



Assessing pupils' progress in ICT at Key Stage 3:

Standards File
Pupil D



Pupil D Secure Level 3 ICT Standards File

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Pupil D Secure Level 3

ICT Standards File

Summary

Pupil D demonstrates his progress in finding, using and communicating information, using a model to answer questions and developing a sequence of instructions to control an event. His teacher indicates that he needs to be given more opportunity to strengthen his planning, evaluation and data handling skills. The teacher's overall judgement places Pupil D at a secure level 3.

The evidence

1. Internet safety
2. Modelling party costs
3. Sequencing instructions

1 Internet safety

Assessment focuses

AF1, AF3

Context

As part of a unit of work on internet safety, the teacher asked the class to create a presentation for other teenagers on the dangers of the internet. They were told that as part of the work, they would need to do some research before creating their presentation. The teacher showed a video on internet safety to the class.

After watching the video, the teacher asked the class to use specified websites containing information on internet safety to identify the main risks associated with using the internet. They were also asked to think about the advice they would give to other teenagers about staying safe online. Working in small groups, pupils collected and compared the main areas of risk that they had identified.

Pupil D's work

Pupil D chose the CEOP website www.thinkuknow.co.uk as the major source of information.

He explored the site to find and select information he thought would be useful to others of his age. Pupil D then shared his initial ideas with others in his small group. As a result, he had a list of areas of possible online risk and some advice on staying safe, which was shared with the teacher:

'I have found these dangers on the internet:

- Chat rooms
- Cyber bullying
- Viruses
- Social networking sites (Facebook, Bebo, Myspace).

To keep safe on the internet I have chosen some rules for using chat rooms.

- Don't add people you don't know
- Don't tell people where you live
- Don't put up pictures of yourself
- Don't give your real name or age'

He was then asked to choose three of the dangers he had identified to include in his presentation.

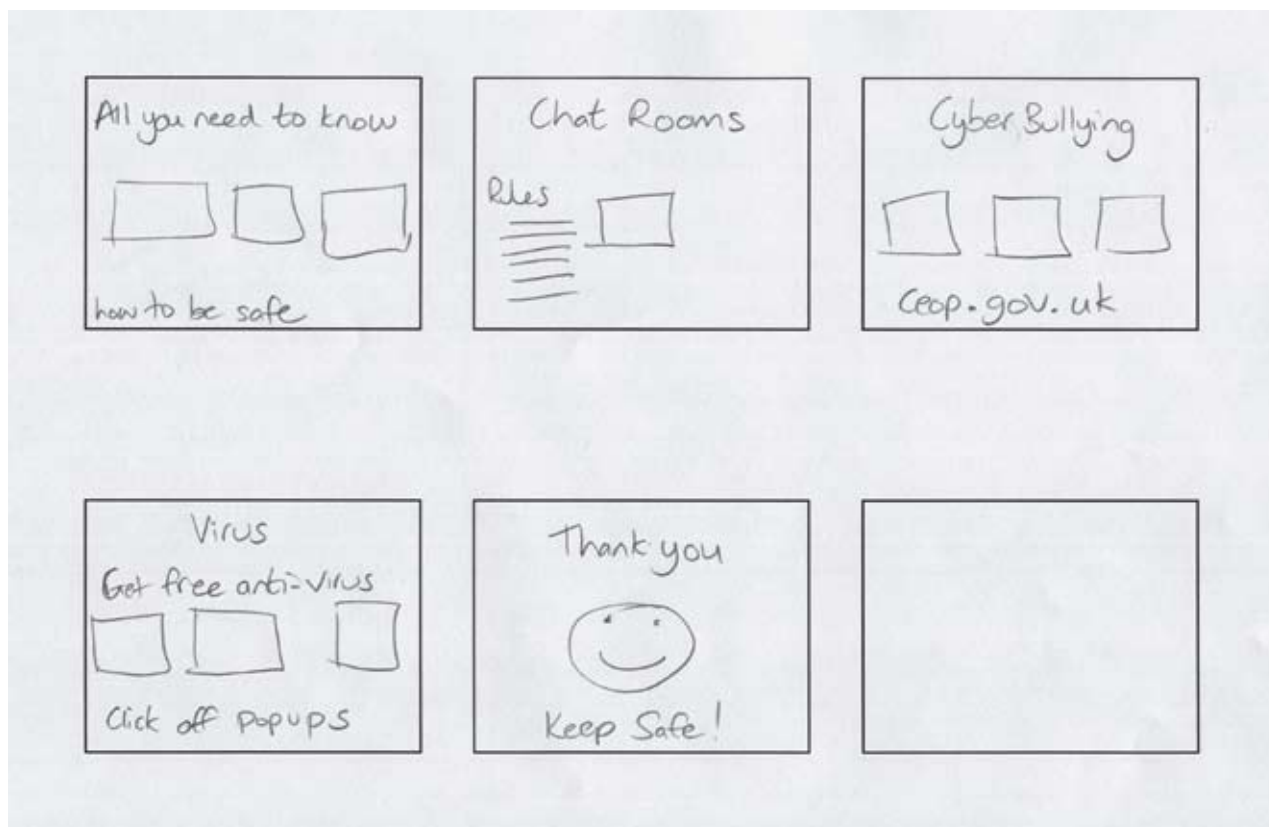
'I have been asked to create a presentation on the dangers on the Internet and how to be safe on it. This presentation will be shown to teenagers. This is because all teenagers use the internet to chat to their friends when they are not in school. A lot of teenagers also have facebook accounts or myspace accounts which they use to put pictures of them and their friends on. My presentation will have a slide on:

- Chat rooms
- Cyber bullying
- Virus

On my presentation I will include information on how to get help when you have been bullied on the internet. I will also include information about what you should and shouldn't do on the internet and how to stay safe on the internet.

I will use Microsoft PowerPoint to do my presentation in my ICT lessons because it's the presentation software that I can use in my school. I could have used Microsoft Word but I do not want to write a letter and I would use Word if I wanted to do this.'

In his notes Pupil D decided what he would do and constructed a straightforward plan to outline the slides he wanted to include in the presentation.



Pupil D then created the presentation. He used a range of animations to introduce the text to the pages one at a time when the presentation is run. He had planned to have several images on each page, some of which were from clip art and others copied and pasted from the internet. During the work, Pupil D asked one of his peers to comment on his presentation, and as a result refined the slides to have a single image on each.

'When I was half way through doing my presentation, I got my friend to look at what I'd done. They said they liked the colours I used and the text style. But they said that I had too many pictures on the slides, and I had a mixture of real and cartoon images. I decided to delete the real images and just have 1 cartoon on each slide.'



Microsoft product screen shots reprinted with permission from Microsoft Corporation

When the presentation was complete Pupil D evaluated his work against his initial intentions.

'Before I created my presentation I said what slides it would include.

- *Chat room slide – I have a chat room slide so I have met this. I have also put the rules on this slide.*
- *Cyber bullying – I have a slide on Cyber bullying so have met this*
- *Virus slide – I have a slide on viruses so have met this*
- *Ceop slide – one of my slides has the Ceop website on it to report bullying so I have sort of met this.*

One thing I like about my presentation is that I think the colours go well together. But I do not like the background pattern so I would change this if I had more time.'

Teacher's notes

AF1

Pupil D planned his use of ICT in order to create the presentation. He was able to comment on the success of the solution by checking that the presentation had met his original brief. He refined the presentation and the information within it, partly in response to peer comments and partly through personal reflection. He was able to make a straightforward evaluative comment.

AF3

Pupil D has navigated a website using the menu structure to locate information and has selected the appropriate information for his presentation. He has created a straightforward presentation for a given audience, including text, images and WordArt objects, although the colour scheme chosen is not entirely successful. He demonstrates that he knows some of the ways of staying safe when using the internet.

Assessment commentary

Pupil D planned a simple presentation for other pupils, following a straightforward brief given to him by his teacher. He developed simple plans for the presentation which formed the basis of his success criteria. These plans and some feedback from a peer allowed him to comment on the success of his work. He used straightforward lines of enquiry to find appropriate information and he developed an awareness of some of the ways to keep safe when using the internet.

Next steps

In order to make further progress Pupil D will need opportunities to:

- develop success criteria during planning
- use success criteria to evaluate the quality of his solution
- develop search criteria to find relevant information on the internet.

2 Modelling party costs

Assessment focus

AF2

Context

As part of a unit of work on computer modelling, the teacher asked the pupils to use a given spreadsheet to model the cost of buying items for a party for up to ten guests.

The teacher provided Pupil D with an electronic version of a prepared spreadsheet and told him that there is a budget of £30 to spend. The teacher then provided a list of questions to guide Pupil D through using the model.

Pupil D's work

Pupil D initially needed guidance to use the model. He quickly understood how to enter data into the 'how many' and 'cost each' columns. The pupil recognised that these inputs would affect the amount shown in the 'so far you have spent' cell.

	A	B	C	D	E	F	G	H
1		Party Items	Cost each	How many?	Costs			
2								
3		Plastic knives/fork	£0.20	0	£0.00			
4		Paper plates	£0.10	0	£0.00			
5		Cups	£0.05	0	£0.00			
6		Party hat	£0.05	0	£0.00			
7		Party popper	£0.05	0	£0.00			
8		Balloon	£0.10	0	£0.00			
9		Lollipop	£0.12	0	£0.00			
10								
11		Pure orange juice	£0.25	0	£0.00			
12		Lemonade	£0.10	0	£0.00			
13		Cola	£0.40	0	£0.00			
14								
15		Ham salad sandwich	£1.80	0	£0.00			
16		Cheese sandwich	£1.20	0	£0.00			
17		Crisps	£0.50	0	£0.00			
18		Sausage roll	£0.30	0	£0.00			
19								
20		Chocolate biscuits	£0.25	0	£0.00			
21		Apple	£0.30	0	£0.00			
22		Banana	£0.35	0	£0.00			
23		Cup cakes	£0.40	0	£0.00			
24								
25		Total			£0.00			
26								

The party budget is £30.00
So far you have spent:

£0.00

You have this left or overspent

£30.00

The teacher provided the pupils with a list of questions, for example:

- If you bought ten of everything, how much over budget would you be?
- If you did not have any sandwiches would you be in budget?
- If you kept all the things on the list how many people would you be able to invite to keep within budget?
- If you made your own sandwiches instead of buying them in packs they would cost 15p each. How much would you save if you did this for the ten guests?

	A	B	C	D	E	F	G	H
1		Party Items	Cost each	How many?	Costs			
2								
3		Plastic knives/fork	£0.20	10	£2.00			
4		Paper plates	£0.10	10	£1.00			
5		Cups	£0.05	10	£0.50			
6		Party hat	£0.05	10	£0.50			
7		Party popper	£0.05	10	£0.50			
8		Balloon	£0.10	10	£1.00			
9		Lollipop	£0.12	10	£1.20			
10								
11		Pure orange juice	£0.25	10	£2.50			
12		Lemonade	£0.10	10	£1.00			
13		Cola	£0.40	10	£4.00			
14								
15		Ham salad sandwich	£1.80	10	£18.00			
16		Cheese sandwich	£1.20	10	£12.00			
17		Crisps	£0.50	10	£5.00			
18		Sausage roll	£0.30	10	£3.00			
19								
20		Chocolate biscuits	£0.25	10	£2.50			
21		Apple	£0.30	10	£3.00			
22		Banana	£0.35	10	£3.50			
23		Cup cakes	£0.40	10	£4.00			
24								
25		Total			£65.20			
26								

The party budget is £30.00
So far you have spent.

You have this left or overspent

Pupil D initially entered ten for each item in the 'how many?' column and realised that it was not possible to have all the things on the list and come within budget.

'I can't afford to have everything on the list as I would be £35.20 over. If we didn't have sandwiches we would still be £5.20 over budget.'

	A	B	C	D	E	F	G	H
1		Party Items	Cost each	How many?	Costs			
2								
3		Plastic knives/fork	£0.20	10	£2.00			
4		Paper plates	£0.10	10	£1.00			
5		Cups	£0.05	10	£0.50			
6		Party hat	£0.05	10	£0.50			
7		Party popper	£0.05	10	£0.50			
8		Balloon	£0.10	10	£1.00			
9		Lollipop	£0.12	10	£1.20			
10								
11		Pure orange juice	£0.25	0	£0.00			
12		Lemonade	£0.10	10	£1.00			
13		Cola	£0.40	0	£0.00			
14								
15		Ham salad sandwich	£0.15	10	£1.50			
16		Cheese sandwich	£0.15	10	£1.50			
17		Crisps	£0.50	10	£5.00			
18		Sausage roll	£0.30	10	£3.00			
19								
20		Chocolate biscuits	£0.25	10	£2.50			
21		Apple	£0.30	0	£0.00			
22		Banana	£0.35	10	£3.50			
23		Cup cakes	£0.40	10	£4.00			
24								
25		Total			£28.70			
26								

The party budget is £30.00
So far you have spent.

You have this left or overspent

Pupil D experimented with changing the variables of cost and number and decided to make his own sandwiches as this was better value, and also to offer only lemonade as this was the cheapest drink.

'I was not going to have knives and forks as we don't need them because we can eat with our fingers. I can afford them if we don't have apples instead. Cola is an expensive drink so we are going to have only lemonade.'

Teacher's notes

AF2

Pupil D answered straightforward questions by entering and changing data in a prepared spreadsheet model. He shows he understands that changing the inputs will have an effect on the output, and that this can be used to model finances and answer questions.

Assessment commentary

Pupil D used a spreadsheet model to answer questions provided by the teacher. He can enter data and make changes to variables in order to try out different options and make decisions about what he can afford. He has chosen a shopping list for a party based on his findings.

Next steps

To make further progress Pupil D will need opportunities to:

- enter formulae into a model to perform calculations
- explore the relationships between inputs and outputs in a model.

3 Sequencing instructions

Assessment focuses

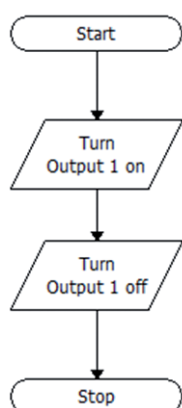
AF1, AF2

Context

As part of a unit of work on control technology, pupils discussed ways in which technology is used to control everyday items in the home and outdoors. The class were then given differentiated tasks to control the flow of traffic, which included controlling a Belisha beacon, a pelican crossing and traffic lights at a bridge. Pupil D was asked to create a sequence of instructions to control a Belisha beacon.

Pupil D's work

In the first part of the work, Pupil D worked with others in a small group to think of the different ways in which control technology is used in everyday life. He then entered the results of the discussion from his group into a template and printed his answers.



Pupil D was asked to plan and implement a sequence of instructions using control software to control the Belisha beacon. Pupil D began by mapping out the operation of the Belisha beacon.

'The light needs to do this:

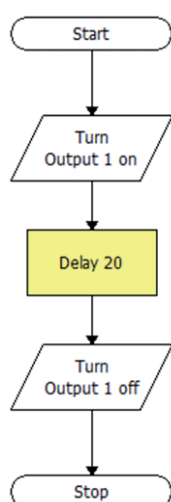
- 1). Light comes on.*
- 2). Light goes off.*
- 3). It keeps going – go back to step 1.*

There are no inputs and the output is the orange light.

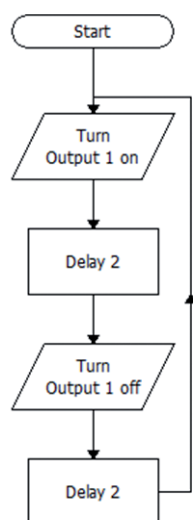
In the program that I will use, the orange light is output 1.'

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

Pupil D used a control program with an animated image to simulate the control of a Belisha beacon. Pupil D then used his plan to determine the sequence required to turn a Belisha beacon light on and off using a flow chart in the software. He wrote his first sequence and ran it.



He identified that it did not work as intended, and realised that he needed to introduce a delay in order for the light to remain on for a few seconds. Pupil D added a delay and tested the sequence.



He identified that the delay was too long, and that real beacons are lit for a shorter time. Pupil D amended the delay to two seconds, and added a similar delay for the light to be off. Finally he added a loop as he had originally planned.

'I tried to write my instructions but I forgot to add time delays. When I added these I made it too long as 20 seconds is a long time. I changed this to 2 seconds which I think is about right.'

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

Teacher's notes

AF1

Pupil D recognised that a Belisha beacon light goes off and on in a sequence. He used the control software to test the sequence of instructions. He identified applications of control technology both in and outside the home.

AF2

Pupil D created a straightforward sequence of instructions to control the simulation of a Belisha beacon.

Assessment commentary

Pupil D successfully used ICT to develop a sequence of instructions to control the simulation of a Belisha beacon. He produced and tested a straightforward solution and commented on the success of his work. Pupil D has shown an awareness of the uses of control technology in and outside the home.

Next steps

To make further progress Pupil D will need opportunities to:

- plan the instructions they will use within the control sequence
- develop sequences of instructions of greater complexity, controlling more outputs (for example, traffic lights).

Assessment summary

AF1 Planning, developing and evaluating

Pupil D shows that he is able to do some simple planning to solve a problem, for example planning which slides to include in a presentation on internet safety. He has used ICT tools to refine and develop information, for example using text and images in his presentation. He has thought about some of the uses of computer control in everyday life and also the use of the internet and internet safety issues. He is able to comment on the success of his work, making simple evaluative comments, but shows little evidence of the use of success criteria or judging fitness for purpose. Pupil D is working at secure level 3 in this AF.

AF2 Handling data, sequencing instructions and modelling

Pupil D has developed a straightforward sequence of instructions to control the flashing light in a simulation of a Belisha beacon. He has used an ICT model to answer questions about planning a party, and knows that changing the inputs will have an effect on calculated (output) values. Pupil D is working at high level 3 in this AF.

AF3 Finding, using and communicating

Pupil D is able to locate information on a website by using a menu structure to follow straightforward lines of enquiry. He can select appropriate information and present it using text and images, for example finding information about internet safety and presenting it on slides. He demonstrates an awareness of how to keep safe when working online. Pupil D is working at secure level 3 in this AF.

Overall assessment judgement

Pupil D has undertaken limited planning and has used a range of ICT tools. He has identified applications of computer control in the home and everyday life, and has used an ICT model to answer questions. Pupil D has developed a sequence of instructions to control a simple event. He can locate and select information from a given website and has identified how to keep safe on the internet. Pupil D has commented on the success of his work. Pupil D's work indicates that he is working at a secure level 3.

ICT assessment guidelines: Levels 3 and 4

Pupil name:Pupil D.....

	AF1 Planning, developing and evaluating	AF2 Handling data, sequencing instructions and modelling	AF3 Finding, using and communicating information
L4	Across a range of contexts pupils: <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 type="checkbox"/>	Across a range of contexts pupils: <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 type="checkbox"/>	Across a range of contexts pupils: <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	Across a range of contexts pupils: <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 checked="" type="checkbox"/>	Across a range of contexts pupils: <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 checked="" type="checkbox"/>	Across a range of contexts pupils: <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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The flowcharts were created using FLOWOL™ by KEEP I.T. EASY (www.flowol.com).
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