guess Who' using coloured photographs of pupils in the class. (Taken for Science week 2 Summer 2.) Encourage pupils to ask simple questions, e.g. Is it a boy? In response to the answer, pupils turn over the photographs that do not comply. This process should be completed until only one photograph remains.

Plenary

Also use the interactive white board to play two of the sorting activities on
http://www.mape.org.uk/activities/sorting_games/index.htm

Resources		Assessment Evidence	
Teaching Assistant Interactive White Board Internet Access White Board Pupils Photographs.		Q & A Correctly playing the sorting games and asking useful questions.	
Cross Curricular Links	SoW / NC ref and level	Differentiation	EAL
Science Numeracy Art	Unit 2E	Q & A Support given Outcome	Oracy 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12. Literacy 2, 3, 6, 8

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Lesson plan

Lesson	Year group	Term	Lesson Length	Lesson
ICT	2	Summer 2	2 hrs	3 of 5

Aims / Outcomes

Use a search tool to find the answers to simple questions.

Know that a database provides a means of storing information and can be searched.
Create a binary tree.

Key Vocabulary

Binary Tree
Questions
Information
Sort

Introduction

Recap last weeks activity where different answers were given to a question and for other questions the answer yes or no is given.

Main Activities

Tell the pupils that this week we are looking at the yes/no questions and we will be making a binary tree, which will illustrate the way in which a computer 'binary trees' work.
Construct a paper-based binary tree using a set of objects such as fruit. Prepare some strips of paper for recording the questions. Cut a set of red arrows for 'no' answers and green arrows for 'yes' answers. Collect a set of fruit, such as banana, apple, apricot, grapefruit, grape. Select two of these pieces of fruit, e.g. the banana and apple. Ask a question to distinguish between them (the answers can be yes or no), e.g. Is it yellow? Put down a red and a green arrow leading from the question strip. Put the banana at the end of the green (yes) arrow and the apple at the end of the red (no) arrow. Now choose another piece of fruit such as a grape. Ask the first question again. This time the answer will be 'no'. Follow the 'no' arrow and construct a question to distinguish between the apple and the grape. The question might be Is it small? Position this question strip at the end of the red arrow with a red and green arrow leading from it. The apple should follow the red 'no' arrow and the grape should follow the green 'yes' arrow. Repeat this process with each piece of fruit in turn.

Group one – Red and blue
HA and AA work on producing their own binary trees, provide relevant artifacts or visual aids available for children to handle so that this is a concrete activity.
LA finish the binary tree found in Yr 2 ICT book, page 51. fruit can also be available for concrete help.

Group two – Orange and green
Work on creating a binary tree with the program 'Black Cat, Decisions 3'
Give a full demonstration, HA can work in pairs to create their own, very simple binary tree, using concrete

apparatus to assist in the process.
AA and LA work as a class on producing a binary tree. After which pupils check to see if it works, using the interactive pen to click on the yes or no buttons.

Plenary

Also use the interactive white board to write the questions for one of the sorting activities on http://www.mape.org.uk/activities/sorting_games/index.htm

Resources		Assessment Evidence	
Teaching Assistant IWB Program Black Cat Branching3. Various pieces of fruit. Small pieces of card. Yr 2 ICT book, page 51. Other concrete materials for pupils to sort.		Q & A Group one – paper binary tree. Group two - binary tree on the computer.	
Cross Curricular Links	SoW / NC ref and level	Differentiation	EAL
Science Numeracy Art	Unit 2E	Q & A Support given Outcome	Oracy 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12. Literacy 2, 3, 6, 8

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Lesson plan

Lesson	Year group	Term	Lesson Length	Lesson
ICT	2	Summer 2	2 hrs	4 of 5

Aims / Outcomes

Use a search tool to find the answers to simple questions.

Know that a database provides a means of storing information and can be searched.
Create a binary tree.

Key Vocabulary

Binary Tree
Questions
Information
Sort

Introduction

Recap last weeks binary tree work
Those that worked on paper last week will be working on the computers this week and vice versa.

Main Activities

Construct another paper-based binary tree using a set of objects such as vegetables. Prepare some strips of paper for recording the questions. Cut a set of red arrows for ‘no’ answers and green arrows for ‘yes’ answers.

Collect a set of fruit, such as carrot, cabbage, peas, cauliflower. Select two of these vegetables, e.g. the carrot and cabbage. Ask a question to distinguish between them (the answers can be yes or no), e.g. Is it green? Put down a red and a green arrow leading from the question strip. Put the cabbage at the end of the green (yes) arrow and the carrot at the end of the red (no) arrow.
Now choose another vegetable such as a cauliflower. Ask the first question again. This time the answer will be ‘no’. Follow the ‘no’ arrow and construct a question to distinguish between the cauliflower and carrot. The question might be Is it thin? Position this question strip at the end of the red arrow with a red and green arrow leading from it. The cauliflower should follow the red ‘no’ arrow and the carrot should follow the green ‘yes’ arrow. Repeat this process with vegetable in turn.

Group two – Orange and green
HA and AA work on producing their own binary trees, provide relevant artifacts or visual aids available for children to handle so that this is a concrete activity.
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apparatus to assist in the process.
AA and LA work as a class on producing a binary tree. After which pupils check to see if it works, using the interactive pen to click on the yes or no buttons.

Plenary

Also use the interactive white board to write the questions for one of the sorting activities on http://www.mape.org.uk/activities/sorting_games/index.htm

Resources		Assessment Evidence	
Teaching Assistant IWB Program Black Cat Branching3. Various vegetables. Small pieces of card. Yr 2 ICT book, page 51. Other concrete materials for pupils to sort.		Q & A Group one – binary tree on the computer. Group two - paper binary tree.	
Cross Curricular Links	SoW / NC ref and level	Differentiation	EAL
Science Numeracy Art	Unit 2E	Q & A Support given Outcome	Oracy 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12. Literacy 2, 3, 6, 8

Belfield CP School

Lesson plan

Lesson	Year group	Term	Lesson Length	Lesson
ICT	2	Summer 2	2 hrs	5 of 5

Aims / Outcomes

Know that a database can only answer questions if appropriate data has been entered.
Use the search tool on a simple database to find out the answers to specific questions
Present findings.

Key Vocabulary

Binary Tree
Questions
Information
Sort

Introduction

Quickly recap through a question and answer session what we have learned so far this term.

Main Activities

Show the pupils five teddy bears. Tell the pupils that we need to sort out the teddy bears and make a binary tree to find out the names of the bears which I will secretly enter into the computer at the end. What questions could we ask to sort out the bears? Get the pupils to give ideas and type them (children involved in typing if possible) into the computer program 'Black Cat Branching 3'
When all the questions are typed in teacher types in a name for each of the bears.

Put a chair in the middle of the circle and ask a pupil to sit on the chair and think of someone in the class. We then have to find out as a class who that person is. The person sat in the chair can only answer yes or no. Do this with 4 or 5 pupils.

While the last activity is going on, pupils come individually to the computer, observed and supported with reading by the TA or Teacher, to using the computer program 'Branching3' to find out the name of the Bear which they choose. The five bears need to be close by to be viewed by the pupils to complete the activity.

Go through with the pupils the names of the bears. Tell the pupils which my favorite bear is and work through the activity with the class to find the name of my chosen bear. Tell the pupils that I would like to invite my bear to tea and I would like to know what sandwiches he likes. Could I use the data base / binary tree to find out? Why not? Discuss.

Plenary
Also use the interactive white board to play pupils choice of the sorting activities on http://www.mape.org.uk/activities/sorting_games/index.htm

Resources		Assessment Evidence	
Teaching Assistant IWB Program Black Cat Branching3.		Q & A Ideas given for questions as to which bear. Use of 'Branching3 program to find the name of a bear.	
Cross Curricular Links	SoW / NC ref and level	Differentiation	EAL
Science Numeracy Art	Unit 2E	Q & A Support given Outcome	Oracy 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12. Literacy 2, 3, 6, 8