KS4 – IT project management

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## Unit introduction

This unit will cover all aspects of project management and use a project brief scenario called Delicious Desserts to support the teaching and learning of the unit.

Project management has numerous transferable skills for learners, from simple time management to structured project management techniques. These skills will be invaluable for learners in their future careers. It will support team building, enable learners to become more organised, and allow them to reflect on any work completed.

Prerequisite

Learners will need to have completed the Spreadsheets unit of work to be able to access all the content of this unit.

## Overview of lessons

| **Lesson** | **Brief overview** | **Learning objectives** |
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| Lesson 1: What is project management?  | Project management will decide the success or failure of a project. If you have ever seen the apprentice you might have seen examples of ineffective project management. This lesson will introduce learners to the concept of project management, the methods that can be used and why it is important to employ effective strategies. | * Define the term project management.
* Identify why the use of project management is important.
* Select appropriate project management methodologies.
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| Lesson 2: Initiate a project  | Project management methods follow a project life cycle that includes four or more stages, including initiation, planning, execution, and evaluation. Lessons 2 to 7 will use the Delicious Desserts project brief to support the teaching of each stage, and will use the critical path method. The first stage will be split over two lessons. Lesson 2 will focus on the first stage (initiation), which includes:* Analysis of the brief
* Identification of user requirements
* Identification of project constraints
* Risk assessment
* Objective setting

It is advisable for learners to have both physical and digital folders to collate work completed in the following lessons, as they will be referring back to previous work throughout the development of their project management knowledge and understanding. | * Analyse a project brief
* Identify the user requirements of a project
* Evaluate the constraints of a project
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| Lesson 3: Initiate and plan a project  | This lesson is a continuation of Lesson 2, so learners will need the feasibility report started in the previous lesson to complete the user requirements table.This lesson will discuss the creation of SMART goals (objectives) and will introduce the concept of integration and iteration of stages within a project. Iteration of stages is particularly relevant if an agile or hybrid method is used, as the success of these relies on stages being repeated.  | * Identify objectives relating to a project
* Develop objectives into SMART goals
* Define ‘iteration’ and ‘interaction’
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| Lesson 4: Tools for planning  | In this lesson, learners will begin to understand the different methods used for planning a project, and will focus on digitally available tools and analyse their advantages and disadvantages. The use of a computer is required. | * Create a Gantt chart
* Create a PERT chart
* Evaluate planning tools
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| Lesson 5: Carry out a project part 1  | This lesson will focus on the integrated system for the Delicious Desserts project. It will encourage learners to draw on prior learning of spreadsheets and develop an understanding how a workbook (all the sheets relating to a business in one file) can be effective in a business because all of the data required is in one place, rather than having to move between different sheets (separate files) that are not integrated.There is a lot to be completed in the lesson, so there is a need to maintain pace. Using a step-by-step guide and guidance from the teacher, the learners will initially edit the structure of a provided workbook and then apply functions and formulas to each sheet in the workbook. Testing of this will be carried out in Lesson 7, when learners look at stage 4 of the project life cycle: evaluation. It is suggested that the solution is studied so that the learners become familiar with the workbook. | * Create an appropriate spreadsheet for a project
* Evaluate a spreadsheet
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| Lesson 6: Carry out a project part 2  | This lesson will complete the execution stage of the project life cycle. The activities to be completed will be the visual components asked for in the project brief. These are the digital dessert selection tool and the two advertising posters. Learners have already developed plans for the posters but not the digital dessert selection tool, so the plan for this will be provided in this lesson. | * Follow a design plan
* Create visual media
* Assess the effectiveness of planning for the visual elements of a project
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| Lesson 7: Evaluate a project  | An important stage of the project life cycle is the evaluation stage, at which the completed project is evaluated overall. It will analyse how successful each stage of the project has been and indicate areas for development for future projects. For this project, all testing of products will be carried out during this lesson. However, testing is usually carried out at the execution stage so that the person in charge of creating and developing the product knows that it is a complete product. This will be stressed in the lesson and has been mentioned in previous lessons. | * Test the effectiveness of developed products
* Evaluate the overall success of a completed project
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| Lesson 8: Start your own project  | This is the first of two and a half lessons (2 hours 30 minutes) in which learners will apply what they have learnt about the project life cycle to a small project. They will initiate, plan, execute, and evaluate a project for a business called Team Outdoor Obstacles. The requirements of this project will be similar to Delicious Desserts. However, the spreadsheet element will be much simpler and require the insertion of formula on a sales sheet.If necessary, omit some of the execution of the project so that learners can complete the project in the given time, or spread these lessons over four lessons if your setting allows. | * Identify the user requirements of a project
* Evaluate the constraints of a project
* Develop documentation for the first stage of a project
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| Lesson 9: Execute your own project  | This lesson is a continuation of the Team Outdoor Obstacles project, for which the learners have now completed the initiation stage and began the planning stage. It is expected that in this lesson learners will complete the planning and the execution stage of the project, leaving the evaluation and summative assessment for the last lesson, Lesson 10.Note, as mentioned in Lesson 8, that there is a lot of work to complete over the two lessons, so it may be necessary to either omit some of the execution stage or extend the lessons over four in total if your setting allows.  | * Create planning documents for a project
* Create project products
* Develop testing documentation
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| Lesson 10: Evaluate your project  | This is the final lesson for the Team Outdoor Obstacles project and the final lesson for this unit of work. Learners will be completing the final stage of the project life cycle by creating a final evaluation of their work. They will also take an assessment of the topic. | * Evaluate a completed project
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## Progression

This unit progresses learners’ knowledge and understanding of project management in IT.

Please see the learning graphs for this unit for more information about progression.

## Curriculum links

[**National curriculum links**](https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study/national-curriculum-in-england-computing-programmes-of-study)

* Develop their capability, creativity, and knowledge in computer science, digital media, and information technology
* Develop and apply their analytic, problem-solving, design, and computational thinking skills

## Assessment

### Summative assessment

* Please see the assessment question and answer documents for this unit.

## Subject knowledge

### Online training courses

* [Teach Computing in Schools: Creating a Curriculum for Ages 11 to 16](https://rpf.io/teachcomputing)

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