

CITIZENSHIP

Informed citizens and the media – introduction

(“Possible causes of asthma” theme)

These learning materials support QCA Citizenship unit 9 at key stage 3 and elements of the key stage 4 specifications in England and equivalent learning in Wales, Northern Ireland and Scotland.

They allow students to:

- Look at the role of the media in society.
- Develop communication skills.
- Participate in discussions and express views that are not their own.

Lesson timing:

The bare minimum for the activities is shown for a single, 60 minute lesson. Spreading the activities over a longer period allows for more preparation, discussion and presentation time.

Activities in the lesson:

- Students look at and discuss critically a video programme on the role of chemicals in our daily lives and newspaper articles on the possible causes of asthma.
- Students present information on an issue relating to the expansion of a chemical factory.

Homework activity:

- Looking at current news stories and how they are presented in different newspapers.

The pack contains:

- Learning outcomes and curriculum links.
- Teaching and learning resources:
 - *Without chemistry, what would we be left with?* video programme on DVD (running time approximately 6 minutes).
 - Newspaper articles and analysis cards: *Chemicals linked to asthma rise* and *Do clean houses cause asthma?*
 - Briefing cards for each of six different interest groups relating to the expansion of a chemical factory.
 - Homework / extension activity sheet.
- Lesson plan including teacher's notes.

Note: Video and support materials available at: <http://www.ciec.org.uk/molsmatter/molsmatter.htm>

Files on DVD applicable to this lesson plan

- Lesson plan – Citizenship at KS 3 & 4 – “Possible causes of asthma” theme, including facsimile newspaper articles, i.e. this document
- Video programme
- Internet links
- Background notes for teachers
- Feedback forms – teachers and students

To use the DVD

The video programme can be viewed on a domestic DVD player or on a PC or Apple Mac computer with DVD drive. Other files should be downloaded to a computer. The computer and any data projector / beamer or interactive whiteboard to which it is connected must be sound-enabled.



Developed by the [Chemical Industry Education Centre](http://www.ciec.org.uk), University of York. Produced with the support of the Royal Society of Chemistry, the Society of Chemical Industry and the Chemical Industries Association Young Persons' Network.



Citizenship: lesson plan and teacher's notes – “Possible causes of asthma” theme

Learning outcomes and curriculum links

England

Key stage 3 - QCA unit 09

Knowledge and understanding about becoming informed citizens

- 1) Pupils should be taught about:
 - h. The significance of the media in society.

Developing skills of enquiry and communication

- 2) Pupils should be taught to:
 - a. Think about topical political, spiritual, moral, social and cultural issues, problems and events by analysing information and its sources, including ICT-based sources
 - c. Contribute to group and exploratory class discussions, and take part in debates.

Developing skills of participation and responsible action

- 3) Pupils should be taught to:
 - a. Use their imagination to consider other people's experiences and be able to think about, express and explain views that are not their own.

Key stage 4

Knowledge and understanding about becoming informed citizens

- 1) Pupils should be taught about:
 - g. The media's role in society in providing information and affecting opinion

Developing skills of enquiry and communication

- 2) Pupils should be taught to:
 - c. Contribute to group and exploratory class discussions, and take part in formal debates.

Developing skills of participation and responsible action

- 3) Pupils should be taught to:
 - a. Use their imagination to consider other people's experiences and be able to think about, express, explain and critically evaluate views that are not their own.

Wales

Links to PSE curriculum at Key Stages 3 and 4

Skills

PSE provision should enable pupils to:

- Listen attentively in different situations and respond appropriately.
- Communicate confidently one's feelings and views and maintain with conviction a personal standpoint.
- Critically evaluate others' viewpoints and messages from the media.
- Empathise with others' experiences and feelings.
- Make decisions and choices effectively.
- Work both independently and cooperatively.
- Manage time and meet deadlines.
- Make reasoned judgements.
- Take part in debates and vote on issues.

Northern Ireland

Links to Social and Environmental Studies curriculum at Key Stages 3 and 4

Learning for Life and Work: Local and Global Citizenship Strand

Young people should have opportunities to:

- Investigate an issue from a range of viewpoints and suggest action that might be taken to improve or resolve the situation.

Learning outcomes:

- Research and manage information effectively, including number and statistics where appropriate (using the internet, newspapers, television, texts and ICT based sources) to investigate citizenship issues, explore problems, undertake action projects and make informed decisions.

Northern Ireland
(continued)

- Communicate effectively in visual, oral, written and ICT formats, showing clear awareness of audience and purpose, for example, *in role play scenarios, presentations and other tasks.*
- Work effectively within teams, for example, *in planning and carrying out an Action Project.*
- Work independently to manage, evaluate and improve own learning and performance.
- Demonstrate creativity, initiative, organisation and perseverance in carrying out tasks and in developing own ideas.

Scotland

Links to the Scottish Education for Citizenship curriculum (materials suitable for 14-18)

Areas of knowledge relevant to citizenship

The role of the media and marketing processes in shaping public opinion and influencing individual and collective decision making.

Generic skills relevant to citizenship

Core skills:

- Communication skills (listening, speaking, reading, writing; visual and non-verbal), for example, being able to research, discuss and share information about social, political and community issues; being able to contribute to debates and discussions in ways that are both assertive and respectful of others' contributions.
- The ability to work well with others, for example, by participating willingly, confidently and constructively in team efforts.

Other generic skills:

- Decision-making skills, for example, making thoughtful and informed decisions in the course of being involved in political and community issues.
- The developing capacity to imagine alternative realities and futures that could benefit society and the environment.
- The ability to consider and empathise with the experience and perspective of others.

Total time:

60 minutes

Contents
check-list ✓

Resources:

- *Without chemistry, what would we be left with?* video programme (running time approximately 6 minutes). Can be played on a domestic DVD player or a PC or Apple Mac computer with DVD drive. The computer and any data projector / beamer or interactive whiteboard to which it is connected must be sound-enabled.
 - Newspaper articles: *Chemicals linked to asthma rise* and *Do clean houses cause asthma?* Make 10 copies of each.
 - Article phrase cards and analysis sheets – make 10 copies of each.
 - Interest group briefing cards – 1 set.
 - Poster paper, overhead transparencies (and projector) and pens as required for presentation or poster.
 - Homework / extension activity sheet.
- Suggested science- and technology-related topics for additional activities based on internet research.
- Lesson plan and teacher's notes.
 - Background notes prepared for non-science specialists on chemicals and chemistry

Not supplied

Access to internet

Timing	Activity and teacher's notes	Resources
Start	<p>Introduction</p> <p>Lesson will look at how we acquire and interpret information on everyday things and issues that are important. Also, how this affects our opinions and behaviour.</p> <p>Question and answer on where we get information from. Note responses on the board. Typical answers will include: internet, television, advertisements, talking to friends, newspapers, television and radio.</p> <p>Summarise by saying that all these sources are produced by people. Is the information “good” (reliable, fair, comprehensive, truthful and balanced)? See how different sources can make the same information sound different, reflecting its own “angle” or point of view.</p>	<p>Answers onto board / overheads / interactive white board.</p>
2 mins	<p>Show <i>Without chemistry, what would we be left with?</i> video programme</p> <p>Before showing the video, ask students to indicate whether they use or do not use chemicals (e.g. by a show of hands).</p> <p>Discuss the video</p> <p>Ask students to think about who has made the video.</p> <p>What was the message? [That chemicals are a vital part of everyday life, both now and in the future. That they meet people's needs. That the chemical industry makes a valuable contribution to the country's economy and behaves responsibly.]</p> <p>Who is the video aimed at?</p> <p>Do the students believe the message?</p> <p>How do they think the message was influenced by the producers of the video?</p> <p>Was the video credible or not? Why?</p> <p>Would they do (or think) anything differently after viewing it?</p>	<p><i>Without chemistry, what would we be left with?</i> on DVD (running time approximately 6 minutes) Any data projector / beamer or interactive whiteboard connected to computer must be sound-enabled.</p>

Timing	Activity and teacher's notes	Resources
10 mins	<p>Information from newspapers</p> <p>Follow on from the video by looking at two contrasting newspaper articles: <i>Chemicals linked to asthma rise</i> and <i>Do clean houses cause asthma?</i> Divide students into groups of 3 or 4.</p> <p>Read the two articles These are based on actual newspaper articles but have been re-written to allow for use in the classroom.</p> <p>Analyse content of articles Cut out the individual phrase cards provided in the pack. For each article, divide these into phrases which are “in favour of chemicals”, “neither for nor against” or “against chemicals” and arrange them on the analysis sheets.</p>	<p>Articles: <i>Chemicals linked to asthma rise</i> and <i>Do clean houses cause asthma?</i></p> <p>Phrase cards – copy and cut out. One set of each per group. Analysis sheets</p>
20 mins	<p>Discuss the articles</p> <p>Both articles deal with the same subject (the possible causes of asthma).</p> <p>Do both articles appear balanced? Which is broadly in favour and which is broadly against? Who do the students think have written the articles? (eg: Health campaigners, scientists, journalists?)</p> <p>Which parts of the articles appear to be facts and which are opinions? Who is trusted more – scientists, journalists, environmental pressure groups, company representatives? Do these people each have their own points of view that they are trying to promote? How do you judge what is the truth? Is there any absolute truth or is there some truth in all the points of view?</p> <p>Wheezing rates seem to be the same in the UK and New Zealand. What are the similarities / differences between these countries? Has anyone visited New Zealand? What could be reasons for the lower wheezing rates in Ireland, Belgium and Sweden?</p>	

Timing	Activity and teacher's notes	Resources				
25 mins	<p>Looking at the views of different interest groups</p> <p>This part of the lesson can be developed in several ways. Students work in groups to put forward a particular viewpoint on the question:</p> <p><i>Imagine that there is a chemical factory close to the school that makes an important ingredient for an asthma treatment medicine. It wants to expand in size to meet the increased demand for its asthma medicine. Should it be given permission to expand?</i></p> <p>Divide class into six groups to represent the different points of view. Each group is provided with an interest group briefing card that sets out some of the ideas they may want to promote to further their case. Keep balance of "for" and "against" groups.</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 50%;">In favour of the factory</td> <td style="text-align: center; width: 50%;">Against the factory</td> </tr> <tr> <td style="text-align: center;"> Regional job development agency Chemical company Asthma support charity </td> <td style="text-align: center;"> Environmental pressure group Local residents Local newspaper </td> </tr> </table> <p>Each group then prepares a short presentation (2 minutes maximum) or posters to represent its point of view.</p>	In favour of the factory	Against the factory	Regional job development agency Chemical company Asthma support charity	Environmental pressure group Local residents Local newspaper	<p>Interest group briefing cards.</p> <p>Poster paper, overhead transparencies and pens as required for presentation or poster.</p>
In favour of the factory	Against the factory					
Regional job development agency Chemical company Asthma support charity	Environmental pressure group Local residents Local newspaper					

	<p>Homework / extension: views of the news</p> <p>Tell students to use the internet to visit the web sites of several daily newspapers. Include a mixture of newspaper styles. Students should look at the headlines for each publication. What are the subjects covered by each newspaper? How do they differ? Note the difference in content and style of what each information source reports. Students then reflect on whether they feel better informed and whether this has influenced their views.</p> <p>Look at a topical, industry- or science-related issue in the different newspapers, on web sites or television. (eg: BBC, ITV, Sky News, the Daily Mail, The Times, The Daily Telegraph, The Guardian, The Independent, the Financial Times and The Sun.) How is the issue reported? What points of view are being expressed? Are these related to particular interest-groups?</p>	<p>Homework / extension activity sheet</p> <p>Internet access</p>
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Chemicals linked to asthma rise

Household chemicals, like cleaners and bleach, have been linked to an increase in childhood asthma rates. A study looked at 7,000 children in houses that used cleaners and found they were more than twice as likely to develop wheezing.

Britain is a world leader when it comes to asthma and wheezing. Over 1.4 million people suffer from the disease and there must be a cause.

A study has followed children over the last 15 years and found an alarming link with asthma and the use of household chemicals. Researchers point to the use of chemicals like paint strippers, carpet cleaners and air fresheners. The use of these products has increased by over 60 per cent in the last 10 years.

Dr. Sarah Harrison said, “The study asked mothers how often they used certain chemical products while they were pregnant. This allowed us to determine whether their houses were high or low in chemicals.” Children in the houses classified as “high chemicals” were more than twice as likely to suffer from wheezing before the age of three years.

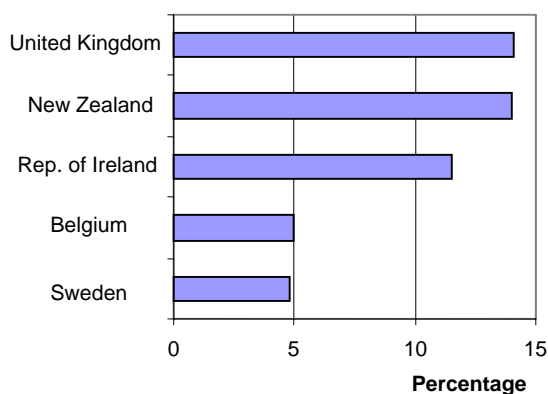
The researchers do not claim that these chemicals cause asthma but they say there is a connection. A particular chemical, formaldehyde, could be a common link.

Parent, Angela Philips said, “This

confirms my fears all along. I have always thought that my son's asthma was caused by chemicals. I don't use anything with chemicals in it.”

“I always buy organic foods because they don't have any chemicals in them. I don't use any chemical cleaners”, she said. “Jake should not be exposed to any chemicals. They are all dangerous and more research is needed.”

Severe wheeze in children aged 13-14 years old



The UK tops the league for severe wheeze in children. The latest study suggests that chemicals could be responsible.

Do clean houses cause asthma?

Asthma rates in children are rising. Doubt is thrown on a recent report that links this rise with the use of chemicals.

A recent study suggested that the use of household cleaning products such as bleach and carpet cleaner was linked to a rise in childhood asthma. Dr. Samina Patel suggests there could be another reason. “Our research shows that children are exposed to less dirt than they were twenty years ago. Their immune systems do not develop in the same way. This could be the cause for the increase in asthma rates.”

“Advances in medicine and the use of chemicals to keep houses clean mean that people are living much longer”, she said. “These advances would have been impossible without the use of chemicals.”

An earlier report had suggested that the chemicals in household cleaning products were linked to the development of asthma in children.

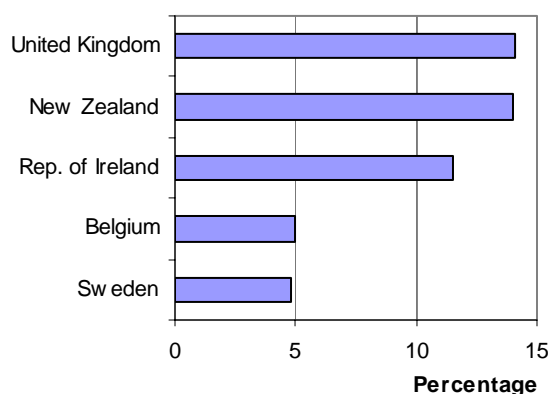
But the improvement in hygiene means that children are not exposed to dirt and dust as their immune system develops. This could make them more likely to develop asthma. The reality is that there are probably many things that make a person more or less likely to develop asthma. “If asthma was caused by just one thing, it is likely that scientists would have found that cause already”, said Dr. Patel.

The United Kingdom tops the league



in wheezing children but Ireland is lower and Belgium and Sweden are much lower. If all countries use cleaning products, the rates of asthma should be the same.

Severe wheeze in children aged 13-14 years old



Frank Carter, a spokesman for AtomBusters Chemicals, said, “This type of stuff happens because people just don't understand about chemicals. Even a potato makes pesticides to stop it being eaten by worms.”

“Chemicals have helped to improve everyone's lives. It really annoys me when people knock the industry without knowing their facts.”

Research continues to find the true cause of asthma.

Phrase cards

Do clean houses cause asthma?



Do clean houses cause asthma?

Asthma rates in children are rising. Doubt is thrown on a recent report that links this rise with the use of chemicals.

In favour of, neutral or against chemicals.

Do clean houses cause asthma?

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In favour of, neutral or against chemicals.

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Advances in medicine and the use of chemicals to keep houses clean mean that people are living much longer.

In favour of, neutral or against chemicals.

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Chemicals have helped to improve everyone's lives.

In favour of, neutral or against chemicals.

Phrase cards

Chemicals linked to asthma rise



Chemicals linked to asthma rise

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In favour of, neutral or against chemicals.

Chemicals linked to asthma rise

The researchers do not claim that these chemicals cause asthma but they say there is a connection.

In favour of, neutral or against chemicals.

Chemicals linked to asthma rise

A study has followed children over the last 15 years and found an alarming link with asthma and the use of household chemicals.

In favour of, neutral or against chemicals.

Chemicals linked to asthma rise

"This confirms my fears all along. I have always thought that my son's asthma was caused by chemicals."

In favour of, neutral or against chemicals.

Chemicals linked to asthma rise

Researchers point to the use of chemicals like paint strippers, carpet cleaners and air fresheners.

In favour of, neutral or against chemicals.

Chemicals linked to asthma rise

"I always buy organic foods because they don't have any chemicals in them. I don't use any chemical cleaners."

In favour of, neutral or against chemicals.

Chemicals linked to asthma rise

Houses classified as "high chemicals" showed their children were more than twice as likely to suffer from wheezing.

In favour of, neutral or against chemicals.

Chemicals linked to asthma rise

The UK tops the league for severe wheeze in children. The latest study suggests that chemicals could be responsible.

In favour of, neutral or against chemicals.

Analysis sheet

Do clean houses cause asthma?

In favour of chemicals	Neither for nor against	Against chemicals

Analysis sheet

Chemicals linked to asthma rise

In favour of chemicals	Neither for nor against	Against chemicals

Group briefing card

Environmental pressure group

Messages we want to promote:

- The extension to the chemical factory **should not be built**.
- We should tackle the things that cause asthma and not just treat the symptoms. This would mean that we would not need these extra factories to produce the asthma medicines.
- The chemical industry makes money from creating problems such as asthma and then makes more money by selling the medicines to treat it.
- There are natural products that can take the place of synthetic chemicals. For example herbal remedies for asthma that can replace the medicines.
- Producing chemicals uses up valuable natural resources like fossil fuels. It also causes lots of pollution. We do not believe that the company really cares about people's health or the environment.
- Too many chemicals are untested and dangerous. We believe that chemicals like pesticides, flame retardants and food additives should be banned unless they are proved to be safe.



Group briefing card

Regional job development agency

Our job is to try and bring industry and employment into the local area.

Messages we want to promote:

- The extension to the chemical factory **should be built**.
- An increase in the size of the factory will help attract high-technology jobs to the local area. This will help people to find new jobs if they become unemployed. This is happening because some older factories are closing down in the area.
- The chemical industry is highly regulated. We have looked at the plans for the factory. It has lots of modern equipment and we are satisfied that it will not mean more pollution.
- The chemicals that will be made are used for medicines that are needed by asthma sufferers. This includes people in our region.
- If the chemicals are not made locally, then they will be bought from another country. This means that people in this country will not have jobs and will be paying for profits and jobs in another country. That is not good for the overall economy of our country.

Group briefing card

Asthma charity

Messages we want to promote:

- The extension to the chemical factory **should be built**.
- Asthma is more common now than 20 years ago, affecting 150 million people in the world, including over 5 million in the UK. That's about 1 in 10 children and 1 in 12 adults. Asthma sufferers deserve as much help as any other people with long-term illnesses.
- The house-dust mite is the main asthma trigger, affecting 9 in 10 sufferers. Others include pets, coughs and colds, exercise, pollen and tobacco smoke. Some scientists think that poor air quality may also be a cause.
- More of the asthma medicine is needed to treat all the people in the world who need it. This extension will help to meet the need for more of the asthma treatment.
- It is wrong for people to want medicines but to refuse to have the factories that make them close to where they live.



Group briefing card

Local newspaper

Write some headlines for reports that could be in your paper.

You will need to tell the class how you would report the news about the factory extension. Would you be in favour, against or neutral, reporting plain facts?

How do you report the controversy?

- You are under pressure to sell newspapers. Arguments can generate emotional and eye-catching headlines. These can help sell more papers.
- You do not have an opinion either way about whether the extension should be built. However, you do know that your readers generally don't believe big business. They are more likely to believe people like themselves and environmental groups. These are against the extension.
- You decide it would be best for your paper to highlight the opponents' views. They say the extension will mean more pollution and that chemicals are generally a bad thing.
- You do not give much attention to statements from the chemical company. You feel that they are keeping things secret. Also, they never advertise in your paper.

Group briefing card

Local residents

Messages we want to promote:

- The extension to the chemical factory **should not be built**.
- It is unfair to have the extension built in our area. There is not a serious asthma problem in the local area. Why should local people put up with a bigger factory to make medicines for people who do not live in the area?
- We do not want lorries, machinery, dust and noise that would happen while the extension is being built.
- We do not believe it when the factory says there will not be extra pollution. In the past, the factory has caused smells. The company promised to fix the problem but never did. Factory managers don't live near the factory. They are not affected by the problem and they refuse to talk with local resident groups.
- The rumours are that the factory will be fully-automated so will only employ a few extra people. These jobs will probably go to outsiders.



Group briefing card

Chemical company

Messages you want to promote:

- The extension to the factory **should be built**.
- It will create 10 new, permanent jobs. It will help to make the future of the factory safe for the long-term. This is good for the people who work there and for those who need jobs in future.
- Jobs at the factory help to support the families of the workers. They also help to provide trade for local shops, garages, restaurants and other businesses.
- Building the extension will create 50 new jobs for two years. These will mainly go to local people.
- We need to encourage science-based jobs in this country. It discourages highly qualified scientists from leaving the country to work abroad.
- We are committed to improving the health of everyone.
- The extension will be built to the highest standards. Building work will also allow the current factory to be upgraded. This will remove the problem of bad smells that has happened in the past.
- The extension is a vote of confidence in local people. It is a well-needed investment in the local economy.

What are the headlines?

How do the newspapers report the news?

Do they all say the same thing? Are they all interested in the same stories?

1. Go to the first page for each of the websites shown on the right. They are all national newspapers available in this country.
2. Use the table below. List the three stories that are shown on their home page.
3. Think about the stories and the style of the headlines. Are all papers the same? Which ones do you think are the most serious? Which ones do you think are the most popular? Why?
4. Visit <http://news.bbc.co.uk/science>
What is the main science story for today? Look to see if you can find it in the other newspapers. Think about how they report it?

The Guardian:

<http://www.guardian.co.uk>

Daily Mirror:

<http://www.mirror.co.uk>

Daily Mail:

<http://www.dailymail.co.uk>

The Daily Telegraph:

<http://www.telegraph.co.uk>

	Main stories
The Guardian	
Daily Mirror	
Daily Mail	
The Daily Telegraph	