

U075\_1 Key skill assessment: application of number

| <p><b>Criteria for assessment: evidence you present must show you can:</b></p>  | <p><b>Checklist: check that your evidence shows what you have done to:</b></p>   |
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| <p align="center"><b><i>Develop a strategy for using skills in application of number over an extended period of time.</i></b></p>             |  |
| <p>Establish opportunities for using application of number skills and clearly identify the outcomes you hope to achieve.</p>                  | <p>Identify where you can use and improve your numerical, graphical or algebraic skills (e.g. learning about new methods or techniques, seeking and using feedback) within your study or work activities.</p> <p>Identify your targets and goals, explaining why you have chosen them (e.g. better ways of presenting and understanding data, improved prediction or forecasting from models, better understanding of relationships between variables in a statistical investigation, improved decision-making on the basis of research data).</p> <p>Establish the criteria you will use to judge your progress and performance, and in seeking feedback from others.</p> |
| <p>Identify relevant sources and research the information needed for planning purposes</p>  | <p>List reference sources and resources, including people, that you might use (e.g. databases, online help, textbooks and manuals, reports, training courses, course materials, colleagues, managers, tutors, friends).</p>  |
| <p>Plan your use of application of number skills and make a reasoned selection of methods for achieving the quality of outcomes required.</p> | <p>Draw up a plan for achieving your goal(s) that:</p> <ul style="list-style-type: none"> <li>• divides the work into stages;</li> <li>• identifies interim targets;</li> <li>• gives a time schedule and deadlines for each stage.</li> </ul> <p>Keep notes and/or a log to record changes to your plans, and reasons for them.</p>   |
|   | <p>Take into account factors that may affect your plans (e.g. options, sequence of work, resources, level of expertise needed, health and safety, social, ethical and moral issues, other</p>  |

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|   | <p>commitments).<br/>         Select, giving reasons for your choice, the methods you are going to use to achieve your goals and targets.</p>  |
| <p><b><i>Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving: a) deductive and inferential reasoning; b) algebraic modelling.</i></b></p> |  |
| <p>Evaluate information from different sources, developing alternative lines of enquiry where appropriate.</p>  | <p>Use search strategies effectively (e.g. to assist in finding, organising and comparing information).<br/>         Establish and use criteria to evaluate and select information.</p>  |
|   | <p>Make judgements (using criteria and feedback from others) on the reliability and quality of the information.<br/>         Explore different lines of enquiry (e.g. use and evaluate critically different approaches, or different models to make predictions and test alternative hypotheses).<br/>         Keep an accurate record and note your progress towards your goals.</p>  |
| <p>Carry out calculations to appropriate levels of accuracy, drawing on a range of techniques to suit your purpose.</p>   | <p>Summarise the methods and techniques you used to help you achieve your goals (e.g. in using and justifying numerical, graphical or algebraic approaches).<br/>         Choose appropriate ways of recording and calculating, including using appropriate software packages such as spreadsheets (e.g. in making measurements; generating, reading and interpreting graphs, charts, drawings and diagrams; organising and classifying data; developing and using mathematical models; using proportion and scaling; working with formulae and equations; working with probability; reasoning and making deductions).</p> |
|   | <p>Use feedback from others and self-assessment to check your skills development.</p>  |
| <p>Monitor and critically reflect on your use of application of number skills, adapting your strategy as necessary to produce the quality of outcomes required.</p>   | <p>Establish and use criteria to help you monitor your progress and critically evaluate your results to check that they are meeting your requirements.</p>   |

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|  | <p>Identify the choices you have made in achieving your targets, and judge how effective they have been (e.g. in their impact on the quality of your work). Reflect on your progress and performance, identifying any changes you have made to your plan and the reasons for them.</p>  |
| <p><b><i>Evaluate your overall strategy and present the outcomes from your work, including use of charts, graphs and diagrams to illustrate complex data.</i></b></p>  |   |
| <p>Interpret results and identify the main findings from your work, including evidence to support your conclusions.</p> <p>Present information effectively, selecting appropriate methods to clearly illustrate findings, and explain results in relation to your hypotheses.</p> <p>Assess the effectiveness of your strategy, including factors that had an impact on the outcomes, and identify ways of further developing your application of number skills.</p> | <p>Identify the requirements for presenting your work.</p> <p>Examine generalisations and solutions, identify reasons for accepting or rejecting hypotheses, interpret predictions of models bearing in mind the assumptions on which the models were based. Identify the audience(s) for your work and make judgements about how best to present your information.</p> <p>Integrate different types of information to ensure consistency in the display of text, numbers and images. Give reasons for the style and format you chose.</p> <p>Explain results and relationships, including patterns, trends and possible consequences. Explain why particular lines of enquiry were followed and others rejected.</p> <p>Check accuracy in terms of content and conventions (e.g. spelling, grammar, punctuation, labelling of images, charts, diagrams and graphs, word limit, layout, style of references). Proof read and amend your work so that it makes sense.</p> <p>Use criteria to judge the quality of your presentation.</p> <p>Assess the quality of your application of number work by making connections between criteria, feedback comments and your own judgement of your performance. Identify factors that affected the production and presentation of your</p> |

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|  | <p>work (e.g. availability and quality of resources, working environment, level of your expertise).</p>   |
|  | <p>Assess the effectiveness of your strategy for developing your skills. What worked well and what worked less well?</p>  |
|  | <p>Identify those factors that had an impact on the outcomes (e.g. availability of resources, level of your expertise, precision of measurements or data, limitations of models).</p> |
|  | <p>Relate your original goals, targets and criteria to your progress so far and to possibilities for future development.</p>  |