

## **United Kingdom (English) contribution**

## Framework for collecting data about pupils' representations (for wp 4 & del A05)

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### **1. Subjects investigated**

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ICT Co-ordinator and REPRESENTATION contact:  
Mrs Lesley Bower (Deputy Headteacher and class teacher)  
Mrs Ruth Lee (ICT Co-ordinator)

32 pupils from Year 5 (10 years of age), in a single class grouping in one school. The classteacher was approached and the tasks considered previous to this visit. The classteacher was excited by the prospect of REPRESENTATION involvement and considered this as an opportunity to introduce both the project and myself to them.

## 2. Methodology

**Visit 1. Monday 19<sup>th</sup> – Teacher familiarisation to Representation no class visit.**

**Visit 2. Monday 26<sup>th</sup> April – Classroom contact to attempt first concept map (spider map) and list. (Total 1.30 hours)**

### 2.1.1 Introduction (total time 25 mins)

- Introduced myself and project REPRESENTATION.
- Asked children which countries and what nationality of children might be involved.
- Considered problem of spoken language, could this problem be avoided if pictures or diagrams were used.
- Consider how messages have been transmitted in the past without language, examples of cave paintings and Egyptian script used.
- Explained that this was an investigation and not a test. (What do you think? and not What do you know?)
- Pupils would be able to demonstrate what was in their own minds; a task which could be both imaginative and fun.
- Explained briefly how a 'Spider' type map could be drawn.
- Introduced theme of 'Computers in the Children's World' by relating to the teacher's own experiences at the equivalent age when computers were largely unknown.
- Pupils asked to consider 'their world' and all types of computers within this.
- Consider what could be classed as a simple computer or the most complicated system?
- Consider the placement of the computer, at home, school or in the outside world or work place?
- Think of all the people who may use them and why?

#### Notes:

The class teacher was approached and the tasks considered previous to this visit.

The class teacher was excited by the prospect of REPRESENTATION involvement and considered this as an opportunity to introduce both the project and myself to them.

The children were responsive to the ideas posed and were able to offer suggestions as to whom the other European members of project might be and also to the language spoken by other partner schools/pupils. The pupils seemed to understand the need to draw rather than write and were appreciative that this was not to be seen as a test of actual knowledge.

**2.1.2. Major Activity - Children asked to draw a spider type map to show the different types and uses of computers in their world (total time 45 mins)**

- Large sheets of A5 white paper/pencils/rulers were provided for this activity
- Reminder given that labels were permitted but not large areas of text.

- Drawings to fill the paper for clarity.

Notes:

Some pupils raised their hands and asked several questions, all of which I attempted to answer without giving them material that could be used as direct input to the drawings.

Question: Can we include Games and Games machines?

Question: Can we put 'names' on the drawing?

As the seating arrangements were of a horseshoe type pattern around the central teacher's desk and due to the way in which these children are used to working in groups, it was impossible to stop quiet conversation amongst pupils. I did however stress that for these activities the work must be their own and not a joint or collective effort. On the whole this seemed to be satisfactory.

Whilst the pupils were working to produce their drawings snippets of conversation with regards to peripherals, the Internet, bookmarks and different software was overheard. The pupils also found it hard to limit their selection and computerised cars (Volvo), toys, telephones, digital television, fax machines, cash machines and x-ray machines were also noted.

**2.1.3. Minor Activity -List of ideas/words generated from activity (total time 10 mins)**

- A4 paper given for this.
- Simple word list to be made (likened to a shopping list) to aid memory for future reference.
- Use drawings made as a reference for this list

**2.1.4. Summary of Activity (total time 10 mins)<sup>1</sup>**

- Congratulated children on working diligently
- Looked at a few similarities and differences in drawings
- For a few moments considered what the children perceived as "Whacky"<sup>1</sup> ideas
- (this came from input made by class teacher, see notes.)
- Thanked class teacher and pupils for co-operation
- Outlined next visit

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<sup>1</sup> Whacky or wacky.

Adjective or noun originally from Yorkshire dialect, meaning crazy.



### **system. (total time 10 mins)**

- Choice of media explained - colour of paper (green or white A4) and white sticky labels, pencil or pen and ruler. (Green became a good choice as it photocopied really well!)
- Own ideas to be illustrated not to work in groups or with partner.
- Draw (fill the paper) a computer system of your choice. “As if you were making a cover for a book, so it needs to be large and clear. Draw what you think is one whole computer system.”
- Use either a pen/pencil /ruler and/or sticky labels to name as many parts of the system as possible.

### **2.2.3 Summary of Activity (total time 10 mins)**

- Congratulated children on working diligently
- Looked at a few examples of pupil's work (See examples below.)
- Thanked class teacher and pupils for co-operation
- Outlined next visit

#### Example 1

This child had drawn the inside of a computer.

Q What sort of things have you labelled?

A I have drawn the inside of a computer, with connecting wires, control box, wires, and a power supply.

Q Have You drawn a battery or a plug/

A It makes the wires work

Q Is this the millennium bug?

A Yes!

Q What power does the computer use?

A Electricity.

Q What makes the whole lot work?

A Control box and power supply.

#### Example 2

Child has drawn or copied from the Acorn computer in the classroom.

Even the keyboard is accurately labelled.

Q 'Do you know what word you have written?'

Child points to 'Qwerty' on drawing. (Pupil knew answer but could not pronounce word!!)

#### Example 3

An intricate drawing.

Q "Tell us about your drawing."

A "It is like a business net, loads of computers linked to email and digital cameras and etc."

#### Example 4

An intricate drawing

Q “What have you drawn?”

A “It’s not a business net like X it is about at home were you can send photographs to pen friends, email, digital phones etc.”

#### Example 5

A “Mine is a normal computer with a mouse etc. table and chairs and a big bookshelf home type - got a bit of network on!”

Q “Have you chosen a special computer?”

A “Yes a “Tiny” computer.”

Q “Where have you seen this?”

A “On the TV.”

#### Example 6

Q “Has anyone put people on the system?”

A “I have drawn a nurse using a baby scanner in a hospital.”

Q “Did the visit of the nurse and baby scanner at school make you think of this?”

A “No, I thought about a system.”

On a quick ‘rough poll’ 2/3 of the class thought the operator might be male.  
1/3 female or mixed usage.

**Visit 3. Thursday 13th May, 1999 - Classroom contact a)Write for ten minutes about computer systems in our world b)Write for ten minutes about the usefulness of computer systems. (Total 0.30hours.)**

#### **2.3.1. Introduction (total time 10 mins)**

- Introduced myself and project REPRESENTATION.
- Reminded the pupils that this was an investigation and not a test. (What do you think? and not What do you know?)
- Pupils would be able to demonstrate what was in their own minds which could be both imaginative and fun.
- Looked at work done last week - pupils remembered spider maps Spider Maps, List and drawing to make up a computer system.

#### **2.3.2 Major Activity - a) Write for ten minutes about computer systems in our world**

- Considered how we could describe a computer system to a ‘Alien’ from another world. who had no knowledge of such things.
- Sheets of A4 lined paper, pupils to put a mark (triangle) to show change of activity.

Write for ten minutes about computer systems in our world

#### **2.3.3 b) Major Activity - Write for ten minutes about the usefulness of computer systems.**

- Write for ten minutes about the usefulness of computer systems in our lives?

Notes:

The children found the writing very difficult and would have liked more help to structure their responses. I was not sure whether enough written material was generated to qualify extrapolating 10 verbs and/or adjectives. However enough for 10 (nouns) significant words was created from the research.

#### **2.3.4. Summary of Activity (total time 10 mins)**

- Congratulated children on working diligently
- Thanked class teacher and pupils for co-operation
- With the consent of the class teacher sweets were given to the class for their participation.

### 3. Interviews

Six pupils were interviewed for 30 minutes according to the proposed canvas for the pupils' interview (30 minutes). The proposed questions were satisfactory. Two questions were however added: "What do you need to connect to the Internet?" and "What can the Internet do?"

#### 3.1. Interview 1 : Pupil No 10

##### Objective data

∑ Age of the child	9.10
∑ gender	female
∑ brothers and sisters	brother 15, sister 18
∑ parents' work	lives with parents
∑ Favourite hobbies?	play, football
∑ Game consoles ?	game boy
∑ Computer at home ?	Yes /2 years
∑ (multimedia, scanner, Internet...)	PC with printer
∑ Who is using it mostly ?	1.sister 2.brother 3. self 4. father
∑ What do they do with it?	<u>work</u> , domestic, home work, <u>games</u> , Internet
∑ Pupil's practice : What ?	<u>games</u> , home work, <u>edutainments</u> ,
∑ Internet ....	no not used yet but would like!
∑ others...	games CD Roms.
∑ time?	sometimes/everyday/ <u>once per week</u>
∑ alone?	Yes
∑ not alone	with parents, brothers/sisters, <u>friends</u>
∑ practice in other places?	relatives, <u>friends</u> ... ?

##### About activities at school

∑ Practise on the computer before this year ?	Since year1- 5 years of age
∑ Practise on the computer <u>this</u> year ?	Once a week
	Game for times tables
	Word processing- "Book of the month"
∑ Enjoy activities on computer this year ?	<u>yes</u> / no.
∑ What was preferred ?	CD Roms
	Game for times tables
	Paint programme
∑ What would he like to do ?,	more time on computer
∑ Self evaluation - level of competencies	average
∑ Does the pupil	help his friends /is helped / <u>both</u>

##### About drawings and texts

∑ Starting from the drawings of children, ask some questions to let the pupils complete and show his/ her technical representations of functions of the computer.

Knows, about computers in the home, school and in society. Lap tops and computers can run and send email. Computers help to allow till and bank receipts.

∑ Eventually, ask some definitions of : computer, informatics, software, Internet, CD-ROM...  
CD-Roms can be put in computer to gather information - 'like Encarta which I have at home.'

Printer connected to base of computer and keyboard. Screen connected by cable to base. Had heard of internet but not used. Could apply technology to hospital where a baby scanner might be used and print outs to supply information. The internet allows connection to other people. For internet communication need CD-Rom and a computer.

∑ Starting from the texts of pupils (and eventually from the collective work), ask some questions to better understand what has been written by the pupil (in the text " what computer is useful to me ").

Communication world wide

internet connects people

Gathering and disseminating information

personal use writing letters-penfriend, pictures, painting, music.

games

business

home

email

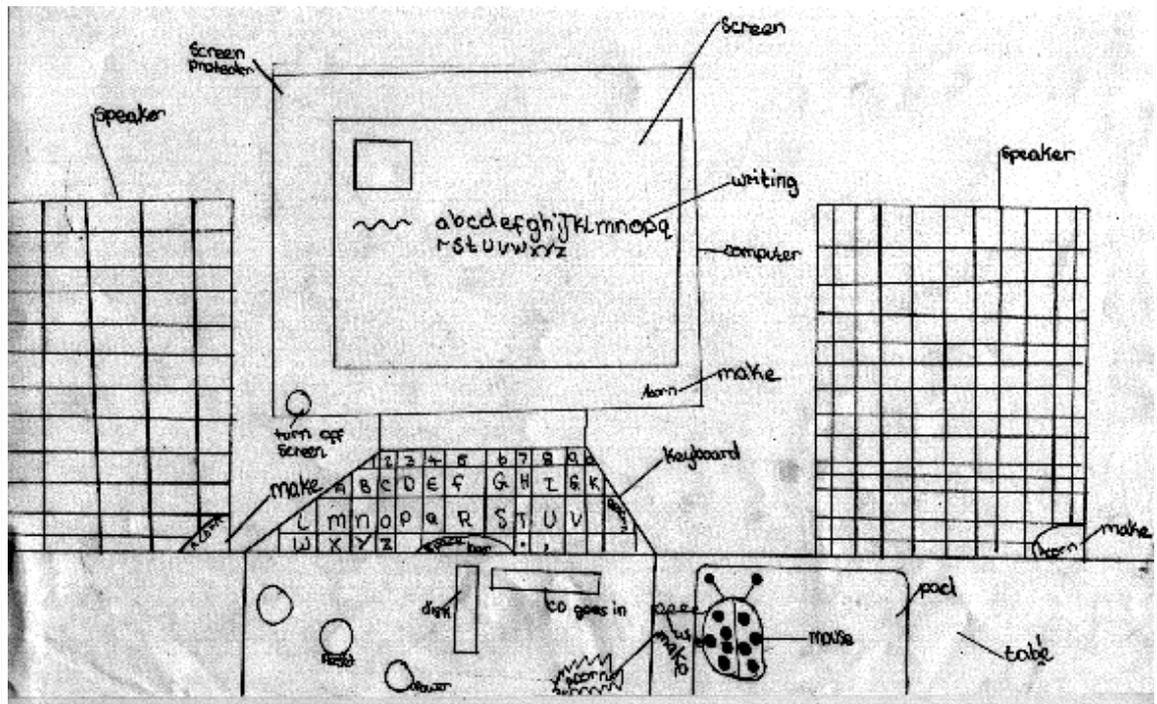
Shopping

Banking

Hospitals



Pupil No 10's drawing



- |   |   |
|---|---|
| Σ How is the picture?   | colour, <u>b/w</u>  |
| Σ How many parts are depicted?  | 0-5 6-10 <u>11-15</u> 16-20   |
| Σ Which parts are these?  | Computer<br>keyboard with detail<br>screen, screen protectors<br>speakers<br>mouse with cable<br>mouse pad<br>disk<br>CD-Drive<br>buttons-reset, power, on off<br>logo<br>table |
| Σ Are they connected via cable?                                       | mouse with cable to CPU   |
| Σ What can be seen on the screen?                                     | writing –alphabet   |
| Σ Is anybody working on it or wandering around it?                    | <u>no</u> /yes  |
| Σ Comments: is there anything worth to notice?                        |   |
| Copy of school computer but with fancy ladybird designer mouse added. |   |

### **Pupil No 10's text**

*This is from the second part of the writing section. It was produced as a continuum to it, but with a change of emphasis by addition of the word 'usefulness.'*

Σ How many words and sentences?

Overall for both	181 words	11 sentences
Usefulness alone	61words	5 sentences

Σ List up to ten significant names/nouns (English equivalents) used in the text (usefulness)

letter, information, money, cash till, email, games, countries, friend, business

Σ List up to ten significant adjectives used in the text(usefulness)

important, different, good

Σ List up to ten significant verbs used in the text (usefulness)

writing, printing, play, find, get money, find

Σ Synthesise the main argument in one sentence (usefulness.)

**Useful for communication, information gathering, game playing, work and for control-cash machines.**

Transcript:-

a) **Describing a computer system to an alien!**

This is a computer system it has a printer to print with. You can play games on it like mind sweeper, times tables and things like that. To get a game on you have to press that button and you put your CD in. Lets put this game in. In a hospital they use a baby scanner to see how the baby is and if it has anything wrong with it. On the computer is a plain piece of paper there pencil or paint and you can choose a colour and start drawing. If you want to print that press the power for the printer put a piece of paper in and let it print and that is your picture. (120 words.)

b) **usefulness!**

The usefulness is for writing a letter to a important person or to a family or friend. It is also good to find information. Also good for business people to use printing things and to get money out of cash till. It is also good to email to other people in different countries. It is also good to play games on. (61 words.)

### 3.2. Interview 2: Pupil No 26

#### Objective data

∑ Age of the child	10
∑ gender	<u>male</u> /female
∑ brothers and sisters	sister 8
∑ parents' work	lives with parent
∑ favourite hobbies	play, football
∑ Game consoles ?	no
∑ Computer at home ?	Yes /1 years
∑(multimedia, scanner, Internet...)	PC with printer, powerpad, joystick
∑ Who is using it mostly :	1. self                      2.father. 3. sister                    4. mother -no
∑ what do they do with	work, domestic, <u>home work</u> , <u>games</u> , internet
∑ Pupil's practice : What ?	<u>games</u> , home work, <u>edutainments</u> ,
∑ Internet	no not used yet but would like!
∑ others...	
∑ time	sometimes/ <u>every other day</u> / once per week
∑ alone/	yes not alone with parents, brothers/sisters, <u>friends</u>
∑practice in other places	relatives, <u>friends</u> ... ?

#### About activities at school

∑ Practise on the computer before this year ?	Since year1- 5 years of age
∑ Practise on the computer <u>this</u> year ?	Twice a week Game for times tables Word processing- "Book of the month" Pictures Library-reference Poetry books
∑ Enjoy activities on computer this year ?	<u>yes</u> / no.
∑ What was preferred ?	CD Roms Games
∑ What would he like to do ?	more time on computer and games
∑ Self evaluation - level of competencies	good but others possibly better
∑ Does the pupil	help his friends /is helped / <u>both</u>

#### About drawings and texts

∑ Starting from the drawings of children, ask some questions to let the pupils complete and show his/ her technical representations of functions of the computer.

From the drawings the pupil has concentrated on computers as game machines and for personal use for writing and printing. Although from the list produced some multimedia functions and other applications of a computer can be identified. These include camera, bomb, romer, watch, scanner and cash machines.

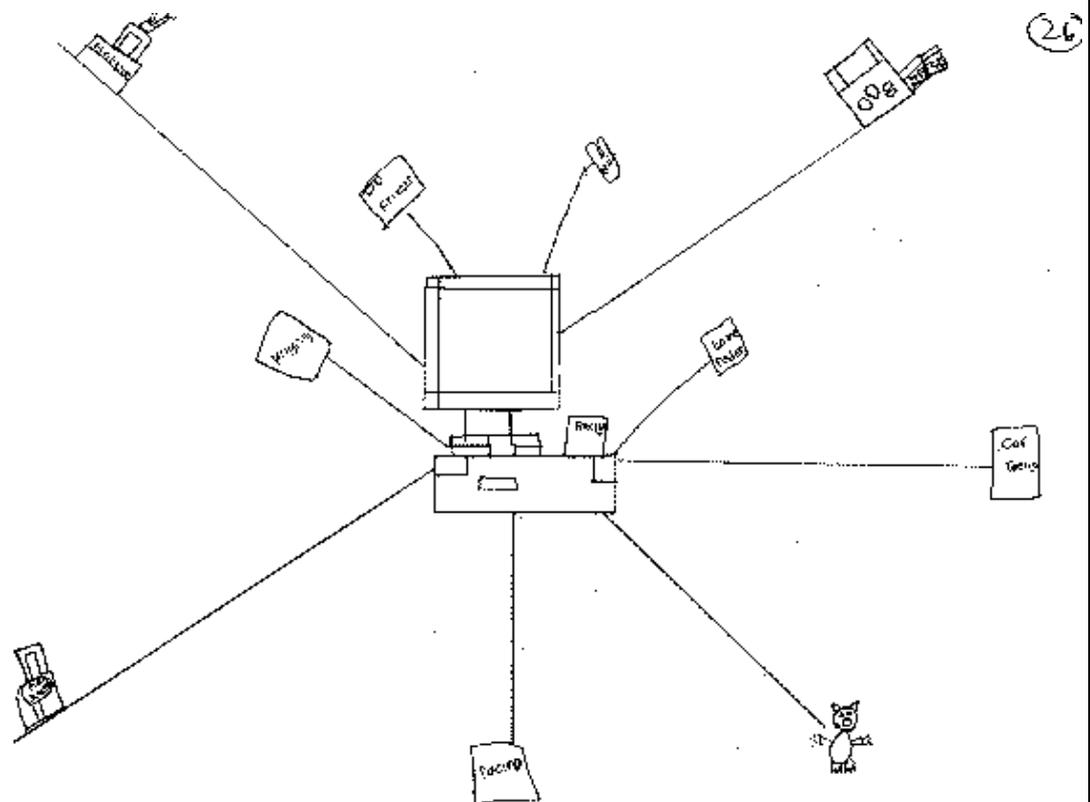
∑ Eventually, ask some definitions of : computer, informatics, software, internet, CD-ROM...  
Understands how cables run to power socket and connect parts and inside of

computer. Uses CDRoms . Defines internet as a way of sending 'stuff to other places.' Software is what makes things work on a computer like games. Computers are useful 'don't have to read, can use sound and pictures.' Very knowlegable on personal computer and attachments.

∑ Starting from the texts of pupils (and eventually from the collective work), ask some questions to better understand what has been written by the pupil (in the text " what computer is useful to me ")

Computers are useful 'don't have to read, can use sound and pictures.  
multimedia functions  
camera, bomb, romer, watch, scanner and cash machines  
personal writing , printing and homework

**Pupil No 26's spider map**



∑ How is the picture: b/w (no choice given -pen or pencil, ruler and A5 paper. To select colours at this initial stage would have caused too much confusion, both in terms of supply to all pupils and by distracting from the type of drawing to be made.)

∑ How many **levels of links** are depicted? 1. 2. 3. 4.  
How many from **hub** single hub 10

∑ Can **areas be depicted?** Games and toys only (furby.)

∑ Comments: is there anything worth to notice?  
Two zones of use personal computer and games environment shown.

**Pupil No 26's drawing**

Σ	How is the picture?	colour, <u>b/w</u>
Σ	How many parts are depicted?	0-5 <u>6-10</u> 11-15 16-20
	Which parts are these?	screen powerpad mouse joy stick disk drive word pad CDDisk button to open disk drive
Σ	Are they connected via cable?	yes/ <u>no</u>
Σ	What can be seen on the screen?	mouse, joy stick, powerpad
Σ	Is anybody working on it or wandering around it?	yes/ <u>no</u>
Σ	Who is he and what is he doing?	
Σ	Comments: is there anything worth to notice?	

Understood meaning of cables, printer scanner and internet, but did not show these on drawings.

### **Pupil No 26's text**

*This is from the second part of the writing section. It was produced as a continuum to it, but with a change of emphasis by addition of the word 'usefulness.'*

Σ How many words and sentences?

Overall for both	105 words
	8 sentences
Usefulness alone	39 words
	2 sentences

Σ List up to ten significant names/nouns (English equivalents) used in the text (usefulness)

computer, mouse, homework

Σ List up to ten significant adjectives used in the text (usefulness)  
(None)

Σ List up to ten significant verbs used in the text (usefulness)  
writing, printing, play, do, work, print

Σ Synthesise the main argument in one sentence (usefulness.)

**Transcript** (*Note child did not use capital letters*)

a) **Describing a computer system to an alien!**

Some computers are to play on and some computers are to write on . the system is inside the computer . and a game is a computer . when you play one it . you can do anything on a computer . a mouse is a thing that can print on paper and on the computer . there is system in speakers sound comes out of the speakers to give you sound. (66 words)

b) **usefulness!**

The usefulness of computers is because that we can do homework and play games and when you are at work you can print stuff off computers . and you can play on computers on games like raising and super mario and lots more. (39 words)

### 3.3. Interview 3: Pupil No 29

#### Objective data

∑ Age of the child	10.5
∑ gender	<u>male/female</u>
∑ brothers and sisters	sister 7
∑ parents' work	
∑	lives with parents
∑ favourite hobbies	play, football and computer
∑ Game consoles ?	sega megadrive
∑ Computer at home ? (multimedia, scanner, Internet...)	Yes /1 years and one previous to this PC with printer, scanner, camera- multimedia
∑ Who is using it mostly ?	1.self 2.mum or dad 3. sister
∑ What do they do with it?	<u>work, domestic, home work,</u> <u>games, internet</u>
∑ Pupil's practice : What ?	<u>games, home work, edutainments,</u> Internet on mums work laptop Puzzles and Games Magic Carpet Theme Hospital Fefa Football Command and Conquer Windows environment
∑ time?	Sometimes / <u>everyday</u> /once per week
∑ alone/	yes
∑ not alone	with <u>parents, brothers/sisters, friends</u>
∑ practice in other places	relatives, <u>friends</u> ... ?

#### About activities at school

∑ Practise on the computer before this year ?	Since year1- 5 years of age
∑ Practise on the computer <u>this</u> year ?	Once or twice a week Game for times tables Word processing CDRoms
∑ Enjoy activities on computer this year ?	<u>yes/ no.</u>
∑ What was preferred ?	CD Roms Game for times tables Paint programme
∑ What would he like to do ?,	more time on computer
∑ Self evaluation - level of competencies	Knowledgeable especially home system not so school as Acorn machines.
∑ Does the pupil	help his friends /is helped / <u>both</u>

#### About drawings and texts

∑ Starting from the drawings of children, ask some questions to let the pupils complete and show his/ her technical representations of functions of the computer.  
Very knowlegable of own computer and other computer systems. 61 items listed to identify computers and their use in the wider world wide setting. The

range varies from toys and games to missiles, heating systems and teletext!

∑ Eventually, ask some definitions of : computer, informatics, software, internet, CD-ROM...

Very knowledgeable of computers and computer system. Both parents work include computer use which has added to this knowledge. Examples of dad spilling coffee on the keyboard and a millennium compliancy test were described. Able to describe a multimedia computer and applications that it could be used for both at home and for business. He takes digital pictures but his parents download them and use the scanner. Talked about internet which parents have at work and are considering for home use, as software that needs installing and setting up, that can be used with a modem and telephone wires and that produces phone bills! It was seen as a good way of communicating both for business and personnel use. Sees it as 'loads of stuff, sort of in the air' that you need an address typed into the computer like www.uk to get. Explained that one child in the class had ordered a book by internet and had brought it to school. Talked about computers being more useful in the future. Mentioned millennium bug as a virus that affects computer clocks which in turn would upset a network of computers if networked and anything which they might run. For an example he used cars which have computers in them and anything run by computers. Email was seen as something typed into the computer then scanned 'sort of' by the computer and sent through the air.

∑ Starting from the texts of pupils (and eventually from the collective work), ask some questions to better understand what has been written by the pupil (in the text " what computer is useful to me ").

personal use

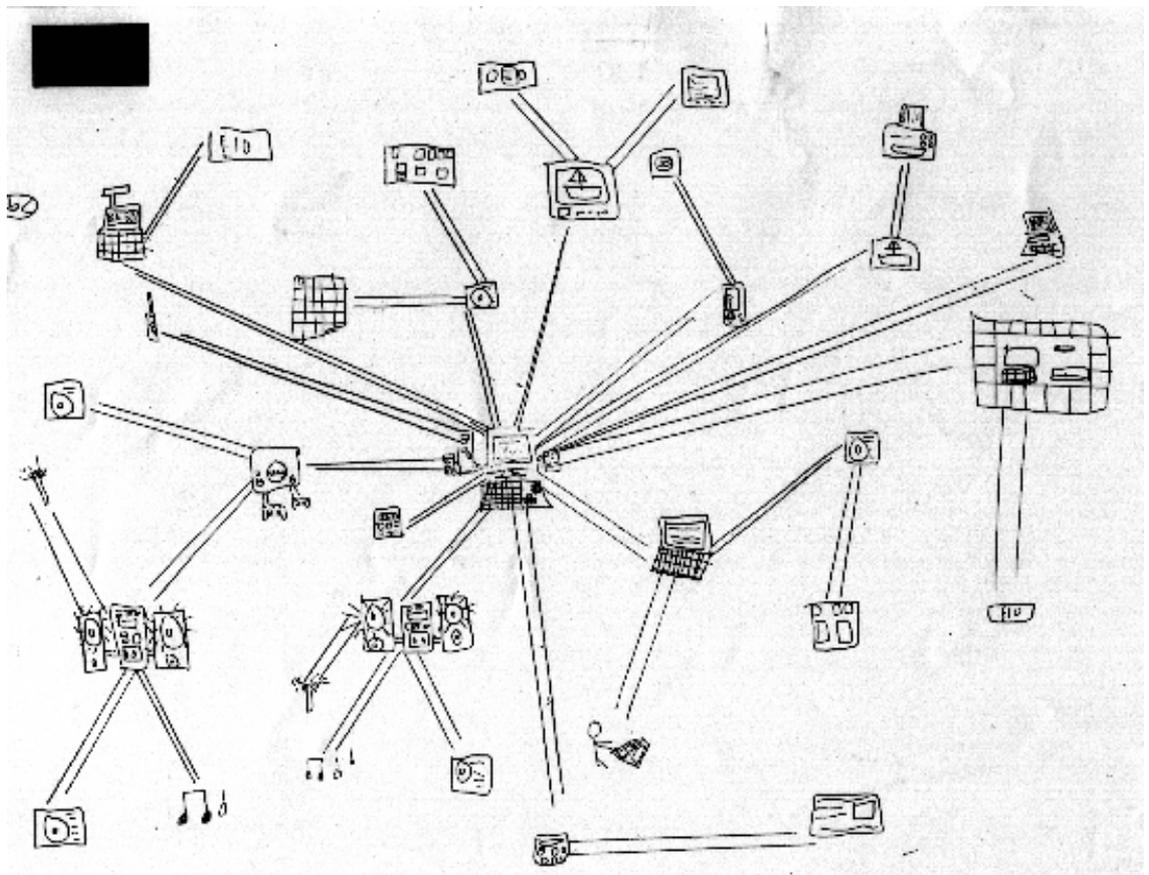
business use

multimedia function

communication

world wide applications-space, warfare, communication (fax, phone, teletext, digital television), heating systems and toys such as cars robots furbies and tamagotgy.

**Pupil No 29's spider map**



Σ How is the picture: b/w (no choice given -pen or pencil, ruler and A5 paper. To select colours at this initial stage would have caused too much confusion, both in terms of supply to all pupils and by distracting from the type of drawing to be made.)

Σ How many levels of links are depicted?  
Σ How many from hub

1. 2. 3. 4.  
single hub **13**

Σ Can areas be depicted?

Games on gameboy with  
handsets  
Mulimedia,  
music,microphone,hand sets  
Money  
CDRoms  
Navigation on boats  
Money,calculator,bank  
machine,money.  
email

Σ Comments: is there anything worth to notice?

Person using computer

**Pupil No 29's drawing**

Σ	How is the picture?	colour, <u>b/w</u>
Σ	How many parts are depicted?	0-5 6-10 11-15 <u>16-20</u>
Σ	Which parts are these	computer keyboard with key detail screen tower speakers mouse with cable mouse mat disk CD-Drive buttons-volume camera table monitor microphone wires transmitter net cameras to send photographs stand email to send messages
Σ	Are they connected via cable?	each system networked by cables
Σ	What can be seen on the screen?	email, pictures, squiggles
Σ	Is anybody working on it or wandering around it?	<u>no</u> /yes
Σ	Comments: is there anything worth to notice?	Six similar computers linked together as a network. Drawing show great detail which includes all buttons and ports. Each computer in the system seems to look the same but is labeled to show different operations. These include a business system, email, internet, and multimedia.

### **Pupil No 29's text**

*This is from the second part of the writing section. It was produced as a continuum to it, but with a change of emphasis by addition of the word 'usefulness.'*

Σ How many words and sentences?

Overall for both 147 words 8 sentences

Usefulness alone 49 6 sentences

Σ List up to ten significant names/nouns (English equivalents) used in the text (usefulness)

business, game, picture, internet, writing, photos

Σ List up to ten significant adjectives used in the text(usefulness)

fun, good

Σ List up to ten significant verbs used in the text(usefulness)

learn, writing, contact, buy, taking photos, talk, sending

Σ Synthesise the main argument in one sentence (usefulness.)

Computers are fun to use and have many applications for home and business use.

### **Transcript**

a) **Describing a computer system to a alien!**

A computer system is like a bunch of computers that make a network. They email each other (email is where you send writing or pictures through the air and send photos. To do this they need a keyboard, a keyboard is a pad with lots of buttons (you type with it). You also need a mouse to move things around on the screen. One of the main things is the digital camera to take photographs of things. There's the microphone to talk to each other about business. Another thing is the speakers to listen to people talking. (98 words)

b) **usefulness!**

If it's a business computer system they can contact each other and talk about business. It is also useful for writing and sending pictures. It's also good for taking photos. It's good to learn things off the Internet. It's good for fun as well. You buy loads (of ) games. (49 words.)

### 3.4. Interview 4: Pupil No 18

#### Objective data

∑ Age of the child	10
∑ gender	female
∑ brothers and sisters	brothers 5, 8 years
∑ parents' work	lives with parents, both doctors in same practise
∑ favourite hobbies?	roller blading
∑ Game consoles ?	no
∑ Computer at home ?	Yes 2 one old and one 1year old
∑ (multimedia, scanner, Internet...)	PC with printer running Windows 98
∑ Who is using it mostly ?	1 father 2. . self 3. brother (8) 4. brother (5)
∑ what do they do with it?	<u>work</u> , domestic, home work, <u>games</u> , Internet
Pupil's practice : What ?	<u>games</u> , home work, <u>edutainments</u> ,
∑ Internet	used with dad.
∑ others...	games CDRoms. Network 2 Rally Kellogs CD Disney CD Go Tango from website as download
∑ time?	sometimes/ <u>everyday</u> /once per week
∑ alone?	yes
∑ not alone	with parents, <u>brothers/sisters</u> , friends
∑ practice in other places?	<u>relatives, friends... ?</u>

#### About activities at school

∑ Practise on the computer before this year ?	Since year1- 5 years of age
∑ Practise on the computer <u>this</u> year ?	Once a month Go go Pendown Egyptian CD Rom Big Pics
∑ Enjoy activities on computer this year ?	<u>yes/ no.</u>
∑ What was preferred ?	CD Roms Game for times tables Paint programme
∑ What would he like to do ?,	more time on computer
∑ Self evaluation - level of competencies	average
∑ Does the pupil	help his friends /is helped / <u>both</u>

#### About drawings and texts

∑ Starting from the drawings of children, ask some questions to let the pupils complete and show his/ her technical representations of functions of the computer.

Although the pupil was familiar with all the parts of the computer she chose to draw the inside of the box. The pupil had seen inside a computer once but knew that this her drawing was nothing like the real thing this came as a product

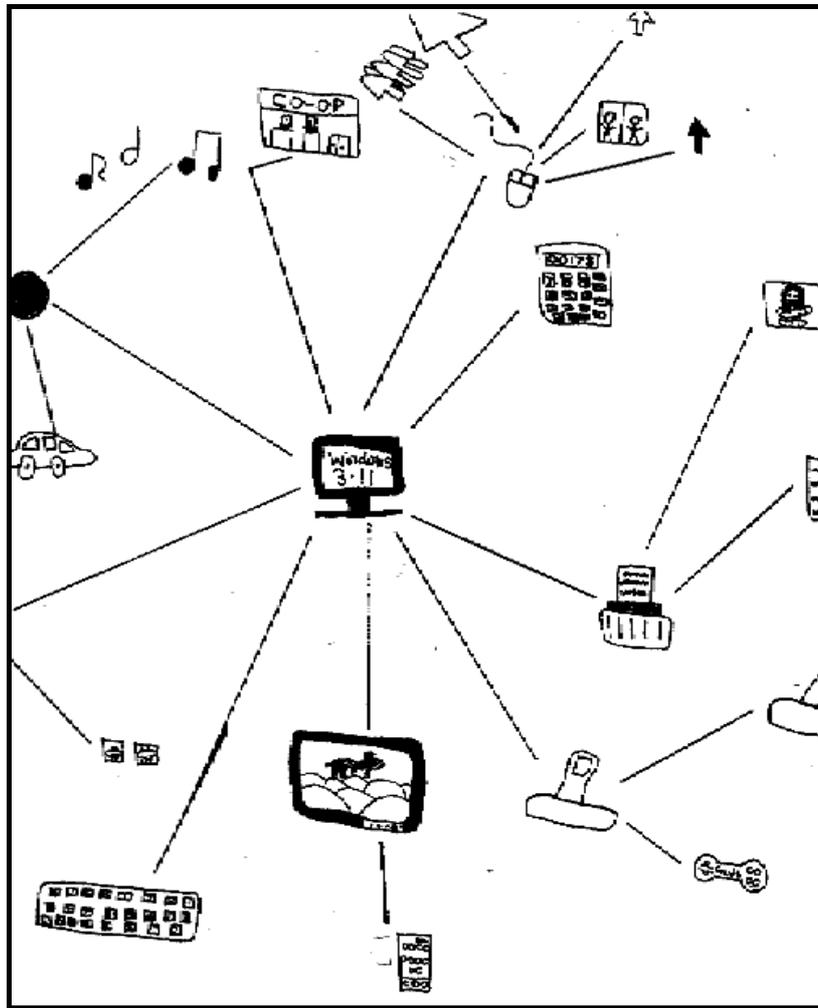
from her own imagination.

∑ Eventually, ask some definitions of : computer, informatics, software, Internet, CD-ROM...

∑ Starting from the texts of pupils (and eventually from the collective work), ask some questions to better understand what has been written by the pupil (in the text “ what computer is useful to me ”).

Communication world wide

**Pupil No 18's Spider map**



(Drawing slightly cropped along edges)

How is the picture: b/w (no choice given -pen or pencil, ruler and A5 paper. To select colours at this initial stage would have caused too much confusion, both in terms of supply to all pupils and by distracting from the type of drawing to be made.)

How many **levels of links** are depicted?

1. 2. 3. 4.

How many from **hub**

single hub 9

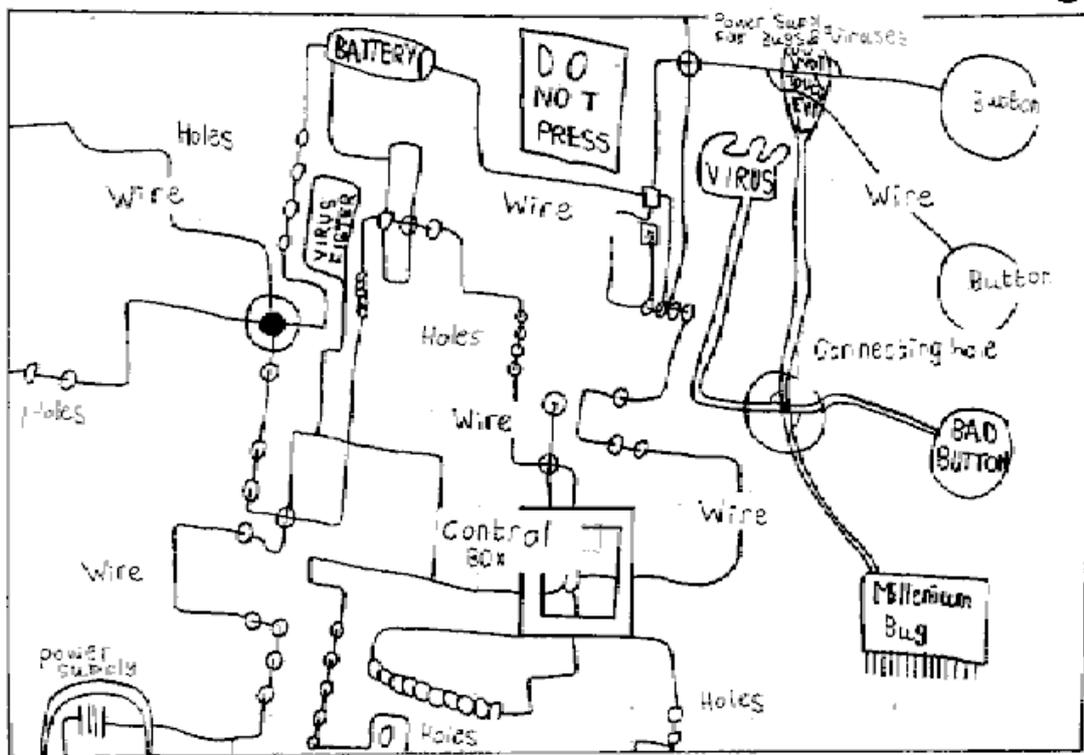
Can **areas** be depicted?

- Windows 3.11
- Cash till, money, bank
- Game gear, tetris and games
- Computer with CD
- paint, numbers, writing, music.
- car
- printing
- mouse
- joypads
- television

Σ Comments: is there anything worth to notice?

Clear demarcation of six areas.

**Pupil No 18's drawing**



- |  |  |  |
|--|--|--|
| Σ How is the picture?  | colour, <u>b/w</u>   |  |
| Σ How many parts are depicted?   | 0-5    6-10    11-15   |  |
|  | <u>16-20</u>   |  |
| Σ Which parts are these? (Inside of computer only drawn and labelled.) | buttons<br>power supply<br>bugs<br>viruses<br>wire<br>connecting hole<br>control box<br>holes<br>millennium bug<br>bad button<br>battery |  |
| Σ Are they connected via cable?  | wires  |  |
| Σ What can be seen on the screen?                                      | no screen  |  |
| Σ Is anybody working on it or wandering around it?                     | <u>no</u> /yes   |  |
| Σ Comments: is there anything worth to notice?                         |  |  |
- Interesting drawing of inside of computer showing various connecting wires, beads and holes.  
Of particular interest is the millennium bug, virus and virus eater illustrations.

### **Pupil No 18' text**

*This is from the second part of the writing section. It was produced as a continuum to it, but with a change of emphasis by addition of the word 'usefulness.'*

Σ How many words and sentences?

Overall for both            154 words    12 sentences

Usefulness alone            72 words    7 sentences

Σ List up to ten significant names/nouns (English equivalents) used in the text (usefulness)

people, calculator, buttons, word processor, letters, internet, type, music, letters, pictures

Σ List up to ten significant adjectives used in the text(usefulness)

fun, pressing, write, play, print, learn

Σ List up to ten significant verbs used in the text(usefulness)

can, go on, do homework, come with

Σ Synthesise the main argument in one sentence(usefulness.)

**Useful for communication, information gathering, word processing, game playing and control.**

### **Transcript**

a) **Describing a computer system to an alien!**

A computer system is a keyboard, a monitor, a mouse, and the bit that controls it all. It has extra bits that you can get if you want, like a modem and floppy disks. A keyboard is something that has letters, numbers and symbols on. You press the keys. (The things that the letters, numbers and symbols are on and they come up on the monitor,(screen.) A mouse is not a furry animal, it is a grey thing with some wire attached. (82 words, 5 sentences)

b) **usefulness!**

They are good fun to play with. People can write letters on them just by pressing a button if they can't usually. They can go on the internet and find out things. They could do homework on them and learn how to type. People could even play music on them. They can do sums on them because all computers come with a calculator programme. They can print letters and pictures on them. (72 words, 7 sentences)

### 3.5. Interview 5: Pupil No 21

#### Objective data

Σ Age of the child	10.2
Σ gender	male
Σ brothers and sisters	brother 7, sister 13 years
Σ parents' work	lives with mum sees Dad at weekends bi-weekly Mum is community midwife Dad makes and sells beds.
Σ favourite hobbies?	Bike, computer and games consoles
Σ Game consoles ? Play station	Nintendo
Σ Computer at home ? (multimedia, scanner, Internet...)	No
Σ Who is using it mostly ? Σ what do they do with it?	
Σ Pupil's practice : What ? Gears Solid' a	<u>games</u> , on consoles likes 'Metal strategy game.
Σ Internet .	no not used yet but would like, sees as screens of text and tables.
Σ others...	games, CDRoms.
Σ time?	two days a <u>week</u>
Σ alone?	yes
Σ not alone	with parents, brothers/sisters, <u>friends</u>
Σ practice in other places?	relatives, <u>friends</u> ... ?

#### 2 - About activities at school

Σ Practise on the computer before this year ?	Since year 2- 6 years of age
Σ Practise on the computer <u>this</u> year ?	Once a month Big Pic Maths Game Word processing-writing Pen Down Egyptian work
Σ Enjoy activities on computer this year ?	<u>yes</u> / no.
Σ What was preferred ?	Go go Big Pics Games
Σ What would he like to do ?, Σ Self evaluation - level of competencies consoles.(Means	more time on computer average on PC's but a 'Pro'on a professional or expert here.)
Σ Does the pupil	/is helped / <u>both</u> , but teacher <u>helps</u> .

#### 3 - About drawings and texts

Σ Starting from the drawings of children, ask some questions to let the pupils complete and show his/ her technical representations of functions of the computer.  
This child said that he was OK on PC's but a "pro" (professional) on games consoles. Saw computers as very important for job prospects.

Σ Eventually, ask some definitions of : computer, informatics, software, Internet, CD-ROM...

Although the child understood and was able to name the parts of a computer he was obviously interested in gaming. His spider map was most informative including :-

Super Nintendo with Mario

Dream Cast with Sonic Adventure

Saga Megadrive with Sonic 2

Game Master with Kirby Dreamland

Super Mario 64

Nintendo 64

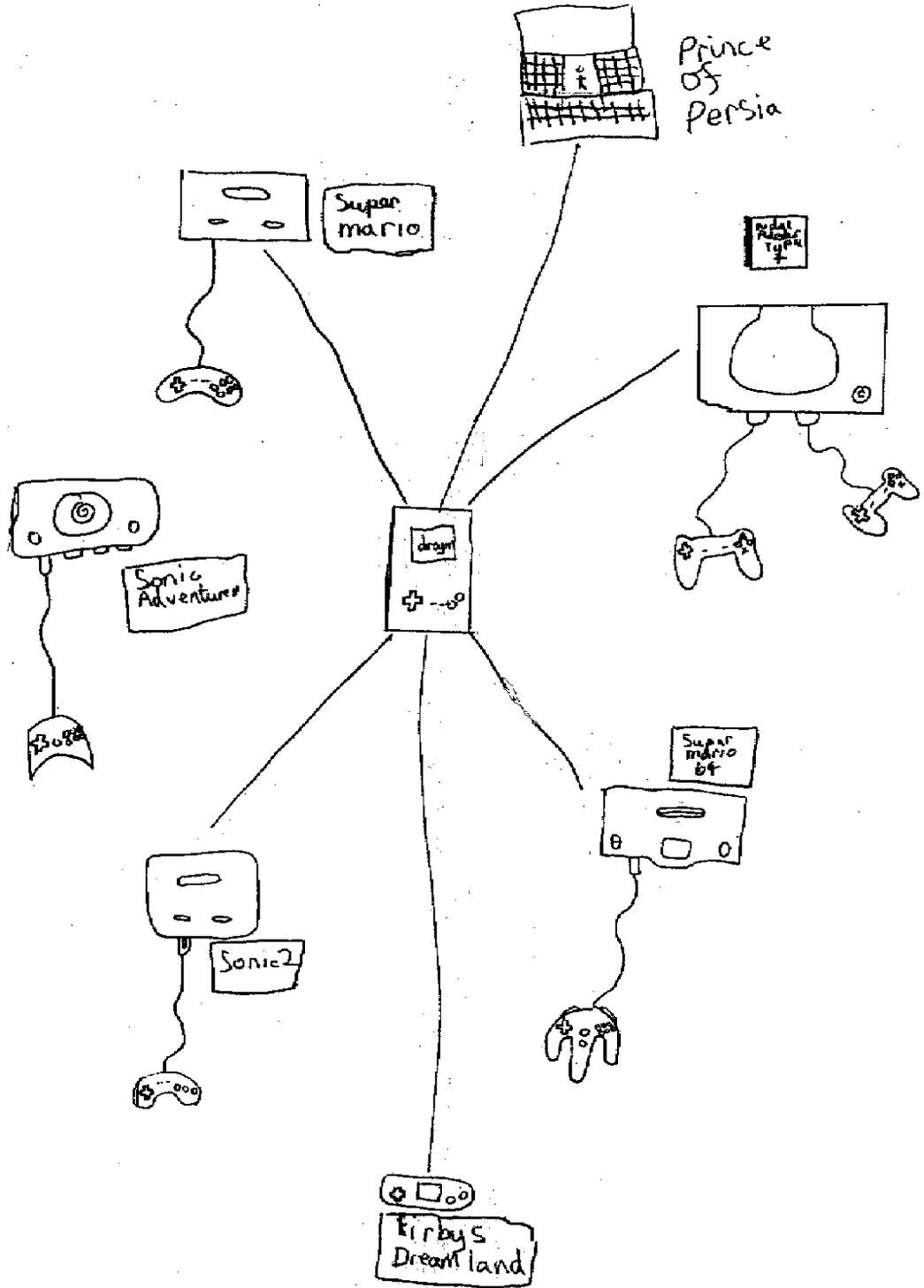
Play station with Ridge Racer type 4

Prince of Persia on a PC (talked about Goose Bumps but had not drawn, he had used this software at his cousins.)

Σ Starting from the texts of pupils (and eventually from the collective work), ask some questions to better understand what has been written by the pupil (in the text " what computer is useful to me ").

Communication and entertainment world wide

**Pupil No 21's Spider map**



How is the picture: b/w (no choice given -pen or pencil, ruler and A5 paper. To select colours at this initial stage would have caused too much confusion, both in terms of supply to all pupils and by distracting from the type of drawing to be made.)

How many levels of links are depicted?

1. 2. 3. 4.

How many from hub

single hub 6

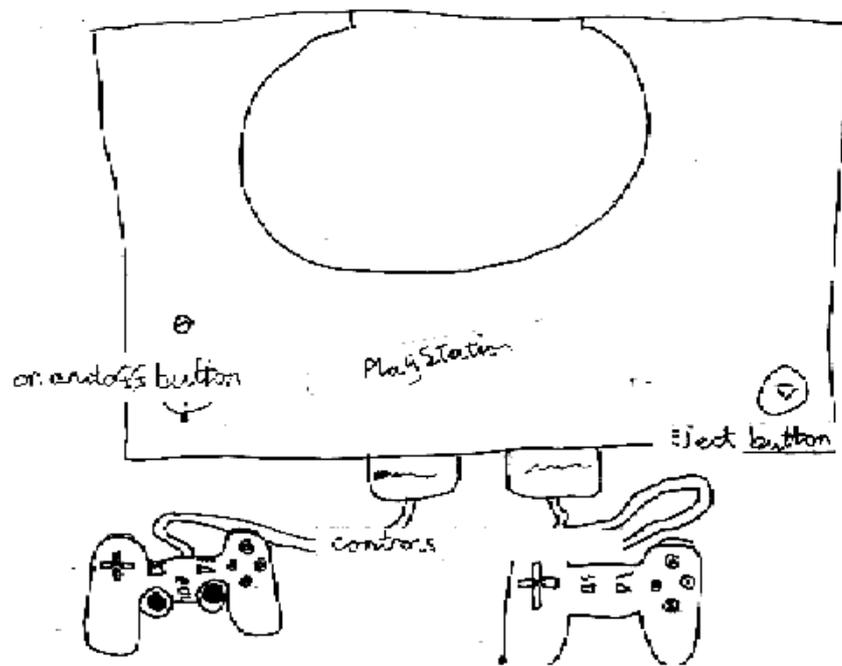
Can areas be depicted?

Prince of Persia on PC  
Game gear, games  
Super Mario on Nintendo  
Play station with Ridge Racer type 4  
Game boy

Handsets  
Sega Mega Drive with Sonic 2  
Mario  
Dream Cast with Sonic Adventure  
Game Master with Kirby Dreamland  
Super Mario 64  
Nintendo 64

Σ Comments: is there anything worth to notice?  
Games only but knowledgeable.

**Pupil No 21's drawing**



Σ How is the picture?	colour, <u>b/w</u>
Σ How many parts are depicted?	<u>0-5</u> 6-10 11-15 16-20
Σ Which parts are these? (Inside of computer only drawn and labelled.)	Play station Controller on /off button eject button
Σ Are they connected via cable?	handsets only
Σ What can be seen on the screen?	no screen
Σ Is anybody working on it or wandering around it?	<u>no</u> /yes
Comments: is there anything worth to notice?	Detail of play station only.

### **Pupil 21's text**

This is from the second part of the writing section. It was produced as a continuum to it, but with a change of emphasis by addition of the word 'usefulness.'

Σ How many words and sentences?

Overall for both	48words	4 sentences
Usefulness alone	13 words	1 sentence

Σ List up to ten significant names/nouns (English equivalents) used in the text (usefulness)

computers, information

Σ List up to ten significant adjectives used in the text(usefulness)

useful, giving you

Σ List up to ten significant verbs used in the text(usefulness)

entertained, keeping

Σ Synthesise the main argument in one sentence (usefulness.)

**Useful for information gathering and entertaining.**

### **Transcript**

a) **Describing a computer system to an alien!**

A computer system is something that lets you be a charter and do things that normal people couldn't do. It is worked by electricity. You need a disk or cartridge to work it. (34 words, 3 sentences.)

b) **usefulness!**

I think computers are useful for keeping you entertained and giving you information. (13 words, 1 sentence.)

### 3.6. Interview 6: Pupil No 13

#### Objective data

∑ Age of the child	10.3
∑ gender	female
∑ brothers and sisters	brother 14,13 years , sister 8 years
∑ parents' work	lives with mum who owns a 'Lifestyle' shop, but visits dad who works on family egg farm.
∑ favourite hobbies?	playing.
∑ Game consoles ?	game boy colour and play station.
∑ Computer at home ?	Yes, at dad's. With Windows 95
∑ (multimedia, scanner, Internet...)	PC with printer
∑ Who is using it mostly ?	1. brother 14 years 2. sister 8 years 3. self 4. father 5. brother 13 years
∑ what do they do with it?	work, domestic, home work, <u>games</u> , Internet
∑ Pupil's practice : What ?	<u>games</u> , home work, <u>edutainments</u>
∑ Internet	no not used yet but would like! Thinks home computer will run but have lost card!
∑ others...	CDRoms.
∑ time?	<u>once per week on computer</u> <u>daily</u> games console
∑ alone?	yes
∑ not alone	with parents, <u>brothers/sisters</u> , friends
∑ practice in other places?	relatives, <u>friends</u> ...occasionally ?

#### About activities at school

∑ Practise on the computer before this year ?	Since year3- 7 years of age
∑ Practise on the computer <u>this</u> year ?	Once a month CDRom Egypt Pen Down -Word processing Go-go (Logo programme.)
∑ Enjoy activities on computer this year ?	<u>yes</u> / no.
∑ What was preferred ?	CD Roms
∑ What would he like to do ?	more time on computer
∑ Self evaluation - level of competencies	average
∑ Does the pupil	help his friends /is helped / <u>both</u> teacher helps.(Paired work usually!)

#### About drawings and texts

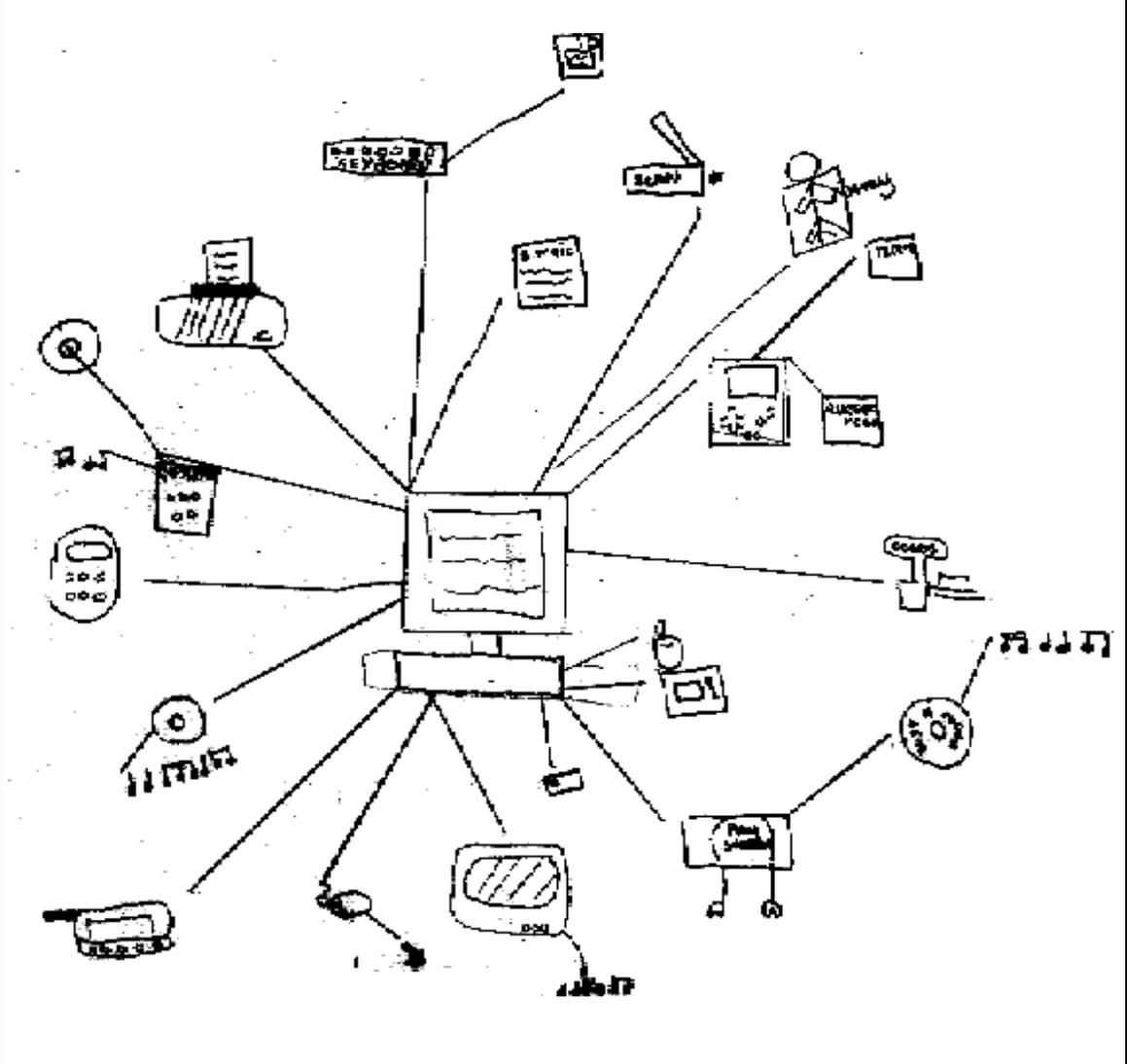
∑ Starting from the drawings of children, ask some questions to let the pupils complete and show his/ her technical representations of functions of the computer.

Clear understanding. SEE DRAWINGS

Σ Eventually, ask some definitions of : computer, informatics, software, Internet, CD-ROM...  
Internet allows you to speak around the world. Computers are going to be very important in future.

Σ Starting from the texts of pupils (and eventually from the collective work), ask some questions to better understand what has been written by the pupil (in the text " what computer is useful to me ").  
Communication world wide.

**Pupil No13's Spider map**



How is the picture: b/w (no choice given -pen or pencil, ruler and A5 paper. To select colours at this initial stage would have caused too much confusion, both in terms of supply to all pupils and by distracting from the type of drawing to be made.)

How many levels of links are depicted? 1. 2. 3. 4.

How many from hub single hub 17

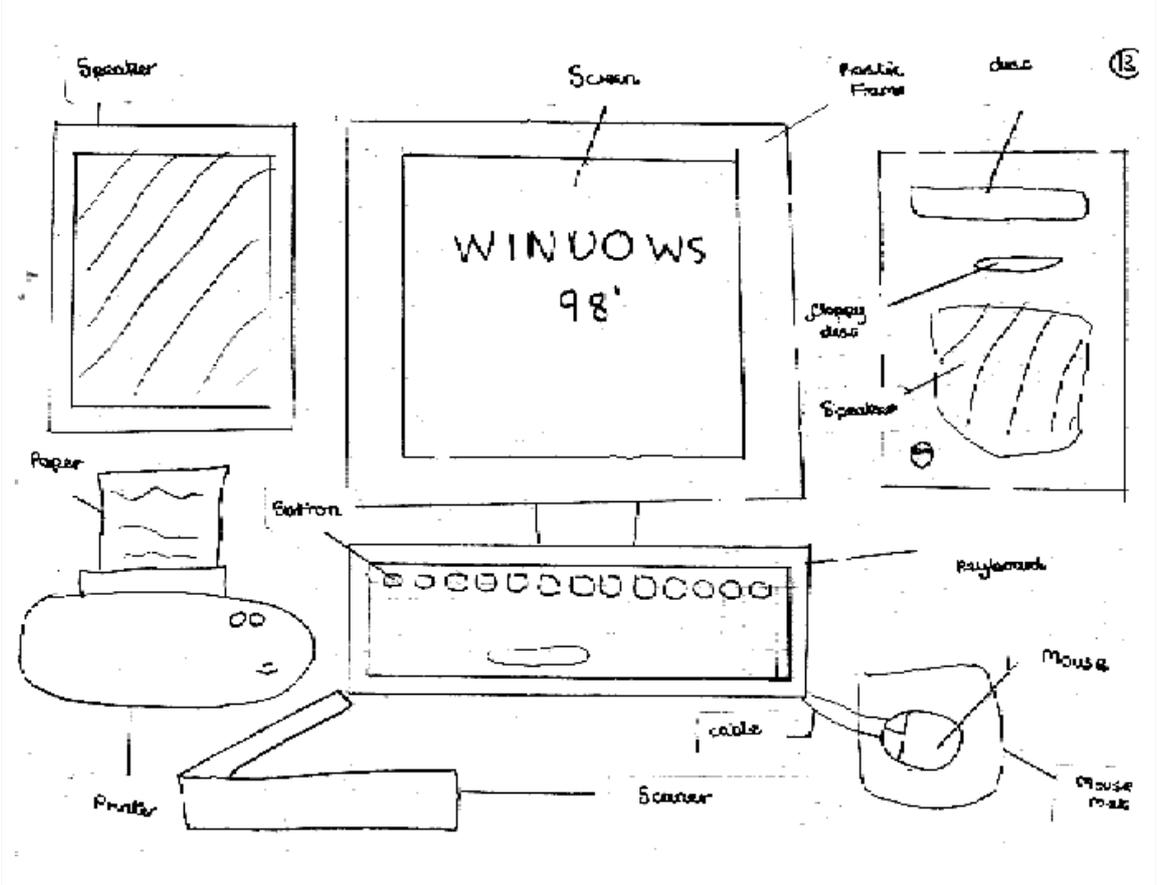
Can areas be depicted?

- pc
- xray
- Game gear,tetris and games
- Computer with CD radio/t.v
- scanner
- printing
- mouse
- joypads
- music
- calculator
- email

mouse  
arrows

Σ Comments: is there anything worth to notice?  
Clear demarcation of use.

**Pupil No13's drawing**



Σ	How is the picture?	colour, <u>b/w</u>	
Σ	How many parts are depicted?	0-5    6-10	<u>11-15</u>
Σ	Which parts are these?	buttons plastic frame speaker cable disk paper printer scanner mouse mouse mat floppy disk screen	
Σ	Are they connected via cable?	windows 98 cable from mouse and	

		scanner
Σ	What can be seen on the screen?	Windows 98
Σ	Is anybody working on it or wandering around it?	<u>no</u> /yes
Σ	Comments: is there anything worth to notice?	A typical computer PC system

### **Pupil No 13's text**

*This is from the second part of the writing section. It was produced as a continuum to it, but with a change of emphasis by addition of the word 'usefulness.'*

Σ How many words and sentences?

Overall for both	189 words	15 sentences
Usefulness alone	55 words	5 sentences

Σ List up to ten significant names/nouns (English equivalents) used in the text (usefulness)

computer, internet, country, offices, work

Σ List up to ten significant adjectives used in the text(usefulness)

lots, millions

Σ List up to ten significant verbs used in the text(usefulness)

do, speak, using, learn

Σ Synthesise the main argument in one sentence(usefulness.)

**Useful at home for education and work. Transference by internet across countries.**

### **Transcript**

a) **Describing a computer system to an alien!**

A computer system is all different things for your computer. Things like a computer screen, printer, scanner, keyboard, mouse, speaker, a machine what turns on the computer and a digital camera.

The computer screen is the thing what shows you the pictures. Printer is what you want the picture on the screen to come on paper. Scanner is you put a picture in the scanner and it will come on the screen. Keyboard has got letters on that you type on the screen. The mouse has got an arrow so you can point the things you want to do on the computer. If it has got music the speaker make you hear it. Power button is so you can turn on the computer. When you take a photo it will come on the screen. (134 words, 10 sentences)

b) **usefulness!**

On the computer you can do lots of things. One of the million things is the internet. You speak to people in different country which only if they using their computers. People learn lots of things from the computer and so do children. Lots of people use computers at work. Offices use them a lot.(55 words, 5 sentences)