



# CYBER SAFETY:

## Understanding Malware

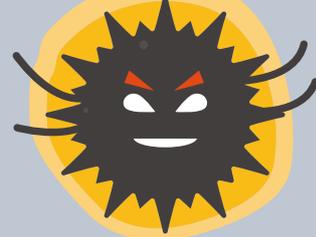
### Teaching Resource

A resource that:

- Develops an understanding of Malware and the harm it can cause
- Demonstrates the cyber safety problems associated with infringing websites
- Helps students develop an understanding about the impact of content piracy on the creative industries
- Teaches the importance of respecting copyright and the value of creative content

*See Page 1 for Curriculum Links*

**Primary:** Years 4-6





# Curriculum Connections

## NSW Curriculum Connections

### English

- **EN3-3A** Uses an integrated range of skills, strategies and knowledge to read, view and comprehend a wide range of texts in different media and technologies
- **EN3-7C** Thinks imaginatively, creatively, interpretively and critically about information and identifies ideas and connections when responding to texts

### Science and Technology

- **ST3-2VA** Demonstrates a willingness to engage responsibly with local, national and global issues relevant to their lives and to shaping sustainable futures
- **ST3-3VA** Develops informed attitudes about the current and future use and influence of science and technology based on reason
- **ST3-15I** Describes how social influences impact on the design and use of information and communication systems
  - » *Demonstrates appropriate and responsible use of information sources and technologies considering, where relevant, different points of view and/or stereotyping (Digital Citizenship)*
  - » *Discusses issues of safety and privacy of personal information when communicating, selecting and using information sources and technologies (Digital Citizenship)*

### PDHPE

- **DMS3.2** Makes informed decisions and accepts responsibility for consequences
- **SLS3.13** Describes safe practices that are appropriate to a range of situations and environments

## Australian Curriculum Connections

### English

- **ACELT1609 (Y5)** Presents a point of view about a particular literary text using appropriate metalanguage and reflecting on the viewpoints of others
- **ACELY1699 (Y5)** Clarifies understanding of content as it unfolds in formal and informal situations, connecting ideas to students' own experiences and present and justify a point of view
- **ACELY1707 (Y5) / ACELY1717 (Y6)** Uses a range of software including word processing programs with fluency to construct, edit and publish texts and select, edit and place visual, print and audio elements.
- **ACELY1703 (Y5) / ACELY1713 (Y6)** Uses comprehension strategies to analyse information, integrating and linking ideas from a variety of print and digital sources
- **ACELY1816 (Y6)** Uses interaction skills, varying conventions of spoken interactions such as voice, volume, tone, pitch and pace. According to group size, formality of interaction and needs and expertise of the audience
- **ACELY1709 (Y6)** Participate and contribute to discussions, clarifying and interrogating ideas, developing and supporting arguments, sharing and evaluating information, experiences and opinions

### Digital Technologies

- **ACTDIP022** Plan, create and communicate ideas and information, including collaboratively online, applying agreed ethical, social and technical protocols
  - » *Developing a set of 'rules' about appropriate conduct, language and content when communicating online, and using these rules as a basis for resolving ethical dilemmas (Digital Citizenship)*
  - » *Applying safe practices while participating in online environments (Digital Citizenship)*
- **ACTDEK023** Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use

### Health and Physical Education

- **ACPPS057** Recognise how media and important people in the community influence personal attitudes, beliefs, decisions and behaviours



# Lesson Summary

This Education Resource has been developed by Creative Content Australia, in conjunction with an experienced educator, to help teachers and students understand the dangers that online pirate sites pose to users and their devices.

**Piracy** is the illegal downloading or streaming of films or TV shows – accessing them without paying. Apart from the impact on creative industries, which can be very significant, these websites are hotbeds for **Malware** – a term that covers a range of ‘malicious’ software which can perform all sorts of harm, from stealing personal data, to hijacking computer functions to monitoring user activities without detection.

The fastest growing demographic amongst online pirates in Australia is teens aged 12-13. It’s important to provide these young content consumers with information that will protect them online.

- Infringing video streaming is the number one way to propagate Malware on the internet.
- Users of pirate websites are three times more likely to be exposed to hacking, viruses and malicious activity than on legitimate sites.
- One out of every three infringing sites contains Malware.

**The objective of this lesson** is to engage students and develop their understanding of Malware and its link to pirate sites. It is important that students deepen their knowledge around Malware as it very present in the lives of 21st Century learners and can be harmful to their technology.

It is also important for students to understand the connection between pirate sites and the creative industries. Illegally downloading or streaming films, television shows and music has a detrimental effect on the creative individuals and companies investing millions of dollars and many years to develop, produce and distribute these works.

Developing an understanding of good digital citizenship is a key component of state and national curricula and respect for copyright online is part of being a good digital citizen.

By the end of this lesson students should be able to:

1. Identify different types of Malware and their effects on computers.
2. Understand the connection between pirate sites and the propagation of Malware.
3. Identify the effects that pirate sites have on the wider creative industries.
4. Identify the connection between accessing legal content and appropriate digital behaviour.

The lesson modules are flexible and teachers can determine which to use and the order of the lesson.

## Video Clips

- 90-second Malware animation: <https://vimeo.com/201797562/dd8b64488b>
- "What's the problem with piracy? Bindi Irwin" video (3mins 30secs): <https://vimeo.com/214971091/dbc6bb9116>

# Lesson Plan

## Introduction (10 minutes)

**Split students up into 5 groups.** Download and print the [Brainstorm Sheet](#) (A3 size). Give each group one page (malware, ransomware, spyware, pop ups, pirate sites).

- Have students make predictions about what the images represent and how they could affect them in their daily lives and write 2 questions they have (left side of the paper).
- Have students present their image and their predictions to the class (1 min each).
- Discuss: What do you already know about the vocabulary?

## Activity 1 (3 minutes)

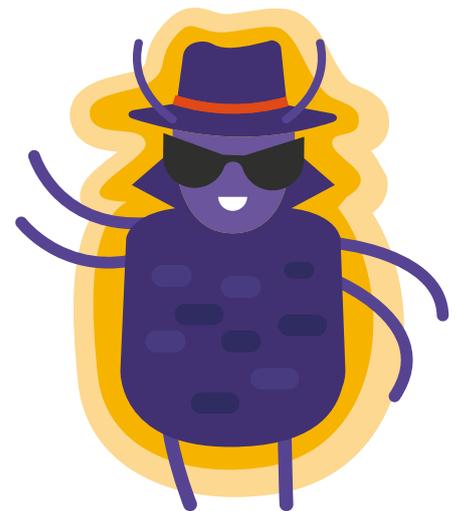
- Use your SMART board to open up the [90-Second Malware Animation](#) to show to kids.

## Activity 2 (10 minutes)

- Have students return to their **Brainstorm Sheets** and add to the paper on the right side about what they now know after the video.
- Designate a reporter to present to the class what image you had, some of your predictions and what you learned after the video.

## Activity 3 (30 minutes)

- Discussion: from the animation what do we know about Malware and how it affects us?
- **Split into 3 groups** (students rotate through activities every 8 minutes):  
*Note: Use the individual activity sheets for each group.*
  - » **Group 1: How Malware can affect us:**
    - Discuss: Have you or someone you know ever been affected by Malware? What happened? What was the result of the Malware?
    - Read the story provided
  - » **Group 2: Using an iPad have students engage in some research:**
    - Use a given website - Cracking ideas, BBC Bitesize
    - Give students research sheet to guide them
  - » **Group 3: Have students think about how Piracy affects the creative industries:**
    - Watch "[What's the problem with piracy?](#)" (3mins 30secs)
    - Give students the work sheet (A3 size) to work through as they watch the video



## Conclusion (10 minutes)

**Some questions to reflect on with the class:**

1. What is the connection between Piracy and Malware?
2. What is the impact of Malware on our lives?
3. What is the impact of Piracy on our lives?
4. Why is it important to show respect for copyright online?

### Poster/iMovie

Have students use what they have learned to make a poster or a short iMovie to educate Year 3/4 students about Malware and the effects that downloading or streaming illegally has on the creative industries and our technology.

OR

### Debate (choose from a selected topic):

- Piracy is stealing.
- It is necessary to pay for the movies and TV shows we watch online.

# Activity 3: Group 1

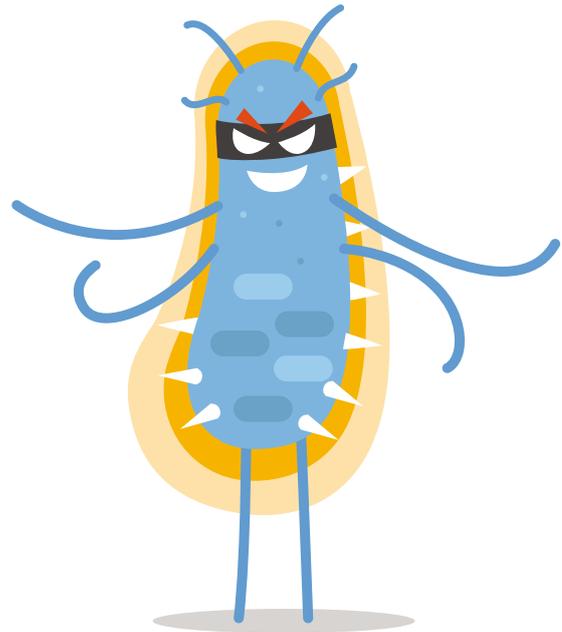
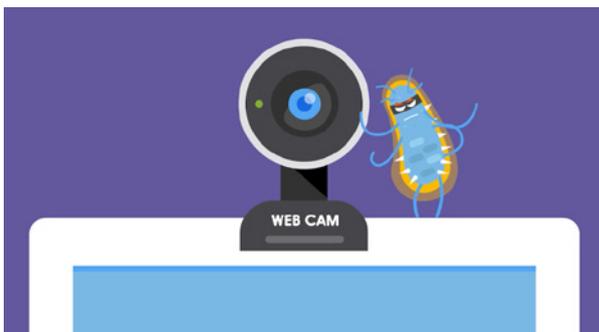
## Story Discussions

### Story #1

Cassidy was a 17-year old girl from California. She had everything going for her- a loving family, a top-notch education, good looks and even the title of Miss Teen USA. In 2013, everything came crashing down for the young Californian. When downloading a movie from a pirate site, Cassidy's computer got infected by a hostile virus. The virus allowed the hacker who created the virus complete access to her videos, pictures and her web cam. In the months that followed, Cassidy found out that some of her pictures were posted on other websites. She was contacted by the hacker and asked for money in return for all her photos and videos. Cassidy became frightened and gave the hacker the money so that she could get back all the information from her computer, however once the money was received the hacker continued to ask for more. Cassidy's life was never the same again.

#### Discuss these questions as a group:

1. What should Cassidy have done in this situation?
2. How could she have prevented this from the beginning?
3. What steps would you take if you were in this situation?
4. What lesson do you think she learned from this experience?
5. What is one thing that you have learned from this story?



### Story #2

Robert was a 20-year-old man living in Sydney and studying to become a lawyer. One day he received an email from his bank requesting that he reset his password because there was an issue with his information. The email asked him to click on the link and it would take him to the internet banking page. Robert unknowingly clicked the link and it took him to a website that looked exactly like the internet banking site that he usually used, so he continued and entered in his banking number and password.

Two days later when Robert went to get money out of his account a message popped up - 'insufficient funds.' He became concerned as he knew there was money in the account and when he went online to check his accounts he noticed that his savings had been taken from his account and he was left with nothing.

#### Discuss these questions as a group:

1. What should Robert have done in this situation?
2. How could he have prevented this from the beginning?
3. What steps would you take if you were in this situation?
4. What lesson do you think he learned from this experience?
5. What have you learned from reading this story?

# Activity 3: Group 2

## iPad Research

Use your iPad to find the answers to the questions below. This research should help you to explore Malware and Piracy sites in more detail.

### Malware

- What is the word **Malware** short for?
- Find 4 common types of Malware, what they are and how they affect your computer.
- Create your own image to represent each of these common types of Malware.

### Piracy Sites

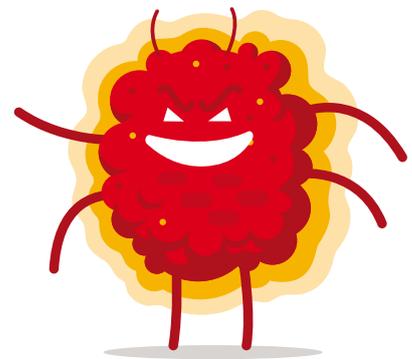
- What is a Piracy site?
- What is the content that users would download or stream from a Piracy site?
- What is the link between Malware and a Piracy site?

### Protecting Yourself

- What are 4 ways that you can keep your computer safe from Malware?
- What are 3 top tips that you would give to a friend or sibling to help keep them safe?
- Create a fun rap or rhyme that includes these tips. Share the rap/rhyme with the class.

### Taylor Swift Fights Piracy

- Music superstar Taylor Swift has joined other music artists in the fight against big companies who make it possible to download their music without paying for it. Taylor said: "Music is art, and art is important and rare. Important, rare things are valuable. Valuable things should be paid for. It's my opinion that music should not be free.....Piracy, file sharing and streaming have shrunk the numbers of paid album sales drastically....."
- What do you think about Taylor Swift's view on Piracy and her decision not to allow her music to be played on some streaming services? Do you agree with her? Why?



### Websites to investigate:

- [BBC Bitesize](#)
- [BTN](#)
- ["Piracy websites: A high risk business" – Content Café](#)
- ["Malware risks" – Asia Digital Alliance](#)
- ["Pirate Bay expose computers to Malware" – IB Times](#)
- ["Is your family aware of the risks of digital TV Piracy? – Huffington Post](#)
- ["Golden age of illegal TV streaming" – Business Insider](#)

# Activity 3: Group 3

## How Piracy Affects the Creative Industries

Watch the video of Bindi Irwin discussing the impacts of Piracy on the creative industries and answer these questions as you go. Stop the video at any point and discuss the answer as a group.

1. What are the effects of Piracy on the film/television industry?

4. When films make a reasonable profit, what can those production companies do with that money?

2. List some of the jobs of the people who are interviewed.  
*These are just some of the people who are directly impacted by Piracy.*

5. Why is it important for Australian creators to have stronger online protection of their work?

3. What does film Piracy reduce?



### Websites to investigate:

- ["Piracy affects careers in film and Television" – Arts Hub](#)
- ["The books and songs that change lives" – Content Café](#)
- ["Making Movies Interviews" – Nothing Beats the Real Thing](#)



## CreativeContent AUSTRALIA

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The Malware animation was  
commissioned by Creative Content  
Australia and produced by Galvin  
Scott Davis and Anthony Ishinjerro  
from digital agency, Protein One.

Creative Content Australia is a not-  
for-profit organisation committed  
to raising awareness of the value  
of screen content and copyright,  
and the impact of Piracy:

[www.creativecontentaustralia.org.au](http://www.creativecontentaustralia.org.au)

Download other free online  
education resources:

[www.nothingbeatstherealthing.info](http://www.nothingbeatstherealthing.info)

