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Blown Away: Teacher resource

Summary

This unit provides teaching materials for the graphic novel and digital story, *Blown Away*.

The story is about Nikos who is working as a painter. His boss asks him to carefully clean a garage made of asbestos cement sheeting with a damp cloth. Nikos decides to save time and effort and use a high pressure washer causing particles to scatter around the garage and into a neighbouring house and nearby air conditioning units. A VWA inspector arrives and closes down the worksite suspecting asbestos contamination. The story is based on similar events in 2011 in a Melbourne suburb. See the newspaper articles at the end of this resource.

Both Nikos and his boss fell short of meeting their duties under the law. These teaching materials are designed to support and extend the issues covered in the story. They include discussion questions, research ideas and applied learning activities. Activity sheets are provided for students to support the teaching materials.

The materials are designed to cover aspects of the Work Related Skills units of VCAL and can be used, with adjustment, across the VCAL levels.

Purpose

For students to develop an understanding of issues around asbestos, proper supervision and training and the importance of following safety instructions.

Background

Asbestos products were used widely from the late 1800's up to 1990. It was also mined in Australia and exported. In the 1970s it became widely known that exposure to asbestos can kill. The health risks arise from breathing airborne asbestos fibres into the lungs. Asbestosis, mesothelioma, lung cancer and pleural disease are some of the main asbestos related diseases which often develop many years after exposure. There is no cure for mesothelioma.

Use of Asbestos

Due to its strength, durability and resistance to fire and water, asbestos was used in a wide range of building products and materials up to 1990. Products that may contain asbestos include vinyl floor tiles, cement roof sheeting and wall lining, lagging and jointing material and fire blankets.

Health risks

Asbestos can cause health problems when fibres become airborne and are inhaled. Once inside the lungs some fibres can become trapped. This can result in serious lung diseases such as asbestosis, lung cancer or mesothelioma that may develop years later (typically 15 to 40 years later).

Asbestos products are likely to pose a significant health risk where they are damaged or disturbed. The risk will be greater with increased damage and disruption to the product. The level of risk of developing an asbestos related disease/condition will depend on a number of things, such as:

- the concentration of airborne fibres
- how long the exposure lasted
- how often you were exposed
- the amount of time since the initial exposure.

In workplaces, the risks caused by asbestos are most likely to arise from exposure to airborne fibres during asbestos removal or while undertaking renovation or maintenance work. If done correctly, and according to the regulations, building repairs, maintenance and asbestos removal do not create a significant risk to people carrying out the work or to others in the vicinity.

Advice on how employers can meet many of their regulatory duties when cleaning and painting asbestos cement products is found in Appendix J of *Managing asbestos in workplaces Compliance Code 2008*. This covers equipment to use, personal protective equipment needed, area preparation, painting and personal and equipment decontamination. Employers must also ensure asbestos is identified if it is going to be worked on and they must provide training to workers on asbestos risks and measures to control the risks as described earlier in the Compliance Code (in *Asbestos-related activities*). For further information about asbestos see asbestos.vic.gov.au and [Asbestos: A guide for householders and the general public](http://docs.health.vic.gov.au/docs/doc/Asbestos:-A-guide-for-householders-and-the-general-public) - <http://docs.health.vic.gov.au/docs/doc/Asbestos:-A-guide-for-householders-and-the-general-public>.

For information about the [health facts](http://www.asbestos.vic.gov.au/about-asbestos/health-facts) see www.asbestos.vic.gov.au/about-asbestos/health-facts.

Discussion questions

You may like to use the following questions to facilitate discussion before or after students have read or viewed *Blown Away*. Take time to discuss the issues before the students undertake the research or applied learning activities.

Training and supervision

- What should a manager/supervisor tell you when you first start a job?
- What should a manager/supervisor tell you when you do any work with asbestos products?
- What are some questions you should ask when you first start a job?
- How closely should your boss supervise you?

Asbestos

- What are some situations where you might come into contact with asbestos?
- What should you do at work if you think something might be asbestos?
- What can happen to you if you breathe in asbestos fibres?
- What personal protective equipment (PPE) might you need if you work with asbestos cement sheeting?
- How would you be able to establish if something contains asbestos? (The answer sought is identification by a NATA accredited person.)

Personal experience

- Do you know anyone that has had to deal with asbestos at work or doing work around the home? What were they doing? What happened?
- What items have you seen in the news about asbestos?
- Have you had contact with anyone with an asbestos related disease? How did the disease effect the person and those around him/her?

'What's going on?'

The aims of these activities are for students to understand that:

1. The employer has responsibility to not only provide instruction but to also provide information, training and supervision and have safe methods, including the use of PPE to protect Nikos and/or the public and
2. Employees must cooperate with their employer, for example follow safety instructions.

Activity 1: What's it all about?

Students discuss the following questions about the events in *Blown Away* and write answers on activity sheet 1.

- What instructions does Nikos' boss give him about cleaning the garage?
- What other information about asbestos safety should Nikos' boss have given Nikos?
- Why does Nikos decide to use the high pressure hose despite specific instruction on how to clean the walls?
- How should Nikos' boss have better supervised Nikos?

- Why should the rag be kept wet?
- Why should Nikos be gentle with the wet rag?
- What PPE should Nikos have been given to wear?
- How does Nikos' action to speed up the job affect the people in the surrounding houses?
- Why does the VWA inspector stop the job?
- What will need to be done before they can start working again?
- How could Nikos' health be affected in the future?
- How could the neighbour's health be affected in the future?

Activity 2: Blown Away: timeline

Students write or draw the important events in the story on the timeline (see activity sheet 2). Students consider how the story might change if the events had happened earlier or later. E.g. If Nikos' boss had come back earlier to check on him, the incident may not have been as bad or If Nikos' boss had spent more time explaining *why* the garage had to be cleaned in a particular way that minimises the risk of releasing the asbestos fibres into the air.

Activity 3: Cause and effect

Students discuss the causes of things going wrong in *Blown Away* and what the effects were to Nikos, Nikos' boss and the people around the worksite. Students write their ideas on the graphic organiser (see activity sheet 3). When considering different causes, students should be aware that Nikos did not receive adequate training on why he had to follow the specific instructions from his boss and was not adequately supervised nor did he receive the necessary PPE or advice on disposing his cleaning rag.

Student research activities

Research activity 1: Asbestos related diseases

Students watch the video [Losing breath - The Adam Sager story](http://www.deir.qld.gov.au/workplace/adam-sager/index.htm) (www.deir.qld.gov.au/workplace/adam-sager/index.htm) about a young man who died of mesothelioma. Students then answer questions about the video (see activity sheet 4) and complete further research about asbestos related diseases.

Information about the health effects of asbestos and appropriate ways to control exposure can be found at www.asbestos.vic.gov.au/about-asbestos/health-facts.

Note: prior to students watching the documentary, it is suggested that you view it so you can take into account possible student reactions to it. If too distressing for students, consider using some true stories found in: hse.gov.uk/asbestos/hiddenkiller/real-life-stories.htm instead.

Research activity 2: Looking out for asbestos

Student's research where asbestos can be found and the different materials that it can be found in (see activity sheet 5). They should consider both the home and the workplace.

Students then present their findings. This could be a written or oral report, a poster, animation, photostory, website or other medium / format.

A good place for students to start their research is:

- www.asbestos.vic.gov.au
- Victorian Workcover Authority [Asbestos page](http://www.worksafe.vic.gov.au/wps/wcm/connect/wsinternet/WorkSafe/Home/Safety+and+Prevention/Health+And+Safety+Topics/Asbestos) - www.worksafe.vic.gov.au/wps/wcm/connect/wsinternet/WorkSafe/Home/Safety+and+Prevention/Health+And+Safety+Topics/Asbestos.

Activity 1: Case studies or *Activity 2: Asbestos hazard model* in the applied learning activities could be used as a follow up activity.

Research activity 3: Asbestos in Australia

Students research the history of asbestos in Australia (see activity sheet 6). They look at asbestos mining, the properties of asbestos and when asbestos was banned.

Information about the history of asbestos can be found at:

- Australian Asbestos Network - www.australianasbestosnetwork.org.au
- Wikipedia - <http://en.wikipedia.org/wiki/Asbestos>.

Students should present the information in a timeline.

Applied learning activities

Activity 1: Case studies

Students choose one of the case studies in the document [Asbestos: a guide for householders and the general public](http://docs.health.vic.gov.au/docs/doc/Asbestos:-A-guide-for-householders-and-the-general-public)- docs.health.vic.gov.au/docs/doc/Asbestos:-A-guide-for-householders-and-the-general-public (see section 'When are householders likely to be exposed to asbestos?') and consider the materials that contained asbestos, potential risks and how the issue was dealt with (see activity sheet 7).

Students discuss and compare the case study they chose with case studies chosen by other students.

This activity could be done as a follow up to research activity 2.

Activity 2: Asbestos hazard model

Students build a model of a house showing areas where there may be asbestos and objects to look out for. www.asbestos.vic.gov.au would be a useful site for students when undertaking this activity.

www.asbestos.vic.gov.au/about-asbestos/finding-and-identifying/finding-and-identifying-asbestos-tool/find-and-identify-asbestos-in-the-workplace

This activity could be done as a follow up to research activity 2.

Activity 3: Safety and training

Students write a dialogue between Nikos and his boss where Nikos' boss explains to Nikos why Nikos needs to follow a particular method and why when cleaning the garage (see activity sheet 8).

Students should include details of the risks of breathing in asbestos and the consequences it can have later in life. Students should explain what techniques, equipment and PPE are acceptable for cleaning asbestos sheeting. Students may find *Managing asbestos in workplaces - Compliance Code*,

particularly Appendix J (www.worksafe.vic.gov.au/forms-and-publications/forms-and-publications/managing-asbestos-in-workplaces-compliance-code) helpful.

Safe-T1 links

SAFE-T1 provides teaching/learning resources around OHS awareness for young people. The links below are for resources that are relevant to the issues in Blown Away.

Investigating asbestos - www.safe-t1.net.au/investigating-asbestos.html

VCAL levels

These activities are suitable for students working at Foundation, Intermediate and Senior level. Teachers will need to adjust the activities to meet the requirements of the curriculum at different levels.

The activities are designed to **support** student learning but, in some instances, may also be used for assessment purposes. The activities support the learning outcomes listed in the table below but **may not cover all the elements**. If the activities are to be used as assessment tasks, teachers should **check** VCAL Work Related Skills Curriculum Planning Guides to ensure all the elements are covered and the activity is consistent with the unit purpose statement.

While documentation from undertaking the activities in this unit can be collected to build a portfolio of evidence to be used for the assessment of relevant learning outcomes, students will need to demonstrate competence of a learning outcome on more than one occasion and, wherever possible, in different contexts, to ensure the assessment is consistent, fair and equitable.

Curriculum alignment

Work related skills Unit 1			
	Foundation	Intermediate	Senior
What's going on?			
Activity 1	Can be used as an introduction to Learning Outcomes 2 & 3.	Can be used as an introduction to workplace health and safety.	Can be used as an introduction to workplace health and safety.
Activity 2	Can be used as an introduction to Learning Outcomes 2 & 3.	Can be used as an introduction to workplace health and safety.	Can be used as an introduction to workplace health and safety.
Activity 3	Can be used to support Learning Outcome 3.	Can be used to support Learning Outcome 4.	Can be used to support Learning Outcome 3.
Research activities			
Activity 1	Can be used to support Learning Outcome 3.	Can be used to support Learning Outcome 4.	Can be used to support Learning Outcome 3.
Activity 2	Can be used to support Learning Outcome 3.	Can be used to support Learning Outcome 2.	Can be used to support Learning Outcome 3.
Activity 3	Can be used as an introduction to Learning Outcome 3.	Can be used as an introduction to Learning Outcome 4.	Can be used as an introduction to Learning Outcome 3.
Applied activities			
Activity 1	Can be used to support	Can be used to support	Can be used to support

	Learning Outcome 3.	Learning Outcome 4.	Learning Outcome 3.
Activity 2	Can be used to support Learning Outcome 3.	Can be used to support Learning Outcome 4.	Can be used to support Learning Outcome 3.
Activity 3	Can be used to support Learning Outcome 3.	Can be used as an introduction to Learning Outcome 2.	Can be used as an introduction to Learning Outcome 2.

Blown Away is based on similar events that occurred in 2011 in a Melbourne suburb. The following newspaper articles report the event.


MEDIA MONITORS



Mordialloc Chelsea Leader
09-Jan-2012
Page: 1
General News
Market: Melbourne
Circulation: 37575
Type: Suburban
Size: 525.94 sq.cms
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HOUSE OF HORRORS

Health | Dimity Barber

A CHELSEA family has been forced to evacuate their home after it was showered with asbestos.

An uninsured contractor blasted the potentially lethal fibres over the Bath St property while cleaning a neighbour's roof with a high-pressure water hose.

Site tests revealed three types of asbestos, including the variety which, if inhaled, can cause malignant lung cancer mesothelioma.

Three houses in the street have also been affected, with the clean-up bill expected to top \$200,000.

Len Cubitt said his family moved out of their home after receiving medical advice.

They have spent the past four weeks living in a nearby rental

property.

However, the contamination means trees, shrubs and even the top soil will be removed.

Dr Cubitt, a forensic engineer, said cleaning up after asbestos contamination was a "huge process".

"They'll have to vacuum and wash the brickwork, remove 100mm of soil, the paving, trees and shrubs will all have to go — and possibly the airconditioning and water services as well — it's an environmental disaster," Dr Cubitt said. He said he was "dumb-founded" by the contractor's actions which he said had endangered his family.

"My daughter and son-in-law were down from the country for

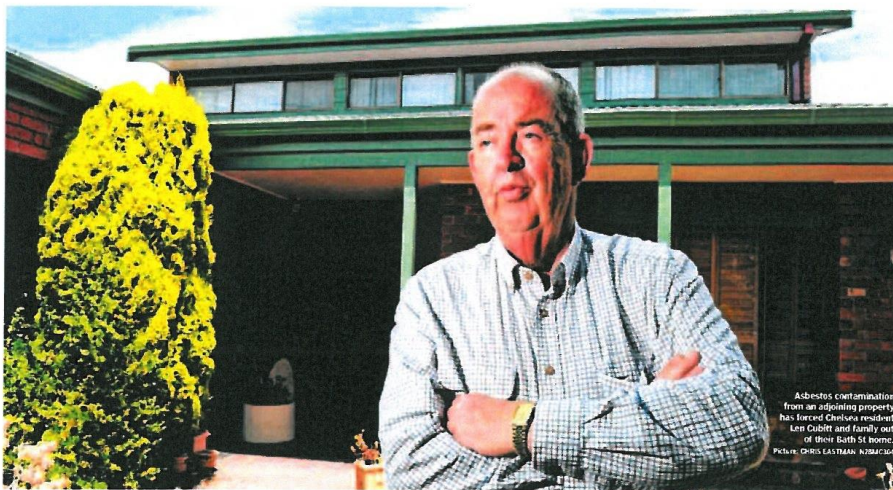
Christmas and my grandchildren were here," he said.

Kingston Council chief executive John Nevins said the clean-up, starting this week, would take about 10 days.

"If the owners of the asbestos garage fail to comply with the clean-up notice, council will act to ensure the asbestos is safely removed," Mr Nevins said.

Environment Protection Authority spokesman Simon Frost said it was a timely reminder to only use registered tradesmen who were adequately insured.

WorkSafe has been notified about the incident.



Asbestos contamination from an adjoining property has forced Chelsea resident Len Cubitt and family out of Bath St home.
Picture: CHRIS EASTMAN / NEWSPICTURE



Moorabbin Leader
11-Jan-2012
Page: 3
General News
Market: Melbourne
Circulation: 30207
Type: Suburban
Size: 134.48 sq.cms
Frequency: -T-----

Chelsea asbestos threat

Family forced to evacuate Bath St house as clean-up cost estimates top \$200,000

Health | Dimity Barber

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