

Skills Exercises

AO2 Application

Cambridge International AS & A Level Psychology 9990

For examination from 2024



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Introduction

Cambridge International AS & A Level Psychology attracts a variety of learners from many different backgrounds. For some learners Psychology is a new subject and an opportunity to explore an area of study that interests them, while developing a set of transferable skills. Other learners have previously studied Psychology and are looking to continue developing their knowledge of the subject. Either way, the study of Psychology allows learners to challenge relevant issues in psychological theory and research and gain the knowledge needed to understand how psychology can be applied to improve people's lives and society in general.

Skills and why they are important?

Skills are the key to success. The performance of candidates in Cambridge International AS & A Level Psychology exams have shown a range of areas where improvement would be helpful. These areas of improvement tend to centre around the assessment objectives (AOs) of the course and we have addressed these AOs in a series of exercises and activities.

- AO1 Knowledge and Understanding
- AO2 Application
- AO3 Analysis and evaluation

Skills Exercises include topic specific exercises with suggested classroom activities and teaching approaches, such as group work and class discussion. Worksheets and possible answers are available for each activity. This resource focuses on some of the syllabus content and does not cover all possible aspects of the examinations.

How will these skills be developed?

Skills Exercises booklets aim to help learners develop skills in:

- using knowledge and understanding of terminology, studies, theories and concepts to answer examination questions
- applying psychological knowledge and understanding to a range of scenarios from everyday life and theoretical scenarios
- using skills of analysis and evaluation to recognise strengths and weaknesses of evidence and reach conclusions about arguments based on evidence.

Skills Exercises provide suggestions so you can have confidence that the materials you prepare and use in the classroom are building skills and resilience in your learners. This document should be used alongside the other teaching and learning resources provided on the [School Support Hub](#)

AO2 Application

Application requires learners to apply their knowledge and understanding of psychology to a range of familiar and unfamiliar scenarios.

This can mean using words or using other forms of presentation to support or develop psychological arguments.

Application of psychological knowledge and understanding is also essential for using existing AO1 knowledge and understanding to plan an investigation.

Exercise 1: Applying psychology to scenarios

Learners should be able to recognise how psychological studies across different areas in psychology can be applied to scenarios other than the ones they have studied as core and key studies.

This is to help them understand the relevance of psychology in contemporary society.

It can be challenging for learners to apply their knowledge and understanding to new situations and think creatively.

Activity 1: Hypothesis writing

Learners are required to write and apply knowledge of null hypotheses and alternative directional (one-tailed) and non-directional (two-tailed) hypotheses.

It is important that learners can distinguish between the different types of hypotheses as well as write their own, fully-operationalised hypotheses for novel scenarios.

Give learners **Worksheet 1: Hypothesis writing** to help learners practise differentiating between the types of hypotheses. Go through the worksheet with learners to check they understand what is required of the task. For this activity learners may work individually or in pairs.

Use **Worksheet 1: Hypothesis writing answers** and ask learners to peer assess each other's work. Lead a class discussion to develop learners' understanding, ensuring any misconceptions are addressed.

Extension activity: learners practise writing their own hypothesis using the stems provided as structured support.

Activity 2: Choosing samples

One of the first steps in planning research is to choose a sample.

Learners need to be able to apply their knowledge of sampling techniques to a novel research situation. This means identifying a suitable sample from a target population.

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Learners must then decide which features of the sample would be appropriate and provide detail the technique that could be used to obtain their sample.

Using **Worksheet 2: Choosing samples**, learners can complete the task to develop the application skills of applying their knowledge and understanding of samples and sampling technique to unfamiliar situations. Go through the worksheet with learners to check they understand what is required of the task. For this activity learners may work individually or in pairs.

Use **Worksheet 2: Choosing samples answers** and ask learners to peer assess each other's work. Lead a class discussion to develop learners' understanding. Ask learners to discuss their answers in groups and add any missing information to their responses. Ensure any misconceptions are addressed.

Activity 3: Explain in context

Learners should understand how context is essential to make an answer specific to the psychology being investigated.

Give learners an everyday scenario to which they can apply their knowledge and understanding in order to make proposals.

The outlines in **Worksheet 3: Explain in context** can be used or replaced with another scenario from everyday life. For each question learners pick the best answer which would be most in context. Go through the worksheet with learners to check they understand what is required of the task. For this activity learners may work individually or in pairs.

Use **Worksheet 3: Explain in context answers** and ask learners to peer assess each other's work.

Lead a class discussion and discuss the strengths and weaknesses of each answer, ensuring any misconceptions are addressed.

Extension activity: learners add another potential, contextual answer.

Exercise 2: Using data

Psychologists must think carefully about the ways in which they collect, present, and interpret research data.

Application requires that learners use their knowledge and understanding of psychological data to apply it to a range of scenarios.

The following activities focus on developing the skills of interpreting data through examining quantitative scores, making substantiated judgements about data collection choices, and practising the ability to present data in suitable formats.

Activity 1: Interpreting data

Learners must be able to both present and interpret data in the form of tables.

It can be challenging without a visual representation like a graph for learners to notice patterns, similarities, and differences.

For this reason, it is useful to practise making interpretations of data in tables, such as that presented in **Worksheet 4: Interpreting data**. Learners study the data and complete the questions. Go through the worksheet with learners to check they understand what is required of the task. For this activity learners may work individually or in pairs.

Use **Worksheet 4: Interpreting data answers** and ask learners to peer assess each other's work.

Lead a class discussion going through the reasons for the findings, ensuring any misconceptions are addressed.

Extension activity: this exercise can be extended to plot the data shown in the table on a chart.

Activity 2: Making appropriate choices

Learners must be able to apply their knowledge of research methods to novel research situations.

This includes making choices about what would be the most suitable approach to take in terms of the methodology, data collection and data analysis.

Use **Worksheet 5: Making appropriate choices** to get learners thinking about the choices psychologists make when designing studies. Go through the worksheet with learners to check they understand what is required of the task. For this activity learners may work either individually or in pairs.

Use **Worksheet 5: Making appropriate choices answers** and ask learners to peer assess each other's work. Lead a class discussion to discuss the rank orders learners have chosen and explore their justifications for each, ensuring any misconceptions are addressed.

Activity 3: Presenting data

Learners are expected to be able to present novel research data.

This can take different forms: in tables, bar charts, histograms, or scatter graphs.

This allows learners to apply their knowledge and understanding of different data analysis to information that they are unfamiliar with.

Learners complete **Worksheet 6: Presenting data** to develop their skills in accurately presenting data with which they are unfamiliar in the different required formats. Go through the worksheet with learners to check they understand what is required of the task. For this activity learners may work either individually or in pairs.

Use **Worksheet 6: Presenting data answers** and ask learners to peer assess the graph or table produced, considering the following questions:

- Are all axes / columns / rows labelled?

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- Have units been included where needed?
- Is there a suitable title?
- Has data been plotted or recorded correctly?

Lead a class discussion to develop learners' understanding of presenting data, ensuring any misconceptions are addressed.

Exercise 3: Planning investigations

Learners need to understand how to plan a study.

For examination questions that require planning, learners will apply their knowledge of the research methods, practical issues, and methodological concepts to plan an investigation.

Some aspects of the investigation are provided as part of the question whilst the other aspects of the investigation must be designed by the learner.

Activity 1: Psychological context

Learners need to understand how different contexts can lead to different types of responses.

Give learners two general psychology contexts which have significant differences.

The contexts in **Worksheet 7: Psychological contexts** can be used or replaced with other contexts. Learners must identify the differences between each of the contexts. Go through the worksheet with learners to check they understand what is required of the task. For this activity learners may work either individually or in pairs.

Use **Worksheet 7: Psychological contexts answers** and ask learners to peer assess each other's work. Lead a class discussion about the different contexts and how each requires different planned investigations, ensuring any misconceptions are addressed.

Activity 2: Designing for replicability

Learners are expected to be able to plan for specific features in sufficient detail for replication.

Including a greater amount of detail increases the chances that the study they have planned should produce the same results, if repeated exactly.

Learners can develop the level of detail required for applying their knowledge and understanding to planning tasks using the structured support in **Worksheet 8: Designing for replicability**. This worksheet can be adapted for any scenario and/or type of research method for learners at A Level. Go through the worksheet with learners to check they understand what is required of the task. For this activity learners may work either individually or in pairs.

Use **Worksheet 8: Designing for replicability answers** and ask learners to peer assess each other's work. Lead a class discussion about the importance of replicability in planning studies and the ways in which other aspects of their plan can be made replicable, ensuring any misconceptions are addressed.

Activity 3: Designing experiments

Learners must be able to apply their knowledge and understanding of variables, research design and controls to a novel research situation, when planning experiments.

Learners need practise to identify and operationalise independent and dependent variables, as well considering how to apply their knowledge of control of variables.

They must also be able to use their knowledge of effective research design to select an appropriate experimental design.

Worksheet 9: Designing experiments can be adapted for AS Level or any of the Specialist Options at A Level to develop their AO2 Application skills.

Learners fill in the blanks for Questions 1, 2 and 3. Go through the worksheet with learners to check they understand what is required of the task. For this activity learners may work either individually or in pairs.

Use **Worksheet 9: Designing experiments answers** and ask learners to peer assess each other's work. Lead a class discussion and go through the level of detail required to operationalise variables for replicability. Consider some common participant and situational variables which must be controlled in experiments to ensure validity. Ensure any misconceptions are addressed.

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