# Scheme of work: Cognition and behaviour

Introduction

This SOW offers a route through the GCSE Psychology (8582) specification.

It covers the specification in a logical order and suggests possible teaching and learning activities for each section of the specification.

The specification references are shown at the start of each section, whilst the learning outcomes indicate what most students should be able to achieve after the work is completed.

Timings have been suggested but are approximate. Teachers should select activities appropriate to their students and the curriculum time available.

The order is by no means prescriptive and there are many alternative ways in which the content could be organised.

The resources indicate those resources commonly available to schools, and other references that may be helpful. Resources are only given in brief and risk assessments should be carried out.

Assumed coverage

This scheme of work assumes a 66 week course over two years: 36 weeks in Year 1 and 30 weeks in Year 2. This gives a total teaching time of 132 hours. This scheme of work does not deal with revision or assessments however sufficient time has been left for these to be covered.

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## Cognition and behaviour

## Lesson 1

## Specification reference

## 3.1.1 Memory: Processes of memory: encoding (input) storage and retrieval (output).

**Specification content**

* Different types of memory: episodic memory, semantic memory and procedural memory.
* How memories are encoded and stored.

**Learning outcomes**

* Understand the processes of memory: encoding (input), storage, and retrieval (output).
* Understand the different types of long-term memory: episodic, semantic and procedural.
* Understand how memories are encoded and stored.

**Possible teaching and learning activities**

* Introduce the processes of memory with video (suggestion in resources section).
* Online memory tests can be a fun way to get students engaging with the topic
* Compare the way memory works in computers and humans.
* Students draw a diagram of processes of memory that includes definitions of key terms.
* Students work in pairs to create real examples of how memories are encoded and stored to add to their diagram.
* Introduce students to the different types of memory. Give students a list of examples and individually decide whether they are episodic, semantic or procedural.
* Students work in pairs to design a short memory test with questions that will require those taking the test to use each of the different types of memories. Then combine with another pair to take each other’s tests.
* Students act out different scenarios (e.g. taking a school trip to France) in which they demonstrate each of the three types of memory being encoded or retrieved.
* Students write down their first ever memories and write whether they are episodic, procedural or semantic memories. This can be used to create a wall display.

**Resources**

* Introduce the processes of memory with this [short video](https://www.youtube.com/watch?v=KXx_LXNjetU) which looks at what memory is. (2 minutes).
* [Online memory tests](https://practicalpie.com/free-memory-test/) can be a fun way to get students engaging with the topic. This website has a range of memory tests that could be used in the lesson.

**Lesson 2**

## Specification reference

* 3.1.1 Memory: Structures of memory.
* 3.1.4 Research methods: Designing research: Case studies.

**Specification content**

* The multi-store model of memory: sensory, short term and long term.
* Features of each store: coding, capacity, duration.
* Case studies.

**Learning outcomes**

* Understand and explain the multistore model of memory.
* Understand the features of each memory store: coding, capacity, duration.
* Understand what a case study is used for and the strengths and weaknesses of case study including the types of research for which they are suitable.

**Possible teaching and learning activities**

* Students get into groups of 3-4, stick a photocopy of the Multistore model on the wall outside the classroom. Students go out and look at the model one at a time for one minute and need to draw the model once back in the classroom from memory.
* Go through the model and get students to compare their drawing with the model.
* Give each student a blank diagram of the multi-store model. Students add in details about each of the stores (including definitions of key terms) and the coding, capacity and duration of each store.
* Watch a video on the multi-store model (suggested one in the resources section).
* Students get into pairs, and each write one evaluation of the multistore model each. Students then swap and explain their evaluation to their pair. Share as a class.
* Introduce students to the case of HM. Students describe with pictures how this case study supports the multistore model of memory. Link this back to previous lesson on different types of long-term.
* Define case study and evaluate the case study method in pairs.

**Resources**

* Video: The multistore model of memory is summarised in [this short video](https://www.youtube.com/watch?v=i-MScuZTW7M&t=50s) (first 5 minutes).
* Video: The case study of HM as support of the multistore model of memory [short video](https://www.youtube.com/watch?v=1I8FjvxphrA) (3 minutes).
* Read an article: [The case study of HM](https://www.themantic-education.com/ibpsych/2019/01/29/key-study-hms-case-study-milner-and-scoville-1957/) (8 minutes).

**Lesson 3, 4 and 5**

## Specification reference

* 3.1.1 Memory: Structures of memory.
* 3.1.4 Research methods: Designing research, planning and conducting research and descriptive statistics.

**Specification content**

* Primacy and recency effects in recall: the effects of serial position.
* Murdock’s serial position curve study.

**Learning outcome**

* Understand primacy and recency effects and the effects of serial position.
* Understand and be able to evaluate Murdock’s serial position curve study.
* Understand key concepts from research methods used in designing and planning research.

**Possible teaching and learning activities**

* Carry out a version of Murdock’s study into serial position. There is a web link in the resources section.
* Read list of 30 words for participants to remember. Then, after they write down all the words they can recall, see how many were remembered from the beginning, middle and end of list.
* Collect the class results from the above experiment and display them so that students can individually draw a graph of the results. Use these to introduce the concept of a serial position curve.
* Students draw the serial position curve of the class results and define what is meant by the primacy and recency effect. Watch a video explaining the serial position effect and primacy and recency
* Murdock’s serial position curve study is a key study so students could create a mind map of this study or create a comic strip on the computer.
* Use Murdock’s study to introduce key terms and research methods concepts such as hypothesis, IVs and DV, laboratory experiment.
* Use class results from Murdock’s study to introduce key terms and data handling concepts such as graphs, mean, median, mode and range.
* As a class evaluate Murdock’s study and the research method (lab experiment) used by Murdock because of synoptic questions.

**Resources**

* Website: A website that can be used in creating a comic strip named canva: [link to website](https://www.canva.com/create/comic-strips/).
* Website: Serial position curve studies to create an experiment: Primacy and recency: [link to website](https://www.simplypsychology.org/primacy-recency.html).
* Video: Watch a video on the [serial position effect and primacy and recency](https://www.bing.com/videos/riverview/relatedvideo?&q=murdock+serial+position+curve+study&&mid=9E8B7774C4CFDF65D1929E8B7774C4CFDF65D192&&FORM=VRDGAR) (8 minutes).

**Lesson 6, 7 and 8**

## Specification reference

3.1.1 Memory: Memory as an active process.

**Specification content**

* The Theory of Reconstructive Memory, including the concept of ‘effort after meaning’.
* Bartlett’s War of the Ghosts study.

**Learning outcomes**

* Understand and be able to describe and evaluate the theory of reconstructive memory.
* Understand and be able to evaluate Bartlett’s War of the Ghosts study.
* Understand the concept of ‘effort after meaning’.
* Understand key concepts from research methods topic.

**Possible teaching and learning activities**

* Introduce the idea that our memories are not an exact copy of what happened with a short video.
* PowerPoint slide showing either a collection of related items (eg things you would see in an office) or an image of an actual location (eg office interior).
* Give students 30 seconds to look at it. Then ask them to list everything they saw. How many other typical items not actual in the original have been recalled? Why do students think this happens?
* Go through the concept of effort after meaning and students then create a poster on the reconstructive model and draw 2 pictures that demonstrate 2 evaluations: Such as its application to eyewitness testimony.
* Carry out a version of the war of the ghost’s study. Students play a secret message game and whisper the War of Ghosts story to each other. The last person has to say out loud the version they were told.
* Get students into groups of 3. One student is given the method to summarise, another student the results and third student the aim and conclusion. Students teach each other and create their write up in small of the study.
* Mind map the evaluation of Bartlett’s study as a class. Go through how these are different to the evaluations of the reconstructive theory.
* Use Bartlett’s study to introduce key terms and research method concepts such as target population and extraneous variables.
* At the end of teaching this area of memory give students a list of evaluations for the reconstructive theory of memory and the Bartlett’s war of the ghost’s study. Students decide whether they could be used for the study or the theory. See the examiner’s report 2022 and examples of exam questions.

**Resources**

* Website explaining the [office schema study](https://www.themantic-education.com/ibpsych/2021/10/15/key-study-the-office-schema-study-brewer-and-treyens-1981/) and ideas for office items that can be used in the starter experiment.
* Video: [can you trust your memory?](https://www.youtube.com/watch?v=lkvOMt34hAo) to introduce the theory of reconstructive memory (3 minutes).
* Website: [War of the ghosts story description](https://www.oxfordreference.com/display/10.1093/oi/authority.20110803121021936) which can be used in a war of the ghosts story whisper.
* Website page: [examiners report 2022](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2022/june/AQA-81821-WRE-JUN22.PDF): Page 2. This details the importance of reading the question in relation to Question 2: Briefly evaluate the reconstructive theory of memory (2 marks) carefully.
* Website: Exam question examples: [2019 exam paper](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2019/june/AQA-81821-QP-JUN19.PDF): Question 5 into the evaluation of reconstructive memory and [2021 exam paper](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2021/november/AQA-81821-QP-NOV21.PDF): Question 5 into the evaluation of Bartlett’s war of the ghosts study.

**Lesson 9 and 10**

## Specification reference

3.1.1 Memory: Memory as an active process.

**Specification content**

Factors affecting the accuracy of memory, including interference, context and false memories.

**Learning outcomes**

* Understand factors such as interference, context and false memories and the effect they have on the accuracy of memory.
* Understand key concepts from research methods topic.

**Possible teaching and learning activities.**

* Experiment demonstrating interference. Split the class into two groups – one has a list of words to remember followed by another list to remember, the other has to remember the first list only and then has to draw a picture.
* Class discussion: examples where context affects memory i.e. exam hall: revise in exam conditions, going upstairs and forgetting what you went upstairs for and going back down stairs and remembering.
* Experiment demonstrating context – students learn a list of words, then half of students recall in a different room and the others recall in the same room.
* Use research you have carried out in class or the Loftus ‘mall study’ to introduce key terms and research method concepts such as experimental designs and ethics.
* Introduce the idea of false memories with a short video.
* Students create a table which includes a description of each factor that effects memory. This can include how the factor affects memory (for example with false memories the accuracy of memory is reduced because a person imagines false information). Also, the table can include a brief description of the research which supports the factor and why with a picture.
* Show a summary video of how these factors affect the accuracy of memory.
* Divide students into groups of 3-4 and give each group one of the factors that affect memory to design a study. Show students a list of the types of questions that are asked in the design a study questions after making a list from past papers. Students pick 4 points out of these including writing a hypothesis. In their groups students design the study into the factor and then swap with another group to answer it.

**Resources**

* Video[: How to implant false memories](https://www.youtube.com/watch?v=il0u2s_WGXA) to introduce the effect that false memories have on the accuracy of memories (first 4 minutes).
* Video: [Memory as an active process](https://www.youtube.com/watch?v=hMacKPeTnRY&list=PLUQ8QDGvbAwhofjoeWA9kpLp6Jyd5EzZw&index=3): (3 minutes) summary of all 3 factors affecting accuracy (from 5 minutes on wards).
* Website: AQA: [Psychology past papers](https://www.aqa.org.uk/subjects/psychology/gcse/psychology-8182/assessment-resources?f.Resource+type%7C6=Question+papers&f.Component%7C7=Paper+1&f.Modified+papers%7CModified=Standard): Design a study style question bullet points: 2022: Question 4, 2021: Question 21, 2020: Question 7 and 2019: Question 13.

**Lesson 11**

## Specification reference

* 3.1.2 Perception: Sensation and perception.
* 3.1.4 Research methods: Designing research, planning and conducting research.

**Specification content**

The difference between sensation and perception

**Learning outcomes**

* Understand the concepts of sensation and perception.
* Explain the difference between sensation and perception.
* Understand key concepts from research methods topic.

**Possible teaching and learning activities**

* A good starter to this topic is a video on how our eyes often play tricks on us. An example of a video you could use is in the resources section.
* Students draw up a table with all the different senses and examples of the types of information that we receive through each of them.
* In pairs, students design an experiment to test if one sense can influence our perception of the information received from another sense. This is probably easiest to do with vision and taste or smell and taste.
* Homework: students could go on to carry out their experiments. This could either be one shorter piece of homework, or a longer piece of homework in which they work on all the elements of designing an experiment and use some of the required mathematical skills to write up their results.
* Introduce and explain the concepts of sensation and perception or show a video.
* Students draw a picture to demonstrate the difference between sensation and perception such as smelling a cup of coffee or tasting a cake and as a class discuss the difference between the two terms.

**Resources**

* Topic introduction video: [10 things you didn’t know about your eyes](https://www.youtube.com/watch?v=GMGSw3GDyJQ) (3 minutes).
* Video: [sensation and perception: Information processing in the brain](https://www.youtube.com/watch?v=0SErqVGcAR0) (2 minutes).

**Lesson 12**

## Specification reference

3.1.2 Perception: Visual cues and constancies.

**Specification content**

Binocular depth cues: retinal disparity, convergence.

**Learning outcomes**

* Understand what a binocular depth cue involves.
* Understand the binocular depth cues of both retinal disparity and convergence.

**Possible teaching and learning activities.**

* Show students how they experience convergence when they keep both eyes fixed on an object (such as their fingertip) getting closer and closer to their nose.
* Show students how they experience retinal disparity when they close one eye and then line up a pencil with a straight vertical ‘line’ such as the edge of a door. When they change the eye that is open, they will see the pencil ‘jump’.
* Introduction to topic that helps students to see how we have different depth perception with two eyes than with one. Show a video on convergence and disparity and get students to write down 5 questions and their answers while watching the video. Get out the mini whiteboards and get students into pairs and get them to test each other out on the content of the video and what they have been learning.
* Students draw a picture of two eyes with enough space in each to explain what retinal disparity and convergence means. Get students to draw each concept and the definition of a binocular depth cue.

**Resources**

* Image: [An Image which shows convergence and retinal disparity](https://www.bing.com/images/search?view=detailV2&ccid=FzGPxC2x&id=C3B06640E0EF0AFCB54F97FECF61FBFB08002DC3&thid=OIP.FzGPxC2xdkFlVfbm9YehCgHaDr&mediaurl=https%3a%2f%2fth.bing.com%2fth%2fid%2fR.17318fc42db176416555f6e6f587a10a%3frik%3dwy0ACPv7Yc%252f%252blw%26riu%3dhttp%253a%252f%252fwww.visioncdl.com%252fImagesDRP%252fexamples%252fBinocular_2013.jpg%26ehk%3dA%252bAqz9n4e5%252bx%252bSTsl%252fm01TvAKOw1lHyU3DZRo%252bXTXyM%253d%26risl%3d%26pid%3dImgRaw%26r%3d0&exph=472&expw=950&q=binocular+depth+perception&simid=608054635338168632&FORM=IRPRST&ck=87E76BC15584BC991E300B4132414BDC&selectedIndex=58&ajaxhist=0&ajaxserp=0).
* Video: [Depth perception experiment](https://www.youtube.com/watch?v=_a43uvZBRO8) (2 minutes).

**Lesson 13**

## Specification reference

3.1.2 Perception: Visual cues and constancies.

**Specification content**

Monocular depth cues: height in plane, relative size, occlusion and linear perspective.

**Learning outcomes**

Understand the monocular depth cues of height in plane, relative size, occlusion and linear perspective.

**Possible teaching and learning activities**

* Students define the term monocular depth cue.
* Go through each of the monocular depth cues and take students out on a walk around school to find examples of the cues. Students then draw a picture with as many of the monocular cues they have collected from around the school. Students then add labels with definition of each cue.
* Show a video of the different binocular depth cues – and arrange students into groups of 3 or 4. Give students some sticks and card and get students to work in pairs to design their own monocular depth cues or another way that our perception can be tricked by manipulating one of the monocular depth cues. Students can then present them to the class.

**Resources**

* Video: [Upset your perception](https://www.youtube.com/watch?v=TeyL0tDXQw0) of depth (I minute). This can be used to help students design their own monocular depth cues that trick the mind.
* Article: [All about monocular depth cues](https://www.healthline.com/health/all-about-monocular-cues-and-how-we-use-them) and how we use them (5 minute read and some useful pictures).

**Lesson 14 and 15**

## Specification reference

3.1.2 Perception: Gibson's direct theory of perception – the influence of nature.

**Specification content**

* Gibson's direct theory of perception – the influence of nature.
* The real world presents sufficient information for direct perception without inference.
* Role of motion parallax in everyday perception.

**Learning outcomes**

* Understand and be able to evaluate Gibson's direct theory of perception.
* Understand motion parallax.

**Possible teaching and learning activities**

* Introduce and explain Gibson's direct theory of perception or use a video.
* Explain what is meant by motion parallax. Show the students a video to help them understand the concept or get them to role play being on a train or in a car.
* Introduce students to other cues from nature, such as texture gradient and colour gradient.
* Class discussion: do you agree that the real world presents sufficient information for direct perception without inference? Why/why not?
* Give students a summary of Gibson’s theory and get students to write a summary in 100 words.
* Create a gap fill for students with the 3 main evaluations including reference to why the theory supports nature.
* Homework: students to bring in examples of visual illusion for the next lesson.

**Resources**

* Video: [direct perception](https://www.youtube.com/watch?v=JF0ArkVDrT8&t=186s) (4 minutes). This can be used to introduce Gibson’s theory.
* Video: [Motion parallax](https://www.youtube.com/watch?v=RxO3HMCjfQs) (2 minutes) shows real examples of motion parallax while driving in a car.
* A summary of Gibson’s theory can be found on this [online learning college](https://online-learning-college.com/knowledge-hub/gcses/gcse-psychology-help/direct-theory-of-perception-gibson-1966/) website.
* Gap fill generator website: [free gap fill generator](https://www.edu-games.org/sentence-games/gap-fill/gap-fill-maker.php).

**Lesson 16**

## Specification reference

3.1.4 Perception: Visual illusions.

**Specification content**

* Explanations for visual illusions: ambiguity, misinterpreted depth cues, fiction, size constancy.
* Examples of visual illusions: the Ponzo, the Müller-Lyer, Rubin’s vase, the Ames Room, the Kanizsa triangle and the Necker cube.

**Learning outcomes**

* Understand why and how ambiguity, misinterpreted depth cues, fiction and size constancy cause visual illusions.
* Identify and describe the Ponzo, the Müller-Lyer, Rubin’s vase, the Ames Room, the Kanizsa triangle and the Necker cube illusions.

**Possible teaching and learning activities**

* Introduce the concepts of ambiguity, misinterpreted depth cues, fiction and size constancy.
* Divide students into groups and give each group one of the examples of visual illusion: the Ponzo, the Müller-Lyer, Rubin’s vase, the Ames Room, the Kanizsa triangle and the Necker cube. Students create a presentation which explains the visual illusion and 5 questions they can use to test the class on their illusion.
* During the presentations students create a table where they can sketch each illusion and the type of illusion each of the illusions are (ambiguity, fiction etc. and why and 3- 4 bullet points on why the illusion occurs.
* Students identify which type of illusion (ambiguity, fiction etc) explains the other illusions that they have brought in. (More than one may be involved for some illusions.)
* Create a matching terms and visual illusion task where the visual illusion name and types need to be matched up using cards.
* Show a video clip which further explains the Ames room. You can get students to create their own Ames room as homework.

**Resources**

* Video: [What is the Ames room illusion?](https://www.youtube.com/watch?v=gJhyu6nlGt8) (3 minute). This can be used to help students understand why the Ames room illusion occurs.
* Website: There is an Ames room [template document](https://www.rigb.org/sites/default/files/attachments/ames_room_template_experimental_0.pdf) and resources can be used to create an Ames room.
* Synoptic link: the first 1 minute 40 seconds of this [video](https://www.youtube.com/watch?v=dBRBvVRZWm0) makes a connection between visual illusions, a factor affecting perception (ie culture) and the variation in recognition of colours (language, thought and communication topic).
* Useful website covering the visual illusions and types: [Explaining visual illusions](https://quizlet.com/360156387/explaining-visual-illusions-gcse-psychology-aqa-flash-cards/).

**Lesson 17 and 18**

## Specification reference

3.1.5 Perception: Gregory's constructivist theory of perception – the influence of nurture.

**Specification content**

* Gregory's constructivist theory of perception – the influence of nurture.
* Perception uses inferences from visual cues and past experience to construct a model of reality.

**Learning outcomes**

* Understand and be able to evaluate Gregory's constructivist theory of perception.
* Understand the influence of nurture and how inferences and visual cues are used to perceive information.

**Possible teaching and learning activities**

* Introduce Gregory's constructivist theory of perception and look at how visual illusions offer support for this theory.
* Create a list of true and false statements in relation to Gregory’s theory and get students to answer them. Go through each statement and discuss why it is true or false.
* Mind map/list evaluation of Gregory's constructivist theory in pairs. Students write 2-3 evaluation points and compare evaluations to Gibson.
* Create a comparisons table for Gregory's constructivist theory and Gibson's direct theory of perception. (Not all aspects of the two theories are directly comparable.) Examples of comparisons could be: Nature vs. Nurture, motion parallax vs inferences, inborn biological factors and direct perception vs. constructivism and perception as an active process.
* Class discussion: Which theory do you agree with Gregory or Gibson and why?
* The theories of perception are both summarised online. Some students may benefit from learning about the difference between top-down and bottom-up theories which are mentioned on this video.

**Resources**

* Videos: Useful as an introduction to Gregory’s theory and evaluations. [Richard Gregory visual illusions](https://www.youtube.com/watch?v=NuANjwVjMu8) (2 minutes). This shows Gregory explaining how visual illusions support the theory and a second video on [how perception is a hypothesis](https://www.youtube.com/watch?v=NuANjwVjMu8) has Gregory himself explain how perception is a hypothesis (3 minutes).
* Useful resource to compare Gibson and Gregory: [psychboost theories of perception.](file:///C%3A%5CUsers%5C44796%5CDesktop%5CSOL%20AQA%5CNew%20folder%5C05-Perception-theories-of-Perception.pdf%20%28psychboost.com%29)
* Video: Summary of the [theories of perception](file:///C%3A%5CUsers%5C44796%5CDesktop%5CSOL%20AQA%5CNew%20folder%5C05-Perception-theories-of-Perception.pdf%20%28psychboost.com%29) (6 minutes).

**Lesson 19 and 20**

## Specification reference

* 3.1.6 Perception: Factors affecting perception.
* 3.1.4 Research methods: Designing research.

**Specification content**

* Perceptual set and the effects of expectation on perception.
* Perceptual set and the effects of culture on perception.
* Bruner and Minturn study of perceptual set.

**Learning outcomes**

* Understand and be able to evaluate Bruner and Minturn’s study of perceptual set.
* Understand the concept of perceptual set and how expectation and culture affects perception.
* Understand key concepts from research methods topic.

**Possible teaching and learning activities**

* Start by testing students’ level of awareness or a selective awareness test such as the moonwalking bear or gorilla test (see resources list).
* Define what is meant by perceptual set and expectation and get students to think of examples of the effect of expectation.
* Students create a Mind map of Bruner and Minturn’s study.
* In pairs think of two evaluations of the study and 2 evaluations of the research method that was used by Bruner and Minturn in their research and share as a class.
* Use Bruner and Minturn’s study to reinforce learning of key terms and research methods concepts such as hypothesis, IVs and DV and experimental designs.
* In pairs, students design an experiment to test perceptual set and the effects of expectation on perception.
* Homework: students could go on to carry out their experiments. This could either be one shorter piece of homework, or a longer piece of homework in which they work on all the elements of designing an experiment.
* Go through the effect of culture on perception. Students read an article and summarise how culture effects perception in 20 to 30 words.

**Resources**

* Video: [moonwalking bear](https://www.youtube.com/watch?v=xNSgmm9FX2s) - good starter to show the effect of a lack of expectation or [the gorilla selective attention test](https://www.youtube.com/watch?v=vJG698U2Mvo) (2 minutes).
* Video: [perceptual set and perception](https://www.youtube.com/watch?v=JaxbeG2aM4E) (6 minutes).
* Website: [How expectations shape experience](https://www.firebrand.marketing/2016/08/expectations-shape-experience/) information and examples.
* Website: [Bruner and Minturn study of perceptual set](https://www.studysmarter.co.uk/explanations/psychology/cognition/bruner-and-minturn-study-of-perceptual-set/): This includes examples of expectation in everyday life.
* Article: [Cultures influence on perception](https://psych-neuro.com/2016/02/17/cultures-influence-on-perception/) (10 minute read).

**Lesson 21 and 22**

## Specification reference

* 3.1.7 Perception: Factors affecting perception.
* 3.1.4 Research methods: Designing research and correlation.

**Specification content**

* The effects of motivation and emotion on perception.
* The Gilchrist and Nesberg study of motivation.
* Correlations: An understanding of association between two variables and the use of scatter diagrams to show possible correlational relationships. The strengths and weaknesses of correlations.

**Learning outcomes**

* Understand and be able to evaluate Gilchrist and Nesberg’s study of motivation including the research method used.
* Understand the concepts of motivation and emotion and how they affect perception.
* Understand key concepts from research methods topic.
* Understand that a correlation is an association between two variables. The use of scatter diagrams to show correlational relationships. The strengths and weaknesses of correlations.

**Possible teaching and learning activities.**

* Conduct an experiment with students. Get them to write down on a scale of 1 to 10 how hungry they feel. Show students a series of photographs of food and get them to rate the photos on how bright they are. 1 is not bright and 10 is bright. Correlate the results against each other.
* Go over what is meant by a correlation and positive, negative and zero correlations. Plot the two variables against each other and get students to draw a conclusion on what the study shows about hunger and the motivation to eat. Get students to write strengths and weakness of correlations.
* Go over the Gilchrist and Nesberg study and get students to draw 6 pictures that represent the study including 2 evaluations with no more than 20 words used on the page.
* Go over the research method that was used in the study (lab-based study) and the strengths and limitations of the study
* Give students 10 minutes to plan, 10 minutes to learn and 10 minutes to write a 9-mark synoptic essay.
* Students in pairs mind map how they think emotion may affect perception. Explain research that shows how emotion affects perception such as Solley and Haigh 1958 and share as a class.
* Show a video which summarises all 4 factors affecting perception.

**Resources**

* Website: [Gilchrist and Nesberg study](https://www.studysmarter.co.uk/explanations/psychology/cognition/the-gilchrist-and-nesberg-study-of-motivation/#:~:text=Psychologists%20Gilchrist%20and%20Nesberg%20%281952%29%20studied%20the%20effects,perception%20is%20not%20as%20linear%20as%20once%20thought.) of motivation and perception. This is a useful web page which lists real life examples and information on the study.
* Website: [AQA 2021 exam paper](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2021/november/AQA-81821-QP-NOV21.PDF) Question 12 synoptic essay and [mark scheme](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2021/november/AQA-81821-MS-NOV21.PDF).
* Video: [Factors affecting perception](https://www.youtube.com/watch?v=ot4AjaQUo3Y). (7 minutes) a summary of all the factors that affect perception.

**Lesson 23 and 24**

## Specification reference

3.1.3 Development: Early brain development.

**Specification content**

A basic knowledge of brain development, from simple neural structures in the womb, of brain stem, thalamus, cerebellum and cortex, reflecting the development of autonomic functions, sensory processing, movement and cognition.

**Learning outcomes**

* Understand early development of the brain, including the brain stem, thalamus, cerebellum and cortex.
* Understand the early development of autonomic functions, sensory processing, movement and cognition.

**Possible teaching and learning activities.**

* Introduce each of the named areas of the brain: brain stem, thalamus, cerebellum and cortex. Students sketch a simple diagram of the brain with these areas labelled and their functions identified on the diagram.
* Explain the concepts of nature and nurture in relation to brain development.
* Synoptic link:Introduce other areas of the brain that are covered in the Brain and neuropsychology topic i.e. neurons, synapses, frontal lobe, temporal lobe, parietal lobe and occipital lobe.
* Introduce and explain early brain development and explain concepts of autonomic functions, sensory processing, movement and cognition.
* Students to research early brain development and the early development of autonomic functions, sensory processing, movement and cognition.
* In small groups construct a poster with a timeline (with illustrations if possible) of early stages of brain development and early development of autonomic functions, sensory processing, movement and cognition.
* Students research ways in which a mother can influence the brain development of her unborn child (eg diet, stress, alcohol or drug use). Create a mind map as a class to summarise this.
* As a class construct a model answer to the Question 15 on the 2022 paper.

**Resources**

* Video: [Early brain development](https://www.youtube.com/watch?v=Tp25wrm-AoA) (2 minutes).
* Diagram of the brain to amend: [Brain facts and important parts of the brain](https://www.bing.com/images/search?view=detailV2&ccid=7FLVTfCL&id=8255120B1AD4FEA2F245CE069FEFA0886F8517EE&thid=OIP.7FLVTfCLgFexsa3ThGZodwHaFS&mediaurl=https%3A%2F%2Fwww.brainframe-kids.com%2Fbrain%2Fimages%2Ffacts-parts-900w.png&exph=643&expw=900&q=brain+stem%2c+thalamus%2c+cerebellum+and+cortex&simid=608006278339839487&form=IRPRST&ck=DF275D7479A75B07A846301BAF6B16E2&selectedindex=10&ajaxhist=0&ajaxserp=0&pivotparams=insightsToken%3Dccid_0eDBUdt%252B*cp_AC521A570DF3A2811128D5BC611DCADE*mid_F060FB6E3B8121E55C9041B760EC0FD8B3CE51C3*simid_608026812560463544*thid_OIP.0eDBUdt-TzbWzE13yCCEewHaG9&vt=0&sim=11&iss=VSI&cdnurl=https%3A%2F%2Fth.bing.com%2Fth%2Fid%2FR.ec52d54df08b8057b1b1add384666877%3Frik%3D7heFb4ig758Gzg%26pid%3DImgRaw%26r%3D0).

**Lesson 25**

## Specification reference

3.1.3 Development: Early brain development.

**Specification content**

The roles of nature and nurture.

**Learning outcomes**

Understand the roles of nature and nurture in human development.

**Possible teaching and learning activities**

* Introduce and explain concepts of nature and nurture.
* Students to discuss in pairs how research might be done into the roles of nature and nurture in human development. Ideas fed back into a wider class discussion.
* Students to consider in pairs the ethics and other issues (eg generalisation) related to using twins, new-born babies and animals in psychological research.
* Class discussion/debate: Which is most influential in our brain development – nature or nurture? Why? (Research from homework task is relevant here.)
* Synoptic link/homework/extension activity:students investigate if drinking or drug use by mother is thought to increase changes of their child having an addiction. (Influence of nurture on addiction – Psychological problems topic.)
* As a class construct a model answer to the Question 15 on the 2022 paper.

**Resources**

* Website: AQA [2022 exam paper](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2022/june/AQA-81821-QP-JUN22.PDF) Question 15 and [mark scheme.](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2022/june/AQA-81821-MS-JUN22.PDF)
* Video: [the nature- nurture debate](https://www.youtube.com/watch?v=CxGrdXP5cSo) (2 minutes).

**Lesson 26**

## Specification reference

3.1.3 Development: Piaget’s stage theory and the development of intelligence.

**Specification content**

* Piaget’s Theory of Cognitive Development including concepts of assimilation and accommodation.
* The four stages of development: sensorimotor, pre-operational, concrete operational and formal operational.

**Learning outcomes**

* Understand Piaget’s Theory of Cognitive Development.
* Understand the concepts of assimilation and accommodation.
* Understand the four stages of development.

**Possible teaching and learning activities.**

* Introduce Piaget’s theory and show them a video which summarises the main concepts and stages.
* Explain the concepts of assimilation and accommodation (and schemas). A good way to remember the difference is assimilation has 2 S letter (Same schema) and accommodation has 2 C letters (Change Create). Students to work in pairs and come up with their own examples of how assimilation and accommodation occur in childhood. Students can then answer an exam questions on this. There are videos which use some good examples which students can draw in their notes and how assimilation and accommodation occurs.
* Students create a table of the 4 stages of development which includes the age the child is in the stage, the key things that occur in the stage and Piaget’s theory in relation to the stage. Students can use their creativity to draw pictures to help them distinguish between the stages. This can be supplemented by using short video clips or by demonstrating the actual tasks that Piaget used at each stage.
* Students answer an application style question from a past exam paper and then mark it using the mark scheme.

**Resources**

* Video: [Piaget’s stages of learning](https://www.youtube.com/watch?v=IhcgYgx7aAA) (7 minutes).
* Video: [Schemas, assimilation and accommodation](https://www.youtube.com/watch?v=xoAUMmZ0pzc&t=97s) (6 minutes).
* Website: [AQA Psychology 2019](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2019/june/AQA-81821-QP-JUN19.PDF) Q19 and [mark scheme](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2019/june/AQA-81821-W-MS-JUN19.PDF).
* Formal operational. Ask students questions or give them tasks that test their ability to solve problems by applying logic in an abstract way. Students to create their own tasks or questions.
* Video links for Piaget’s stages:
1. Sensorimotor and object permanence, use this [video](https://www.youtube.com/watch?v=-gWJrZ7MHpY) – may also lead to a discussion of ethics 4 minutes).
2. Pre-operational and egocentricity, use this [video](https://www.youtube.com/watch?v=v4oYOjVDgo0) (2 minutes).
3. Concrete operational and conservation, use this [video](https://www.youtube.com/watch?v=gnArvcWaH6I&t=52s) (4 minutes).

**Lesson 27**

## Specification reference

3.1.3 Development: The role of Piaget’s theory in education.

**Specification content**

The role of Piaget’s theory in education.

**Learning outcomes**

* Understand the role of Piaget’s theory in education.
* Understand how Piaget’s four stages of development can be applied in education.

**Possible teaching and learning activities.**

* Students to work in pairs to research the role of Piaget’s theory in education. Each pair to then share their findings with another pair.
* Students are put into small groups and together they are given a stage of Piaget’s to create ideas of how children’s thinking could be developed within the stage.
* Each group to do a presentation or poster on their collective findings.
* Class discussion: how could our psychology lessons include more of Piaget’s applications?

**Resources**

* Image: [Piaget’s application of stages to monopoly](https://www.pinterest.co.uk/pin/522558362993994567/).
* Image: [Application of Piaget’s theory to education](https://www.pinterest.co.uk/pin/theorist--683491680948613528/).

**Lesson 28**

## Specification reference

3.1.3 Development: Piaget’s theory.

**Specification content**

* Hughes’ ‘policeman doll study’.
* Reduction of egocentricity.

**Learning outcomes**

* Understand and be able to evaluate Hughes’ ‘policeman doll study’.
* Understand implications of this study for the reduction of egocentricity.

**Possible teaching and learning activities**

* Reminder of Pre-operational stage, egocentricity and three mountains task.
* Introduce Hughes’ ‘police doll study’ by demonstrating the task children were asked to do. Students could create the intersecting walls with Lego in groups and create dolls from card and take it in turns acting out the method.
* Students to create a story board of the ‘police doll study’ that includes results which show both egocentricity and the ability to see things from someone else’s point of view.
* Class discussion: why do you think that the ‘policeman doll study’ found that the period for which children display egocentric thinking is reduced from that initially suggested by Piaget?
* Write evaluations of Hughes study on the board but muddle them up so the sentences are not in the right order. Students write them in the correct order. Discuss which research method Hughes used and write evaluations of the research method (lab-based study).
* Students work in pairs to design an experiment that could be used to test whether children are egocentric or not. This could be preceded by a class discussion about ethics and what should be considered when doing psychological research on children.

**Resources**

* Video: [Police task](https://www.youtube.com/watch?v=nCeM8RmwBEw) (2 minutes). This shows children in a recreation of Hughes experiment.
* Website: Study smarter [Hughes key takeaways](https://www.studysmarter.co.uk/explanations/psychology/cognition/hughes-policeman-doll-study/).
* Website: [Experimental methods in Psychology](https://www.simplypsychology.org/experimental-method.html). This describe and evaluates lab based research.

**Lesson 29 and 30**

## Specification reference

3.1.3 Development: Piaget’s theory.

**Specification content**

* McGarrigle and Donaldson’s ‘naughty teddy’ study’.
* Development of conservation.

**Learning outcomes**

* Understand and be able to evaluate McGarrigle and Donaldson’s ‘naughty teddy study’.
* Understand implication of this study for the development of conservation.
* Be able to evaluate Piaget’s Theory of Cognitive Development

**Possible teaching and learning activities.**

* Students to create a story board of ‘naughty teddy study’ that includes results which show both ability to conserve and the inability to conserve.
* Class discussion: why do you think that the ‘naughty teddy study’ found that the ability to conserve develops earlier than was initially suggested by Piaget?
* Give students evaluation points of McGarrigle and Donaldson’s study with parts missing and students have to write the missing parts in their own words.
* Class discussion: how can the results of the ‘policeman doll study’ and the ‘naughty teddy study’ be used to evaluate Piaget?
* Explain that Piaget’s participants were mainly his own children and ask students to write an evaluation of this.
* Mind map/list evaluation of Piaget’s theory in pairs.

**Resources**

* Video: [AQA GCSE psychology developmental- conservation](https://www.youtube.com/watch?v=YkXRGNTFFVE).
* Article: [Piaget’s stages: a review](http://indianmentalhealth.com/pdf/2020/vol7-issue2/5-Review-Article_Piagets-theory.pdf#:~:text=This%20article%20aims%20to%20provide%20a%20concise%20understanding,encompass%20and%20define%20the%20theory%20have%20been%20highlighted.). Useful for extension material.
* Website: [psychboost development quiz](https://psychboost.com/wp-content/uploads/2021/03/Quiz-3-DEVELOPMENT-Qs.pdf). This contains a useful list of questions that can be used to test Piaget’s theory.

**Lesson 31 and 32**

## Specification reference

3.1.3 Development: The effects of learning on development.

**Specification content**

* Dweck’s Mindset Theory of learning: fixed mindset and growth mindset.
* The role of praise and self-efficacy beliefs in learning.

**Learning outcomes**

* Understand and be able to evaluate Dweck’s Mindset Theory of learning.
* Understand the role of praise and self-efficacy beliefs in learning.

**Possible teaching and learning activities.**

* Introduce Dweck’s Mindset Theory of learning and concepts of fixed and growth mindset
* Students to spend time individually thinking about their own mindsets and how they help themselves to develop more of a growth mindset.
* Students write 10 questions each which they could use to test whether someone has a fixed or growth mindset. Students swap with another person and answer the questions.
* Students create an information leaflet on Dweck’s mindset theory which can be used to people which explains what the mindsets are and their characteristics, how they link to education and the evaluations of the theory.
* Introduce and explain the role of self-efficacy beliefs in learning. Students are asked to write a letter to a friend telling them what praise and self-efficacy mean and what they have learnt about it. They need to include definitions, the positive effect of praise and what can be done to improve a person’s self-efficacy.
* Synoptic link: coping effectively with challenges is a characteristic of a mental healthy person (Psychological problems topic). Students can start to think about how the development of a growth mindset and increasing their sense of self-efficacy can have a positive effect on mental health.
* Homework: students to research different learning styles and if possible identify their preferred learning style.

**Resources**

* Video: [Growth and fixed mindsets](https://www.youtube.com/watch?v=KUWn_TJTrnU) (5 minutes).
* Webpage: [Growth mindset activities for kids](https://lovegrowslearning.com/growth-mindset-for-kids-activities/#:~:text=Growth%20Mindset%20For%20Kids%20Activities%201%201.%20Fixed,8.%20Growth%20Mindset%20Conversation%20Dice%20...%20More%20items). This page has 10 ideas that you could use in the classroom to grow students mindsets.
* Video: [What is self-efficacy?](https://www.bing.com/videos/search?q=self+efficacy+&&view=detail&mid=2429FF53456C5C103D0E2429FF53456C5C103D0E&&FORM=VRDGAR&ru=%2Fvideos%2Fsearch%3Fq%3Dself%2Befficacy%2B%26FORM%3DHDRSC6) (2 minutes).

**Lesson 33**

## Specification reference

3.1.3 Development: The effects of learning on development.

**Specification content**

* Learning styles including verbalisers and visualisers.
* Willingham’s Learning Theory and his criticism and his evaluation.

**Learning outcomes**

* Understand learning styles including verbalisers and visualisers.
* Understand and be able to evaluate Willingham’s Learning Theory.

**Possible teaching and learning activities**

* In small groups, students discuss different learning styles and their own learning style preference. Introduce and explain concepts of verbalisers and visualisers and students to discuss in groups which style they mainly use.
* Students decide how a visualiser and a verbaliser would learn a paragraph of information using their preferred learning style. You could give them an article on visualisers and verbalisers and get them to decide on different ways the information could be learnt and whether this would be a preferred style for a verbaliser or a visualiser.
* Get students to do a questionnaire or a quiz to test what their preferred learning style is.
* Introduce Willingham’s Learning Theory and show them a video which explains the theory. Get students to make notes on the video and then as a class create a mind map on Willingham’s theory including 2 evaluation points.
* Class discussion/debate: do you agree with Willingham? Why/why not?

**Resources**

* Article: [the visualiser-verbaliser hypothesis](http://www.visuallearningstyles.com/about-the-visual-learning-style/1-about/5-the-visualizer-verbalizer-hypothesis-words-pictures-and-learning-styles) (5 minute read).
* Video: [What kind of learner are you?](file:///C%3A%5CUsers%5C44796%5CDesktop%5CSOL%20AQA%5CNew%20folder%5CWhat%20Kind%20of%20Learner%20Are%20You%3F%20QUIZ) (6 minutes).
* Video: [Learning styles don’t exist](https://www.youtube.com/watch?v=sIv9rz2NTUk) (6 minutes).
* Website: [Willingham’s theory](https://online-learning-college.com/knowledge-hub/gcses/gcse-psychology-help/willinghams-theory/#more-73038).

**Lesson 34**

## Specification reference

3.1.4 Hypotheses and types of variable.

**Specification content**

Independent and dependent variables.

**Learning outcomes**

Understand independent and dependent variables.

**Possible teaching and learning activities.**

* Explain what is meant by independent and dependent variables. Go through a diagram of variables and get students to draw the diagram.
* Students identify the IVs and DVs in examples of experiments on a sheet. Students need to make sure that these variables are clear and operationalised (measurable).
* Watch a video which explains the difference between the independent and dependent variables.
* Students create a rhyme to help them remember which variable is which- such as Ice creams Do melt: Ice: independent Creams: Changed Do: dependent Melt: measured.
* Class discussion: does listening to music make you study better? Why/why not?
* In pairs, students discuss how they could carry out an investigation into music and memory to find out if what they believe is true. What would the IVs and DV be in their study?
* Put students into groups and give them one of the studies they need to know in the GCSE course and get them to identify the iv and dv in the study.

**Resources**

* Webpage: [Variables](https://www.simplypsychology.org/variables.html): This has useful diagram and tables of variables.
* Video: [psych terms:](https://www.youtube.com/watch?v=_hY_Vy-my4Y) (3 minutes) this explains the difference between the terms.

**Lesson 35 and 36**

## Specification reference

3.1.4 Hypotheses and types of variable.

**Specification content**

* Formulation of testable hypotheses including null hypothesis and alternative hypothesis.
* Extraneous variables.

**Learning outcomes**

* Be able to formulate testable hypotheses – including null hypothesis and alternative hypothesis.
* Understand extraneous variables.

**Possible teaching and learning activities**

* Explain how to combine IVs and DV to create a hypothesis – give examples of a null hypothesis and an alternative hypothesis. Explain what makes a DV testable and give examples of things that cannot be tested, eg better, worse.
* Show students a video which explains the difference between an alternative and null hypothesis. Get students to practice writing these out and then go through examples.
* In pairs, students to write a null and alternative hypothesis for an investigation into the following topic the impact of music on memory.
* Introduce and explain extraneous variables or use this [short video](https://www.youtube.com/watch?v=LXcR0hk1SRY).
* Class discussion: what extraneous variables would you need to consider in your investigations into music and memory?
* Students draw a table of examples of extraneous variables and how they can control them and what would happen if they didn’t control them.
* Show students mark schemes of past exam questions into hypotheses to make a poster on what you need to do when writing a null and alternative hypothesis and what you should not do.

**Resources**

Video: [What are extraneous variables?](https://www.youtube.com/watch?v=apNw5hV6SuM) (4 minutes)

**Lesson 37**

## Specification reference

3.1.4 Sampling methods

**Specification content**

* Target populations.
* Samples and sampling methods (random, opportunity, systematic and stratified) and how to select samples using these methods.
* Strengths and weaknesses of each sampling method.
* Understanding principles of sampling as applied to scientific data.

**Learning outcomes**

* Understand target populations.
* Understand the named sampling methods and how to select samples using these methods.
* Understand strengths and weaknesses of each named sampling method.
* Understand principles of sampling as applied to scientific data.

**Possible teaching and learning activities.**

* Explain what is meant by target population and sample.
* Students to identify the target population in examples of experiments.
* Give student an example of an experiment that could be investigated such as the effect of cheese on nightmares. Students divide up into four groups and each group allocated a different sampling method. They research their method; explain how they would use the sampling method to get the participants for the cheese experiment and find out what the strengths and weaknesses of their method are. Students then present their sampling method to the rest of the class, and the class adds each method to a summary mind map.
* Do a practical: sampling with skittles/ smarties or M&M’s where students are given a bag of sweets as participants and they have to arrange their sweets according to the sampling methods. For example, an opportunity sample can be used by the students taking the first five sweets nearest to them
* In pairs, students decide which sampling method will be used in their investigation into music and memory.
* Present students with scientific findings that have been generated using a range of sampling techniques and encourage them to evaluate each example. Include examples of poor sampling strategies.
* Students are placed in teams and complete a quiz in identifying the target population, sampling method and the advantages and disadvantages of different methods.

**Resources**

* Image: [stratified sampling](https://www.simplypsychology.org/stratified-random-sampling.html) – this is useful for students to see visually.
* Practical lesson: [sampling with skittles](https://www.tutor2u.net/psychology/reference/psychology-teaching-activity-sampling-with-skittles-research-methods).

**Lesson 38 and 39**

## Specification reference

3.1.4 Designing research.

**Specification content**

* Experimental methods (laboratory, field and natural experiments).
* Strengths and weaknesses of each experimental method and what types of research they are suitable for.
* Experimental designs (independent groups, repeated measures and matched pairs).
* Strengths and weaknesses of each experimental design.

**Learning objectives**

* Understand each of the named experimental methods, including strengths, weaknesses and suitability.
* Understand each of the named experimental designs.
* Understand the strengths and weaknesses of each experimental design.

**Learning activities and resources**

* Explain each of the experimental methods.
* Class discussion: what do you think the strengths and weaknesses of each experimental method might be? How might that influence researchers when they are choosing which experimental method to use? What types of research might they each be most/least suitable for?
* Give students a list of all the studies in psychology that use an experiment and get them to identify which type: lab, field or natural. Each of them in use.
* In pairs, students decide which experimental method will be used in their investigation into music and memory.
* Explain the three types of design: independent groups, repeated measures, and matched pairs. Get 12 volunteer students to stand at the front of the class and show them how you would do an experiment using the students as the participants.
* Get students to come up with a sentence to help them to remember the 3 experimental designs- such as I Get Really Mad Matching Penguins: Independent groups, repeated measures, and matched pairs.
* Students create a table of the three experimental designs and draw a picture for each one as well as definitions of the key terms associated with each design: such as participant variable, random allocation, counterbalancing etc. Draw a picture for each design.
* Answer exam questions on experimental designs.
* In pairs, students decide which experimental design will be used in their investigation into music and memory.

**Resources**

* Website: [Types of experiment](https://testbookpdf.com/all-types-of-experimental-research-methods-pdf-download/): This is a good summary with clear pictures for each of the types of experiment. Please note there are others included on this website which are not part of the GCSE specification.
* Exam question: [experimental designs 9 mark essay](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2020/november/AQA-81821-QP-NOV20.PDF) Q 24 and [mark scheme](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2020/november/AQA-81821-W-MS-NOV20.PDF).

**Lesson 40 and 41**

## Specification reference

3.1.4 Designing research.

**Specification content**

* Interviews and questionnaires.
* Strengths and weaknesses of interviews and questionnaires and what types of research they are suitable for.

**Learning outcomes**

* Understand the methods of questionnaires and interviews, including strengths, weaknesses and suitability.
* Understand key concepts from research methods topic.

**Possible teaching and learning activities**

* On PowerPoint, show examples of questions. Students identify whether each is an open or closed question and whether there are any problems with the question.
* Working in small groups, students design a questionnaire with both open and closed questions to investigate whether people believe that TV programmes and video games are violent and whether this affects the aggression levels in young people.
* Class discussion: what do you think the strengths and weaknesses of questionnaires might be? What types of research might they each be most/least suitable for?
* Students then work in small groups to research each interview type more fully and then create a class presentation/demonstration on how to conduct a structured, semi-structured or an unstructured interview and what the strengths and weaknesses and suitability of each interview type are.
* Students create a Venn diagram which compares the different types of interviews against each other.
* Homework: students carry out the questionnaire they designed. This could either be one shorter piece of homework with just one or two participants, or a longer piece of homework with more participants and the use of some of the required mathematical skills to write up their results.
* Get all students to complete a questionnaire and record the results of all the students as this will be needed later in topic when looking at reliability.

**Resources**

* Webpage: [Venn diagram template](https://templatelab.com/venn-diagram-templates/).
* Article: [open and closed questions](https://www.simplypsychology.org/questionnaires.html) (8 minute read).
* Webpage: [Psychological tests](http://www.yorku.ca/rokada/psyctest/) – This contains lots of questionnaires that can be used.

**Lesson 42**

## Specification reference

3.1.4 Designing research.

**Specification content**

Case studies: strengths and weaknesses of case studies and what types of research they are suitable for.

**Learning outcomes**

Understand the method of case studies, including strengths, weaknesses and suitability.

**Possible teaching and learning activities**

* In small groups, discuss what kinds of behaviours produced by individuals would be of interest to psychologists.
* Explain the case study method.
* Students then research an individual who has been studied using the case study method (eg Genie, HM, Clive Warring, Little Hans or Phineas Gage). Students then present their findings to the rest of the class. (You could teach this in the memory topic)
* Create a poster which includes a case study written on themselves or a family member as well as information about the use of the case study method, including an explanation of the method, one example, plus strengths, weaknesses and suitability.

**Resources**

Article: [The case study method in psychology.](https://www.verywellmind.com/how-to-write-a-psychology-case-study-2795722)

**Lesson 43**

## Specification reference

3.1.4 Designing research.

**Specification content**

* Observation studies (including categories of behaviour and interobserver reliability).
* Strengths and weaknesses of observation studies and what types of research they are suitable for.

**Learning outcomes**

* Understand observation studies including categories of behaviour.
* Understand inter-observer reliability.
* Understand the strengths, weaknesses and suitability of observations.

**Possible teaching and learning activities**

* Explain the observation method and the difference between a naturalistic, controlled and participant observation.
* Watch a video on observations beforehand and create a list of questions that students need to answer when watching the clip. Go through the answers together.
* Class discussion: what are the strengths, weaknesses and suitability of each type of observation? (This discussion could include ethical considerations.)
* Research examples of how psychologists have used observations in famous studies.
* Explain how to carry out a non-participant observation and the use of behaviour categories and the need for inter-observer reliability.
* In pairs, students design a record sheet containing behavioural categories they could use to record behaviour such as at a pedestrian crossing or in a car park or at traffic lights. The behaviour categories for at a pedestrian crossing could be running, walking normally, walking with exaggerated arm movements, skipping. Watch a clip of pedestrian behaviour Students conduct their observation and then, in pairs, write up their results. In their write-up, they need to present the data as a bar chart, and they need to draw a conclusion as to whether inter-observer reliability has been established.
* Complete the following question:
* Imagine that the hospital psychologist has asked you to conduct an observation to help with his case study on teenagers in hospital. You would need to collect observational data on what the teenagers do to keep themselves from getting bored.
* Explain how you might carry out this observation. In your answer, give details about:
* • at least one behavioural category that could be used
* •where in the hospital you could carry out the observation
* • when you could carry out the observation
* •how you could establish inter-observer reliability

**Resources**

* Video clip to use in an observation: [Abbey Road pedestrian crossing](https://www.youtube.com/watch?v=V3oZI1G3H5M) (4 minutes).
* Video: [Observations in Psychology](https://www.youtube.com/watch?v=lSOjuEMAij4) (7 minutes).

**Lesson 44**

**Specification reference**

3.1.4 Correlation.

**Specification content**

* An understanding of association between two variables and the use of scatter diagrams to show possible correlational relationships.
* The strengths and weaknesses of correlations.

**Learning outcomes**

* Understand what is meant by correlation.
* Be able to draw appropriate scatter diagrams.
* Understand the strengths and weaknesses of correlations.

**Possible teaching and learning activities**

* Every member of the class writes down their shoe size and height on a piece of paper. Each of these is written on the board. Students identify if there are any patterns in this data.
* Explain what is meant by a positive, negative and zero correlation.
* Students plot a scatter graph for the data collected by the class. Students write a conclusion to what type of correlation has been found.
* Students complete a mind map into the strengths and weaknesses of correlations.
* Get students to answer exam paper question on correlations from past exam papers. Mark them using mark schemes.

**Resources**

Exam questions: [Correlations](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2020/november/AQA-81821-QP-NOV20.PDF) Question 25.6 and Question 25.7 and [mark scheme](https://filestore.aqa.org.uk/sample-papers-and-mark-schemes/2020/november/AQA-81821-W-MS-NOV20.PDF).

**Lesson 45**

## Specification reference

3.1.4 Planning and conducting research.

**Specification content**

How research should be planned, taking into consideration the reliability and/or validity of sampling methods, experimental designs and quantitative and qualitative methods.

**Learning outcomes**

Understand how to plan and carry out research so that it is reliable and valid.

**Possible teaching and learning activities**

* Explain concepts of reliability and validity or use videos.
* Give students a sheet describing a number of pieces of research. Ask them to identify if they are reliable and valid and why/why not. Class to discuss answers collectively.
* Ask students to answer the same questionnaire they answered when learning questionnaires ([Psychological tests](http://www.yorku.ca/rokada/psyctest/)) and score the questionnaire. Draw a graph to show the correlation of the two sets of questionnaire scores for each member of the class. The score from the first occasion should be on one axis and the score from the second occasion on the other. If there is a positive correlation this will support the reliability of the questionnaire as it is consistently measuring the behaviour the questionnaire is investigating. If there is a negative correlation or no correlation then this will show that there is not consistency so not reliable.
* Create a set of 16 jumbled sentences about the way that sampling methods, experimental designs and qualitative and quantitative data can be made to be reliable and valid. Students match up the sentences and then create a mind map of the information.

**Resources**

Video: What is [reliability and validity?](https://www.youtube.com/watch?v=vZMxUcRmLMw) (6 minutes.) This is an AS level video but is still useful.

**Lesson 46**

## Specification reference

3.1.4 Ethical considerations.

**Specification content**

* Ethical issues in psychological research as outlined in the British Psychological Society guidelines.
* Ways of dealing with each of these issues.

**Learning outcomes**

* Understand ethical issues as outlined by the British Psychological guidelines.
* Understand ways of dealing with these issues.

**Possible teaching and learning activities**

* Students imagine they are being asked to take part in a psychology experiment. Students discuss in groups of 3–4 what they would like to know before they take part, how they will be treated, whether they would be willing to take part in research that is unpleasant but will tell us a lot about human nature and what they would want to know about the data collected.
* Explain ethical issues as outlined by the British Psychological guidelines and watch a video which goes through why ethical considerations are important in research.
* Students create a table of the ethical issues in the British Psychological guidelines and ways in which the issues could be dealt with in research and a picture for each. Students could research psychological studies which have broken these guidelines and add this also to the chart. Watch a video on studies that have broken ethical guidelines.
* In pairs decide how each ethical issue will be controlled in their investigation into music and memory.
* Homework: students to carry out their investigations into music and memory using as many participants as possible. They need to bring their results to class for the computation and descriptive statistics lesson.

**Resources**

* Video: [Ethical issues](https://www.youtube.com/watch?v=iSD4ta9gaGU) (7 minutes).
* : Video : [5 Controversial Psychology Experiments That Would Never Happen Today - YouTube](https://www.youtube.com/watch?v=zZ3l1jgmYrY)

**Lesson 47**

## Specification reference

3.1.4.1 Quantitative and qualitive data and primary and secondary data.

**Specification content**

* The difference between quantitative and qualitative data.
* The difference between primary and secondary data.

**Learning outcomes**

* Understand the difference between quantitative and qualitative data.
* Understand the difference between primary and secondary data.

**Possible teaching and learning activities**

* Explain quantitative, qualitative, primary and secondary data and give students examples of each.
* In pairs, students to write their own examples and then read them out to the class who need to identify which type of data it is.
* Give students examples of types of data and students decide which one they are and explain how they could convert the data into a different form.
* Give students examples of past exam questions and get them to answer theme and mark them using the mark schemes.

**Resources**

Website: [Types of data](https://psychologyrocks.org/types-of-data-qualitative-and-quantitative-data-primary-and-secondary-data/). This website contains lots of activities that could be used to test understanding of the different types of data.

**Lesson 48 and 49**

## Specification reference

3.1.4.1 Computation and descriptive statistics.

**Specification content**

* Recognise and use expressions in decimal and standard form.
* Ratios, fractions and percentages.
* Estimate results, find arithmetic means and use an appropriate number of significant figures.
* Mean, median, mode and range.

**Learning outcomes**

* Recognise and use expressions in decimal and standard form.
* Recognise and use ratios, fractions and percentages.
* Be able to estimate results, find arithmetic means and use an appropriate number of significant figures.
* Understand and calculate mean, median, mode and range.

**Possible teaching and learning activities**

* Introduce and explain what the named forms of computation and descriptive statistics are and how to use them .
* After each explanation, provide students with data that they can practice with.
* Students complete a chart into how the mean, median, mode, range and percentages are calculated and calculate these for the data from their investigation into memory and music.
* Get the data and information from psychological students in the specification and write some ratio, fractions and percentage questions for students to answer. (For example, in the Asch study into conformity 25% of the participants never gave a wrong answer. Express this as a fraction.

**Resources**

Videos that are useful in explaining computation and descriptive statistics. These are listed below:

* [Standard form](https://www.youtube.com/watch?v=ceneATH5EZ8) (9 minutes).
* [Ratios and fractions](https://www.youtube.com/watch?v=BZ56cfETWtY) (4 minutes).
* [Percentages](https://www.youtube.com/watch?v=9QKc5bZPLv0) (5 minutes).
* [Significant figures](https://www.youtube.com/watch?v=CGdBFY5sB_4) (4 minutes).

**Lesson 50**

## Specification reference

3.1.4.1 Interpretation and display of quantitative data.

**Specification content**

Frequency tables and diagrams, bar charts, histograms and scatter diagrams for correlation.

**Learning outcomes**

Understand how to present data graphically using frequency tables and diagrams, bar charts, histograms and scatter diagrams.

**Suggested teaching and learning activities**

* Using a PowerPoint show students examples of frequency tables and diagrams, bar charts, histograms and scatter diagrams.
* Using PowerPoint, show students examples of flawed graphical representations – they need to identify what is wrong with them.
* Students draw an example of each type of graph and list next to each graph what they need to include when drawing the graph. For example: Title with both variables, label both axis etc.
* Go through the difference between a bar chart and histogram and the when you would draw a bar chart rather than a histogram and vice versa. Show a video or go get students to read an article which explains the difference between a bar chart and a histogram.
* Students create a bar chart to show the data from their investigation into memory and music.
* Give students exam paper questions on graphs and get them to answer them and mark them using mark schemes.

**Resources**

* Video: [Frequency table and histograms](https://www.youtube.com/watch?v=5IPJjUOqnoA) (12 minutes).
* Article: [Histograms and bar chart](https://www.indeed.com/career-advice/career-development/bar-chart-vs-histogram) (5 minute read).

**Lesson 51**

## Specification reference

3.1.4.1 Normal distributions.

**Specification content**

The characteristics of normal distribution.

**Learning outcomes**

Understand the characteristics of normal distribution.

**Suggested teaching and learning activities**

* Introduce and explain normal distribution and its characteristics. Students watch a video which explains normal distribution and make a list of the characteristics of a normal distribution.
* Students plot data from a frequency table showing heights of 30 people into a histogram. Ensure the data you give them will result in a normal distribution.
* Give students a list of examples and get them to state whether they would form a normal distribution or not. Students don’t need to know about positive and negative distributions but is useful to know examples of data that are and are not normally distributed to allow them to understand the characteristics of normal distribution.

**Resources**

* Video: [The bell curve](https://www.youtube.com/watch?v=DJzmb7hGmeM) (1 minute).
* Website: [Examples of normal distribution](https://www.statology.org/example-of-normal-distribution/) and [skewed distributions](https://studiousguy.com/skewed-distribution-examples/).