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Delivery guides are designed to represent a body of knowledge about teaching a particular topic and contain:

- Content: a clear outline of the content covered by the delivery guide;
- Thinking Conceptually: expert guidance on the key concepts involved, common difficulties students may have, approaches to teaching that can help students understand these concepts and how this topic links conceptually to other areas of the subject;
- Thinking Contextually: a range of suggested teaching activities using a variety of themes so that different activities can be selected that best suit particular classes, learning styles or teaching approaches.

If you have any feedback on this Delivery Guide or suggestions for other resources you would like OCR to develop, please email resources.feedback@ocr.org.uk.
Microeconomics: Market failure and government intervention > Market failure
- explain what is meant by market failure
- explain the implication of market failure for efficiency/inefficiency
- explain what is meant by market failure in terms of over or under consumption/production and resource allocation.
Market failure occurs when free markets, operating without interference, fail to achieve an efficient allocation of resources.

**Approaches to teaching the content**
At the very start of their economics course, students were introduced to the use of economics in achieving an efficient allocation of resources and, by this point, they should have realised that markets can be a very efficient way of doing this. Many students are entranced by the idea that there are laws that govern the operation of market forces and may be somewhat resistant to the idea that not all markets operate in perfectly efficient ways. In other words, they may take some convincing. Use real-life examples that students can relate to and, where possible, get students to suggest examples themselves.

**Common misconceptions or difficulties students may have**
The concepts of over and under production and consumption require only a basic introduction here as they are covered in much greater depth in the section on externalities.

**Conceptual links to other areas of the specification – useful ways to approach this topic to set students up for topics later in the course**
Market failure links to the following topics: ‘The basic economic problem’; ‘Externalities’; ‘Market power/information asymmetries’; ‘Public goods’.

The activities below remind students about work already conducted into economic efficiency and this topic can be seen as a progression. The topic leads on naturally to a discussion of externalities [see above] and teachers may wish to refer back to this section when covering asymmetrical information as a cause of market failure, and when examining the specific case of public goods.
Students will doubtless have personal experience of not being able to buy a particular product or service yet having been both willing and able to pay. These types of experience provide great introductory contexts for the initial discussion of market failure. Students are all consumers of public education, which thus can act as a frequent focus for explanations of market failure related concepts. Students themselves, or members of their households, are likely to under-consume or over-consume certain goods and services and drawing out these examples can bring the topic to life.

### Activities

<table>
<thead>
<tr>
<th><strong>Spot the market failure</strong></th>
<th><strong>Resources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim is to introduce the idea of how the market system of supply and demand might fail to allocate resources correctly.</td>
<td>Click here</td>
</tr>
<tr>
<td><strong>Details:</strong></td>
<td></td>
</tr>
<tr>
<td>1) Quickly run through a list of ways in which either productive or allocative efficiency may not be achieved.</td>
<td></td>
</tr>
<tr>
<td>2) Find 'Spot the market failure' picture on Google Images – it is a sketch of part of a seaside town with various examples of market failure depicted.</td>
<td></td>
</tr>
<tr>
<td>3) In small groups, give the students five minutes to find as many examples of market failure as possible – they should mark these on the picture with a brief note about why they represent market failure.</td>
<td></td>
</tr>
<tr>
<td>4) Display the image on the main board. Ask students to come and circle an item and give their explanation.</td>
<td></td>
</tr>
<tr>
<td><strong>Duration:</strong> 20–30 minutes, depending on how many examples taken and level of explanation given by teacher.</td>
<td></td>
</tr>
</tbody>
</table>

### What is market failure

Mjmfoodie’s episode 31 is a good brief introduction to market failure, with cartoons, which students should watch before attempting this activity.

http://www.youtube.com/watch?v=rjxtB0GluQ

Display three headings on the board: capital goods; consumer goods; public services. Give each group of students 10 ‘economic welfare’ tokens [just the words ‘economic welfare’ on a piece of paper will do fine] and tell them that their role is to maximise the welfare of the citizens of the economy by allocating the tokens between the three possible uses shown on the board. When each group has made its decision, they must justify it to the other groups in the class. The teacher can use the outcomes to lead a discussion into the meaning of market failure, and why some goods and services are over/under produced or over/under consumed.

**Duration:** 15 minutes
### Activities

**Implication of market failure for efficiency/inefficiency**  
This activity assumes that in your teaching, you have already covered the topic 'Scarcity and choice'. Draw a PPC on the board and label the axes 'capital goods' and 'consumer goods'. Indicate three points on the diagram: point A inside the curve; point B on the curve; point C outside the curve. Ask the students to identify the most efficient point. Follow this up by asking them to explain why this is the most efficient. They should make a copy of the diagram and their analysis. Now introduce the idea of the Pareto optimal level of output, a level at which any reallocation of resources to make someone better off will result in someone else becoming worse off. Ask them to discuss this question: are all points on the PPC Pareto optimal points?  
Duration: 20 minutes

**Over or under consumption/production and resource allocation**  
Research task. Split the class into four groups: overproduction; underproduction; overconsumption; underconsumption. Give each group two examples of products or services that may fall into this category. Each group then has to research the reasons why this may occur, and the possible remedies. When research is complete, the groups should create a wall display in the shape of a four-quadrant grid, one quadrant per category.  
Duration: 20–30 minutes

**Public goods and market failure**  
This provides good background reading, case studies and notes for advanced teaching of market failure at A Level.  
Duration: 1 lesson

Students may find the YouTube channel of ‘paj holden’ useful for explanations of market failure topics.  
Students may find the YouTube channel of ‘Enhance Tuition’ useful for explanations of how to answer market failure examination questions.
Microeconomics: Market failure and government intervention > Externalities

- explain, with the aid of a diagram, what is meant by positive and negative externalities (external benefits and external costs) of consumption
- explain, with the aid of a diagram, what is meant by positive and negative externalities (external benefits and external costs) of production
- explain what is meant by marginal social cost, marginal external cost, marginal private cost, marginal social benefit, marginal external benefit and marginal private benefit
- explain, with the aid of a diagram, why the following cause market failure:
  - negative externalities of consumption
  - negative externalities of production
  - positive externalities of consumption
  - positive externalities of production
- evaluate how the existence of externalities affects markets, such as education, health, transport and the environment.
Externalities are costs or benefits arising from production or consumption that accrue to third parties and not the producer or consumer. They are not reflected in the price of a good or service and thus are difficult to measure. Market failure arises due to the amount of the activity undertaken by the free market: if externalities are beneficial, the market tends to supply too little and if the externalities are costs, the market tends to supply too much.

Approaches to teaching the content
Students are introduced to new vocabulary and to unfamiliar diagrams. It is useful to begin with the vocabulary so that students understand the concepts and one may then proceed to the analysis of externalities through the diagrams.

When teaching the diagrams, some teachers find it useful to use demand and supply curves to represent benefit and cost curves respectively, or to point out to students the similarity between the curves.

Whichever version of the diagrams is used, the central concept in the diagrams is that of the socially optimum level of output, hereinafter referred to as Q*, being that level of output at which the MSC = MSB. The diagrams illustrate cases where there is over or under production and cases where there is overconsumption or underconsumption i.e. output is above or below Q*. The diagrams are also used to show remedies to bring output to the socially optimum level of Q*. The concept of Q* is central to the understanding of all the diagrams and thus requires heavy emphasis at the start.

Common misconceptions or difficulties students may have
Both the vocabulary and the diagrams will be new to the students and may well require a slower pace than usual in order for all the new information to be absorbed. However, as students progress through the series of four diagrams, the repeated elements will become apparent to them.

Conceptual links to other areas of the specification – useful ways to approach this topic to set students up for topics later in the course.
Externalities links with the following topics: ‘The concept of the margin’ (A Level only); ‘Allocation of resources’; ‘Supply and demand and the interaction of markets’; ‘Market failure’, ‘Alternative methods of government intervention’.
A Level students will already be familiar with the concept of the margin, if they have covered this, and this will render the teaching of externalities easier when it comes to the explanation of the curves in the diagram. Teachers may choose to introduce taxes and subsidies as methods of correcting market failure at this point through the diagrams, or they may choose to wait until covering ‘Alternative methods of government intervention’. If students appear to be suffering from information overload at this point, it may be wisest to wait and allow some time to pass so that students have a chance to process the information.
Students will be able to relate to examples of under consumption of goods or services that are supposedly good for them, so discussions on why they should eat more vegetables or complete their homework on time can be both useful and entertaining. On a more serious note, students can easily recognise negative externalities arising from the overconsumption of alcohol or cigarettes.

Today’s students tend to be quite environmentally aware and can quickly recognise pollution in its many forms as a negative externality of production. Examples of positive externalities of production that students find interesting are infrastructure projects and developments in technology.

**Activities**

**True cost of flying**

Aim: To introduce students to the concepts of private cost, negative externalities and external cost, and third parties.

Details:

1) Display an image of a plane on the board, with four columns entitled: ‘private cost’; ‘negative externalities’; ‘external cost’; ‘third parties’.

2) Explain the meaning of ‘private costs’ and give students three minutes to list as many costs under this heading as possible.

3) Repeat for ‘negative externalities’.

4) Now explain how one of these negative externalities leads to an external cost and who is included as a third party.

5) Use further worked links for other negative externalities.

6) Students should incorporate this table into their notes.

Duration: 20+ minutes, depending on the number of examples worked through.
### Activities

<table>
<thead>
<tr>
<th>Marginal costs and benefits</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mjmfoodie's episode 32 on externalities provides an accessible introduction to the topic using cartoon illustrations. Students should watch the video and then do the activity.</td>
<td><img src="http://www.youtube.com/watch?v=yC5R9WPl0s" alt="Click here" /></td>
</tr>
</tbody>
</table>

It is useful to begin this topic by introducing the new vocabulary. Create two sets of cards, one with the names of the terms and the second with the definitions. The terms required are: marginal social cost; marginal external cost; marginal private cost; marginal social benefit; marginal external benefit; marginal private benefit; externalities; positive externalities of production; negative externalities of production; positive externalities of consumption; negative externalities of consumption. Give out the sets of cards and ask students to match the terms with the definitions.

Duration: 15 minutes

<table>
<thead>
<tr>
<th>Four types of externalities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a four-quadrant grid with the following headings: positive externalities of production; negative externalities of production; positive externalities of consumption; negative externalities of consumption. Ask students to fill in examples of each type of externality.</td>
<td></td>
</tr>
</tbody>
</table>

Duration: 10–15 minutes

<table>
<thead>
<tr>
<th>Externalities diagrams</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Good presentation for the different externalities: <a href="http://www.slideshare.net/vicarick/externalities-graphs-how-i-understand-them">http://www.slideshare.net/vicarick/externalities-graphs-how-i-understand-them</a></td>
<td><img src="http://www.slideshare.net/vicarick/externalities-graphs-how-i-understand-them" alt="Click here" /></td>
</tr>
</tbody>
</table>

Let students take notes. Next show them the diagrams without labels and let students label them on the whiteboard or on a handout. Then prompt students to draw the different diagrams without referring to their notes.

Duration: 35 minutes

<table>
<thead>
<tr>
<th>Diagram flip books</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Give students four copies of the diagram in question and instruct them to shade the following areas in different colours: private benefit; private cost; external cost (production diagrams) or external benefit (consumption diagrams); net welfare gain/loss. By flipping through the sequence of each diagram, students can see, understand and remember what happens to costs, benefits and welfare in each diagram.</td>
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</tbody>
</table>

Duration: 10 minutes
## Thinking Contextually: Externalities

<table>
<thead>
<tr>
<th>Activities</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagram jigsaws</strong></td>
<td></td>
</tr>
<tr>
<td>Give students an A3 copy of each diagram in question and four sheets of card in different colours. Using the A3 diagram as a template, they need to cut out shapes from the card to cover the areas under the benefit curves/demand curves and cost curves/supply curves, which represent private benefit; private cost; external cost [production diagrams] or external benefit [consumption diagrams]; net welfare gain/loss. By then fitting the shapes onto each diagram, students can see, understand and remember what happens to costs, benefits and welfare in each diagram.</td>
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<tr>
<td>Duration: 15 minutes</td>
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<tr>
<td><strong>Negative externalities of production</strong></td>
<td></td>
</tr>
<tr>
<td>Begin with watching this video tutorial on negative externalities of production: <a href="https://www.youtube.com/watch?v=7pyB-sTCB8U">https://www.youtube.com/watch?v=7pyB-sTCB8U</a></td>
<td></td>
</tr>
<tr>
<td>Ask students to take notes, or alternatively prepare a script to the clip with missing phrases/diagrams and ask them to complete it while watching.</td>
<td></td>
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<tr>
<td>Ask students to write down three examples where social cost is greater than private cost.</td>
<td></td>
</tr>
<tr>
<td>Ask students to answer these questions: <a href="http://www.economicsonline.co.uk/Questions/Congestion.html">http://www.economicsonline.co.uk/Questions/Congestion.html</a></td>
<td></td>
</tr>
<tr>
<td>Duration: 30 minutes</td>
<td></td>
</tr>
<tr>
<td><strong>Positive externalities of production</strong></td>
<td></td>
</tr>
<tr>
<td>Watch this short clip about the positive externalities of production diagram <a href="https://www.youtube.com/watch?v=onrnz4oudNE">https://www.youtube.com/watch?v=onrnz4oudNE</a></td>
<td></td>
</tr>
<tr>
<td>Then ask students to complete these tasks.</td>
<td></td>
</tr>
<tr>
<td>• List the private and the social benefits from the following productive activities: fire safety equipment; flu vaccinations; development of sustainable energy sources.</td>
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</tr>
<tr>
<td>• Select an activity to research that generates positive externalities in production. Write about the differences between the private and the social benefits of the chosen activity, how and for whom it generates positive externalities, what could be done to extend production and to what extent the level of production should be left to market forces to decide. Draw the appropriate diagram.</td>
<td></td>
</tr>
<tr>
<td>Duration: 30 minutes</td>
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</tbody>
</table>
# Thinking Contextually: Externalities

## Activities

### Positive externalities of consumption

Follow on with [https://www.youtube.com/watch?v=7zLb1m3cxM](https://www.youtube.com/watch?v=7zLb1m3cxM)

Ask students to take notes, or alternatively prepare a script to the clip with missing phrases/diagrams and ask them to complete it while watching.

Ask students to select an area that generates positive externalities in consumption. They should write up the differences between the private and the social benefits of the chosen area, how and for whom it generates positive externalities, what could be done to extend consumption and to what extent the level of consumption should be left to market forces to decide. They should then draw the appropriate diagram.

Duration: 30 minutes

### Negative externalities of consumption

Begin with watching this video tutorial on negative externalities of consumption: [https://www.youtube.com/watch?v=aj6FTueEiCY](https://www.youtube.com/watch?v=aj6FTueEiCY)

Ask students to take notes.

Ask students to list the private and social costs arising from the consumption of: alcohol; cigarettes; driving cars; fast food. Split the class into four groups and allocate one of these cases to each group. Students should research the causes of the externalities and make a presentation on possible solutions, including appropriate diagrams.

Duration: 1 lesson

### How externalities affect markets

Let students watch the clip [https://www.youtube.com/watch?v=3_2wUdpUjC4](https://www.youtube.com/watch?v=3_2wUdpUjC4)

Prepare a handout with space for students to write summary bullets points. Give a selection of essay questions on the examples shown in the clip and ask students to prepare essay plans for them.

Duration: 30 minutes
Microeconomics: Market failure and government intervention > Market power/Information asymmetries

- explain what is meant by information failure
- explain what is meant by asymmetric information and moral hazard
- explain, with the aid of a diagram, how information failure causes market failure
- explain what is meant by merit and demerit goods
- explain what is meant by merit and demerit goods in terms of information failures
- evaluate the significance of merit and demerit goods.
Information failure occurs when some or all parties to an economic exchange do not have perfect information, i.e. all information relevant to a transaction. One particular form of this is called asymmetric information, when one party in an exchange has more information than another. The possession of this information may give this party an incentive to cheat, as they will be protected from the cost of risk, which will be borne by the other party. This is known as moral hazard. Information failure can be the cause of under consumption of merit goods and over consumption of demerit goods.

**Approaches to teaching the content**

An approach to teaching that helps students both to categorise concepts and use them to analyse cases is to consider information failure form a demand side / supply side perspective. The issues relating to the demand for information are asymmetric information and moral hazard, while the under consumption of merit goods or over consumption of demerit goods can be corrected by improving the supply of information.

**Common misconceptions or difficulties students may have**

The most common confusion is for students to categorise or confuse merit goods with public goods. If this arises, use the example of education and ask if all education is provided by the government. Follow this up with questions on whether or not the market can supply education at a profit while charging a price that consumers are willing to pay. Students should then be able to see that merit goods are private goods that are largely provided by government. They should then be able to discuss why governments do this.

**Conceptual links to other areas of the specification – useful ways to approach this topic to set students up for topics later in the course**

The under consumption of merit goods or over consumption of demerit goods can be corrected by improving the supply of information. Teachers may wish to revisit this when covering methods of government intervention.
This is a particularly fertile area for discussion. Students enjoy the idea that lying can be considered from an economic perspective. Contexts could be second-hand goods that they have sold to each other or on eBay, or their own part-time employment. They could also consider examples of asymmetric information in familiar industries, such as dentistry. When considering merit and demerit goods, familiar examples will be education and smoking. These familiar contexts can then easily be used as a platform for the exploration of less well-known examples.

**Thinking Contextually** Market power/Information asymmetries

<table>
<thead>
<tr>
<th>Activities</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **Information failure**<br>As an introduction to the theoretical elements of this topic, students should read this before beginning their work on this topic. [http://economicsonline.co.uk/Market_failures/Information_failure.html](http://economicsonline.co.uk/Market_failures/Information_failure.html)<br>Go through definitions of perfect and imperfect information. Ask students to define information failure, then lead a discussion – what problems do you think could result from information failure?<br>Let students read the case study on the importance of information, and then ask them to depict the situation diagrammatically before and after the introduction of the mobile phone. [http://www.econport.org/content/handbook/Market-Failure/Imperfect-Information/Case-Study.html](http://www.econport.org/content/handbook/Market-Failure/Imperfect-Information/Case-Study.html)<br>Duration: 25 minutes | **Click here**

**Click here**

**Click here**
**Asymmetric information and moral hazard**

Information failure leads to demand side problems of asymmetric information and moral hazard. In the case of asymmetric information, the seller knows more about the product than the buyer. Explore this through the following discussions:

**Discussion 1** – In the case of private goods, what problems might arise?

**Discussion 2** – What solutions would you suggest?

Moral hazard occurs due to the principal-agent problem. One person, the principal, hires an agent to perform tasks on his behalf but cannot ensure that the agent performs them in exactly the way the principal would like. This may be because:

- the efforts of the agent are impossible or expensive to monitor
- incentives of the agent differ from those of the principal.

Students should explain how this could apply to a specific good or service and what remedies may be available. The agent has an incentive to cheat, which creates a consequent hazard to the less well-informed party (the principal), because the one who engages in immoral behaviour does not suffer the consequences or may actually benefit.

**Discussion 3** – In what work situations might a worker providing a public good ‘cheat’, i.e. not do the job to the best of their ability? What would be the consequences of this behaviour? Who would suffer, the agent or the principal?

**Duration:** 25 minutes

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**Asymmetric information game – cherries and lemons**

Based on the work of George Akerlof.

Split the class into two groups, with one group roughly twice as large as the other. The large group will be the sellers of used cars, the small group will be the buyers. Explain to the students that in America, good quality cars are said to be in ‘cherry’ condition, while poor quality cars are known as ‘lemons’. Each seller should take a slip of paper from you which says either ‘cherry’ or ‘lemon’. Tell the sellers that they can sell cars for any price they can get. Lemons have no minimum price, while cherries cannot be sold for less than £1500. Once the seller has sold a car, they give the slip to the buyer, who then knows whether they have bought a cherry or a lemon. Tell the sellers that they can sell cars for any price they can get. Lemons have no minimum price, while cherries cannot be sold for less than £1500. Once the seller has sold a car, they give the slip to the buyer, who then knows whether they have bought a cherry or a lemon. Give each buyer a budget of £5000 to buy used cars. Tell them that they will be able to resell a lemon for £500 but if they find a cherry, they will be able to sell it for £2500. Let students trade for 5–10 minutes, then get the sellers to write on the board how much they sold their car for, using the headings ‘Cherries’ and ‘Lemons’. While they are doing this, the buyers will calculate their profit or loss and write that on the board in a third column headed ‘Profit/Loss’. Lead the class in a discussion about the effect of asymmetric information on the market for cars.

**Duration:** 25 minutes
### Activities

**Merit and demerit goods in terms of information failures**

Provide students with a list of common merit goods: education; healthcare; skills training. Students should suggest reasons why such goods tend to be underconsumed. Students should answer the following questions:

1. What are the private benefits of having public libraries?
2. What are the social benefits of public libraries?
3. Why does imperfect information lead to libraries being underused?
4. What remedies do you suggest?

Information failure is said to contribute to the overconsumption of demerit goods, due to consumers either being uncertain about the true costs of consumption or misunderstanding the true costs of consumption. Ask students to choose two examples of demerit goods and answer the questions below.

1. Misunderstanding true costs – how does this happen?
2. Uncertainty about costs – why are people uncertain?

Follow up with a video and worksheet exercise:


Duration: 35 minutes
## Activities

**More merit goods and less demerit goods**

Ask students in groups to write a short advert to promote one of the possible solutions to underconsumption (regular health checks) and overconsumption (sweets and fatty foods):

- public service films, advertisements and leaflets
- education to improve the ability of people to select, process and utilise information [literacy, numeracy and ICT skills]
- legislation to improve labelling or force disclosure of information.

Let students discuss:

a) costs of each method  
b) the time frame  
c) what factors will influence whether the method improves the quality and provision of information and thus leads to more economically efficient choices.

Then let them vote which one (or combination) they think would work best.

Duration: 1 lesson

Useful questions for students to attempt at the end of this topic:  
[http://economicsonline.co.uk/Questions/Education.html](http://economicsonline.co.uk/Questions/Education.html)

Duration: 30 minutes
Microeconomics: Market failure and government intervention > Public goods

- explain what is meant by a private good, a public good and a quasi-public good
- explain the characteristics of a public good, including:
  - non-excludability, non-diminishability/non-rivalry, non-rejectability and zero marginal cost
- distinguish between a private good, a public good and a quasi-public good (A Level only)
- explain why the existence of public goods results in the free rider problem (A Level only)
- explain why the existence of public goods may result in market failure (A Level only)
- evaluate the significance of public goods
- evaluate the role of the government in the provision of a public good.
Public goods are those commodities or services that are provided free of charge to all members of society, while private goods are those that must be purchased in order to be consumed. Public goods have certain characteristics that differentiate them from private goods and some of these characteristics are shared with quasi public goods.

Approaches to teaching the content
The most effective starting point is probably the characteristics of public goods. All other aspects of the topic can be linked to this, so you can choose an order to suit your personal style and preferences. The use of examples is very helpful in delivering the content.

Common misconceptions or difficulties students may have
Occasionally, students have difficulty understanding the difference between not using a service and non-rejectability. The key here is that the public good, for example the police, will exist independently of the citizenry and will continue to exist whether individual citizens make use of it or not.

Conceptual links to other areas of the specification – useful ways to approach this topic to set students up for topics later in the course
Public goods links with the following topics: ‘The concept of the margin’ (A Level only); ‘The objectives of economic agents’. Teachers may wish to relate the public good characteristic of zero marginal cost to students’ prior study of the concept of the margin. It can be of interest to link the free rider problem to the concept of rational self-interest.
Students and their families are consumers of both public and quasi public goods, making the family an ideal context for teaching this topic. Consumption could lead on to the provision of public and quasi public goods as well, as a proportion of parents are likely to work in the public sector. This can also be an interesting point at which to begin considering the role of government in ameliorating market failure.

### Activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>Resources</th>
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<tbody>
<tr>
<td><strong>Light the way: public goods and market failure</strong></td>
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</tr>
<tr>
<td>To introduce the ideas of excludability and rivalry, bring a sweet/chocolate bar/fruit to the class and eat it or give it to one student. Then show a picture of a lighthouse. Ask the students what the differences between the two are. Then watch the videos on private and public goods, and consequently the free rider problem:</td>
<td></td>
</tr>
<tr>
<td><a href="https://www.youtube.com/watch?v=E1v5eRs0_fw">https://www.youtube.com/watch?v=E1v5eRs0_fw</a></td>
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<tr>
<td><a href="https://www.youtube.com/watch?v=4RE9PMwwaFc">https://www.youtube.com/watch?v=4RE9PMwwaFc</a></td>
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<tr>
<td>Duration: 20 minutes</td>
<td></td>
</tr>
<tr>
<td><strong>Characteristics of a public good</strong></td>
<td></td>
</tr>
<tr>
<td><a href="http://www.youtube.com/watch?v=udyAlyrs6A">http://www.youtube.com/watch?v=udyAlyrs6A</a></td>
<td></td>
</tr>
<tr>
<td>This is an interesting visual/musical introduction to the concepts relating to public goods. Students should watch the video then attempt the activity below.</td>
<td></td>
</tr>
<tr>
<td>Ask students to find a brand name good that they have brought to the lesson, e.g. a mobile phone, and to put the goods on the table in front of them. Hand out printed definitions of the key terms: excludability; rivalry; rejectability; marginal cost. Ask students to discuss the extent to which they think their possessions are private goods. Ask them to make a list of goods that do not have these characteristics. This list can then lead on to the discussion of public goods.</td>
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<tr>
<td>Duration: 15–20 minutes</td>
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</table>
### Thinking Contextually: Public Goods

<table>
<thead>
<tr>
<th>Activities</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fireworks</strong>&lt;br&gt;Show a video clip of a fireworks display, the more spectacular the better. Hand out printed definitions of the key terms: non-excludability; non-rivalry; non-rejectability; zero marginal cost. Ask students to discuss the extent to which they think fireworks are a public good. Now show them this article from tutor2u: <a href="http://www.tutor2u.net/blog/index.php/economics/comments/are-fireworks-in-london-a-public-good">http://www.tutor2u.net/blog/index.php/economics/comments/are-fireworks-in-london-a-public-good</a>&lt;br&gt;Students should read the article then discuss further whether or not fireworks are a public good. This activity encourages them to look beyond the obvious.</td>
<td>20 minutes</td>
</tr>
<tr>
<td><strong>Public goods results and the free rider problem</strong>&lt;br&gt;Split the class into four groups. Explain what a free rider is and give each group one example: TV licence dodgers; businesses that avoid paying corporation tax; club members who 'forget' to pay their subscriptions; visitors to museums or galleries who don't make a voluntary donation. Each group should discuss why this behaviour is problematic and what possible solutions there could be. They should present their findings to the whole class.</td>
<td>20–25 minutes</td>
</tr>
<tr>
<td><strong>Private good, public good and quasi-public goods</strong>&lt;br&gt;Give each of the four groups one of the following quasi-public goods to discuss: motorways; parks; BBC; the police. Explain what a quasi-public good is and ask them to discuss the following questions:&lt;br&gt;• In what way is the good partially excludable?&lt;br&gt;• In what way is the good partially rivalrous?&lt;br&gt;• Why might the good not be provided by the private sector?&lt;br&gt;• How could a government justify paying for the good out of tax revenues?&lt;br&gt;Each group should make a poster about their given good.</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>
### Activities

<table>
<thead>
<tr>
<th>Healthcare public or quasi-public?</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong><a href="http://www.economicsonline.co.uk/Market.Failures/Healthcare.html">http://www.economicsonline.co.uk/Market.Failures/Healthcare.html</a></strong></td>
<td><strong>A Level only</strong></td>
</tr>
</tbody>
</table>

Students should read this article, then answer the following essay question:

- In the UK, healthcare is a public good, while in the USA it is a quasi-public good. Which system do you believe to be the most economically efficient, and why?

Duration: 25 minutes

<table>
<thead>
<tr>
<th>Public goods and market failure</th>
</tr>
</thead>
</table>

Give students a worksheet with the heading: ‘Why does the market system fail to provide public goods?’ Below the heading list typical public goods, such as roads, lighthouses, national defence, fire and police services, public education and public health. Below the list, give three possible reasons: non-excludability; indivisibility; free rider problem. Students should then discuss, and write down, their answers to the question.

Duration: 15 minutes

<table>
<thead>
<tr>
<th>Significance of public goods.</th>
</tr>
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</table>

On the reverse of the worksheet, students should be given the following question to discuss: ‘What would be possible outcomes if the government didn’t provide the public goods listed overleaf?’ Split the class into groups and assign one public good to each group. Give them five minutes to write down their ideas and then each group should share their ideas with the rest of the class.

Duration: 15 minutes

<table>
<thead>
<tr>
<th>Summary exercise</th>
</tr>
</thead>
</table>

As a summative exercise, students should create a table with columns for private goods, public goods, quasi-public goods, merit goods and demerit goods. The table should have nine rows: definition; examples; provided by; external costs or benefits; information failure; non-rival; non-excludable; zero marginal cost; government action. Students should research the information required to complete the table.

Duration: 20–25 minutes
A Level only

Microeconomics: Market failure and government intervention > Inequity

• explain the causes of inequality of income and wealth
• evaluate the significance of inequality of income and wealth
• explain why there may be differences in access to resources
• evaluate the significance of differences in access to resources.
The key concept here is inequality itself. Students find this issue particularly fascinating and are often genuinely shocked by the degree of inequality in the world, but particularly in the UK.

**Approaches to teaching the content**
Using current statistics is a very useful way to lead into the topic. There are a number of activities below that contain external links to relevant sources of data, which students will find interesting to explore.

**Common misconceptions or difficulties students may have**
Students are prone to confuse wealth and income, or to use the terms interchangeably. It needs to be explained that wealth is a stock concept, while income is a flow concept. Once the difference is established, teachers can go on to show how wealth affects income and vice versa.

**Conceptual links to other areas of the specification – useful ways to approach this topic to set students up for topics later in the course**
Inequity links with the following topics: ‘The objectives of economic agents’; ‘Income distribution and welfare’.

Although this is a micro topic, it has very clear links with the macro topic of income distribution, which concerns itself with policies relating to inequality and poverty. ‘Income distribution and welfare’ could logically be taught alongside this topic, although teachers may also find value in keeping micro and macro topics separate.
Although this topic is of great interest to students, it requires sensitive management as, in any group of A Level students, one may find children of the very rich and of the very poor. The context should, therefore, be society as a whole and the UK economy in comparison to other economies. The activities are designed to reflect this.

**Activities**

**Efficiency benefits everyone?**
Aim: To introduce students to the apparent contradictions between efficiency and equity.

Details:

1) This follows on from the idea that if the market system was working perfectly for every good, then resources would have been allocated efficiently to the right quantities of these goods. However, it could be the case that 90% of these goods went to 10% of the people in the economy, so this fails to achieve equity and overall economic welfare.

2) Show a made-up statement with the image of a well-known politician, e.g. ‘Our economy is working at maximum efficiency.’ Add a background statement, such as ‘90% of income is earned by 1% of people.’

3) Discuss these ideas using questions, such as is it fair, might there be problems for the economy as a result?

Duration: 10+ minutes, depending on discussion time allowed and number of questions posed.

**Causes of inequality of income and wealth**
This clip shows how economic inequality harms society:

http://www.ted.com/talks/richard_wilkinson

Superb introduction to this topic, influential work in the field of Humanities backed up by thorough research and statistical analysis. Watch this with the students, then discuss the issues raised, depending on student interest.

Duration: 25 minutes
## Activities

**Bubble maps**
Display two headings on the board: ‘Income – flow’ and ‘Wealth – stock’. Explain the difference, then ask students to add examples under each heading.

Bubble map 1. Draw a small circle on the board and in it write ‘causes of inequality of income’. Students should come to the board and add more ‘bubbles’ around the central one, each containing a cause of inequality. Examples: wage differentials; level of education; skills; experience; pattern of demand for labour; elasticity of demand for labour in specific occupations; access to resources.

Bubble map 2. Draw a small circle on the board and in it write ‘causes of inequality of wealth’. Students should come to the board and add more ‘bubbles’ around the central one, each containing a cause of inequality. Examples: inheritance; asset prices; difficulty of redistribution; access to resources.

Duration: 15–20 minutes

### Inequality of income and wealth

Use this infographic to display and discuss the significance of inequalities of income.


Let students invent figures for single household income and for family income, then take the survey in the link below, which shows where individuals and families feature in the income distribution of the UK.


Duration: 20 minutes

## Resources

### Inequity

**Thinking Contextually**
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<th>Resources</th>
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</thead>
<tbody>
<tr>
<td><strong>The distribution of wealth</strong></td>
<td><strong>Resources</strong></td>
</tr>
<tr>
<td>This study from the London School of Economics shows the distribution of wealth, with graphs plus explanations. Students should read this resource before undertaking the next activity.</td>
<td><a href="http://www.discoversociety.org/2013/12/03/focus-the-distribution-of-wealth-what-we-think-and-how-it-is/">Click here</a></td>
</tr>
<tr>
<td>Hans Rosling's talks really bring statistics to life and shows how interesting Economics can be and the insights that economic analysis can produce:</td>
<td><a href="http://www.ted.com/talks/hans_rosling_reveals_new_insights_on_poverty">Click here</a></td>
</tr>
<tr>
<td>Once students have studied the resources above, they should be asked to write an essay plan to evaluate the significance of inequality of income and wealth in the UK.</td>
<td>Duration: 1 lesson</td>
</tr>
<tr>
<td><strong>Access to resources</strong></td>
<td><strong>Resources</strong></td>
</tr>
<tr>
<td>Thomas Piketty is the new ‘superstar’ of economics and his engaging talk provides an interesting view on this topic, which could be used as the basis for a concluding discussion on inequality.</td>
<td><a href="http://www.ted.com/talks/thomas_piketty_new_thoughts_on_capital_in_the_twenty_first_century">Click here</a></td>
</tr>
<tr>
<td>Ask students the following questions:</td>
<td>Duration: 35 minutes</td>
</tr>
<tr>
<td>• To which resources might the wealthy have greater access?</td>
<td></td>
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<tr>
<td>• What are the likely effects of this?</td>
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</tbody>
</table>
Microeconomics: Market failure and government intervention > Environment

- explain the three functions of the environment: provider of resources, provider of amenities and absorber of waste
- explain, with the aid of a diagram, how externalities arising from the impact of production on the environment cause market failure
- explain, with the aid of a diagram, how externalities arising from the impact of consumption on the environment cause market failure
- explain, with the aid of a diagram, the environmental Kuznets curve
- evaluate whether economic growth will result in environmental degradation/resource depletion and limit sustainable development
- evaluate the effectiveness of policies used to reduce the rate of environmental degradation/resource depletion at a local, national, regional and global level, including for example:
  - indirect taxation and subsidies
  - legislation and regulation, including environmental standards
  - tradable pollution permits
  - information provision
  - government expenditure
  - public and private partnerships.
The three functions of the environment can be used as ‘pegs’ on which to ‘hang’ the other topics in this section. The environment as provider of resources can be the starting point for how externalities arising from the impact of production on the environment cause market failure, and also for whether economic growth will result in environmental degradation/resource depletion and limit sustainable development. The environment as provider of amenities links with how externalities arising from the impact of consumption on the environment cause market failure. The environment as absorber of waste can lead into the environmental Kuznets curve and policies used to reduce the rate of environmental degradation/resource depletion.

**Approaches to teaching the content**

A cost/benefit approach is useful here. Teachers can direct students to examine the harmful effects on the environment of production and consumption activities, together with possible remedies, while not neglecting the benefits to all that arise from economically efficient management of the environment.

**Common misconceptions or difficulties students may have**

Some of the policy instruments, in particular tradable pollution permits and public-private partnerships, will be wholly unfamiliar to most students and thus merit careful explanation.

**Conceptual links to other areas of the specification – useful ways to approach this topic to set students up for topics later in the course**


This topic is one of the clearest illustrations of the basic economic problem and it is worth reminding students about this, and referring to opportunity cost throughout the teaching of the topic. The reasons why environmental degradation takes place have their roots in the objectives of households and firms, while the solutions to environmental problems lie with governments and depend on government objectives. Although the environment and market failure is a micro topic, it has many macro implications and it could be taught together with economic growth and development.
Examining the environment from the perspective of different economic agents can be useful. Students and their families can provide the context for issues around consumption, while firms can be the focus for production and the environment. Students can then consider the wider role of government in economically efficient management of the environment.

<table>
<thead>
<tr>
<th>Activities</th>
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<tbody>
<tr>
<td><strong>Word chain: environmental negative externalities</strong></td>
<td>List the key steps from the existence of a negative externality in either consumption or production through to how this leads to market failure. Jumble the steps and add some wrong steps. Working in pairs, students should write down the correct steps on Post-it notes and place them in the correct order. First correct team wins.</td>
</tr>
<tr>
<td>Duration: 10–15 minutes</td>
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<tr>
<td><strong>Provider of resources</strong></td>
<td>Environment as provider of resources – the link below provides an introduction to the economics of natural resources:</td>
</tr>
<tr>
<td>Students should make notes on the role of the environment.</td>
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<tr>
<td>Duration: 10 minutes</td>
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<tr>
<td><strong>Tragedy of the Commons</strong></td>
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<tr>
<td>You will need 24 small pieces of plain paper per student – cut enough A4 sheets into 16 pieces. Tell the students that they are going fishing. To catch a fish, they need to take a piece of paper and write their initials on it. They will be paid £1 per fish in round 1 and £2 per fish in round 2. Place the pieces of paper on the desk top and give the students 30 seconds fishing time, then ask them to add up the total number of fish each and ‘pay’ them. The fastest of students will only be able to ‘catch’ around 15 fish because this will still leave less than half the fish stock for the second round. Students invariably ‘catch’ as many fish as they can in round 1. Play the second round for 30 seconds, add up the totals and make the ‘payments’. Discuss the outcomes of the games with the students, allow them to explore why they caught so many fish in round 1 when they knew that they could get double the price per fish in round 2, and explain the tragedy of the commons.</td>
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<tr>
<td>Duration: 20 minutes</td>
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</table>
## Thinking Contextually Environment

<table>
<thead>
<tr>
<th>Activities</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **Depletion of fish stock**  
After reading this case study, students should consider the advantages and disadvantages of the different remedies and decide on the most effective solution.  
http://www.economicsonline.co.uk/Market_failures/Depletion_of_fish_stocks.html | **Provider of amenities**  
To illustrate the environment as provider of amenities, such as natural landmarks and beautiful views, students should create a table, with each row being allocated to an example of an amenity. The column headings should be as follows: public good characteristics; quasi-public good characteristics; under or over provided; remedy for market failure; under or over consumed; remedy for market failure. Students could be given a list of amenities chosen by the teacher or could be asked to choose their own examples.  
Duration: 15 minutes | 

| **Absorber of waste**  
Remind students of the tragedy of the commons [see above]. Due to this, the environment is often treated as a private good rather than a public good. Governments will set the desired quality of environment, such as the level of pollution, assign user rights and create a market. Students should follow the link below.  
http://www.economicsonline.co.uk/Market_failures/Pollution_carbon_waste.html | **Market failure**  
Split the class into four groups. Assign one of the following externalities to each group: negative externalities of production; positive externalities of production; negative externalities of consumption; positive externalities of consumption. Each group should make a presentation, based around the diagrams that they learned in ‘Externalities’, and link it to an environmental issue of their choice. The presentations should show how the externality affects the environment and causes market failure.  
Duration: 1 lesson, minimum |

Duration: 15 minutes  
Students should summarise the main points from the 'remedies' section.  
Duration: 20 minutes |
### Activities

<table>
<thead>
<tr>
<th>The environmental Kuznets curve</th>
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<tbody>
<tr>
<td>Give students a copy of the environmental Kuznets curve diagram. They should make two lists: ‘Why pollution increases’; ‘Why pollution decreases’. They should then use these lists to make a flow chart that explains the shape of the curve.</td>
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<tr>
<td>Duration: 15 minutes</td>
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</table>

<table>
<thead>
<tr>
<th>Kuznets curve storyboard</th>
</tr>
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<tbody>
<tr>
<td>With such a clear, inverted u-shape, this curve works well with the storyboarding technique. Either give simplified text explanations for different parts of the curve for the students to draw the curve, or give the curve with gaps for students to add text to explain the shape. This can be a useful differentiation exercise, with different versions used with varying amounts of text/gaps included.</td>
</tr>
<tr>
<td>Duration: 20 minutes</td>
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<table>
<thead>
<tr>
<th>Impact of economic growth on sustainable development</th>
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<tbody>
<tr>
<td>Students should research the costs and benefits of economic growth and make a list of each. They should then watch the following talk:</td>
</tr>
<tr>
<td><a href="http://www.ted.com/talks/ray_anderson_on_the_business_logic_of_sustainability">Click here</a></td>
</tr>
<tr>
<td>This talk provides a micro approach to the question of whether or not economic growth is likely to limit sustainable development. This could usefully be followed by:</td>
</tr>
<tr>
<td><a href="http://www.ted.com/talks/alex_steffen_sees_a_sustainable_future">Click here</a></td>
</tr>
<tr>
<td>As they watch the talk, students should make notes on the answers to the following questions: What is an ecological footprint? What other problems are impacting on global sustainability? How can ‘brighter, greener cities’ improve sustainability? What are ‘megacities’ in developing countries? How can collaboration help sustainability? The final segment ‘Another world is possible’ can be used as the basis for a plenary discussion.</td>
</tr>
<tr>
<td>Duration: 1 lesson</td>
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</tbody>
</table>
**Activities**

**Effectiveness of policies**
Research task – when you have decided on the policies to reduce the rate of environmental degradation/resource depletion that you want the students to cover, split the class into groups and assign one policy per group. They should research that policy, then make an A2 poster that contains only the name of the policy, ten other words and a series of images which illustrate the policy. Each group should appoint a researcher and a representative. The researcher will visit the other groups and find out about the other policies, then report back to their own group. The representative will explain the poster to the researchers who visit.

Duration: 1 lesson, minimum

<table>
<thead>
<tr>
<th>Resources</th>
<th>Activities</th>
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<tbody>
<tr>
<td></td>
<td><strong>Effectiveness of policies</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td>Duration: 1 lesson, minimum</td>
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</table>
Microeconomics: Market failure and government intervention > Alternative methods of government intervention

- explain why governments intervene in markets
- explain, with the aid of a diagram, how government interventions in markets corrects or reduces market failure and inequity by using, for example:
  - taxation and subsidies
  - government expenditure/state provision
  - buffer stock systems
  - price controls
  - public/private partnerships (A Level only)
  - legislation and regulation
  - tradable pollution permits (A Level only)
  - information provision
  - competition policy (A Level only)
- evaluate the effectiveness of different types of government intervention in correcting or reducing market failure and inequity
- explain what is meant by Cost Benefit Analysis (CBA) (A Level only)
- explain how CBA can be used in assessing infrastructure projects, such as in education, the environment, health and transport (A Level only)
- evaluate the value of CBA in helping governments to make decisions in situations where there is market failure. (A Level only)
The main idea here is that market failure can be corrected and that governments have a range of tools at their disposal with which to make the corrections. Cost benefit analysis (CBA) is included as a means of assessing the provision of public goods that arise from the market failure of missing markets.

Approaches to teaching the content
This topic provides a good opportunity to revisit several other topics in 'Market failure and government intervention' and to show how the market failures that students have learned about can be corrected, and thus a useful approach is to build on prior knowledge.

Common misconceptions or difficulties students may have
Some of the policy instruments, in particular tradable pollution permits and public-private partnerships will be wholly unfamiliar to most students and thus merit careful explanation.

Conceptual links to other areas of the specification – useful ways to approach this topic to set students up for topics later in the course
Alternative methods of government intervention links with the following topics: 'Elasticity'; 'Market failure'; 'Government failure'.

The effect of taxes, and especially the producer and consumer burden, is closely allied to the topic of price elasticity and students will need to be made familiar with the diagrams that show this. The different methods of intervention relate to different types of market failure and students will probably have to be shown where the links are. Many types of intervention are covered in 'Environment', so it is worth considering teaching 'Alternative methods of government intervention' first and then following up with the topic of the environment. Teachers should also bear in mind that government failure as a result of intervention will need to be covered, so use this topic to set up for 'Government failure', which follows on.
Thinking Contextually  Alternative methods of government intervention

Without wishing to state the obvious, it is useful to approach this topic from the point of view of the government and the need to have different types of intervention. Students can then be directed to consider the role of firms in creating the need for intervention through their production activities. Finally, this topic can be considered from the perspective of the individual or household and their consumption decisions, which are affected by government intervention.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Resources</th>
</tr>
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<tbody>
<tr>
<td><strong>Economics in the news</strong></td>
<td></td>
</tr>
<tr>
<td>Search for articles, clips and debates on problem areas, such as alcohol, smoking and obesity, that cover government intervention. Use edited versions of these to discuss how government intervention works and how it might be less effective. Alternatively, get the students to find articles to present, or focus on particular policies.</td>
<td></td>
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<tr>
<td>Duration: 15 minutes</td>
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<tr>
<td><strong>Become the experts</strong></td>
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</tr>
<tr>
<td>Allocate different types of government intervention to small groups. Give them a simple diagram that illustrates how the method might work. Students should then produce presentations that include key steps for how the intervention reduces market failure, an analysis of the diagram and evaluation.</td>
<td></td>
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<tr>
<td>Duration: 35–50 minutes, depending on class size</td>
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<tr>
<td><strong>Regulation</strong></td>
<td></td>
</tr>
<tr>
<td>A tricky area for students to grasp that needs lots of practice. Use images of goods with negative externalities and a repeated series of questions for students to answer that would cover analysis. Students should thereby practice the step-by-step effect chain.</td>
<td></td>
</tr>
<tr>
<td>Duration: 20 minutes</td>
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</table>
### Activities

**Why governments intervene in markets**
To get students to explain why governments intervene in markets, they should begin by watching the following video by an A Level student covering the main arguments for and against government intervention:

[http://www.youtube.com/watch?v=3eszQRRaOuM](http://www.youtube.com/watch?v=3eszQRRaOuM)

Students should make lists of points for and against government intervention. In groups, ask them to discuss instances of market failure or inequity when they think it would be appropriate for the government to intervene, and why that instance is a suitable case.

Duration: 20 minutes

**Diagrams for government interventions**
This activity offers an alternative to simply copying out the diagrams and writing explanations to go with them. It contains a kinaesthetic element, which aids recall.

Take two sheets of black A4 card. Use a guillotine to cut them into strips approximately 75mm wide, one sheet landscape, one sheet portrait. The landscape strips are used as the axes of the diagrams; the portrait strips are used as the demand, supply, cost and benefit curves. Some teachers may wish to use different coloured card for the different curves.

Students will need access to copies of the diagrams that you wish them to learn, the strips of card, some A3 paper, a ruler, a rubber and a pencil. The students should use the tools to create versions of the diagram. The strips can be used to show shifts of the curves, pivots of the curves, effects of different degrees of elasticity and, in the case of taxation, the consumer and producer burdens. Students place the strips on the A3 paper, label the axes and the curves and draw in the relevant dotted lines. They can then move the curves in the ways indicated above, draw in the new dotted lines and discuss the effects of the changes that they have made, both with other students in their group and with the teacher.

To recap the diagrams once work on them is complete, create a ‘diagram grab bag’. Make a list of the titles of the different diagrams that the students have learned, cut them up and place them in an envelope. In pairs, students select a title from the envelope without looking at it. On A3 paper, without access to any version of the diagram, they have to draw the diagram and explain it to the class. Other students are then invited to comment on and correct the diagrams. This activity usually results in some lively discussion.

Duration: 1 lesson

### Resources

**Click here**

Diagrams for government interventions

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**Thinking Contextually** Alternative methods of government intervention
### Effectiveness of government intervention

To evaluate the effectiveness of different types of government intervention, explain to students the 3 Es:

- **Efficiency** – does the intervention result in a more efficient allocation of resources
- **Effectiveness** – does the intervention achieve its stated objective
- **Equity** – do some groups gain more than others and if so, is this fair

Armed with these tools, students should research specific cases of government intervention, which could be suggested by the teacher or could be cases that the students research for themselves.

Two possible starting points are available at Economics Online:

- [http://www.economicsonline.co.uk/Market_failures/Road_congestion.html](http://www.economicsonline.co.uk/Market_failures/Road_congestion.html)
- [http://www.economicsonline.co.uk/Market_failures/Public_transport.html](http://www.economicsonline.co.uk/Market_failures/Public_transport.html)

Students could be asked to write up their findings as a leader article for a broadsheet newspaper.

**Duration:** 30 minutes

### Cost benefit analysis (CBA)

To introduce students to the concept of cost benefit analysis, students should be directed to read the following article:


The article gives a micro perspective on CBA and shows how it can be used in a simple way. Students should make a flow chart / map of the four steps suggested in the article, and they should make a copy of the key points at the end.

**Duration:** 20–25 minutes
## Activities

### CBA to assess infrastructure projects

To move the students on to the macro use of CBA, they should then be directed to this article:

http://www.sjsu.edu/faculty/watkins/cba.htm

Students should make a summary of the main points and then produce, on one side of A4, an example of CBA using hypothetical data, based on the example given at the end of the article. They should devise some questions for their fellow students to attempt. They should make copies of their example and activities for distribution, after having this checked by the teacher.

Duration: 25 minutes

### Value of CBA

To evaluate the value of CBA to governments, students should begin by making a table of the advantages and disadvantages. The following article makes a good starting point:


Students should then discuss each of the advantages and disadvantages from the perspective of decision making to solve market failure. Each student should write their own individual overall conclusion.

Duration: 15–20 minutes
Microeconomics: Market failure and government intervention -> Government failure

- explain what is meant by government failure
- explain what may cause government failure
- evaluate the consequences of government failure.
This is an ideal topic to introduce the debate as to whether or not governments should intervene in markets. This will come up time and again, especially in the macro section, so it is good to introduce it at an early stage. The underpinning of the free market vs government intervention debate is economic efficiency, which students should by now understand quite well.

**Approaches to teaching the content**
The activities below can be used in a student-centred approach, and varied according to the size of the class so that the work can be done in pairs or small groups. Although the activities are based around students producing handouts for each other, teachers may wish to use the handouts as a basis for discussion, further research or testing.

**Common misconceptions or difficulties students may have**
Government failure can sound a lot worse than it actually is. Government failure only means that government intervention has resulted in a sub-optimal allocation of resources. However, given the scale and scope of government activity, a government failure can be quite significant.

**Conceptual links to other areas of the specification – useful ways to approach this topic to set students up for topics later in the course**

The teaching of this topic can usefully follow on from ‘Alternative methods of government intervention’ and teachers can refer back to the different types of intervention when going through examples of government failure.
This can be a challenging topic for students, as examples tend to be from unfamiliar contexts. The teacher can help students by linking this topic to what they have already learned about government intervention and the reasons for intervention.

### Activities

<table>
<thead>
<tr>
<th>Government failure pairs</th>
<th>Resources</th>
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<tbody>
<tr>
<td><strong>Details:</strong></td>
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<tr>
<td>1) Make up pairs of cards – one with an image of a good and a method of government intervention and the other with an image of a possible side effect that could result in government failure, i.e. deepening of the misallocation of resources.</td>
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<td>2) For example: regulation of smoking in public places and increased purchase of patio heaters; minimum wage set above market equilibrium and labour surplus/unemployment; regulation of fine for dropped chewing gum and cost of monitoring cameras; food subsidies; tradable permits limit set too high and firms making a profit without being greener; subsidies for biofuels and loss of food crops/increased price of food; higher levels of tax and companies moving abroad.</td>
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<td>3) Students then work in groups to put the pairs together and the winners are those who finish first.</td>
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<td><strong>Duration:</strong> 10–15 minutes</td>
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### Government failure

This clip was made by A Level students, the video highlights significant aspects of government failure and makes a good introduction to the topic.

[http://www.youtube.com/watch?v=PcZiCKHOVlQ](http://www.youtube.com/watch?v=PcZiCKHOVlQ)

The second clip is Milton Friedman on government failure. He makes his case very strongly. Students could be asked to make notes as they watch and come up with counter-arguments.

[http://www.youtube.com/watch?v=Moc7gwMJaB]{(Moc7gwMJaB)}

**Duration:** 15 minutes
**Activities**

<table>
<thead>
<tr>
<th>Cause of government failure</th>
<th>Resources</th>
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<tbody>
<tr>
<td>Split class into five groups; give them one reason, one method and one cause each to research. They should word process their findings and make handouts for the rest of the class.</td>
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<tr>
<td>• Why does government intervene in markets? Reasons: to correct shortages or surpluses; to provide when the market does not; to regulate where there is inefficiency or inequality; to reduce poverty; to influence property rights.</td>
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<td>• How does government intervene in markets? Methods: taxation; subsidies; regulation; identifying property rights; direct provision.</td>
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<td>• What are the causes of government failure? Causes: political self-interest; regulatory capture; imperfect information; unintended consequences; short-termism.</td>
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<td>Duration: 1 lesson</td>
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<tr>
<th>Consequences of government failure</th>
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<tbody>
<tr>
<td>Once the research is complete, organise a class debate: ‘This house believes that government should never intervene in markets.’</td>
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<td>Duration: 15–20 minutes</td>
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<tr>
<th>Essay plans</th>
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<td>Questions for students to attempt at the end of this topic.</td>
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<tr>
<td>Ask students to write an essay plan and a list of all relevant key terms and concepts.</td>
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<td>Duration: 20 minutes</td>
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<tr>
<th>Revision and recap on market failure</th>
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<tr>
<td>Split students into groups. Each group should do a revision session on an aspect of market failure for the rest of the class including a handout and questions (with answers). They should use these websites as resources. The second website can be printed as a poster picturing a mind map for market failure.</td>
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<tr>
<td><a href="http://www.s-cool.co.uk/a-level/economics/market-failure/revise-it/what-is-market-failure">http://www.s-cool.co.uk/a-level/economics/market-failure/revise-it/what-is-market-failure</a></td>
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<tr>
<td>Duration: 1–2 lessons depending on whether preparation for this is done in class or as homework</td>
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