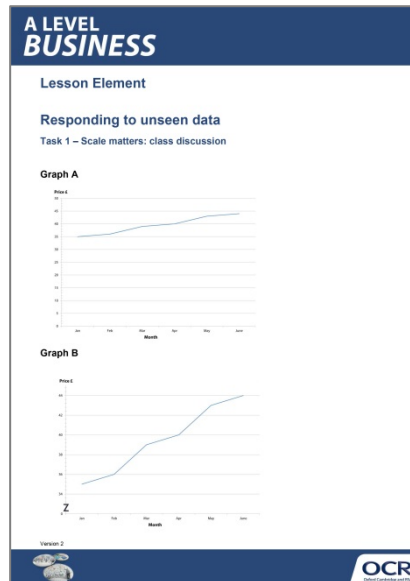


Lesson Element

Responding to unseen data

Instructions and answers for teachers

These instructions should accompany the OCR resource 'Responding to unseen data' activity which supports OCR A Level Business.



The Activity:

This resource comprises of 4 tasks.

This activity can be used to introduce graphical analysis to students.



This activity offers an opportunity for English skills development.



This activity offers an opportunity for maths skills development.

Associated materials:

'Responding to unseen data' Lesson Element learner activity sheet.

Suggested timings:

Task 1: Scale matters – Class discussion 10-20 minutes

Task 2: Identifying graphical trends – card sorting activity 20 minutes

Task 3: Describing graphical trends – resource sheet and newspaper activity 20 minutes

Task 4: Rate of change – resource sheet and 'give me five' 30-50 minutes



Task 1 – Scale matters: class discussion

Objective

This activity can be used to introduce graphical analysis to students. Students should be familiar with responding to data presented in tables and should now consider the value of presenting the data as a graph. It is important that students understand that the primary reason for presenting in graphical format is to show patterns or trends. In so doing, however, the author can give very different messages. This activity concentrates on the importance and impact of the vertical scale of a graph and is designed to encourage whole class discussion.

Task Description

After a brief introduction explaining that numerical data does not have to be presented in numerical form, display Graph A. It is helpful at this stage if you do not draw attention to the objective of the lesson (the importance of the scale) as the discussion works better if the students realise the impact themselves. Work through the questions on the discussion sheet which refer to Graph A. Then show Graph B and work through the questions. When discussing the difference between Graph A and Graph B it is helpful to be able to display both graphs at the same time. Once the difference in scale and the impact on the understanding of the audience has been grasped by students move on and repeat the exercise for Bar charts A and B. Finally note the importance of the vertical scale. In all of the exam components of A level Business they are likely to meet graphical data, which will always have a scale. This scale needs to be taken into consideration before students attempt to answer any questions based on this data.



Task 2 – Identifying graphical trends card sorting activity

Objective

This activity can be used as a plenary to recap data trends or as a starter to check students' understanding of graphical trends. Significant attention to the details given in the description, as well as the shape of the graph, is required to match the cards correctly.

Task Description

The student worksheet is a template for 24 cards (12 pairs of descriptions and graphs). These are best photocopied onto coloured card and laminated; cards should be cut out and placed in envelopes or plastic wallets. Students should try and match the descriptions to the graphical forms. The cards have been deliberately designed so that some graphs might fit more than one description. It is only when the students get to the last card that they will know whether they are correct. If they are not, they can rearrange the cards and keep trying, developing the skill of identifying graphical trends as they attempt to match all of the cards.

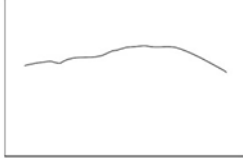
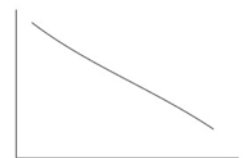

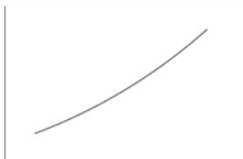


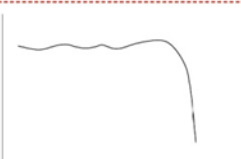
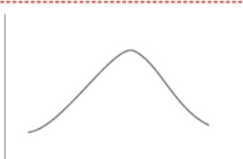
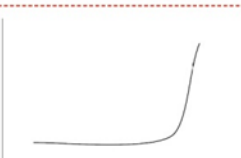


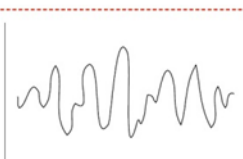
This activity works best in pairs or in small groups. The teacher can use the opportunity to walk round the classroom assisting students as necessary.

The answers can be found on the following page.



Task 2 - Identifying graphical trends: card sorting activity

Answers

<p>E</p> <p>There has been a dramatic downturn in the market</p>	<p>I</p> <p>The market is extremely volatile</p>	<p>L</p> 
<p>L</p> <p>Sales fell slightly in the final quarter</p>	<p>J</p> <p>The share price has bottomed out</p>	<p>A</p> 
<p>C</p> <p>The sudden collapse in wheat prices has surprised everyone</p>	<p>H</p> <p>The market is showing some signs of growth</p>	<p>K</p> 
<p>K</p> <p>The price reached a peak before falling a little and then maintained the same level</p>	<p>D</p> <p>Sugar prices peaked at £300 a tonne</p>	<p>B</p> 
<p>G</p> <p>The marketing budget has stabilised over the past few years</p>	<p>H</p> 	<p>E</p> 
<p>B</p> <p>There has been a steady increase in fuel costs over several years</p>	<p>C</p> 	<p>D</p> 
<p>A</p> <p>The value of the shares has shown a steady decline</p>	<p>F</p> 	<p>J</p> 
<p>F</p> <p>The investment level rose sharply</p>	<p>G</p> 	<p>I</p> 



Task 3 – Describing graphical trends: resource sheet and newspaper activity

Objective

The aim of this activity is to get students to not only identify graphical trends but be able to describe them. Their descriptions need to be accurate so that they can analyse their findings and, in the exam, obtain the full set of available marks.

Task Description

The student resource sheet suggests suitable vocabulary for describing data trends. Before issuing the sheet, the teacher might like to suggest to students that there are 4 basic types of movement – upwards, downwards, no movement and change of direction. Note one of these on each flip chart around the room and ask students to add suitable expressions to the lists. Once they have finished walking around the classroom adding their contributions, or shouting them out for a scribe to record (as you prefer) the resource sheets can be issued and the lists compare.

The teacher should then introduce the newspaper activity. Each student needs copies of the worksheets and a national newspaper with a good business/financial section. Students should be asked to select two different types of graph (bar chart, line graph, pie chart, histogram, pictogram etc.) and work through the questions on the sheets. For the final question they should use the vocabulary resource sheet which has been issued to them and attempt to describe the data as well as they possibly can.

This activity works best if students tackle it individually, each choosing their own two graphs. Students will need scissors and glue to attach the graphs to their worksheets. If preferred, the activity could be done online using the websites of national newspapers.



Task 4 - Rate of change: resource sheet and 'give me five'

Objective

The aim of this activity is to consolidate learning, using complex data. It will prepare the students for the unseen data which they will encounter in the exam. Students will work through the 'Tips to improve your performance sheet' with their teacher and attempt to apply these tips in class to a complex rate of change graph (one of the types of graphs that students seem to find most difficult to interpret).

The students should now be equipped to tackle an unseen sample exam paper or past paper.

Task Description

The teacher should go through the 'Handling unseen data: Tips to improve your performance' resource sheet with the class. Draw attention to the most important points reminding them of activities they have done concerning bias or the importance of the scale. Remind them to use good, accurate vocabulary and avoid making incorrect assumptions.

Display an up to date, complex rate of change graph for students to consider. The Office for National Statistics is an excellent source for such a graph (<http://www.ons.gov.uk/ons/datasets-and-tables/index.html>). Employment data, consumer trends, inflation, wage rates, fuel prices, housing, retail sales and international trade make excellent choices (click on 'economic').

Using the worksheet ask students to 'give you five' – write down five statements about what the data shows. Students should be encouraged to frame their words carefully, using the vocabulary resource sheet issued previously if necessary. Students may wish to work in pencil. While students are working – give out the tick and cross cards – one of each to every student. When students have finished writing their five statements the teacher should select a student to read out one of their statements. The rest of the class should consider the statement and decide whether it is true or false. The rest of the class should indicate their opinion by raising the appropriate tick or cross card. The teacher should tell the class whether the statement was or was not correct and explain why. The selected student should then circle the tick or cross on their sheet to indicate whether their statement was judged to be correct or incorrect. The selected student should then nominate another student to read out a phrase (unless time permits otherwise, bring in a rule that no student can be chosen twice). Towards the end of the session the teacher should reassure the class that they have all of the skills necessary to deal with the unseen data they will encounter in the three exam components of their qualification. An unseen sample exam paper or past paper could be issued for homework.



A LEVEL BUSINESS

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