

Assessment

The assessment of pupils' work and subsequent target setting should become an integral part of the 'Framework for Delivering ICT'.

Effective assessment takes place when:

- It is regular
- Pupils are involved to jointly assess strengths and weaknesses
- It includes a range of methods
- There is a recording system in place
- Teachers make use of prior learning and information passed on by others
- Pupils receive feedback, some of which may be immediate

There are three main stages of assessment.

Short Term	Medium Term	End of Key Stage
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Expected attainment			
End of Year	Pupils who make slower progress	Most pupils	Pupils who make faster progress
7	Level 3 / 4	Level 4 / 5	Level 5 / 6
8	Level 4	Level 5	Level 6
9	Level 4 / 5	Level 5 / 6	Level 6 / 7

Short Term Assessment

The following may be considered as short term assessment:

Short term assessment is generally lesson focused and should help you judge whether teaching objectives have been met. Its purpose is to:

- Ensure that pupils can demonstrate certain skills and techniques
- Explain what they have done using correct technical language
- Check whether pupils have interpreted your teaching correctly
- Make sure that pupils understand the current or future activities
- Provide information for other staff including support staff
- Provide feedback to pupils

Generally, short term assessment is about working with pupils in the classroom, making observations and deciding whether differentiated work is required, by providing either extension material or more help.

Throughout the activities there are online tests. These are self-marking and pupils can resit them as often as they wish. You may wish to record pupils' scores or question them about their achievement.

Online test 1 (activity 1)	Online test 2 (activity 3)	Online test 3 (activity 5)	Online test 4 (activity 8)
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These online tests can also be used as part of your medium term assessment.

Where pupils work in pairs it is important that you can make a judgement for each pupil's commitment and achievement for that lesson. At times there may be gender bias; be aware of group dynamics.

During introductions and question and answer sessions, take note of those pupils who find it difficult to join in due to a lack of confidence or knowledge. Likewise, find those pupils who seem to require little help with the concepts and skills.

Medium Term Assessment

The following may be considered as medium term assessment:

Medium term assessment should assemble new information. Its purpose is to:

- Review progress that pupils have made during the unit of work:
 - Can they apply knowledge, understanding and skills?
 - What can they do and what do they know?
 - Are there areas of difficulty?
- Check progress against any existing targets
- Inform future planning
- Provide additional information that may be used when making end of year or end of key stage decisions

Generally, medium term assessment takes place at the end of a unit of work. A range of pupils' work should be looked at. If there are several annotated versions showing how pupils have built up the work these should be examined individually and as a whole.

Included within this unit is an 'End of Unit Test'. This is a self-marking test in a multimedia style. It tests the knowledge and understanding of the unit and questions can only be answered once. Pupils should be encouraged to revise for this test, as it will include the words that make up the language for learning.

Pupils cannot access the test from within the activities. It needs to be installed separately; this is to ensure it is delivered when the teacher requires it.

These online tests can also be used to help you decide the end of key stage assessment.

The recording of medium term assessments may take the following format:

- End of unit test mark recorded
- Best fit against one of the assessment criteria
- Checklist against the yearly teaching objectives

Where pupils work in pairs it is important that you can make a judgement for each pupil's commitment and achievement for the unit as a whole.

Objectives

This unit of work covers the following teaching objectives. Ensuring that these are met will form part of any medium term assessment and enable targets to be set.

Finding Information

- use information from primary or secondary sources and know when to choose the different types
- justify the use of particular information sources to support an investigation or presentation, and devise and apply criteria to evaluate how well various information types support a task
- select information from a range of sources and assess the potential value of the information for a task
- acknowledge all sources, recognising copyright and other constraints
- save files in appropriate formats and create a hierarchical folder structure
- develop open and closed questions with sensitivity, recognising people's cultural, social and ethical differences
- design a questionnaire or data-collection sheet to collect relevant data, and obtain and use feedback to establish what are good questions
- represent information in graphs, charts or tables, and in a report where appropriate; justify the form of representation and check the plausibility of their conclusions
- identify examples of automated data collection and recognise the impact of electronic databases on learning, everyday life and employment
- evaluate different applications in terms of the structure and method of processing data

Developing Ideas

- identify the key elements of a problem and represent components in a plan
- automate simple processes by harnessing software tools; recognise where automation tools, such as filtering, can be used to improve safety when using the internet
- combine variables within a model in different ways to form rules
- recognise that the rules contained within a model determine its output, and make more complex predictions based on several variables
- amend existing simple models by changing variables and formulae

- identify whether a model has an appropriate set of variables to make it suitable for a particular purpose, and assess its accuracy by comparing its outcomes with those from other sources
- use precision and accurate syntax when framing instructions
- test and refine sequences in order to achieve specific outcomes
- recognise that sequencing instructions is fundamental to a wide range of ICT applications

Communicating Information

- plan communication projects and select the appropriate communication (type, length, media) for the intended audience (considering audience needs and expectations), purpose and environment
- reflect on the work of others to help plan and amend their communications and understand how effective presentations or publications address specific audience needs and expectations
- draft, refine and structure their work using a combination of ICT tools to convey meaning more effectively
- modify and develop text, images, tables and sounds from several sources within the structure of a piece of work
- extract, combine and modify relevant information for a specific purpose, and structure and sequence this to meet audience needs
- use a range of ICT tools efficiently to refine the presentation of information for a specific purpose
- use digital communications for the sharing and collaborative development of ideas for a variety of purposes
- work in a safe and responsible way when communicating with others

Evaluating

- gather and use feedback to inform future work

Assessment Criteria

The following may be considered as medium term assessment:

Although you will use the level descriptors to make a 'summative best fit' assessment at the end of the key stage, you will probably also like to monitor pupil progress at the end of each unit of work.

The following criteria bank only relates to this unit and its purpose is to:

- Break the assessment of the unit into small manageable parts, enabling teachers
 - to identify areas of achievement
 - to give confidence to pupils by showing progress, however small
 - to plan for the future
- Enable staff to show progress with individual pupils or whole classes
- Provide data for statistical analysis

Expectation from this unit can be summarised as:

Most pupils will:

- Work as part of a larger group to develop a small business product for sale at a school 'Trade Show'. They will develop individual roles and understand the principle parts of a business. Corporate design is considered with logos and headed paper used as part of a larger mail-merging task. They will be able to examine a financial model for break even, profit and loss and develop one for themselves
- Use LOGO to simulate the CNC cutting of a maze and develop a set of procedures. FLOWOL is successfully used to simulate a production line for maze manufacture
- Prepare, organise and contribute to a group presentation with evaluation

Some pupils will not have made so much progress and will:

- Work as part of a larger group to develop a small business product for sale at a school 'Trade Show'. With help they will develop a role and understand the basic way a business runs. Some corporate design is considered with logos and headed paper. With help, they will have mail-merged documents although the documents may have been prepared for them. They will be able to examine a financial model and with help develop one for themselves
- Use LOGO to simulate the CNC cutting of a maze and develop a set of procedures. FLOWOL is successfully used to simulate a production line for maze manufacture; this may not use sensors or feedback
- Prepare, organise and contribute to a group presentation with evaluation

Some pupils will have progressed further and will:

- Work and take the leading role within a group to develop a small business product for sale at a school 'Trade Show'. They will develop an individual role and understand the way a business functions. Corporate design is considered with logos and headed paper used as part of a larger mail merging task. They will be able to fully examine a financial model for break even, profit and loss and develop one for themselves which may include additional functions, macros, menus and command buttons
- Use LOGO to simulate the CNC cutting of a maze and develop a set of procedures. FLOWOL is successfully used to simulate a production line for maze manufacture which includes the use of sensors, loops and feedback
- Take the leading role to prepare, organise and give their group presentation
- They are able to evaluate and give feedback to others

Levels are reported as whole numbers with intermediate progress as letters.

Each level subsumes the previous level.

	Skill	Knowledge & Understanding
4c	<p>Sequencing events Can develop a time line that relates to a set of events.</p> <p>Market research Used suitable software to develop a logo and has mail merged using prepared documents / data source</p> <p>Financial modelling Can use the obvious tools of a spreadsheet package that relate to this unit of work. Has used the prepared spreadsheet model and changed variable to see the outcomes.</p> <p>Can use the trial and error method to seek outcomes such as material costs and with help can create a simple financial model.</p> <p>Manufacture Can examine LOGO examples and develop a simple maze for themselves. Can use FLOWOL to simulate a simple production line.</p> <p>Presentation With others, can give a presentation. This may will not have supporting notes.</p>	<p>Sequencing events Understands the concept of a time line that follows a set of events.</p> <p>Market research Knows how market research affects everyday life.</p> <p>Understands the reason for corporate design e.g. logos and headed paper.</p> <p>Financial modelling Can use a spreadsheet to model situations using trial and error. Understands the reasons behind bulk purchases and different costs.</p> <p>Manufacture Understands that manufacture can be carried out in different ways and that machines can be computer controlled and can give simple examples, e.g. car production.</p> <p>Presentation Knows that the order of the presentation is important and that it should be directed towards the intended audience.</p>

4b	<p>Sequencing events Can develop a time line that accurately relates to a set of events.</p> <p>Market research Used suitable software to develop a logo and headed paper and has mail merged using partly prepared documents / data source.</p> <p>Financial modelling Can load and edit data within a prepared spreadsheet model using mathematical operators and can use the tools of a spreadsheet package that relate to this unit of work. Can create a simple financial model and with help use goal seek.</p> <p>Manufacture Can examine examples and use LOGO to develop a maze including simple procedures. Can use FLOWOL to simulate a simple production line. This may use loops and feedback.</p> <p>Presentation With others, can give a presentation using speaker notes.</p> <p>Pupils may be using keyboard shortcuts to improve development time.</p>	<p>Sequencing events Understands that a timeline can be used to track progress, e.g. the manufacture of an item</p> <p>Market research Knows about direct mail and can give examples including where it impacts on everyday life, e.g. junk mail.</p> <p>Financial modelling Understands that a spreadsheet can be used to model different situations by changing variables e.g. cost of materials</p> <p>Has produced a simple working spreadsheet model and can interrogate it using goal seek. Can explain how this works.</p> <p>Has an appreciation of financial language.</p> <p>Manufacture Can explain different manufacturing processes and knows how to program LOGO to simulate a cutting tool. This can be explained using appropriate technical language.</p> <p>Presentation Can work as part of a larger group to present their work after discussion about what to include. Self review and evaluation is taking place.</p>
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4a	<p>Sequencing events Can develop a time line that accurately relates to a set of events and may take the form of a Gantt chart.</p> <p>Market research Used suitable software and more advance skills to develop a logo and headed paper and may have used these as part of mail merging</p> <p>Financial modelling Can use the tools of a spreadsheet package that relate to this unit of work pupils and can examine an example financial model drawing conclusions. Can interrogate the spreadsheet using goal seek.</p> <p>Can create a financial spreadsheet to model break-even, adding worksheets, renaming and linking cells .</p> <p>Manufacture Can examine examples and use LOGO to develop a maze including procedures. Can use FLOWOL to simulate a simple production line. This will use loops and feedback.</p> <p>Presentation With others, can give a presentation using speaker notes.</p>	<p>Sequencing events Understands a Gantt chart</p> <p>Market research Knows how direct mail works and can explain the process of mail merging using correct technical language.</p> <p>Financial modelling Can use correct financial terms when discussing the work. Knows about break-even, profit and loss.</p> <p>Can explain the advantages of goal seek over trial and error method.</p> <p>Has completed most worksheets with some help but has not totally relied upon prepared answers.</p> <p>Manufacture Can discuss where different manufacturing processes are used and the reasons why.</p> <p>Understands the term CNC and can describe where controlled machines are used. Knows about procedures and can describe how these are used to make a program more efficient.</p> <p>Presentation There is a developing awareness of consistency, any evaluation is reasoned and useful.</p>
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5	<p>Sequencing events With help can develop a Gantt chart to follow a sequence of events.</p> <p>Market research Used suitable software and more advance skills to develop a logo and headed paper and has used these for the form letter during mail merge.</p> <p>Financial modelling Can examine, using goal seek where required, example financial models and draw conclusions about material costs, break-even, profit and loss.</p> <p>Can use the tools of a spreadsheet package that relate to this unit of work to create a financial spreadsheet to model break-even using absolute cell references. The spreadsheet is tested for accuracy.</p> <p>Manufacture Can examine examples and use LOGO to develop a maze including procedures.</p> <p>Can use the procedures to create a new maze design. Can use FLOWOL to simulate a simple production line. This will use loops. sensors and feedback.</p> <p>Can develop a clear set of sub routines for the maze which show an efficiency of commands.</p> <p>Presentation With others, can give a presentation using speaker notes.</p>	<p>Use appropriate evaluation criteria to select work from a range of materials form the various sections below. This can be used to show progressive change.</p> <p>Sequencing events Understands how a small business may use a Gantt chart when developing a product.</p> <p>Market research Knows how market research can inform future design.</p> <p>Understands and can discuss the benefits of mail merge compared to traditional methods giving examples of both. Can explain the stages of mail merge and how they interact.</p> <p>Financial modelling Understands the relationship of worksheets as part of a workbook (Excel) and how cells within these link together.</p> <p>Can explain why it is important to model costs and find break-even points.</p> <p>Manufacture Can explain the simulated production line using correct technical language. Understands the limitations that this type of system can bring.</p> <p>Can use and explain the use of procedures and sensors within their work.</p> <p>Presentation There is a developing awareness of audience, any evaluation is reasoned and useful. Feedback is given to others.</p>
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5c	<p>Sequencing events Independently can develop a Gantt chart to follow a sequence of events.</p> <p>Market research Has successfully mail merged by creating a form letter and data source that uses the headed paper and logo.</p> <p>Financial modelling Can examine, using goal seek where required, example financial models and draw conclusions about material costs, break-even, profit and loss. They test hypothesis for their maze and use this to inform future work.</p> <p>Can use the tools of a spreadsheet package that relate to this unit of work and create a financial spreadsheet to model break-even points using absolute cell references and new functions such as ROUNDUP and ROUNDDOWN. Can add worksheets, rename and link cells between them. The spreadsheet is tested for accuracy.</p> <p>Manufacture Can examine examples and use LOGO to develop a maze including procedures. Can design new mazes based upon previously created procedures.</p> <p>Shows an increasing development of skills required to simulate a production line.</p> <p>Presentation With others, can give a presentation using speaker notes. The presentation may contain effects that help get over key points, e.g. sound.</p>	<p>Pupils working at this level and higher should show a developed awareness and increased understanding of their work.</p> <p>There should be evidence that the pupil has worked at a higher level and the work has been completed independently.</p> <p>Examples:</p> <p>Sequencing events Understands and can describe how a Gantt chart is used to develop a manufacturing process or to assemble a project together.</p> <p>Market research Has used a variety of methods to create the corporate image for the logo and headed paper. Can explain how the logo represents their business and the ways that it may be used.</p> <p>Financial modelling Understands how ROUNDUP and ROUNDDOWN functions work</p> <p>Has a good understanding of relative and absolute cell referencing.</p> <p>Graphing is used with purpose and correct styles are chosen. These are then used to help interrogate the spreadsheet.</p> <p>Can explain the use of hyperlinks within a spreadsheet. Understands what a macro is and how it can be used within a spreadsheet. Can demonstrate its use.</p> <p>Manufacture Has a raised awareness of how LOGO and FLOWOL can be used to simulate manufacturing processes. Could create a mimic to work in the FLOWOL flowchart.</p>
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5b	<p>Sequencing events Can produce a Gantt chart with confidence following a set of events.</p> <p>Market research Has successfully mail merged but can also edit the form letter to include different fields.</p> <p>Financial modelling As 5c but pupils may include linked graphs to use for comparing material costs.</p> <p>Manufacture As 5c but pupils use more advanced skills to make the programs more interesting.</p> <p>Presentation As 5c but pupils use more advanced skills to make the presentation more interesting.</p>	<p>Presentation Can work as part of a larger coordinated group that has made group decisions although the work is carried out independently.</p> <p>Can describe how their Trade Show stall would be set up and advertised.</p> <p>Knows about health and safety and could carry out a risk assessment and explain this within the presentation.</p>
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5a	<p>Sequencing events Can design and create a Gantt chart.</p> <p>Market research Corporate stationery has been created and used with confidence during mail merge.</p> <p>Financial modelling As 5b but pupils may also include a menu page and command buttons / macros.</p> <p>New functions (ROUNDUP and ROUNDDOWN) are used with confidence.</p> <p>Manufacture LOGO has been used with confidence to create / edit various mazes that use procedures in an efficient way. FLOWOL has been used to simulate a production line and pupils may have designed their own mimic.</p> <p>Presentation Pupils have contributed to an organised and well delivered presentation that has used different effects and methods to communicate, e.g. a sound commentary.</p>	
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<p>6 abc</p>	<p>Pupils who are working at these level should be able to show that they are learning and using skills independently to develop their work beyond the expectations of the unit.</p> <p>Sequencing events e.g. Using comments or hyperlinks to other documents from within the Gantt chart.</p> <p>Market research e.g. developing data sources from other software such as a spreadsheets.</p> <p>Financial modelling e.g. a financial spreadsheet has been produced that does not follow the example and uses other skills learnt in previous units.</p> <p>Manufacture e.g. using LOGO and FLOWOL commands to simulate more difficult systems.</p> <p>Presentation e.g. other external resources are used within the presentation - evaluation and feedback is given leading to improvements being made.</p>	
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End of Key Stage

The following may be considered as end of key stage assessment:

Note: *The guidelines for assessing and reporting ICT at the end of key stage may change. Please keep yourself regularly updated by visiting the appropriate Government sites. We will keep updated and downloadable information on our website.*

Presently, teachers are required to give a level for each pupil for their ICT attainment. These should be awarded using the level descriptors and a model of 'best fit'.

During the key stage you may have monitored pupil progress using levels broken down into smaller steps (see medium term assessment). These, together with other assessments, should help you decide on a level that best describes the attainment of each pupil.

It is useful if all teachers responsible for awarding these levels moderate a sample of work. It may be that the department has assembled a portfolio of work for this purpose.

Other assessments that can feed into this are:

- End of year examinations
- End of unit tests
- Pupil reviews