



**Australian Government**  
**Department of Agriculture,  
Fisheries and Forestry**

# Biosecurity champions

Teacher guide – Year 5



# Learning areas and Australian Curriculum content

## Design and Technologies

Explain how and why food and fibre are produced in managed environments ([AC9TDE6K03](#)).

## English

Understand that language is selected for social contexts and that it helps to signal social roles and relationships ([AC9E5LA01](#)).

Describe how spoken, written and multimodal texts use language features and are typically organised into characteristic stages and phases, depending on purposes in texts ([AC9E5LA03](#)).

Use appropriate interaction skills including paraphrasing and questioning to clarify meaning, make connections to own experience, and present and justify an opinion or idea ([AC9E5LY02](#)).

Plan, create, rehearse and deliver spoken and multimodal presentations that include relevant, elaborated ideas, sequencing ideas and using complex sentences, specialist and technical vocabulary, pitch, tone, pace, volume, and visual and digital features ([AC9E5LY07](#)).

## Humanities and Social Sciences

The management of Australian environments, including managing severe weather events such as bushfires, floods, droughts or cyclones, and their consequences ([AC9HS5K05](#)).

Develop questions to investigate people, events, developments, places and systems ([AC9HS5S01](#)).

Locate, collect and organise information and data from primary and secondary sources in a range of formats ([AC9HS5S02](#)).

Evaluate information and data in a range of formats to identify and describe patterns and trends, or to infer relationships ([AC9HS5S03](#)).

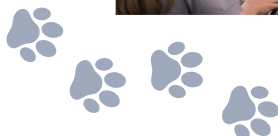
Develop evidence-based conclusions ([AC9HS5S05](#)).

Propose actions or responses to issues or challenges and use criteria to assess the possible effects ([AC9HS5S06](#)).

## Science

Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions ([AC9S5H02](#)).





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## Lesson objective

Students will learn about the significance of biosecurity in protecting people, the environment and agriculture. They will understand Australia's comprehensive strategies to prevent pest and disease outbreaks, including the various services, organisations and groups tasked with these essential actions. Students will role-play as stakeholders in biosecurity management and design awareness campaigns tailored for primary school audiences. Through this process, they will also gain insights into the spread and movement of diseases and collaborate to solve scenarios, questions and research tasks.

## Lesson overview

**Activity 1** – Pests, diseases and biosecurity (20 to 30 mins)

**Activity 2** – Biosecurity stakeholders and creative campaigns (60 mins)

**Activity 3** – Biosecurity challenge (60 mins)



## Success criteria

### 1. Understand biosecurity concepts

I can accurately define biosecurity and explain its role in protecting Australia's ecosystem, agriculture and population from pests and diseases.

### 2. Role-play stakeholder responsibilities

I can demonstrate an understanding of different stakeholders' roles in biosecurity by accurately role-playing their responsibilities and contributing to a simulated stakeholder meeting.

### 3. Design and articulate an awareness campaign

I can design a biosecurity awareness campaign tailored for primary school students, clearly articulating its purpose and key messages in both visual and textual formats.

### 4. Engage in collaborative problem-solving

I can actively participate in a group to solve biosecurity-related scenarios demonstrating effective communication and problem-solving skills.

## Additional information

### Junior Biosecurity Officer certificate

Students colour a paw print on the [Junior Biosecurity Officer certificate](#) for each completed activity, visually tracking their learning journey with Frankie the biosecurity detector dog.

### Take home challenge

Students become biosecurity champion 'graduates' by completing the [take home challenge](#). They can test their carer's knowledge by quizzing them on biosecurity trivia and interviewing them about their experiences with biosecurity rules and regulations.

### Biosecurity poster (assessment)

The [biosecurity awareness campaign poster](#) for Year 2 to 5 invites students to create an educational poster on the importance of biosecurity, incorporating interactive elements like flaps, pop-ups and QR codes. This activity enhances understanding through creative engagement. A [marking rubric](#) is available for teachers.

### Surveys and feedback

The [student survey](#) may be used for students to assess understanding pre- and post-lesson, while the [teacher survey](#), available online, gathers feedback from educators about student performance and resource value.

## Resources and equipment



### Activity 1 – Pests, diseases and biosecurity

1. **Worksheet 1a – Stimulus images: at the airport**
2. [Australia’s biosecurity – DAFF \(1:46\)](#)
3. [Our biosecurity detector dogs safeguarding Australia \(2:52\)](#)
4. **Worksheet 1b – Fact sheet: pests, diseases and biosecurity**
5. **Worksheet 1c – Sentences: pests, diseases and biosecurity**



### Activity 2 – Biosecurity stakeholders and creative campaigns

1. [Become a biosecurity officer \(4:53\)](#)
2. [Country Handle with Care – Episode 6 Protecting Country \(10:12\)](#)
3. **Worksheet 2a – Role-play: managing a biosecurity incident**
4. [Frontline – Indigenous Biosecurity Rangers \(3:21\)](#)
5. **Worksheet 2b – Design a biosecurity awareness campaign**



### Activity 3 – Biosecurity challenge



1. [You can be a Biosecurity Champion too!](#)
2. [Travellers and tourists \(3:25\)](#)
3. [Keep it out \(1:53\)](#)
4. **Worksheet 3a – Biosecurity challenge**
5. **Worksheet 3b – Biosecurity challenge answer sheet**
6. Timer, playdough, matchsticks, scissors, ruler, pipe cleaners, paper
7. Digital devices



## Lesson guide

### Activity 1 – Pests, diseases and biosecurity

Students will explore pests and diseases and how they spread. Through class discussions and interactive activities, students will understand how important biosecurity is to prevent the entry and spread of biosecurity threats in Australia and why these measures are crucial for safeguarding Australia's environment, plants and animals, human health, jobs, the economy and our way of life.

1. Project or distribute copies of **Worksheet 1a – Stimulus images: at the airport** to generate a discussion about what is happening in the image. Pose questions to students such as:
  - What do you think is happening in this scene?
  - Who are the people in the uniform?
  - Why do you think this is happening?
  - What might happen if these actions were not performed?
2. If suitable, encourage a class discussion about students' experiences with overseas travel and ask them if they have noticed what procedures are in place when they enter and exit Australia. Focus on biosecurity procedures (such as disposing of fruit in biosecurity bins, asking where they have travelled and declaring items such as food and wood products), rather than immigration. Promote a discussion on why Australia has these procedures in place to prevent the entry of pests and diseases and the threats they may pose if they were to enter the country.
3. Introduce the term biosecurity by writing 'Biosecurity' in a central area, leaving a space between 'bio' and 'security'. Encourage a class discussion to define the two and then the entire word. Record student responses. **Answers page 11** 
4. View the video **Australia's biosecurity – DAFF** (1:46) to learn about Australia's biosecurity systems and how important it is to be protected from pests and diseases.
5. Optional: view the video **Our biosecurity detector dogs safeguarding Australia** (2:52) to learn about the work biosecurity detector dogs do at seaports, airports and mail centres to detect biosecurity risks.
6. Distribute **Worksheet 1b – Fact sheet: pests, diseases and biosecurity**. Students read the information either individually, in small groups or as a class. Then, they use the information to complete the sentences on **Worksheet 1c – Sentences: pests, diseases and biosecurity**.
7. Project the worksheet answers and discuss student responses. **Answers page 11** 




## Activity 2 – Biosecurity stakeholders and creative campaigns

Students will deepen their understanding of biosecurity and its importance through an interactive role-play in which they assume the roles of key stakeholders involved in a biosecurity incident. Following the role-play, students will design and develop their own biosecurity awareness campaign specifically tailored to engage and educate primary school audiences. This activity will illustrate the impact of effective public awareness campaigns in shaping behaviours and attitudes towards important social issues.

1. Visit [Become a biosecurity officer](#) and watch the video under [Why biosecurity is important \(4:53\)](#). Then watch the video [Country Handle with Care – Episode 6 Protecting Country \(10:12\)](#) to introduce the concept of stakeholders in Australian biosecurity.
2. Distribute **Worksheet 2a – Role-play: managing a biosecurity incident** to explore different perspectives and responsibilities in managing biosecurity incidents. Read the instructions and discussion topics together, and then use the scripted role-play on the worksheet to complete the activity. At points in the role-play, the students will ask questions of the participants. Assist in coordinating this and responding to the answers students provide.
3. Either divide students into small groups and allocate them roles as:
  - a) Government official
  - b) Biosecurity officer
  - c) Producer
  - d) Scientist
  - e) Local council member

Alternatively, nominate five students to perform the role-play in front of the class. Students act out the roles of the biosecurity stakeholders for the provided scenario.

4. After the role-play has been completed, consider the discussion topics and reflect on the challenges and solutions to the incident. Allow time for students to share their ideas. **See answers page 12** 
5. Teachers may opt to complete the extension activities on **Worksheet 2a – Role-play: managing a biosecurity incident**.
6. Generate a discussion with the class about how messages of health awareness (anti-smoking campaigns) and desired behaviours (anti-littering, etc.) are conveyed to the public. Ask students about any posters, billboards or advertisements they have seen and record these in a central area. For example:
  - **Health awareness campaign:** SunSmart Campaign – ‘Slip! Slop! Slap!’  
This iconic campaign encourages the public to slip on a shirt, slop on sunscreen and slap on a hat to prevent skin cancer. Updated in 2007 with the new slogan ‘Slip, Slop, Slap, Seek, Slide’ the campaign encourages five forms of sun protection: to seek shade and slide on sunglasses, in conjunction with slipping on a shirt, slopping on sunscreen and slapping on a hat.
  - **Public behaviour campaigns:** Keep Australia Beautiful – ‘Do the Right Thing, Use a Bin’  
Focuses on reducing littering in public spaces, and promoting environmental cleanliness and responsibility.
7. Discuss the elements that make campaigns memorable (for example, slogans, visuals, humour and emotions).





8. Distribute **Worksheet 2b – Design a biosecurity awareness campaign**. Either individually or in pairs, students design a campaign to raise awareness about biosecurity issues using the provided templates or creating digital content. Campaign materials could include a:
  - Slogan
  - Bumper sticker
  - Transit advertisement
  - Poem, song or rap
  - New merchandise.
9. As a class, view [Frontline – Indigenous Biosecurity Rangers](#) (3:21) as an example of how positive community messages can be spread via various forms.
10. Display the completed awareness campaign materials around the classroom or school to engage the wider community and reinforce the importance of biosecurity.





### Activity 3 – Biosecurity challenge

Students will participate in the biosecurity challenge, a collaborative activity centred on the importance of biosecurity in the context of hosting international events. This group challenge combines competitive elements with scenarios requiring teamwork, problem-solving and an understanding of the importance of protecting Australia’s people and environment. Each event is designed to accommodate various learning styles, fostering a sense of achievement and responsibility among participants. Depending on the literacy and comprehension skills of the class, teachers may choose to access this activity (Activity 3 – Biosecurity challenge) from either the Year 3, 4 or 5 resources. Complexity of the biosecurity challenge varies according to year level.

1. As a class, view the video content from the website [You can be a Biosecurity Champion too!](#) Go to the video presented by Catrina Rowntree, [Travellers and Tourists \(3:25\)](#) and [Xylella and exotic vectors \(scroll to the Keep it out video focused on Xylella fastidiosa \(1:53\)\)](#) to introduce/remind students about the importance of tourists and travellers keeping Australia safe from exotic pests and diseases.
2. Allocate students into groups of two to five, considering year level, literacy and comprehension skills. Each group should select a group name for their challenge.
3. Determine the appropriate version (Year 3, 4 or 5), challenge type (A or B) and distribution option (i, ii or iii) for each class.


Version	Description
<b>Year 3</b> Two–three questions per event	Recommended for years 3–4 classes with mixed literacy and comprehension skills. Ideal for students who need guidance in research, group collaboration and recording responses.
<b>Year 4</b> Four questions per event	Best suited for years 3–4 or classes with more developed literacy and comprehension skills. Designed for students capable of independent research and collaborative work.
<b>Year 5</b> Five questions per event	Best suited for years 4–5 or classes with more developed literacy and comprehension skills. Designed for students capable of independent research and collaborative work.

Challenge type	Description
<b>A</b> Time challenge	Groups record start and finish times, competing with other groups to complete the challenge in the shortest time.
<b>B</b> Class challenge	The class works together, completing challenges to collect coloured paw prints as a unit.

Distribution option	Description
<b>i</b> One to five	Distribute the first event of the biosecurity challenge to each group. As students complete each event, a new event is collected until all five events have been completed.
<b>ii</b> Random	Assign each group a randomly selected event page. As students complete each event, a new event is collected until all five events have been completed.
<b>iii</b> All five	Provide each group with all five event pages. Groups complete all events in any order until all five events have been completed.



4. Project or distribute the introductory page of **Worksheet 3a – Biosecurity challenge** for students to observe. As a class, read the instructions detailing the different events that groups will complete:
  - Event 1 Rapid response multiple choice quiz.** Quick-fire questions to kickstart your adventure, challenging your knowledge and speed.
  - Event 2 Teamwork trek.** Work together to navigate through complex problems that test both your teamwork and biosecurity understanding.
  - Event 3 True or false trivia.** Sharpen your accuracy with rapid true or false decisions that require keen judgement.
  - Event 4 Problem-solving puzzle.** Engage in a series of diverse challenges that demand strategic thinking and effective communication.
  - Event 5 Research raid.** Uncover essential information to improve our defences.
5. Answer any questions from students to ensure clarity and understanding of the tasks.
6. Distribute **Worksheet 3b – Biosecurity challenge answer sheet** to each group.

*Note: ensure students have access to digital devices, paper and rulers to complete Event 5: Research raid.*
7. Encourage students to collaborate and share ideas openly while solving the event questions presented on the worksheets. If groups are working on one event at a time (distribution option i or ii), they should return the completed questions to a central area and collect the next set of event questions until all events are complete. Ensure that the groups collect all five coloured paw prints.
8. At the end of the challenge, provide groups with examples of suggested responses, discuss any questions, and if applicable, recognise a winning group based on time (challenge type A) or performance and teamwork. **Answers page 13** 



## Answers

### ③ Activity 1 – Pests, diseases and biosecurity

3. Bio – means living, like a person, plant or animal.

Security – means to keep things safe.

Biosecurity is all about keeping living things (people, livestock, pets, animals, plants, and crops for food and fibre) safe from harmful pests and diseases. Biosecurity involves measures to prevent the entry and spread of pests and diseases into Australia.

### Worksheet 1c – Sentences: pests, diseases and biosecurity

1. Biosecurity involves measures to prevent the **entry** and **spread** of pests and diseases into Australia.
2. Brown marmorated stink bug.
3. Indigenous rangers' knowledge of **Country** enables them to protect Australian borders from biosecurity risks.
4. Department of Agriculture, Fisheries and Forestry (DAFF) or the Australian Government.
5. Pathogens.
6.
  - 1 The environment, native plants and animals.
  - 2 Plants and animals that produce food and fibre.
  - 3 Human health.
  - 4 Jobs and the economy.
  - 5 Our way of life.
7. Answers will vary. A strong biosecurity system means that all people, our environment, plants and animals and our way of life are protected from the threat of exotic pests and diseases.
8. Throw it in the special biosecurity bins or declare it on an Incoming Passenger Card because biosecurity officers may need to inspect it.
9. We all have a **role** to play in protecting Australia's biosecurity, including government agencies, industry and members of the public.



## Activity 2 – Biosecurity stakeholders and creative campaigns

### Worksheet 2a – Role-play: managing a biosecurity incident

1. Suggested answers:

#### **Agricultural extension officer**

This role could be crucial in bridging the gap between research, government policies and practical application at the farmer level. They could provide insights into the current practices in agriculture that may either contribute to or help mitigate the spread of pests and diseases, offering direct communication channels to the farming community.

#### **Environmental scientist**

Given the scope of the pest impacting people, plants, animals and the environment, an environmental scientist could offer a broader ecological perspective. They would be able to assess and communicate the potential impacts on biodiversity and ecosystem services, which are critical in understanding the full scope of the outbreak.

#### **International biosecurity expert**

Since biosecurity threats are not confined by national borders and can be exacerbated by global trade and travel, having an international expert could provide a wider context and share global best practices and lessons learned from similar outbreaks elsewhere.

2. Student answers will vary depending on responses.
3. The scenario described in the role-play is plausible in Australia. In fact, Red Imported Fire Ants were detected in Australia in Queensland in February 2001. Since then, the National Fire Ant Eradication Program has been actively eradicating fire ants in areas of South East Queensland and related outbreaks in NSW.

Biosecurity has played a critical role in reducing risk and shaping Australia to become one of the few countries in the world to remain free from the world's most invasive pests and diseases. While our status as an island nation has been a key factor in maintaining this position, biosecurity risks are growing and increasing in complexity, driven by factors such as climate change, unpredictable trade and travel patterns and changes in land use. Australia has over 60,000 kilometres of coastline offering a variety of pathways for exotic pests, weeds and diseases to enter the country.



## 🔗 Activity 3 – Biosecurity challenge

### Event 1: Rapid response multiple choice quiz

Question 1: B

Question 2: B

Question 3: C

Question 4: B

Question 5: A

### Event 2: Teamwork trek

Suggested answers could include:

#### Obstacle 1

##### Crop damage

These pests may directly damage crops by feeding on them, leading to reduced yields/production of essential food crops like fruits, vegetables and grains. This can result in shortages and increased food prices.

##### Spread of plant diseases

Insects often act as vectors or carriers for plant diseases. They can rapidly spread diseases that were not previously present, further reducing the productivity of agricultural areas.

##### Increased use of pesticides

To combat the new threat posed by these pests, farmers might need to increase their use of pesticides. This could lead to higher production costs, potential health risks for consumers and wildlife, and possibly affect the quality of the food produced.

#### Obstacle 2

Native plants form the foundation of local ecosystems, supporting a variety of wildlife, including insects, birds and mammals. If these plants are outcompeted and displaced, it could lead to a decline in native biodiversity, disrupting ecological balance.

Alteration of ecosystem functions: native plants play critical roles in their ecosystems, such as maintaining soil health, regulating water cycles and preventing erosion. The invasive plant could alter these essential ecological functions, leading to long-term environmental degradation, which could affect water quality, soil fertility and the overall health of the ecosystem.

#### Obstacle 3

##### Enhanced biosecurity and screening procedures

Implement strict biosecurity measures for all incoming animals and livestock, including thorough health screenings at ports of entry. This would help detect and isolate any potentially diseased animals before they enter the general population.

##### Travel and import restrictions

Temporarily restrict or closely monitor the importation of animals and animal products from regions currently experiencing outbreaks of the disease. This could involve suspending imports or implementing additional certification and testing requirements for incoming livestock.



### Rapid response and containment teams

Establish dedicated rapid response teams that are ready to act quickly in case an infection is detected. These teams would be responsible for the containment management and disinfection of affected areas to prevent the spread of the disease to the wider livestock population and beyond.

## Obstacle 4

### Disruption of local marine life

Non-native aquatic species can become invasive, outcompeting native species for resources such as food and habitat. This disruption can lead to a decline in native species populations, altering the biodiversity and ecological balance of marine ecosystems. Some invaders may also be predators of local species, further endangering indigenous marine life.

### Economic impact on fishing industries

The presence of invasive species can significantly affect local fishing industries. These species may deplete the stocks of commercially important fish either directly by preying on them or indirectly by competing for food sources. This can reduce the catch yields for fishers, potentially leading to economic losses and affecting the livelihoods of those dependent on the fishing industry. Additionally, the management and control of invasive species can be costly, further straining the resources of local fishing communities.

## Obstacle 5

Answers will vary for this activity.

## Event 3: True or false trivia

Question 1: True

Question 2: True

Question 3: True

Question 4: False

Question 5: False

## Event 4: Problem-solving puzzle

### Problem 1

#### Immediate quarantine and removal

To prevent further spread, the affected area should be quickly quarantined. This involves setting up barriers to restrict access and movement through the area. Simultaneously, efforts should be made to physically remove the invasive plant, ensuring that all parts, including roots and seeds, are eradicated to prevent regrowth.

#### Ongoing monitoring and management

After the initial removal, the site should be regularly monitored for any signs of the invasive plant returning. This should be part of a long-term management plan that includes the use of appropriate herbicides if necessary and the reintroduction of native plants to restore the natural habitat and compete against any resurgence of the invasive species.

**Problem 2**

Suggested answers could include:

**Things you should do:**

- Check what goods you can bring into Australia on the Australian Department of Agriculture, Fisheries and Forestry website.
- Declare if you are carrying a certain food, plant material or animal product on your Incoming Passenger Card.
- Take the item to be assessed by a Biosecurity officer when you arrive in Australia.

**Things you should not do:**

- Proceed through border control without declaring the item.
- Hide the item in your luggage.

**Problem 3****Implement movement controls**

Quickly establish controls on the movement of animals and animal products within and around the affected area to prevent the disease from spreading to other farms or regions. This could include roadblocks or checkpoints to monitor and regulate the transport of livestock.

**Enhance surveillance and reporting**

Increase surveillance and encourage prompt reporting of any unusual sickness in animals from farms in and around the affected area. This would involve veterinary checks and possibly setting up a hotline or online reporting system for farmers to communicate any suspicious symptoms or livestock deaths quickly.

**Problem 4****Immediate assessment and monitoring**

Identify the unfamiliar species and their potential impact on the local marine ecosystem. Set up ongoing monitoring programs to track their spread and behaviour and assess their interactions with native marine life.

**Containment and management strategies**

Develop and implement containment strategies to prevent the spread of these non-native species into broader areas. This could include physical barriers or targeted removals where feasible. Additionally, management strategies such as adjusting water sports activities to minimise disturbance and potential spread of these species should be considered.



**Problem 5**

Answers will vary but could include:

**1. Gloves**

Protect the hands of cleaning and maintenance staff, allowing them to handle waste and potentially contaminated items safely. This helps prevent the direct contact and transmission of pathogens, enhancing the safety and hygiene of the cleanup process.

**2. Bin systems**

Encourage attendees to dispose of their waste properly. Placing clearly labelled bins (recyclable, compostable, non-recyclable) throughout the venue facilitates waste segregation and reduces the likelihood of cross-contamination and overflow (potentially encouraging pests), keeping the venue cleaner and more sanitary.

**3. Rubbish trucks**

Essential for the efficient removal of accumulated waste from the venue. Regularly scheduled waste collection by these trucks ensures that waste does not build up at the venue, which could otherwise lead to unsanitary conditions and attract pests.

**4. Masks**

Protecting the respiratory health of staff working within waste management is crucial, especially in areas where dust or potentially infectious aerosols might be present. This protective measure helps prevent the inhalation of harmful substances and contributes to maintaining health standards during the event.

**5. Chemical sprays**

These sprays are used to disinfect surfaces and areas that are frequently touched or are likely to be contaminated by waste and spills. Regular application helps kill bacteria and viruses that could lead to disease, ensuring a hygienic environment for both attendees and staff.

**Event 5: Research raid****Task 1**

The five Olympic rings are a well-recognised symbol designed to represent the unity of the five inhabited continents (Africa, America, Asia, Europe and Oceania) coming together in the Olympic movement.

**Designer**

Baron Pierre de Coubertin, who founded the modern Olympic Games, also designed the rings.

**Date designed**

The design was completed in 1913.

**Representation**

Each of the five interlocking rings is coloured differently (blue, yellow, black, green and red) on a white background. These colours were chosen because at least one colour appeared on the flag of every country in the world at that time. The interlocking nature of the rings symbolises the coming together of athletes from across the world to compete in the Olympic Games, promoting a spirit of global unity and friendship.

**Task 2**

Suggested answers could include:

**Witchweed (*Striga* spp.)****Agricultural impact:**

Witchweed is a parasitic plant that attaches to the roots of various agricultural crops, including corn, sorghum and sugarcane. It saps nutrients from these crops, severely stunting their growth and significantly reducing yields. This could lead to massive agricultural losses.

**Environmental impact:**

Although primarily an agricultural threat, if introduced, Witchweed could spread to native ecosystems, attaching to native plants and disrupting local biodiversity.

***Xylella fastidiosa*****Agricultural impact:**

*Xylella fastidiosa* is a bacterial pathogen that affects over 660 plant species by blocking the water transport system. It causes symptoms like leaf scorch, wilt, dieback and eventual death. Its introduction could devastate industries such as viticulture, citrus, olive and almond.

**Environmental impact:**

*Xylella fastidiosa* could infect native trees and plants, altering ecosystem structure and function and potentially leading to severe ecological consequences similar to those in other affected regions, such as Europe and the Americas.

**Task 3**

Students model the organism, for example, by using a ruler to measure paper/playdough and creating a shield-shaped body for the brown marmorated stink bug model, ensuring it measures between 1.5 and 1.7 cm in length. Students could also consider the bug's natural colour patterns, incorporate them into the design, and use matchsticks to craft six proportional legs. For the antennae, find a suitable material like thin wire or stiff paper strips to represent their distinct banded appearance accurately.



Brown marmorated stink bug

Image: Department of Agriculture, Fisheries and Forestry

**Task 4**

The cane toad (*Rhinella marina*) was introduced to Australia in 1935 from Hawaii to control cane beetles damaging sugarcane crops. This introduction has negatively impacted local ecosystems, as cane toads are toxic and outcompete native species, leading to declines in native wildlife populations. Their proliferation continues to threaten Australian biodiversity.

**Task 5**

The pathogen SARS-CoV-2, responsible for COVID-19, spread to Australia as a result of global travel. This virus has significant effects on human health, ranging from mild symptoms like cough and fever to severe respiratory distress and even death. Additionally, long-term effects known as 'long COVID' include fatigue, cognitive impairments and ongoing respiratory difficulties, impacting many who recover from the initial infection.



## References

### Activity 1

DAFF 2023a, [\*Australia's biosecurity\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.

DAFF 2024a, [\*Be a Junior Biosecurity Officer\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.

Department of Agriculture 2019, [\*Our biosecurity detector dogs safeguarding Australia \[YouTube\]\*](#), Canberra, accessed 21 August 2024.

### Activity 2

DAFF 2024b, [\*Become a biosecurity officer\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.

Department of Agriculture and Water Resources 2017, [\*Frontline – Indigenous Biosecurity Rangers \[YouTube\]\*](#), Canberra, accessed 21 August 2024.

Department of Agriculture and Water Resources 2019, [\*Country Handle with Care – Episode 6 Protecting Country \[YouTube\]\*](#), Canberra, accessed 21 August 2024.

### Activity 3

DAFF 2022, [\*Brown marmorated stink bug\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.

DAFF 2023b, [\*Xylella and exotic vectors\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.

DAFF 2024c, [\*Catriona Rowntree – Travellers and Tourists\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.

DAFF 2024d, [\*You can be a Biosecurity Champion too!\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.



## Other resources

DAFF 2023c, [\*Biosecurity Innovation Program\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.

DAFF 2023d, [\*Biosecurity matters\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.

DAFF 2023e, [\*Country Handle with Care – Costa and dirtgirl Tackle Biosecurity\*](#), Department of Agriculture, Fisheries and Forestry, Canberra, accessed 21 August 2024.

DAFF 2023f, [\*Innovation Pilots Initiative\*](#), Department of Agriculture, Fisheries and Forestry, accessed 21 August 2024.

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Department of Agriculture, Water and the Environment 2019, [\*Australia's National Priority Plant Pests \(NPPP\) playing cards: Beastie the Bug and novel coronavirus 2019 version \[PDF 2040KB\]\*](#), accessed 21 August 2024.



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**Acknowledgement of Country**

We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment and community. We pay our respects to the Traditional Custodians of the lands we live and work on, their culture, and their Elders past and present.



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