



Assessing pupils' progress in ICT at Key Stage 3:

Standards File
Pupil C



Pupil C Low Level 4 ICT Standards File

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Pupil C low level 4

ICT Standards File

Summary

Pupil C is part of a mixed-ability group. This file contains evidence drawn from three units of work based on modelling, data-handling and sequencing instructions. Pupil C has made varying progress in these different aspects of ICT. Overall, the teacher places him at a low level 4.

The evidence

1. School disco modelling
2. Social networks
3. Creating a sequence of instructions to control traffic lights

1 School disco modelling

Assessment focuses

AF1, AF2, AF3

Context

As part of a unit of work on spreadsheet modelling, pupils were asked to investigate the costs of running a school disco. The headteacher wanted to know what the costs of the disco would be and whether it would raise any money for charity.

The teacher suggested a structure for the spreadsheet, providing a template in a shared network area, and also led a class discussion on how best to approach solving the problem. As a specific project brief, the teacher asked them to consider:

- the income, costs and potential profits for different days of the week
- which day would raise the most funds for the charity
- how to present their findings to the headteacher.

Pupil C's work

After a class discussion about the costs for a disco and how to generate income, Pupil C was asked to think about what to include in a spreadsheet model. He was asked to identify which items would be a cost and which might generate income, or both.

'When Sir asked us to think about what we'd have to pay for, I thought the DJ, the hall, and the caretaker. I have got to have the caretaker there because they have to clean up after the disco. We would need to have teachers there because there are kids there, and the disco will be at school. We can sell crisps and drinks, but we'll have to buy them first, so I'll have to put them in too. I have got to make a report for my headteacher to see what day would be best to hold the disco on.'

Pupil C was asked to consider what software they would use to solve the problem. He had a short discussion with his teacher before deciding on what to use.

'I need to use a spreadsheet so I can put the costs in, and the ticket price and things, so it can add things up and work out what will be left over. I have to be careful making my spreadsheet so that it adds things up right, but I can make changes if I get things wrong. I'll write the report in a word processor because I've used it before, and I know that I can make things look neat and tidy for the headteacher.'

To investigate costs, Pupil C used the internet to find some prices for the items that he had identified in the planning, such as crisps, drinks and the potential charges for a DJ. The teacher emailed him with details of the cost for the caretaker.

'I searched the internet to try to find out what it would cost for the different bits of the disco. I put "DJ+costs+disco", and I got some results but they didn't say what a DJ would cost. I found a page that said how much a good DJ might be, so I thought it might be about £300 for the disco and the DJ. I wasn't sure so I checked with my friends in class too.'

Pupil C decided to search a supermarket website for costs of drinks and crisps. He used a search engine to find the supermarket's website and then the search facility within the website to find crisps and drinks. The search terms used were single words in each case.

'I used the internet to look for costs for crisps and drinks for the disco. I went to the supermarket website to get my prices. I chose a supermarket brand bag of crisps, as they are quite cheap, but I will sell them for more so I make more money. I will do the same with the drinks. I thought if I used the supermarket website it would be a safe site to use, as lots of people use it to do online shopping.'

Pupil C used the template provided by the teacher.

	A	B	C	D	E	F	G	H	I
1	School Disco								
2									
3	Income					Costs			
4	Item	Price each (£)	Number sold	Total		Item	Cost each (£)	Quantity	Total
5	Tickets					Hire disco equipment			
6	Can of drink					Pay the DJ			
7	Packet of crisps					Caretaker			
8						Drinks			
9						Crisps			
10									
11									
12									
13	Total income					Total costs			
14									
15									
16	Overall profit								

Pupil C entered the data and formulae to the cells to calculate totals.

When I started my model, I put in all of the costs that I have found and made some up, like ticket price and how many people, so I could add things up and work things out. I added all cells in each part and then took the costs cell from the income cell to work out the profit.

	A	B	C	D	E	F	G	H	I
1	School Disco	Wednesday							
2									
3	Income					Costs			
4	Item	Price each (£)	Number sold	Total		Item	Cost each (£)	Quantity	Total
5	Tickets	2.50	150	375.00		Hire disco equipment	200.00	1	200.00
6	Can of drink	0.50	150	75.00		Pay the DJ	100.00	1	100.00
7	Packet of crisps	0.40	150	60.00		Caretaker	40.00	1	40.00
8						Drinks	0.40	150	60.00
9						Crisps	0.20	150	30.00
10									
11									
12									
13	Total income			£ 510.00		Total costs			£ 430.00
14									
15									
16	Overall profit	£ 80.00							

	A	B	C	D	E
1	School Disco	Wednesday			
2					
3	Income				
4	Item	Price each (£)	Number sold	Total	
5	Tickets	2.5	150	=B5*C5	
6	Can of drink	0.5	150	=B6*C6	
7	Packet of crisps	0.4	150	=B7*C7	
8					
9					
10					
11					
12					
13	Total income			=SUM(D5:D12)	
14					
15					
16	Overall profit	=D13-I13			

	F	G	H	I
1				
2				
3	Costs			
4	Item	Cost each (£)	Quantity	Total
5	Hire disco equipment	200	1	=G5*H5
6	Pay the DJ	100	1	=G6*H6
7	Caretaker	40	1	=G7*H7
8	Drinks	0.4	150	=G8*H8
9	Crisps	0.2	150	=G9*H9
10				
11				
12				
13	Total costs			=SUM(I5:I12)
14				
15				
16				

Pupil C then decided that he should check the totals to ensure that his formulae were correct.

'I checked the answers to make sure the formulas are working by putting some easy numbers into it where I would know the answer. Then I used a calculator to double check and the totals were right.'

Using a show of hands, the class decided how much they would be prepared to pay for a ticket and estimated roughly how many people they could expect to attend on Wednesday, Thursday or Friday, scaling up the totals to cover the whole year group.

'Most people said that they would come to a disco on a Friday because it's the weekend. I changed my spreadsheet to show what would happen if we charged £2 a ticket. We also found that the caretaker would cost more because he would have to come before the disco and stay after it finishes.'

Pupil C put the new values into the spreadsheet and noticed that, with the data that he had for Wednesday, the disco no longer made a profit. He changed the contents of cells to reflect the data for each of the three days that the disco could be run, noting down the profit in each case. He needed reminding that the quantities of drinks and crisps bought and sold also needed changing if the number of people attending the disco changed. Having changed the data to reflect a particular day, he saved the spreadsheet model.

Pupil C then used the final profit figures to complete a table of results to use in the report.

	WEDS	THURS	FRI
<i>Tickets sold</i>	150	200	250
<i>Profit</i>	£-30.00	£85.00	£200.00

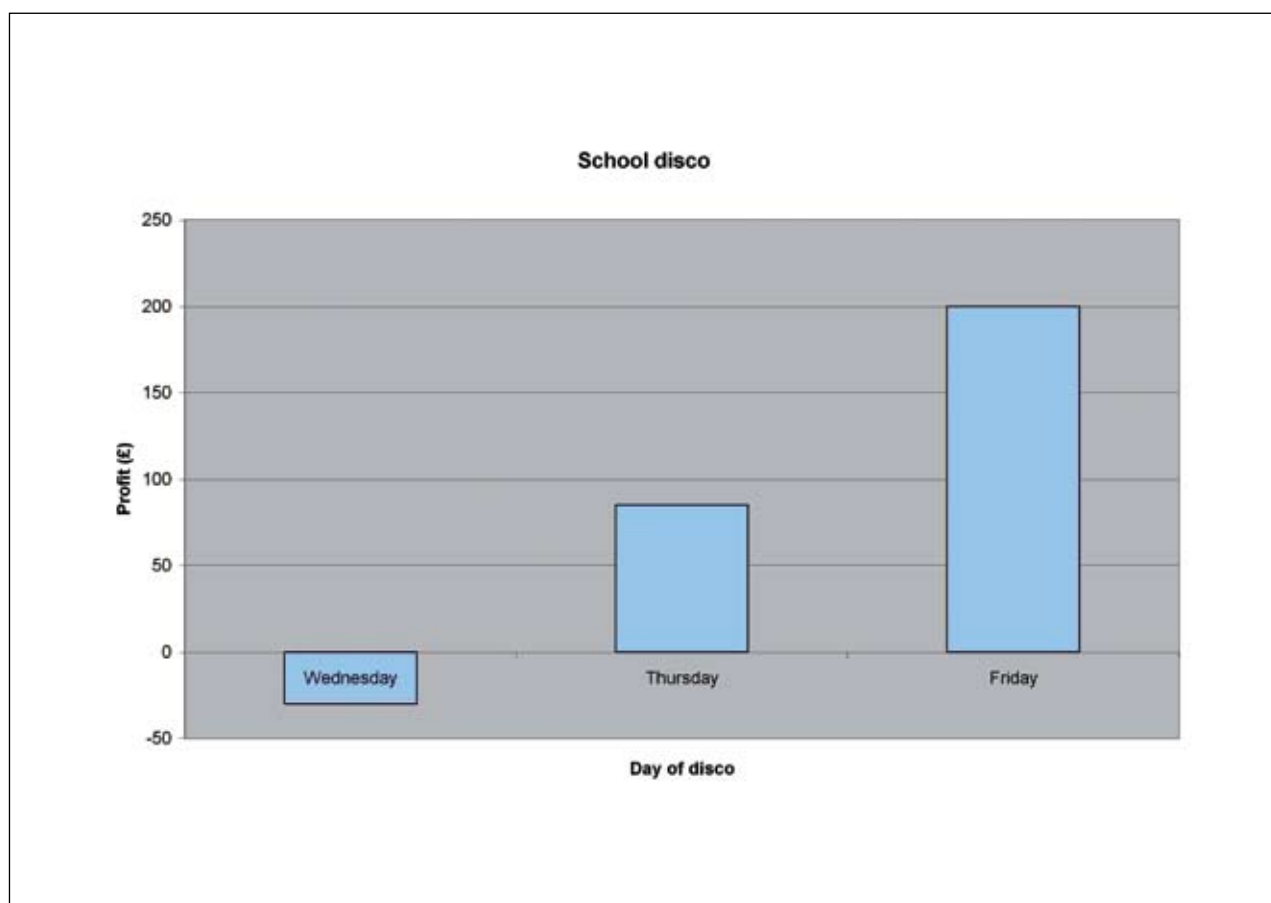
'When I changed the numbers of pupils in the model, with the £2.00 ticket price, I found that the day that would make the most profit would be Friday. In the Income I had to make the numbers of drinks and crisps bigger because more people were coming. In the Costs I had to make the numbers of drinks and crisps bigger so there would be enough to sell.'

	A	B	C	D	E	F	G	H	I
1	School Disco	Friday							
2									
3	Income					Costs			
4	Item	Price each (£)	Number sold	Total		Item	Cost each (£)	Quantity	Total
5	Tickets	2.00	250	500.00		Hire disco equipment	200.00	1	200.00
6	Can of drink	0.50	250	125.00		Pay the DJ	100.00	1	100.00
7	Packet of crisps	0.40	250	100.00		Caretaker	75.00	1	75.00
8						Drinks	0.40	250	100.00
9						Crisps	0.20	250	50.00
10									
11									
12									
13	Total income			£ 725.00		Total costs			£ 525.00
14									
15									
16	Overall profit	£ 200.00							

Pupil C compiled a word-processed report that showed what costs were needed for the disco and also how much profit would be made on each potential evening. He created a column chart, using a spreadsheet, and after discussion with the teacher decided to add labels showing the value on each column. He identified Friday night as being the best night to hold the disco because:

'Friday night would be the best night to hold the disco because a lot of pupils would like to come on a Friday. We would sell more tickets, and my model shows that we would make the biggest profit. I think that if more people come, then we make bigger profits.'

'I put a graph in the report because it makes things easier to read. I think the headteacher will be able to see the profit easily, and will be able to make a good decision.'



Teacher's notes

AF 1

Pupil C was able to identify how he would use a spreadsheet to solve the problem he was given. By using a simple set of data, where the answer was known, he was able to test and comment on the success of the spreadsheet model in answering the questions.

AF2

Pupil C was supported with a template for the model and he ensured that what he had identified as incomes and costs were correctly entered into it. He used appropriate formulae to calculate total incomes, costs and overall profits. He checked the results given within the model against a known outcome. He was able to use the model by trying different values to find out which would be the most profitable day for the school disco. He did not explain how the model worked, but he has begun to explore simple relationships within a model, for example, between the number of attendees and the profit made.

AF3

Pupil C has used simple search criteria on the internet to find the cost of a DJ and food and drinks. He has presented the findings from using a spreadsheet model in an appropriate form for the intended audience and purpose.

Assessment commentary

Pupil C was able to identify how to use ICT to solve a straightforward problem of planning a school disco. He was able to use simple search criteria to search the internet. Pupil C added data and formulae to a template to complete a model. He was able to change some variables and hence use the model to answer questions. He was able to comment on the success of the solution. He presented his findings to the headteacher in an appropriate format, using a report combining text and a chart.

Next steps

- Develop and use a model to make more complex predictions, based on several variables, and explain how the model works.
- Extend Pupil C's use of planning to solve a problem by identifying clear success criteria that will ensure that solutions are fit for purpose.

2 Social networking

Assessment focuses

AF1, AF2, AF3

Context

In a unit on data-handling, the class worked in small groups to think about how and where their personal information is held, both inside and outside school. They considered how many people have access to their data, and what they would be able to do with such information. This work was further developed to consider some of the issues of online safety and the risks associated with sharing personal information online.

The teacher asked the pupils to:

- investigate the types of online social activity in which their peers participate and the most popular sites they use for these activities
- devise a data-handling solution to store and analyse the data and draw conclusions
- present the findings to their teacher.

Pupil C's work

Pupils worked in small groups to create a questionnaire that would gather data about social networking and e-safety.

'In my group we talked about social networking and chat when we are using the internet. We collected all of these ideas together, so we could make questions from them.'

'I decided to write down the ideas about what we do on the internet and the sites that we visit. The most popular sites we thought of were MySpace, MSN, Bebo, Club Penguin and Delicious. I am going to use a questionnaire to find out which one is the most popular. We said that we used email, MSN, webcams and games chat to talk to our friends. The internet is different at home because it is not blocked for lots of my friends. I decided to use these ideas for my questionnaire.'

Pupil C considered how easy it would be to analyse the responses to the questions, recognising that a question requiring a yes/no answer is more straightforward.

'We have put the ideas into questions that we could collect answers from, so I have got a lot of questions with yes / no answers. This means that I will be able to add up how many have answered easily. There is a question with lots of possible answers, and this will be harder to put in my spreadsheet.'

Pupil C then typed the questionnaire into a word-processor and saved the file. He sent it out via email to his peers, who completed it and emailed their responses back to him.

Social Networking Questionnaire

Do you have a computer in your bedroom? **Yes/No**

Do you have access to internet at home? **Yes/No**

Does your computer have any blocks on it? **Yes/No**

Do you use MSN or Instant Messaging? **Yes/No**

Which social networking sites do you use? **Bebo/My Space /Club Penguin /Face book/ Delicious/Other**

Do you use a webcam? **Yes/No**

Do you chat to other people if you are playing games on the internet? **Yes/No**

Have you chatted to anyone who you don't know? **Yes/No**

Do you have pictures of yourself on your profile? **Yes/No**

Pupil C created a data-handling solution that would be able to store the answers from the questionnaire and perform some straightforward analysis of the data.

'I asked 25 pupils my questions, and I recorded the answers in the spreadsheet. I used a spreadsheet because I know that it will be able to add up the answers that I need, and I can use the graphs that I can make from my data to show my answers in a clear way. I have used =SUM to add up my columns so I get totals. I am going to add up my social network sites question by using the auto filter.'

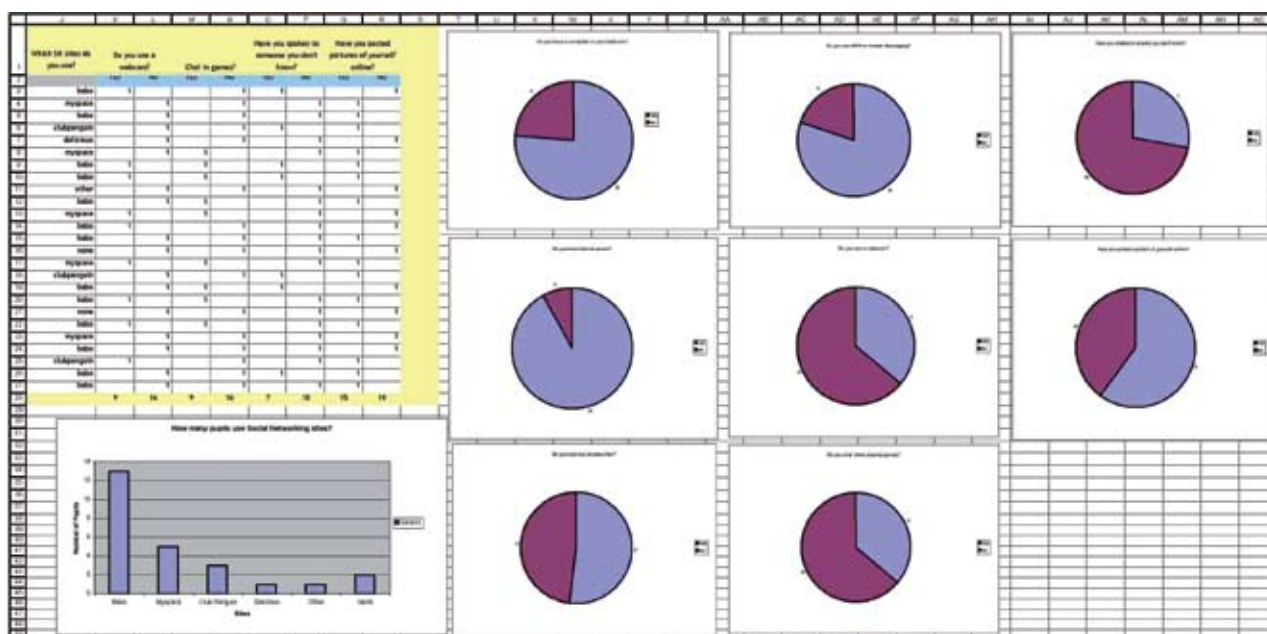
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1		Do you have a computer in your bedroom?		Internet?		Any blocks on sites?		MSN or Instant Messaging?		Which SN sites do you use?	Do you use a webcam?		Chat in games?		Have you spoken to someone you don't know?		Have you posted pictures of yourself online?	
2		YES	NO	YES	NO	YES	NO	YES	NO		YES	NO	YES	NO	YES	NO	YES	NO
3	1	1		1		1		1		bebo	1				1		1	
4	2	1		1			1	1		myspace		1				1	1	
5	3	1		1			1	1		bebo		1				1	1	
6	4	1		1			1	1		clubpenguin		1			1	1	1	
7	5		1	1			1	1		delicious		1			1		1	1
8	6	1		1			1	1		myspace		1	1			1	1	
9	7		1	1		1		1		bebo	1				1		1	
10	8		1	1			1	1		bebo	1				1		1	
11	9	1		1		1			1	other		1			1		1	1
12	10	1		1			1		1	bebo		1	1			1	1	
13	11	1		1		1		1		myspace	1		1			1	1	1
14	12	1		1		1		1		bebo	1				1		1	1
15	13		1	1			1	1		bebo		1			1		1	1
16	14		1		1	1			1	none		1		1		1	1	1
17	15	1		1		1		1		myspace	1		1			1	1	
18	16	1		1		1			1	clubpenguin		1		1	1		1	
19	17	1		1			1	1		bebo		1	1		1		1	1
20	18	1		1			1	1		bebo	1		1			1	1	
21	19		1		1		1		1	none		1		1		1	1	1
22	20	1		1		1		1		bebo	1		1			1	1	
23	21	1		1		1		1		myspace		1		1		1	1	1
24	22	1		1		1		1		bebo		1		1		1	1	1
25	23	1		1			1	1		clubpenguin	1			1		1	1	
26	24	1		1		1		1		bebo		1		1	1		1	1
27	25	1		1		1		1		bebo		1		1		1	1	
28	Total	19	6	23	2	13	12	20	6		9	16	9	16	7	18	16	10

Pupil C added a SUM function to the cell under the first column of data, using the autosum toolbar button. He then filled the formula across the other cells in the row. He removed the SUM function from the column (J) about social networking sites as it produced an error message. He was initially unsure how to analyse this but decided to use the filtering feature of the spreadsheet, realising that he could use the same feature to check the data he had entered.

'I highlighted the cells I had used in the second row and turned on the auto filter. Then I could count how many people had chosen each social networking site. When I clicked the auto filter for the social networking sites, it showed a list of all the things typed in. I used this to check that I hadn't made any mistakes typing in the names.'

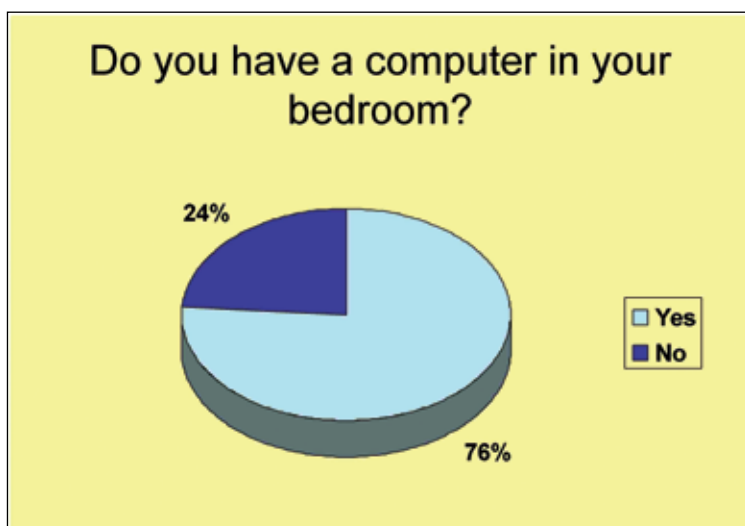
Pupil C then used each pair of yes/no columns (corresponding to each question) to create a pie chart for the responses to each question in the spreadsheet. These charts were then used to draw a conclusion for each of the questions asked, such as: *'Most pupils have the internet at home.'* Having done this, he decided to present the data along with each finding in a presentation.

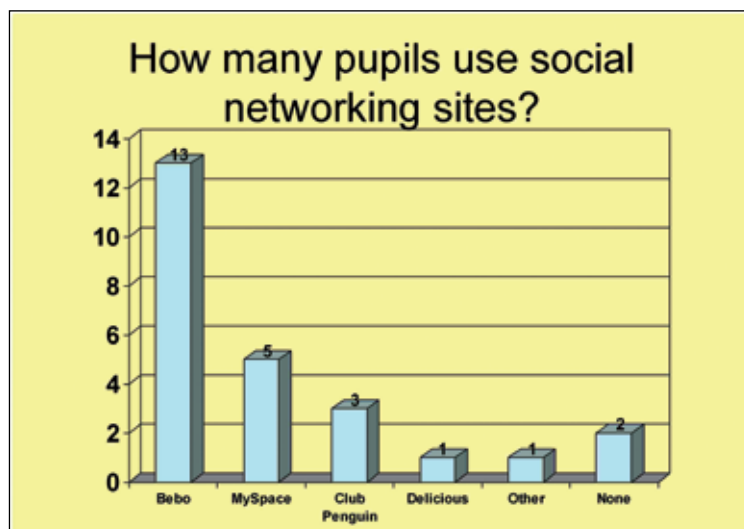
'I needed to give the information to my teacher. I used a presentation program because you can see things clearly and I might have to present what I found out to the class. I made charts for all my questions so that Sir can see the answers. I made the charts in the presentation as well to make them clearer.'



He realised that the charts were hard to read on the spreadsheet so, instead of copying and pasting them onto slides in the presentation, he used the chart function within the presentation software.

'I put each question that we asked the pupils on a separate slide. I thought it would make it easier to read and understand. I put my findings on the last slide as these were the most important thing that I found out.'





My findings

- Most pupils have internet access at home.
- Most pupils go on social networking sites. Bebo and MySpace are the most popular.
- Most pupils have put a picture online of themselves.
- In school, the internet will not let us access sites like Bebo & MySpace for our safety.
- At home, many pupils can access any internet page they want because they do not have any blocks.

'From my data I can see that pupils use social networks a lot at home. The most popular site is Bebo. Most pupils use MSN or instant messaging but most do not use a webcam or chat in games. In school we have sites blocked that could be dangerous or upsetting, but at home lots of pupils do not have any blocks, and that means they could be at risk.'

'I thought my presentation showed what I found out clearly, and I had to use new charts to make the information easy to read. If I was to do my project again, I would ask more pupils because I don't think 25 are enough to get a really good result.'

Teacher's notes

AF1

Pupil C gathered his initial ideas through discussion in a small group and planned his questionnaire as a result. Pupil C recognised that he would have difficulty analysing the responses where there were several possible answers. He used the auto filter function to check the data had been entered correctly. Pupil C looked at the analysis that he had performed, and judged that not enough data had been collected to give reliable answers about the kinds of online social activity in which pupils engaged. He started to consider how the use of ICT varies in and out of school.

AF2

Pupil C created a questionnaire to collect the required data. He devised a data-handling solution to enable him to record and analyse the results from the questionnaire. He used the database functions within a spreadsheet application, as this would perform the functions needed to analyse the data. As the collection of the data was done separately, via email, and then the results were entered manually into the spreadsheet, he recognised there may be some data-entry errors. His solution organises the respondents' data and allows him to process the data in order to answer the teacher's original question about social networking. He used the analysis to create charts and has begun to consider what they tell him about the social networking activities of his peers.

AF3

Pupil C was able to use email to gather data. He identified that to present his information to his teacher and class, he needed to create a presentation that included data from his analysis. To aid understanding of the findings by the audience, Pupil C identified the need to create charts and used an appropriate chart type for each question. He created both pie and column charts in the presentation software as these would be more easily understood by the audience. Pupil C recognised that a lot of pupils use social networking sites at home and that these sites are blocked in school. He also recognised that, in homes with no filtering, pupils could be exposed to risk. There is no evidence to indicate that Pupil C follows safe practices when working online.

Assessment commentary

Pupil C was able to plan a solution to a data-handling problem. He was able to plan and create a way of collecting data, using a word-processed questionnaire. He was able to use a spreadsheet to organise and process the data and analyse the results for the purpose given in the original brief. Pupil C was able to use appropriate charts to analyse the results. He presented his findings to a given audience, adapting the format of the charts to aid understanding. He has begun to show awareness that there may be risks involved with using social networking sites.

Next steps

- Develop the use of more complex search criteria within a data-handling solution to find and select relevant information.
- Use feedback to establish which questions are effective and which will yield useful information to solve the problem.
- Develop success criteria for the data-handling solution and identify where the solution could be automated further.

3 Sequencing instructions

Assessment focuses

AF1, AF2

Context

As part of a unit of work on sequencing instructions, the teacher introduced a control problem. The local council had decided that a bridge close to the school was too narrow for vehicles travelling in opposite directions to pass safely. One possible solution is to place traffic signals on each side of the bridge and to allow traffic to cross in only one direction at any one time.

The teacher asked the class to:

- Create a sequence of instructions that would operate the bridge traffic lights safely.

Pupil C's work

Pupil C identified that he would need to know the correct sequence of traffic signals, plan how the two sets would operate together to allow traffic in one direction only at any one time, and then implement the solution.

'I looked at the problem that Sir had given us, and thought about what we would need to do to complete it. I really need to make accurate instructions, because the bridge needs to be safe and if two cars go across at the same time there will be a crash.'

Pupil C was asked to create success criteria to evaluate the success of the project.

'My criteria were all about the bridge lights. I found the lights should go: red, red & amber, green, amber, red. Both sets can have amber at the same time, but not green. The lights won't start changing to green until the other is red. There needs to be the right gap between the lights changing so that cars can have enough time to get across the bridge.'

Pupil C planned the sequence of lights, using a simple state table. The outline table was provided by the teacher as a word-processor template, which the pupil completed and printed for reference.

Traffic Lights State Table

The number next to the light refers to output number in the program simulation, so "Red (6)" means output 6 which is the red light. Complete the table with your sequence for the traffic lights. You can make more rows if you need to.

Step	Red (6)	Amber (5)	Green (4)	Red (3)	Amber (2)	Green (1)
1	0	0	1	1	0	0
2	0	1	0	1	0	0
3	1	0	0	1	1	0
4	1	0	0	0	0	1
5	1	0	0	0	1	0
6	1	1	0	1	0	0
1	0	0	1	1	0	0

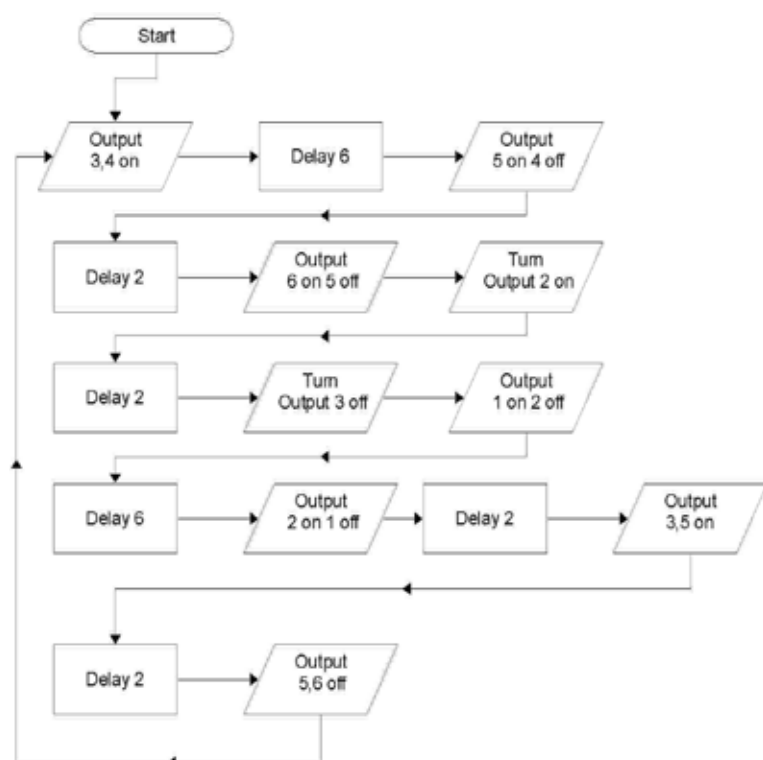
How have you decided on your sequence?

I showed a light off as 0 and on as 1 to make the table easy to read. The traffic lights don't start to change until the other is at red. They change in the right order.

Pupil C constructed the sequence in a control and sequencing program that had a virtual simulation of the narrow bridge with traffic signals at both ends. The instructions were made into a flowchart as he entered his sequence into the software. He tested parts of the instruction sequences as he went along by running sections of the flowchart in the software.

Pupil C initially thought that he had completed the task, but then noticed that an instruction was missing.

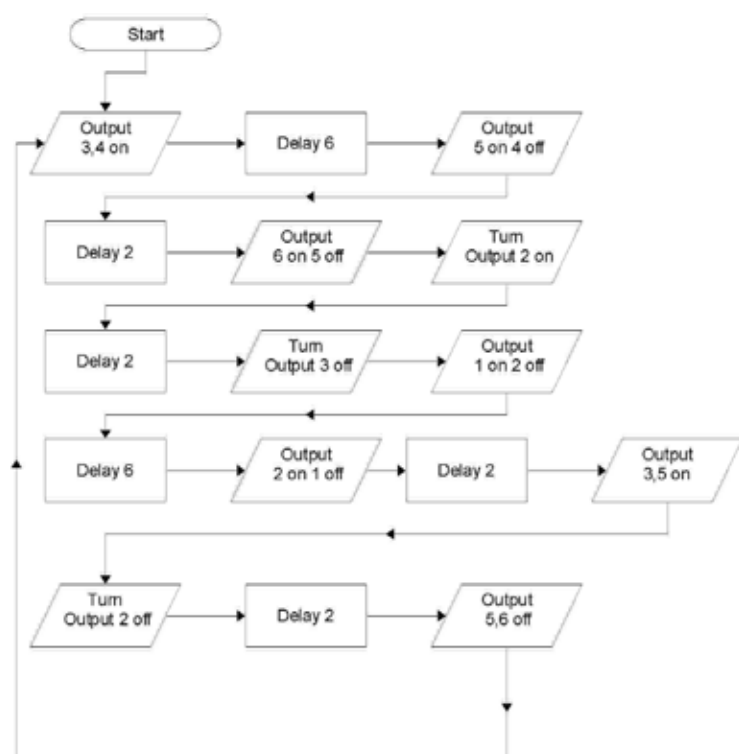
'I could see if the lights were working properly by looking at the lights in the mimic and seeing if this matched the table. This flowchart is a draft flowchart as it doesn't work properly. It goes wrong near the end when I turn the amber light on then don't turn it off again. I'm going to change the flowchart so that the amber light goes off when it needs to. The amber light is output 2.'



Flowcharts created using FLOWOL™ by KEEP I.T. EASY (www.flowol.com). Used with kind permission.

The pupil amended the flowchart to include an instruction to turn the amber light off at the correct point in the sequence. He then tested it again and decided that the sequence was working properly.

'This flowchart is my final flowchart. It works and it controls the lights properly. It goes round in a continuous circle so that it won't stop unless someone changes the flowchart or turns it off. I've improved it by turning the amber light off when it needed turning off, so that the flowchart works and controls the lights properly. The order of the lights is right and my sequence never has a green light at the same time on both ends of the bridge. I've also got one set of lights to go to red before the other changes, so that if anyone goes through an amber they don't collide with the traffic coming the opposite way, because on the other side the red light should be on too. I think my solution is successful.'



Flowcharts created using FLOWOL™ by KEEP I.T. EASY (www.flowol.com). Used with kind permission.

Teacher's notes

AF1

Pupil C identified the key steps that he needed to perform to solve the problem successfully. He understood the predetermined sequence for traffic lights, and that he would have to phase this for the second set. He used a state table to plan the correct sequence for turning the lights on and off. He tested his solution during the development and refined it when it was not producing the required output in order to make it fit for purpose. Pupil C used these simple success criteria to check his solution once it was completed.

AF2

Pupil C used control software to simulate the traffic lights over the bridge. He devised the sequence of instructions by constructing a flowchart and refined the instructions following the testing of his solution.

Assessment commentary

Pupil C was able to plan the solution to the problem and identify simple success criteria. He recognised that the sequence of lights for each traffic signal is predetermined and that his solution should follow the conventional sequence for traffic signals. He was able to develop and implement an appropriate sequence of instructions, checking his solution as he went. In testing, he realised the need to refine and correct the work. He checked the solution against his success criteria.

Next steps

- Devise and implement sequences of instructions that are not predetermined.

Assessment summary

AF1 Planning, developing and evaluating

Pupil C develops initial plans, and can gather ideas and thoughts on what he needs to do to solve a problem. He is able to identify the most appropriate tools and techniques to solve problems within the context he is given. He is able to implement, test and refine his solutions. He is able to comment on the success of his solutions. using simple criteria.

The evidence shows that Pupil C is working at a low level 4 in this AF.

AF2 Handling data, sequencing instructions and modelling

Pupil C is able to develop a given model and change variables to answer straightforward questions. He is beginning to understand the relationship between inputs and outputs in a model. Pupil C is able to collect, organise and process data for a particular purpose. He is able to analyse results and draw simple conclusions. Pupil C is able to devise and refine sequences of instructions. Pupil C is working at a secure level 4 in this AF.

AF3 Finding, using and communicating

Pupil C is able to present information in different forms, combining and refining the quality of the presentation and showing an awareness of audience and purpose. He is able to use email to gather data and is aware that there may be risks when using social networking online, but there is no evidence to indicate that Pupil C follows safe practices when working online. Pupil C is working at a high level 3 in this AF.

Overall assessment judgement

Pupil C is making progress into level 4, but much of his work shows that he is not yet working at a secure level 4.

In AF 1, Pupil C is able to plan and implement solutions that combine and refine different forms of information. Although he is able to comment on the success of his solutions, he needs to develop his ability to evaluate the quality of his solutions, using more sophisticated success criteria. Pupil C recognises that there are differences in using ICT inside and outside school, but needs to develop his understanding of how and why it varies.

In AF 2, Pupil C is working more securely at level 4, but needs opportunities to develop his understanding of how models work and the relationship between inputs and outputs.

In AF3, Pupil C has shown that he is able to present information in different forms, taking into account audience and purpose. In searching for information, he needs more opportunity to judge the plausibility and relevance of what he finds. Pupil C is able to use digital communication to exchange ideas, but needs opportunities to work collaboratively.

The overall judgement is that Pupil C is working at a low level 4.

ICT assessment guidelines: Level 4

Pupil name.....Pupil C.....

	AF1 – Planning, developing and evaluating	AF2 – Handling data, sequencing instructions and modelling	AF3 – Finding, using and communicating information
L4	<p>Across a range of contexts pupils:</p> <ul style="list-style-type: none"> Plan and implement solutions that combine and refine different forms of information Evaluate the quality and success of their solutions Explain how and why the use of ICT varies in and out of school <input checked="" type="checkbox"/>	<p>Across a range of contexts pupils:</p> <ul style="list-style-type: none"> Organise and process data for a purpose Devise and refine sequences of instructions. Use models to explore relationships between inputs and outputs and explain how the models work <input checked="" type="checkbox"/>	<p>Across a range of contexts pupils:</p> <ul style="list-style-type: none"> Use appropriate search criteria to find relevant information, and check its plausibility and usefulness Present information in different forms suited to purpose Use ICT to communicate and collaborate, identifying some of the risks and acting to minimise them <input type="checkbox"/>
L3	<p>Across a range of contexts pupils:</p> <ul style="list-style-type: none"> Plan how they will use ICT to solve a problem Comment on success of their solution Refine and develop information using ICT tools and techniques to make changes Describe how they use ICT at school and how it is used outside school <input type="checkbox"/>	<p>Across a range of contexts pupils:</p> <ul style="list-style-type: none"> Collect, store and retrieve data Use ICT-based models or simulations to answer questions Use a sequence of instructions to control events <input type="checkbox"/>	<p>Across a range of contexts pupils:</p> <ul style="list-style-type: none"> Identify and select appropriate information using straightforward lines of enquiry Present information using text, images and other media Use digital communication to exchange ideas Identify ways they can keep themselves safe when using ICT <input checked="" type="checkbox"/>
BL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Key: BL-Below Level IE-Insufficient Evidence

Overall assessment (tick one box only)

 Low 3 ☐ Secure 3 ☐ High 3 ☐ Low 4 ☒ Secure 4 ☐ High 4 ☐

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