

Employer Set Project Task 1 - Research a strategy

Teacher guidance

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Employer Set Project (ESP) task 1 – Teacher guidance

The aim of this sequence of lessons is to allow learners to develop the skills needed for their ESP. Through these lessons, learners can develop competencies in English, presenting ideas and information, summarising information and ideas, and synthesising information.

The scientific context of the ESP encompasses multiple occupational areas, some of which learners might not have direct knowledge of. In this sequence of lessons, topics such as water quality, nanotechnology and plastic waste are used as examples, but the skills developed can be applied to any scientific setting. The same activities outlined in the sequence could be incorporated into lessons covering the core content of the science specifications. Suggestions for suitable topics where solutions to problems could be researched include:

- B1.33 The relationship between the atomic structure and the physical and chemical properties of metals.
- B2.5 How mechanisms of enzyme action allow them to catalyse a wide range of intracellular reactions.
- B2.12 The comparative amounts of energy produced by different respiratory substrates (lipids, proteins and carbohydrates).
- B2.25 The advantages of using a catalyst in industrial reactions.
- B2.34 The effect of compression when storing gases in cylinders.

To prepare for ESP task 1, learners will need to develop core skill 2.1 (CS2.1). This is the skill that outlines good research practice. During the sequence of lessons, learners will learn how to improve their research skills by considering the quality of sources of information, reading for purpose (skimming and scanning), practise using a recognised referencing system and writing a structured review.

Learners have the opportunity to demonstrate CS2.1 in ESP task 1 by using the brief, conducting a literature review of independently selected scientific literature (website list) and presenting this as an introduction, a main body and a conclusion. On completion of the literature review, learners complete an entry in the project diary.

The project diary is an aspect of the ESP that runs through all the tasks. During the ESP assessment, learners are allocated 30 minutes to record a reflection on how they have found the task. They will use the project diary to inform their reflective evaluation in task 6.

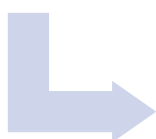
Scientists and technicians working in science and science-related organisations must have a good understanding of core science concepts. A strong grasp of these concepts will enable learners to use and apply this knowledge and understanding in vocational contexts when studying other sections of this specification.

The flowchart below shows the skills your learners will develop during the sequence of lessons. This sequence reflects the order in which to approach ESP task 1 during the assessment.

Remind learners to read and consider all aspects of what the brief asks them to do.



Direct learners to use the list of websites provide. Encourage them to judge the relevance and reliability of each, and record this information on the template provided.



Learners should employ their skimming and scanning skills to select information relevant to the brief.



Task 1 has to be completed before learners start task 2 (plan a project). Learners will use their literature review to produce a plan for investigating the issue identified in the brief.

Guide learners through the formative assessment to ensure each paragraph of their review focuses on one point and provides evidence linked to the brief (PEEL).



Instruct learners on the use of Harvard referencing style. Highlight the purpose of this for the task and its wider use.

Use this flowchart to remind your learners of the sequence of skills needed to complete the literature review. (Task 1 – Research a strategy).

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