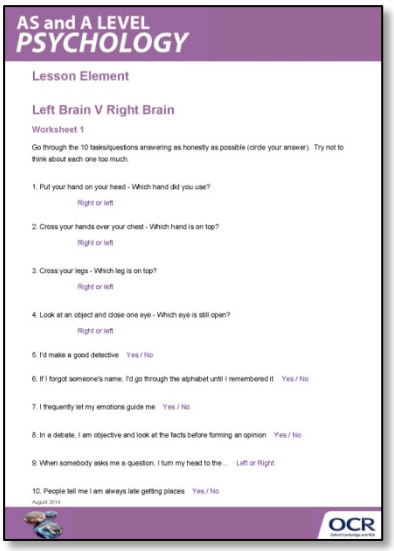
Lesson Element

Sperry

Instructions and answers for teachers

These instructions should accompany the OCR resources* 'Sperry Worksheet 1 and Sperry Worksheet 2' *activities *which supports OCR AS and A Level Psychology.*


AS and A LEVEL
PSYCHOLOGY

Lesson Element

Left Brain V Right Brain

Worksheet 1

Go through the 10 tasks/questions answering as honestly as possible (circle your answer). Try not to think about each one too much.

1. Put your hand on your head - Which hand did you use?
Right or left

2. Cross your hands over your chest - Which hand is on top?
Right or left

3. Cross your legs - Which leg is on top?
Right or left

4. Look at an object and close one eye - Which eye is still open?
Right or left

5. I'd make a good detective Yes / No

6. If I forgot someone's name, I'd go through the alphabet until I remembered it Yes / No

7. I frequently let my emotions guide me Yes / No

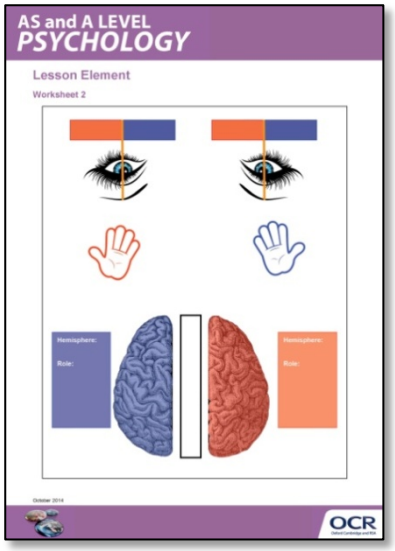
8. In a debate, I am objective and look at the facts before forming an opinion Yes / No

9. When somebody asks me a question, I turn my head to the... Left or Right

10. People tell me I am always late getting places Yes / No

August 2014

OCR


AS and A LEVEL
PSYCHOLOGY

Lesson Element

Worksheet 2

Hemisphere:

Role:

Hemisphere:

Role:

October 2014

OCR

The Activity:

The aim of these activities is to introduce the concepts explored by Sperry. In order to understand the effects of hemispheric deconnection students must first be able to appreciate how the brain works. Students should be able to:

- How the two hemispheres have different roles
- How contralateral control works.

This activity offers an opportunity for English skills development.

Associated materials:

'Sperry Worksheet 1' Lesson Element learner activity sheet.

'Sperry Worksheet 2' Lesson Element learner activity sheet.

OCR
Oxford Cambridge and RSA

Introduction to the Task

Summary and background

Sperry's study investigated the effects of hemispheric deconnection. The study involved investigating participants who had undergone a 'split brain' surgery to relieve their symptoms associated with epilepsy.

When participants had to undertake visual and tactile tasks Sperry found that they were unable to identify certain objects/stimuli due to the effects of the split brain surgery.

Student Misconceptions

Students can often get confused when trying to understand why split brain participants could not identify some of the objects/ stimuli. For students to understand this, it is important that they have a clear and sound knowledge of how a healthy brain works – before considering how a split brain would affect results.

The activities introduced in this lesson element are designed to enable students to independently learn how healthy hemispheres operate. Following on from this, worksheets provided should also be useful to help students understand *why* split brain patients' performance varied in the results.

To further consolidate the ideas introduced by the two activities you can show the following animation.
http://www.nobelprize.org/educational/medicine/split-brain/splitbrainexp.html

Teacher Preparation

Possible student questions:

Q: What happens if one half of brain is injured?

Possible Response: Then the actions that that hemisphere is responsible for will be impaired. Often the brain attempts to compensate for the injury e.g. the right hemisphere becoming more involved in language. This leads onto the study itself so may well be worth prompting in your students.

Q: Is language 100% in your left hemisphere? Is it the same for all people?

Possible Response: It is important to make students aware that when conducting the first activity that the concept of lateralisation of function is not black and white (language is left hemisphere dominant but not 100%) and that for left handers the percentage is lower.

OCR
Oxford Cambridge and RSA

Teacher Preparation

A copy of both worksheet 1 and worksheet 2 should be previously printed for each student.

If possible, worksheet 2 should be printed out in colour.

Task 1

Worksheet 1

As students enter the room the first worksheet (right brain v left brain) should be on the desk. Students will then work their way through the worksheet answering and scoring themselves.

The discussion questions provide an opportunity for students to discuss how accurate the questionnaire is and what factors could influence its validity. The discussion questions work well in pairs and then opening up the discussion to the class. Getting students to see if their score reflects the subjects they take is a good way of measuring accuracy e.g. did the students who study art score more for right over left.

Task 2

Worksheet 2

The second worksheet (Learn how your brain works in 10 steps) is intended for students to work through at their own pace. The activity is very directed to ensure that all students come away with a simple and correct diagram for how contralateral control works. There are a few key words for students to fill in; this makes the task a little more active. The blanks should be: corpus callosum, language, creativity, and visual field.

The idea of contralateral control explored on this worksheet can often confuse students (particularly in reference to visual fields) so ensuring students work through the sheet at their own pace is important. It is worth telling students to have out the colour coded diagram throughout all lessons on Sperry as it will aid them in understanding the procedure/results.

OCR
Oxford Cambridge and RSA

We'd like to know your view on the resources we produce. By clicking on the 'Like' or 'Dislike' button you can help us to ensure that our resources work for you. When the email template pops up please add additional comments if you wish and then just click 'Send'. Thank you.

OCR Resources: *the small print*

OCR's resources are provided to support the teaching of OCR specifications, but in no way constitute an endorsed teaching method that is required by the Board, and the decision to use them lies with the individual teacher. Whilst every effort is made to ensure the accuracy of the content, OCR cannot be held responsible for any errors or omissions within these resources. We update our resources on a regular basis, so please check the OCR website to ensure you have the most up to date version.

© OCR 2014 - This resource may be freely copied and distributed, as long as the OCR logo and this message remain intact and OCR is acknowledged as the originator of this work.

OCR acknowledges the use of the following content: Maths and English icons: Air0ne/Shutterstock.com

October 2014