

**Biosecurity  
& Food Safety**

# WARRIOR TRAINING MANUAL

This manual belongs to:

*Do your  
Biosecurity  
Warrior training  
with me!*





# Biosecurity starts in your backyard



Biosecurity Baddies (pests, disease, weeds & contaminants) are bad for our farms, food and spaces



Biosecurity Actions are things YOU can do to help the biosecurity mission



Biosecurity Goodies help keep the Baddies at bay and our environments and us healthy

## Good biosecurity means we can all enjoy healthy environments and safe food



Our environment is precious and unique. Biosecurity Baddies occur everywhere, even in backyards and homes where you would least expect them. They can then spread to our environment and farms and impact the health of our native species and land.

Biosecurity and food safety is a shared responsibility which starts at home.



Work through your training manual to become a Biosecurity and Food Safety Warrior like me!  
Look out for the backyard Biosecurity Baddies and stop them from spreading using your Biosecurity Actions and Goodies!



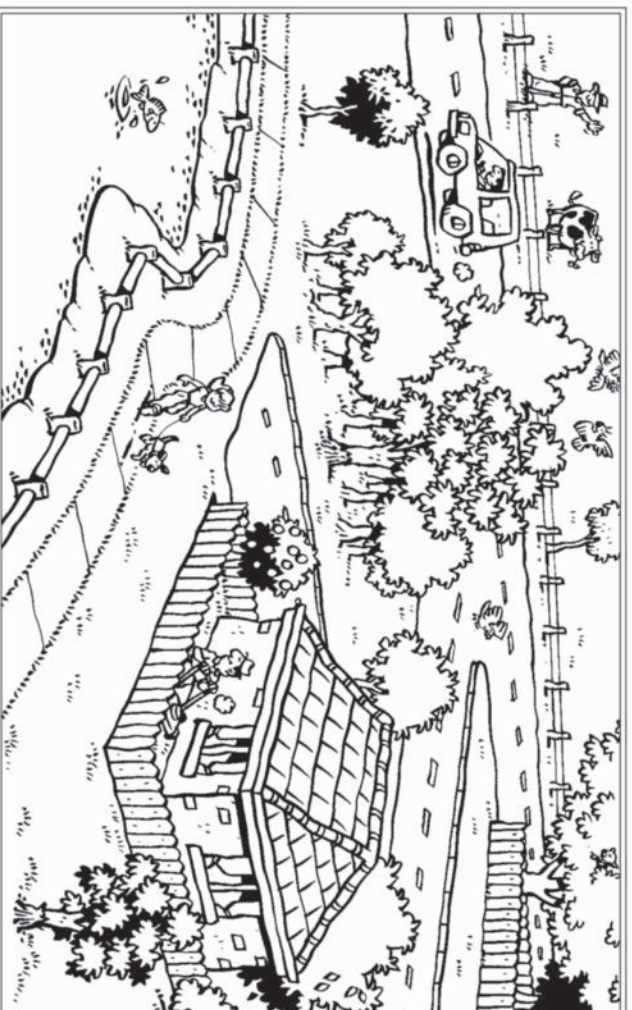
Farms produce food for our tables and fibre for our clothes. Biosecurity Baddies can affect how much our farmers can produce and how good their products are. Farmers work hard to keep Biosecurity Baddies out of their farms.

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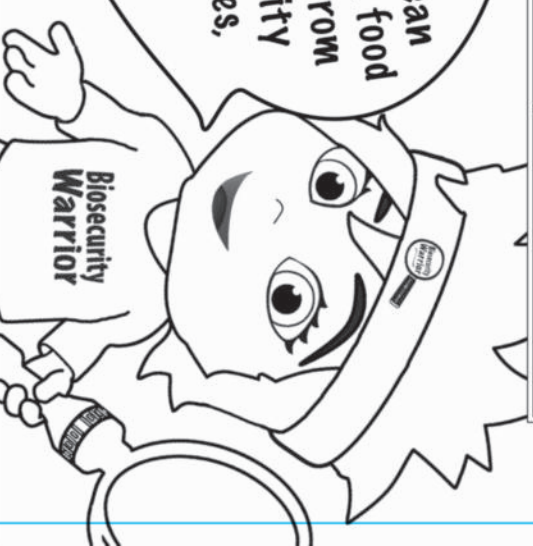
# Spot the differences between the Biosecurity Warrior's neighbourhood and one where Biosecurity Baddies haven't been stopped.



## Spot the difference answers:

1. Weeds cause allergies.
2. Weeds make animals sick.
3. Weeds affect native animals.
4. The wind spreads weed seeds.
5. Wash down cars that have been through vegetated areas.
6. Weeds take over native bushland.
7. Watch environmental weeds spread seedlings.
8. Weeds choke our waterways.
9. Don't put aquarium weeds into waterways.
10. Pets can get sick from eating weeds.
11. Don't dump your garden clippings over the fence.

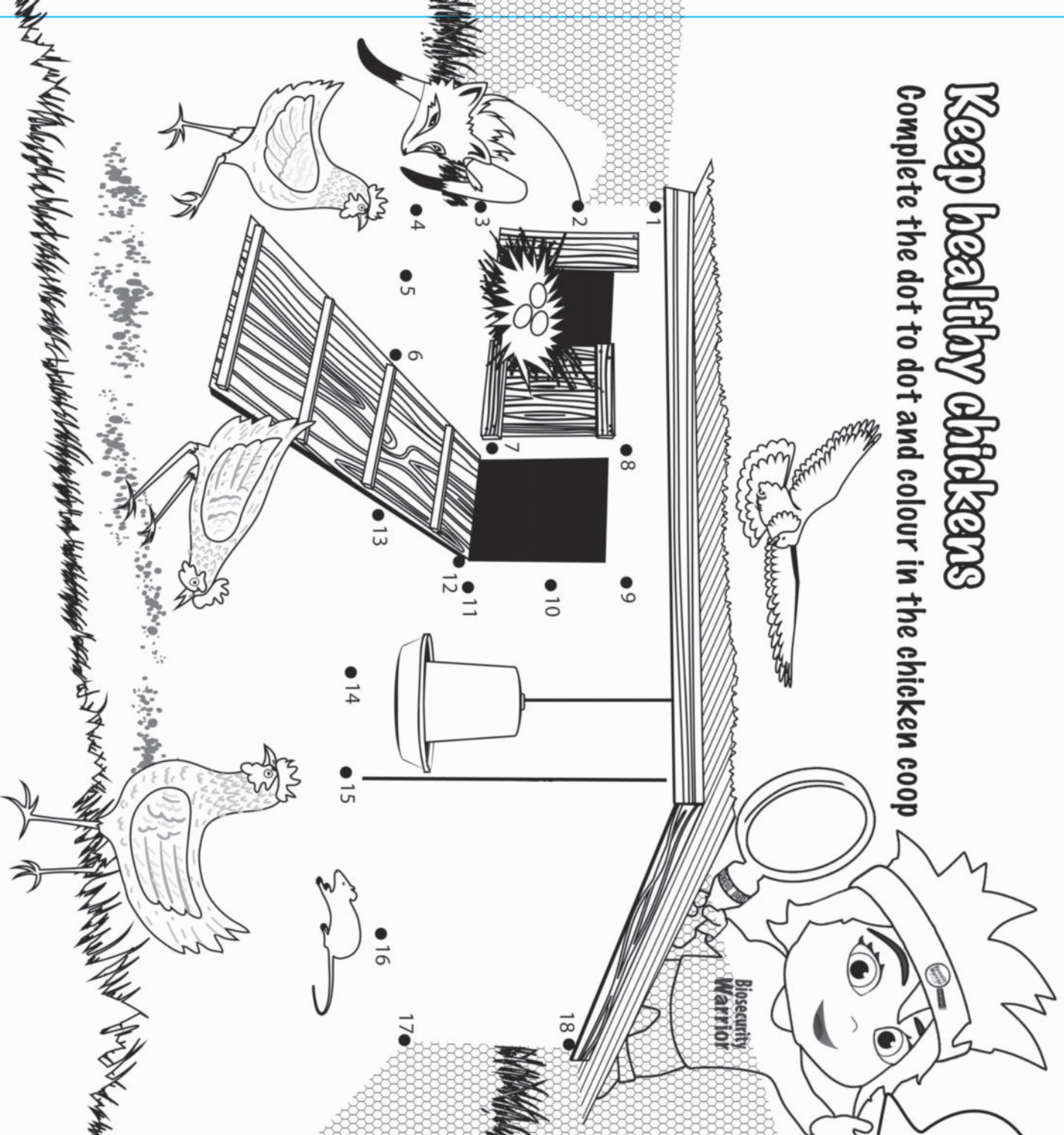
By becoming a Biosecurity Warrior you can help keep our environment, food and other products safe from the impacts of Biosecurity Baddies such as diseases, pests, weeds and contaminants.





# Keep healthy chickens

Complete the dot to dot and colour in the chicken coop



Match the descriptions to the correct parts of the image

Make sure your chicken coop is clean and has a good roof and sides to keep the Biosecurity Baddies out and your chickens safe.

Chickens love somewhere comfortable and safe to lay their eggs. Straw can carry weeds and encourage pests. Check your straw before you buy it and keep it clean.

I am a pest and I love chook pellets and food scraps. I also love sleeping in straw... but I can spread diseases so you want to keep me away!

Keep your chicken food and water under cover and make sure I can't get into the coop as I spread diseases!

Make sure I'm vaccinated and wormed. Keep me happy and healthy with a balanced diet and I'll give you fresh eggs. Make sure you collect my eggs quickly though!

Winner, winner, chicken dinner! I love to eat your chooks. I eat lots of different native and farm animals and I can spread diseases. Some people think I'm cute, but I am a feral pest!



# Find-a-Word

Find the following words and decide whether each is a biosecurity baddie or something you can do .to keep the baddies away from your chickens. Then, use the leftover letters to solve the missing phrase.

- MOUSE
- CLEAN
- STRAW
- TIDY
- ROOF
- WATER
- FOX
- FOOD
- DISEASE
- SHELTER
- WEED
- PROTECTION
- COOP
- FLY
- WILD BIRD

W	Y	D	I	T	A	S	F	H	W
C	O	O	P	Y	O	Y	O	U	I
R	H	R	A	N	D	L	X	S	L
B	E	O	F	O	R	F	O	O	D
R	M	O	U	S	E	E	A	F	B
T	E	F	R	T	T	E	W	N	I
W	N	T	E	R	L	R	A	A	R
E	I	N	G	A	E	T	T	E	D
E	H	E	C	W	H	O	E	L	O
D	I	S	E	A	S	E	R	C	P
N	O	I	T	C	E	T	O	R	P

## Solve the phrase:

It is important to \_\_\_\_\_ and \_\_\_\_\_  
 \_\_\_\_\_ chicken \_\_\_\_\_!



Many people keep backyard chooks so they can eat the delicious and healthy eggs they produce.

Fresh eggs are yummy in all sorts of meals. Keep your eggs safe for eating by:

1. Collecting your eggs from the chicken coop as soon as possible.
2. Labelling your eggs with the date of collection.
3. Storing them in an egg carton in the fridge.
4. Cooking your eggs before you eat them.

## Did You Know?

- ▶ When laid, eggs have a natural coating called a 'bloom' which keeps out bacteria
- ▶ Egg shells are porous and covered by more than 17,000 tiny holes
- ▶ DON'T wash eggs because you'll remove the 'bloom' and bacteria can push through the shell - yuck!
- ▶ Throw away cracked or dirty eggs
- ▶ A fresh egg will sink in water, a stale egg won't
- ▶ A hard boiled egg spins easily on a flat smooth surface, a raw egg wobbles

It is important to wash your hands before and after entering the chicken coop!



# Grow healthy fruit and vegetables



Biosecurity Baddies



Biosecurity Actions



Biosecurity Goodies

Choose the correct symbol for each description and label them



☐ I'm an aphid and have lots of cousins. We all love living on, eating and damaging your plants. We are scared of ladybeetles who are Biosecurity Goodies.

☐ Plants that are easy to grow or have nice flowers are often shared with neighbours and friends, either to grow or as fresh flowers for the house. Make sure your plants are healthy and aren't home to Baddies before you share them.

☐ Look out for me! I'm a citrus psyllid. I love sucking sap and injecting poison which damages trees. I also spread diseases which affect how many fruit your citrus tree grows.

☐ Spot it! Look out for strange marks, spots or features on your plants. These may be a sign of a Biosecurity Baddie.

☐ I'm a Biosecurity Goodie, I pollinate your plants so they can make the fruit and veggies you love!




☐ We eat the aphids and other Biosecurity Baddies which harm your garden. Make your garden friendly for us!

☐ Keep your garden clean and tidy by removing any old fruit or vegetables and keeping weeds away.



# Biosecurity Goodies help keep the Biosecurity Baddies away and your garden and the environment healthy.

Encourage Biosecurity Goodies in your garden in three easy steps:

1. Learn more about Good insects 
2. Grow plants which attract Good bugs 
3. Design and build an insect hotel 



**INVESTIGATE!**  
**bees**

Learn more about bees and good bugs, then create your own insect hotel at:

[www.tocal.nsw.edu.au/home/investigate](http://www.tocal.nsw.edu.au/home/investigate)

## **BROWN MARMORATED STINK BUG is a major Biosecurity Baddie**

It's an exotic plant pest we don't want to get established here in Australia, so we need to be on the lookout for it. This bug will damage yummy fruit and vegies we grow in our backyards and farms. Over winter the bugs shelter together in buildings for protection.

There are many Australian native (Goodies) stink bugs so we need to make sure we can spot the difference between the Goodies and the Baddies.

Look out for these features of the Brown Marmorated Stink Bug:

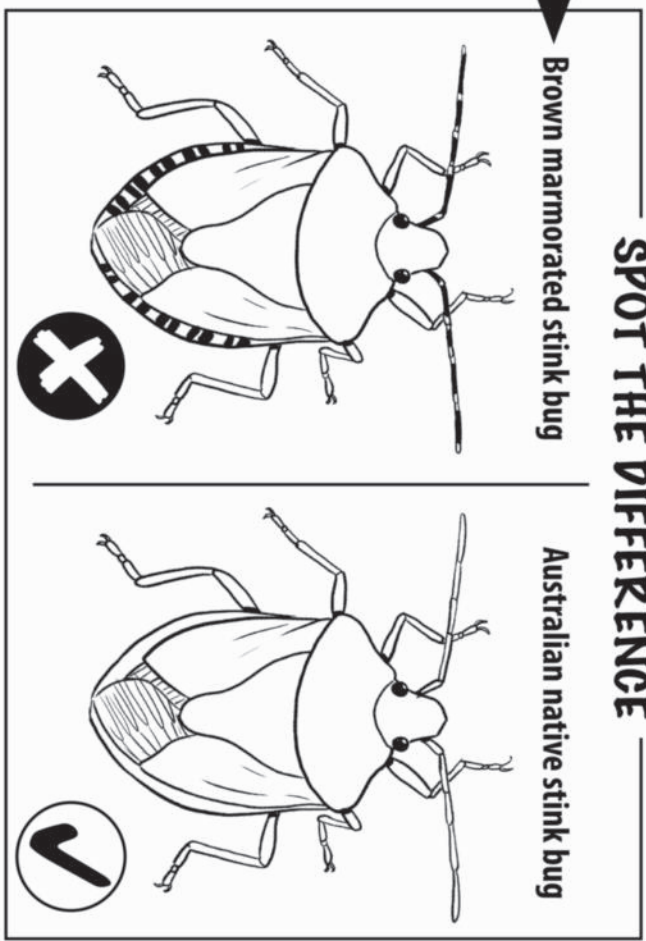
- ▶ White bands on antennae
- ▶ White bands on sides of abdomen
- ▶ 14-17mm in size

If you see we take a photo and **REPORT ME** to the Exotic Plant Pest Hotline **1800 084 881** or use the **MyPestGuide Reporter** app.



The **FREE MyPestGuide™ Reporter** app lets you quickly submit a report with photos. If reporting a suspected Brown Marmorated Stink Bug, select 'Stink Bug Survey' and send report to NSW.

### SPOT THE DIFFERENCE





# Keep your lawn and garden clean

Colour in the garden. Match the descriptions to the correct part of the image and choose the correct symbol.



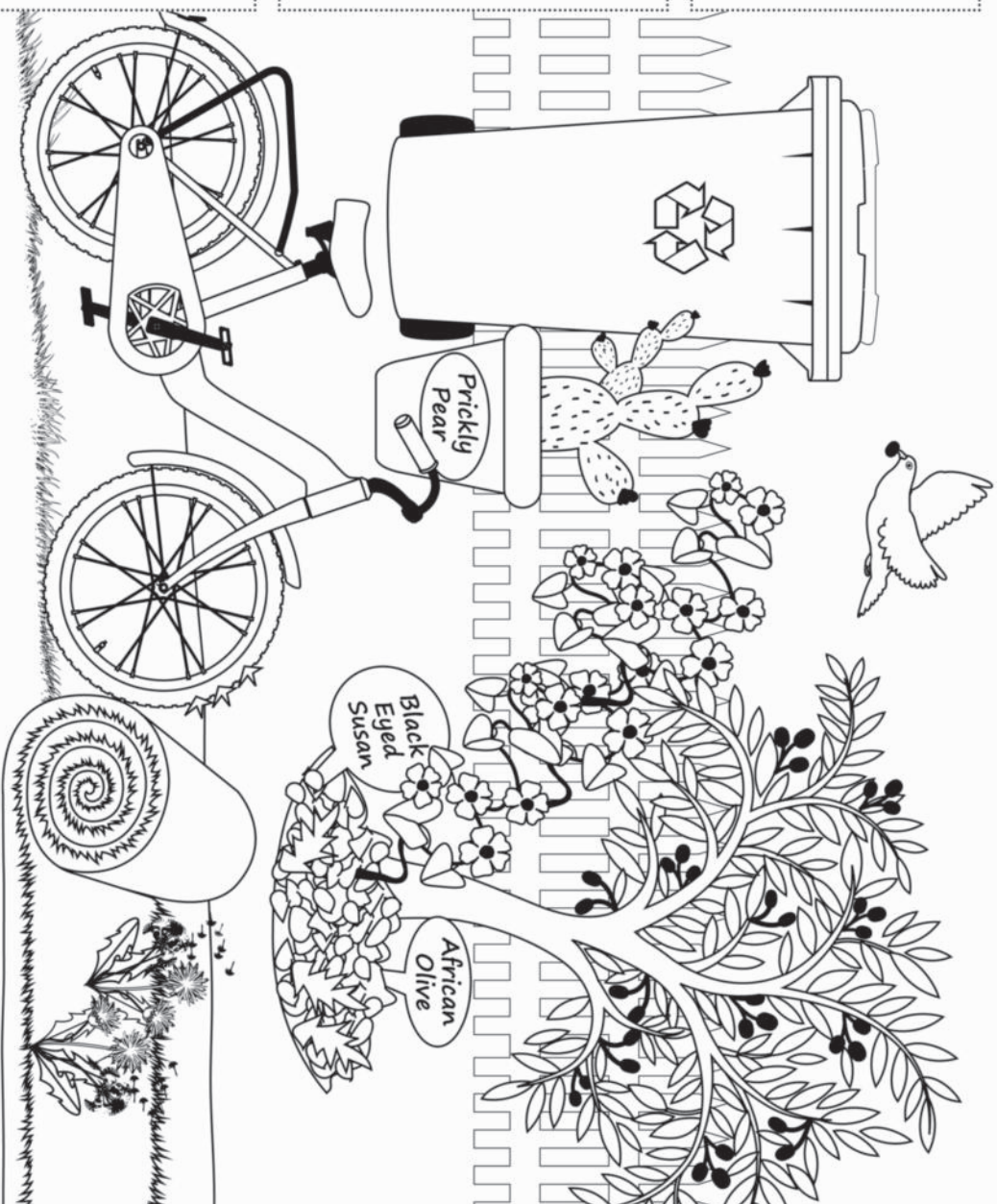
**Biosecurity Baddies**



**Biosecurity Actions**



**Biosecurity Goodies**



Use me to remove your garden waste responsibly. Did you know your garden waste could be known as a weed elsewhere or home to Biosecurity Baddies?



Biosecurity Baddies, such as weeds, their seeds, and bad bugs can hitch a ride on anything that moves. Check your bike, vehicles, shoes and socks often and wash them before you enter and leave new areas.



My fruit looks like the yummy olives from the deli but you can't eat the fruit from me and birds will spread my seeds wherever they fly.



Remove weeds and maintain your garden to reduce the risk of Biosecurity Baddies taking over your garden or the places around you!



I'm bright, cheerful and pushy. I like to creep all over the place in the garden, in the bush and over other plants. I produce heaps of seeds that birds carry everywhere.



Garden materials, such as soil, mulch, turf and even plants may be home for Biosecurity Baddies before you get them. Keep a look out for anything unusual in your garden materials.



Some people think I look pretty in their garden, like a nice cactus, but I'm a Biosecurity Baddie. I can spread to places near and far, make sure I'm not in your garden!

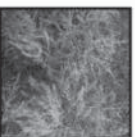


# Be Weedwise Look out for weeds and stop the spread

Weeds are plants that behave badly and grow where we don't want them! You might think weeds are ones with spines or prickles or plants that have odd smells or look tangled but weeds come in all shapes and sizes.

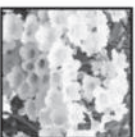
You can help with early detection of weedy plants by knowing what to look for, where to look, when to look, and who to contact.

NSW has no space for weeds, so look out for these weeds and many others in your school grounds or garden:



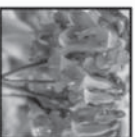
## WANTED Asparagus fern (*Asparagus virgatus*)

**Crime:** Looks nice but likes to go bush taking over space  
**Grow instead:** Creeping Boobialla (*Myoporum parvifolium*)



## WANTED Golden Bells (*Tecoma stans*)

**Crime:** Seeds spread by birds, water and garden waste  
**Grow instead:** Honey Gem Grevillea (*Grevillea* x honey gem)



## WANTED Mother-of-millions (*Bryophyllum* species)

**Crime:** Spreads itself from seed and tiny plant bits. Poisonous to animals  
**Grow instead:** Pigface (*Carpobrotus glaucescens*)



## WANTED Butterfly bush (*Buddleja davidii*)

**Crime:** Loved by butterflies but seeds blow over the garden fence and grow together so other plants can't get in  
**Grow instead:** Purple mint bush (*Prostanthera ovalifolia*)



## WANTED Montbretia (*Crocosmia* x *crocosmiiflora*)

**Crime:** Very pushy and sneaking by growing and spreading underground  
**Grow instead:** Fringe Lily (*Thysanotus* species)

Get over  
300 weed profiles  
in your pocket.  
Download DPI's NSW  
WeedWise app



## Did You Know?

Lots of plants are Biosecurity Baddies, or can become Baddies if they escape from your garden! Check out: [www.growmeinstead.com.au/](http://www.growmeinstead.com.au/) to make sure your garden would make a Biosecurity Warrior happy!

Create a Wanted Poster for a weed in your local area. Use the WeedWise app or [weeds.dpi.nsw.gov.au](http://weeds.dpi.nsw.gov.au) to profile a biosecurity weed baddie.

**WANTED Name:**

**Picture**

**Crime:**

**Last seen:**

**Action:**



# Keep our fish and waterways healthy





Keeping fish is fun, but it's important to make sure your pets don't become pests in our oceans and waterways. Most fish, snails, and plants you keep in ponds and tanks are not native to Australia, or to your local area. If released, they are difficult to eliminate and pose a serious threat to fragile ecosystems and important industries.



Make 'Clean' part of your routine to help prevent the spread of aquatic pests and diseases. Avoid unwanted hitchhikers by always washing down your boat, trailers and fishing equipment after using them and dispose of all waste collected during cleaning in the general waste.

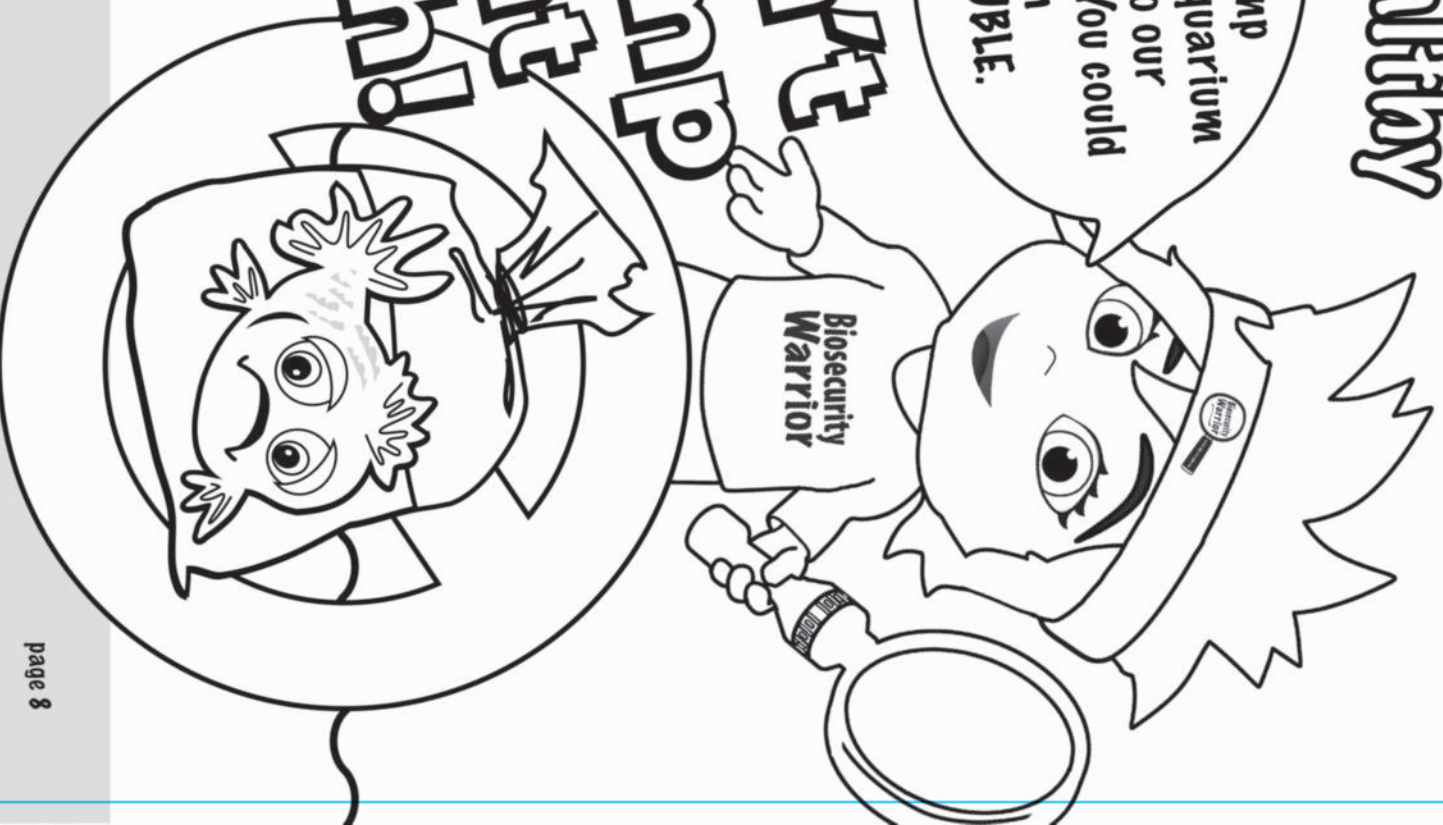
## FISH TANK CLEANING TIME!

Can you help the Biosecurity Warrior keep the tank clean by arranging the content so that every row, line and column and 4-square box has one of each kind of aquarium item? Draw in the missing items.

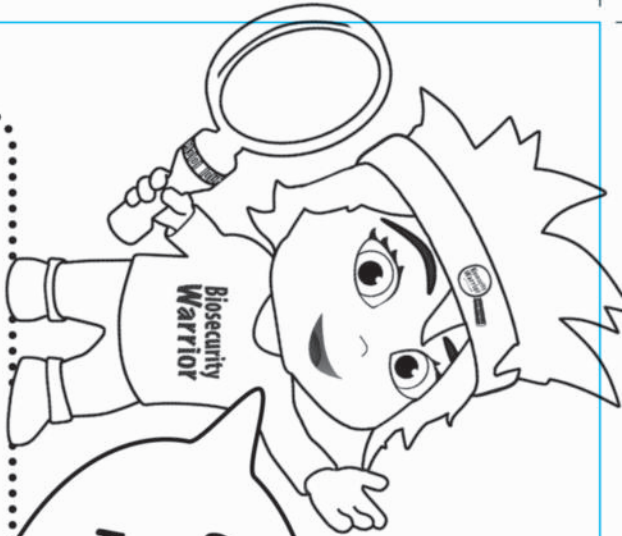






Don't dump your fish or aquarium weeds into our waterways! You could get in **BIG TROUBLE.**

**Don't dump that fish!**







# Protect our farms, native wildlife and environment

*Keep your pet cat inside at night to help keep our native birds and animals safe*

The Biosecurity Warrior needs help to track the feral pests and unusual suspects. Can you use the footprints to work out who made them? Colour the ones in red you think are feral, and colour the unusual one in purple.

TRACK 1

TRACK 2

TRACK 3

TRACK 4



## FERAL PESTS

Feral pests in Australia have few natural predators or fatal diseases, and some have high reproductive rates. They include cats, rabbits, foxes, pigs and deer.

## UNUSUAL SUSPECTS

Unusual suspects are non-native species that include the American corn snake, red-eared slider turtle, boa constrictor and veiled chameleon, but there are also many others.

If you spot an unusual animal that you think looks like it doesn't belong in Australia, REPORT IT by calling 1800 680 244

## Did You Know?

Feral pests and non-native animals are dangerous to our native wildlife, environment, domestic pets and farming communities. They hunt and can spread diseases. DPI researchers are studying the movement of wild dogs, foxes and feral cats with GPS tracking collars and remote cameras.





6



# The Golden Rules of Food Safety



**Keep  
it cold**

- keep the fridge below 5°C
- refrigerate food that needs to be kept cold in the fridge straight away
- don't eat food that's meant to be in the fridge if it's been left out for 2 hours or more
- defrost and marinate foods in the fridge, especially meats
- shop with a cooler bag and picnic with an esky



**Keep  
it hot**

- cook foods to at least 60°C, hotter for specific foods
- reheat foods to at least 60°C, until they're steaming hot
- make sure there's no pink left in cooked meats such as mince or sausages
- look for clear juices before serving chicken
- heat to boiling all marinades containing raw meat juices before serving



**Keep  
it clean**

- wash and dry hands thoroughly before starting to prepare or eat any food, even a snack
- keep benches, kitchen equipment and tableware clean and dry
- don't let raw meat juices drip onto other foods
- separate raw and cooked food and use different cutting boards and knives for both
- avoid making food for others if sick



**Check  
the label**

- don't eat food past a 'use-by' date
- note a 'best before' date
- follow storage and cooking instructions
- be allergy aware
- ask for information about unpackaged foods

It's easy to forget that food can be dangerous and cause illness. Food can grow bacteria which can make us sick if we do not store, prepare, cook and eat it correctly!

Biosecurity warriors  
don't just want our food to  
be yummy, we also want it to  
be safe. That's why it's important  
we learn the 4 Golden Rules of  
Food Safety!





# Keep a healthy fridge

Hot food needs to be cooled down long enough to stop steaming before putting it in the fridge. It's best to wait about 30 minutes or divide large quantities of hot food into smaller portions. If it's too hot, it can overheat your fridge and put it into the temperature 'danger zone' - between 5°C to 60°C.

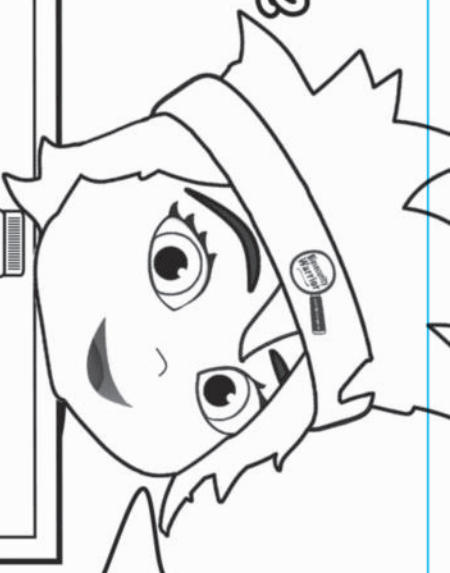
To make sure your food stays safe, keep your fridge between 0°C and 5°C at all times.

Raw pieces of meat should be kept on the bottom shelf so they don't drip onto other foods and contaminate them. Yuck!

Your fridge needs room to breathe! If it gets overcrowded the temperature starts to rise above 5°C and your food may not be safe to eat.

HELP! I don't have a cover and that piece of raw meat above me keeps dripping onto me. Please cover me quickly to stop me becoming contaminated - I don't want to make you sick.

This milk is no longer safe to drink - make sure you throw away food that's past its 'use-by' date - it could make you very sick.

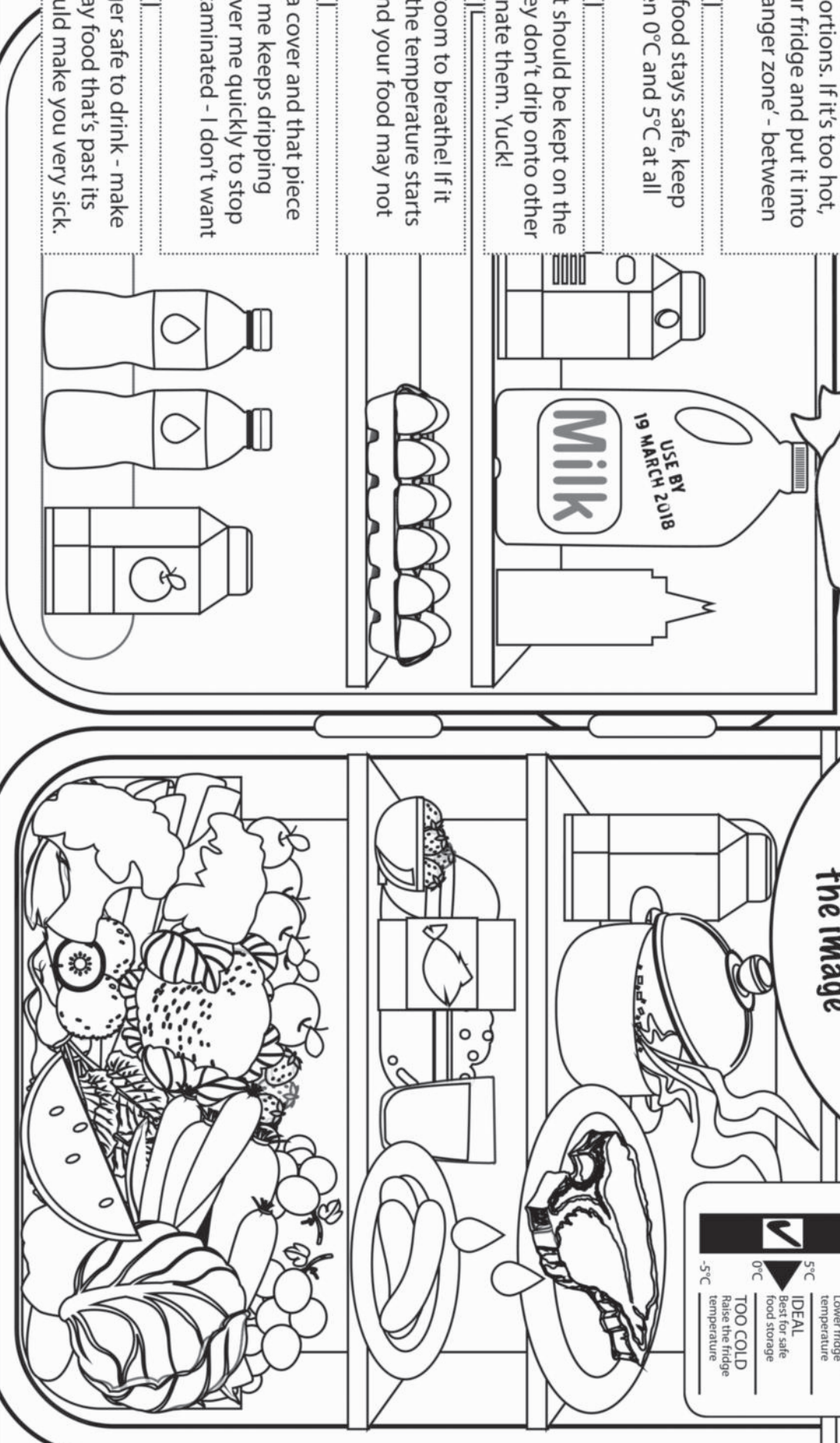
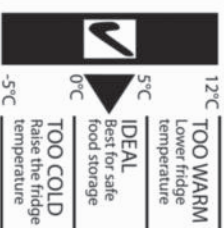


Colour in the fridge items and match the descriptions to the correct parts of the image

## Golden rules of food safety

- o keep it cold
- o keep it hot
- o keep it clean
- o check the label

## Fridge thermometer





## TRUE OR FALSE?

- a) It's safe to eat food that's been dropped on the floor, as long as it's been picked up within 5 seconds? ☐ True ☐ False
- b) If food looks, smells and tastes ok, it's safe to eat ☐ True ☐ False
- c) Eating food after the 'best before' date is ok ☐ True ☐ False
- d) Eating food after the 'use by' date is ok ☐ True ☐ False
- e) The best way to defrost food is in the fridge or the microwave ☐ True ☐ False

## Food Safety Word Challenge

Fill in the missing words from the choices below:

- 2 hours • steaming • 5°C • 20 seconds • wash • defrost
- separate • fridge • throw

1. Wash your hands for at least \_\_\_\_\_ to remove all germs
2. \_\_\_\_\_ food in the fridge not on the counter
3. Keep uncooked meat \_\_\_\_\_ from cooked meat
4. Leftovers should be stored in the \_\_\_\_\_
5. Wait until hot food has stopped \_\_\_\_\_ before putting in the fridge
6. Make sure your fridge is kept between 0°C and \_\_\_\_\_ at all times
7. \_\_\_\_\_ your hands before touching food
8. \_\_\_\_\_ away food that is past its Use By date
9. Food that is meant to be kept cold should be put in the fridge within \_\_\_\_\_ or it might make you sick

### True or False Answers:

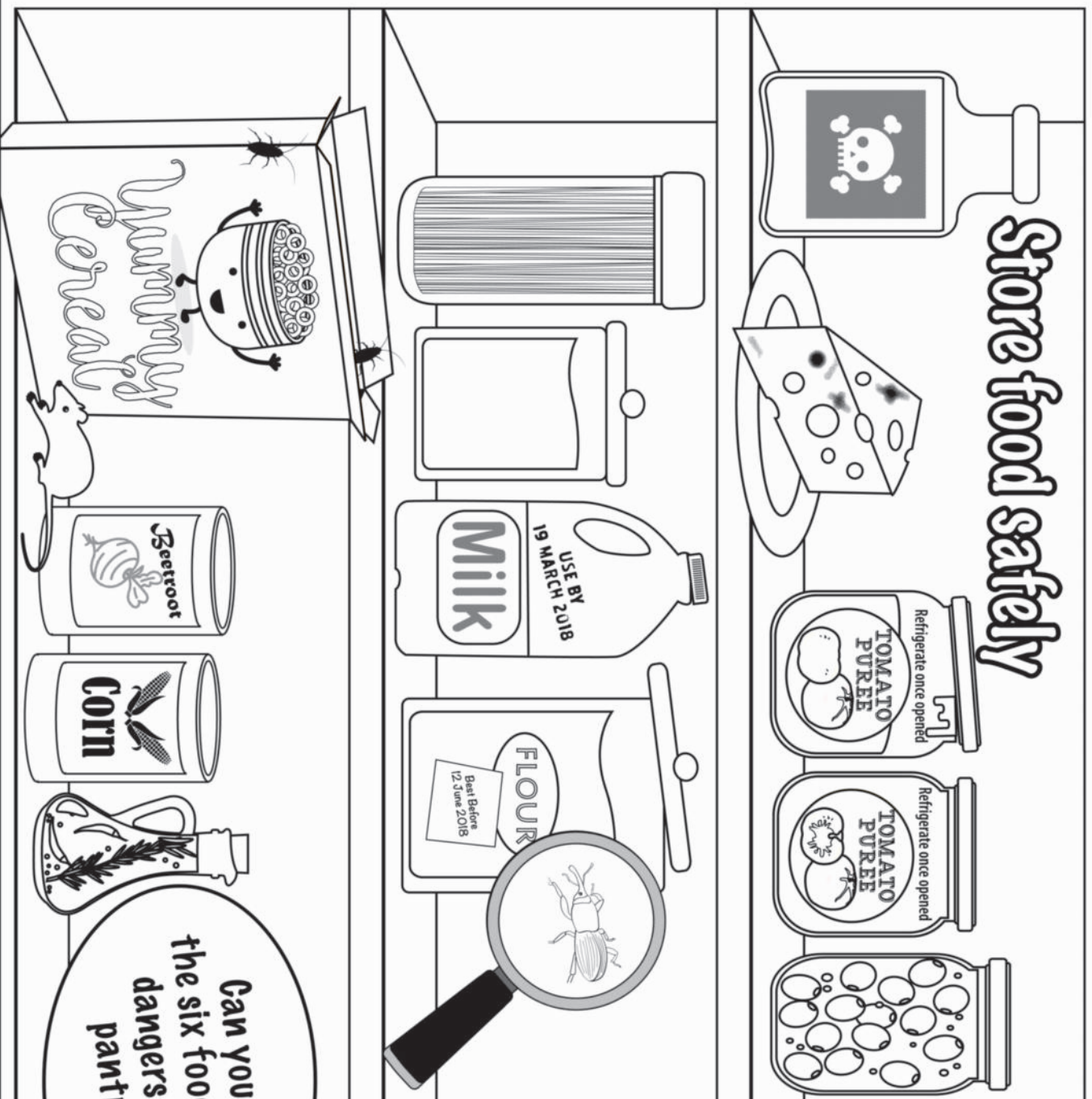
- a) False – it doesn't take long for bacteria to attach itself to dropped food, even if you pick it up super-fast. So, if the food hits the floor, best to be safe and throw it away immediately.
- b) False – although a bad smell or taste are signs that food has gone 'off', these signs are often not caused by the bacteria that give you food poisoning so you shouldn't rely on this as a warning sign. It's best to stick to the 'use by' date and storage instructions on the packet.
- c) True – 'best before' dates are about food quality not safety. It just means that the food may have started to lose its colour, flavour or texture.
- d) False – food past its 'use by' date is no longer safe to eat – even if it looks and smells fine, throw it out straight away.
- e) True – it can take hours for food to defrost fully if left on a kitchen bench meaning the surface of the food can reach a dangerous temperature, allowing bacteria to multiply and make you sick when you eat it.

### Food Safety Word Challenge Answers:

- |               |            |
|---------------|------------|
| 1) 20 seconds | 6) 5°C     |
| 2) defrost    | 7) wash    |
| 3) separate   | 8) throw   |
| 4) fridge     | 9) 2 hours |
| 5) steaming   |            |



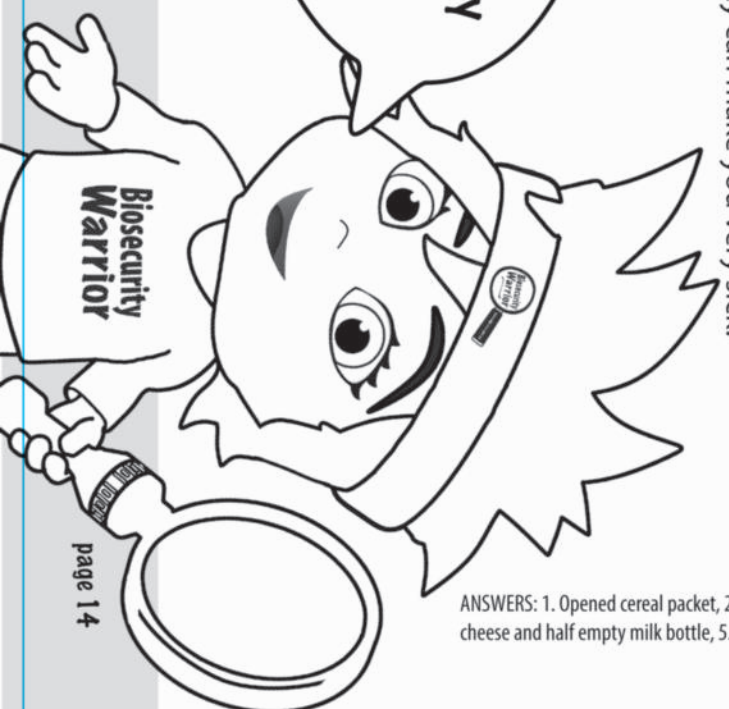
# Store food safely



There are six food safety dangers in the pantry. Can you find them and colour them in red to show they are not safe to eat? Match the unsafe food to the descriptions

- ▶ Lids should be closed to keep cockroaches and bugs out - these creepy crawlies love cereal as much as you do!
- ▶ Once opened, some items need to be kept in the fridge so they don't make you sick.
- ▶ Don't forget to label me with what food I am, and also when you need to throw me out
- ▶ You need to keep us in the fridge where we stay cold and we won't grow mould
- ▶ Would you like a weevil with that? Store food properly in air-tight containers and you won't need to share your food with weevils.
- ▶ Never store chemicals near food, if they leak they can make you very sick.

Can you spot the six food safety dangers in the pantry?



ANSWERS: 1. Opened cereal packet, 2. Opened jar of tomato paste, 3. Unlabelled container, 4. Mouldy cheese and half empty milk bottle, 5. Opened flour container, 6. Chemical container





# Gross World

[illegible]

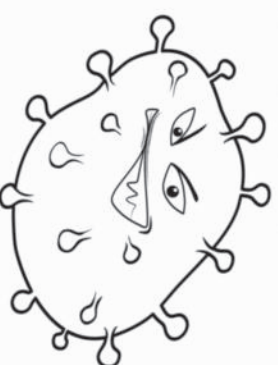
## Across

1. Keep raw and cooked foods \_\_\_\_
4. You can see bacteria: True or False?
7. I should be kept out of the kitchen
8. Milk should be stored in the \_\_\_\_

**Down**

1. Don't make food for others if you are \_\_\_\_\_
2. You should defrost foods in the fridge: True or False?
3. Always wash these for at least 20 secs before touching food
5. I will keep your lunchbox cold
6. Bacteria grows quickly in the danger \_\_\_\_\_

Do you have a COOL lunchbox? Make sure you keep your lunch safe to eat by using a frozen drink or freezer block to keep it cold and keep bacteria away!



**Solution for code cracker: Keep food safe - follow the Four Golden Rules**

A		B		C		D		E		F		G		H		I		J		K					
N		O		P		Q		R		S		T		U		V		W		X		Y		Z	

<hr/>																			
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# Keep your kitchen clean

ALWAYS wash your hands before handling food - that's an order!!! It's the easiest way to avoid getting sick, and from making others sick as well.

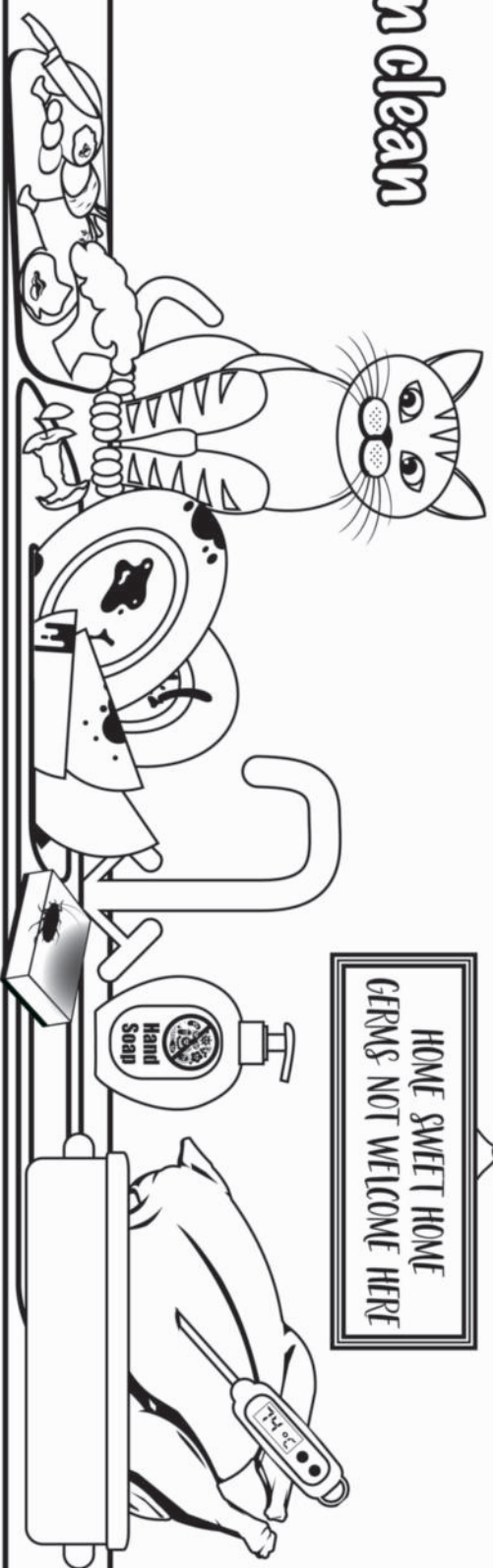
Yes, I'm cute - but pets and food preparation don't go together. To keep food safe, keep me out of your kitchen.

Keep your kitchen clean, tidy and free of rubbish and you'll keep it free from Biosecurity Baddies like bugs and creepy crawlies!

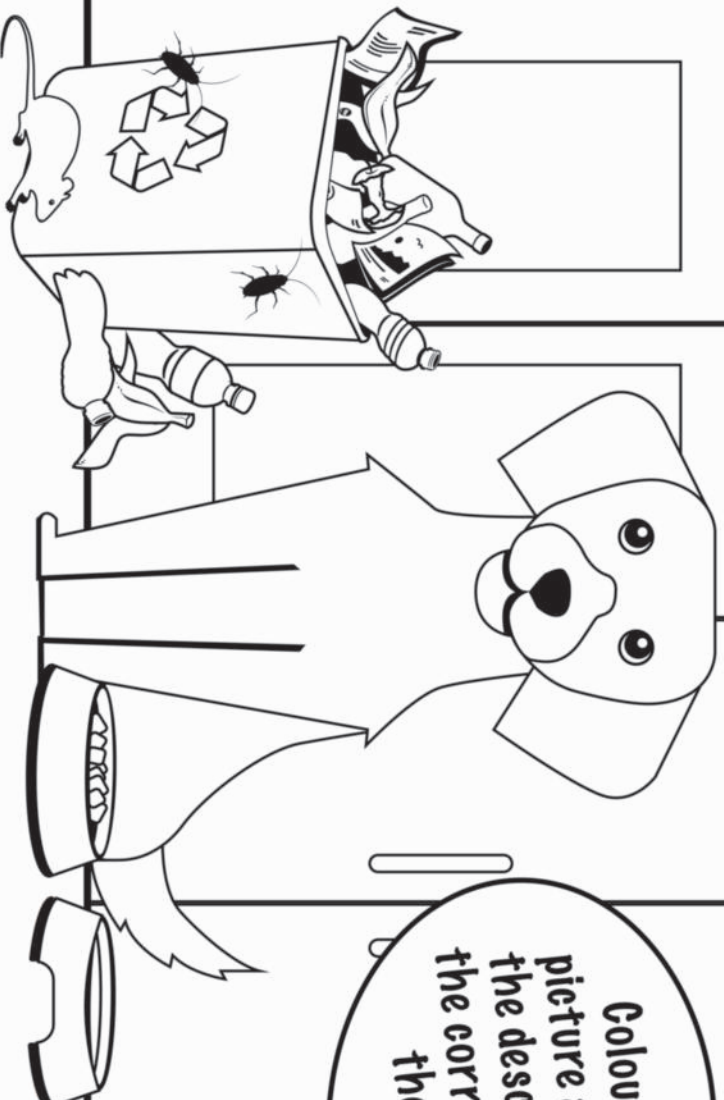
Raw food and cooked food shouldn't hang out together- so make sure you keep them separate and use different cutting boards and knives for each. Trust me, if you don't, they might make you very sick.

Excellent! Meat shouldn't be undercooked as it will make you crook but at this temperature, everyone will be happy and healthy.

Keep me clean and replace me often - at least once a week.



Colour in the picture and match the descriptions to the correct parts of the image





# 5 steps for healthy hand washing

Follow the 5 steps for healthy hand washing to make sure you're washing them properly before handling and eating food



Wash your hands with soap and warm running water.



Rub soap into your hands. Don't miss the tricky spots on the backs of your hands, between your fingers and under your nails.



Scrub your hands for at least 20 seconds – time yourself by humming the "Happy Birthday" song from beginning to end.



Rinse your hands under clean, warm, running water to remove all the soap.



Dry your hands using a clean towel (preferably paper) before preparing or eating food.

**Keep your hands squeaky clean.**

**Good hand washing removes dirt, food, grease and bacteria and viruses from your hands.**

## Wash your hands BEFORE:

## Wash your hands AFTER:



Sneezing, coughing or blowing your nose



Touching raw meat or eggs



Going to the toilet



Touching food, cooking or eating



Touching rubbish, mess or chemicals



Touching animals or playing outside



Touching a cut or sore







Department of  
Primary Industries

# Congratulations!

**Official Biosecurity and Food Safety Warrior training completion certificate**

(INSERT NAME)

awarded the title of

## Biosecurity Warrior

**For completing your Biosecurity and Food Safety Warrior training.**

Your learning will help protect our environment, community and economy from the negative impacts of Biosecurity Baddies and keep our food safe and healthy for eating.

**We'll done...  
now you're  
a Biosecurity  
Warrior too!**



[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)