Introduction

This activity builds on the experience of discussion, debate and the development of argument skills in the AS course. The topic of nuclear power continues to be highly controversial. A wide range of sources is available. This makes the topic a good one for a debate.

The suggested format for the activity is based on the Debating Matters Competition, a national debating competition for sixth-form students. To find out more, visit www.debatingmatters.com.

The activity

A debate needs careful preparation by the students if it is to be valuable. One approach is to divide the class into two groups in advance. One group will be expected to argue broadly in favour of nuclear power and the other group in advance. Some students may have to argue against their convictions but it should be possible to persuade them that this is a worthwhile exercise as part of understanding an issue in depth.

Before the main session brief the class and ask them to prepare by reading the relevant section in the textbook and by studying at least one of the resources listed under ‘sources of information’. These vary in length and demand and you may want to suggest to some students which resource they should focus on.

Remind students of what they learnt about the structure of a good argument during the AS course, of the importance of being able to support arguments with evidence and of being ready to deal with counter arguments (http://www.nuffieldfoundation.org/argument)

In the first part of the main session, each group collaborates to prepare the two formal presentations they must give in the debate, to agree on supplementary points that might be made in discussion and to prepare some questions to use to challenge the other side. During this preparation the groups decide on their two main speakers and everyone else has agreed on something to contribute to the discussion.
Allow one hour for the debate, which you chair and might run along the following lines.

1. As chair, remind the class of the procedure and the topic for debate: ‘There is an urgent need to build new nuclear power stations in Britain’.

2. Invite the debaters to speak in the order with an agreed time limit of not more than 3 minutes:
   - first speaker for the motion
   - first speaker against the motion
   - second speaker for the motion
   - second speaker against the motion

3. Take first round of comments and questions from the audience. Invite three or four students to express their opinions and ask questions.

4. Invite the four main speakers to respond in turn to the comments and questions.

5. Take a second round of comments and questions making sure that everyone has made a contribution.

6. Again ask the four main speakers to respond and at the same time to make their final remarks aimed at persuading the class to vote for their side of the debate.

7. Take a vote. You might decide to make this secret. Consider asking for a vote on two points: one vote on the motion for debate; a second vote on which group made the better case for their point of view in the debate.

8. Announce the result. If there is time give an opportunity for students to reflect on the debate, the persuasiveness of the arguments used and what they have learnt about the issue.

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Introduction

The UK government is now in favour of building more nuclear power stations, but there is much public distrust of the technology. What do you think?

Your task

You are going to take part in a debate on the motion: ‘There is an urgent need to build new nuclear power stations in Britain’.

The form of the debate will be explained by your teacher. You may have to make a short, formal presentation at the start to the debate; or you may be expected to contribute your views to the discussion and ask questions of the main speakers.

You need to decide on your views and to formulate the arguments you will use to support your views. You will be given time to do this with the help of the sources of information suggested below; however you will have to be selective. You might decide to development your argument in relation to just one of the aspects of the debate.

Sources of information

Nuclear power with its risks and benefits are described in your textbook on pages 145 – 154 with a particular emphasis on risks and the issue of dealing with nuclear waste.

The BBC has a guide to nuclear power which explores the issues including waste, cost and energy alternatives.

The Parliamentary Office of Science and Technology has produced a four page guide for parliamentarians about Future Nuclear Technologies.

The World Nuclear Forum presents a table on its web site setting out the common arguments against nuclear power with rebuttals from the nuclear industry.
http://www.world-nuclear.org/info/inf50.html

The Nuclear Industry Association in the UK presents a set of talking points on its web site as a contribution to the energy debate.
http://www.niauk.org/hot-topics.html

The UK government policy on nuclear power was presented in a 2008 white paper. The key arguments are set out in the overview with the main conclusions in short passages of bold type. (Note that changes to government ministries may mean that the documents move to a new web site. Search on: ‘Meeting the energy challenge’.)
http://www.berr.gov.uk/energy/sources/nuclear/whitepaper/page42765.html
Greenpeace makes the case against nuclear power on its web site. [http://www.greenpeace.org.uk/nuclear](http://www.greenpeace.org.uk/nuclear)

Friends of the Earth is a campaigning group that makes the case against nuclear power. [http://www.foe.co.uk/campaigns/climate/issues/nuclear_index.html](http://www.foe.co.uk/campaigns/climate/issues/nuclear_index.html)

WWF is against nuclear power. The case is summarised on its web site and supported by position statements that can be downloaded. [http://www.panda.org/what_we_do/footprint/energy_solutions/energy_vision/nuclear_power/](http://www.panda.org/what_we_do/footprint/energy_solutions/energy_vision/nuclear_power/)


Search for ‘nuclear power’ at the web site of the California State Library and you will find a very clear summary in a paper called: The benefits and risks of nuclear power in California. This provides a review of developments internationally as well as in California and covers the health risks, the economic arguments and the issue of nuclear waste. [http://www.library.ca.gov/](http://www.library.ca.gov/)


Arguments for and against nuclear power are presented on this Physics World web page. The pages were published in 2001. [http://physicsworld.com/cws/article/print/128](http://physicsworld.com/cws/article/print/128)

This article in the New Statesman by Mark Lynas links together many of the issues in some of the sources above. The article is called: Why greens must learn to love nuclear power. [http://www.newstatesman.com/environment/2008/09/nuclear-power-lynas-reactors](http://www.newstatesman.com/environment/2008/09/nuclear-power-lynas-reactors)