

# Pollination exploration

## Design and Technologies (food and fibre production)

### Content description: South Australian Scope and sequence

YEAR 7	<p><b>Analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises</b></p> <ul style="list-style-type: none"> <li>• use the components that need to be managed sustainably in a food or fibre production system to develop a solution</li> <li>• apply one emerging and innovative production technique to the creation of a solution</li> <li>• apply the use of a digital tools to enhance the design of a food or fibre production system</li> </ul>
YEAR 8	<p><b>Analyse how food and fibre are produced in managed environments and how these can become sustainable</b></p> <ul style="list-style-type: none"> <li>• examine the components that need to be managed sustainably in a food or fibre production system, including soil, organisms, and water</li> <li>• compare how one or more food or fibre environments are managed, for example: kitchen gardens and orchards, poultry</li> <li>• consider how primary producers balance high productivity with animal welfare and biosecurity in managed systems (like egg production)</li> </ul>
YEAR 9	<p><b>Analyse and make judgements on the ethical and sustainable production of food and fibre enterprises</b></p> <ul style="list-style-type: none"> <li>• examine, prioritise, and discuss solutions for the challenges facing agriculture in Australia such as: climate variability, pests, diseases, and weeds</li> <li>• analyse food and fibre systems from different perspectives, for example, biosecurity</li> </ul>
YEAR 10	<p><b>Analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises</b></p> <ul style="list-style-type: none"> <li>• analyse primary production practices for their suitability as profitable, secure, and sustainable food sources in different regions and under changing climate conditions in Australia</li> <li>• critically analyse the management of a food or fibre environment</li> </ul>

## TASK DESCRIPTION

Students select topics related to pollination from the question matrix following the parameters set for the class. They may be required to select from each column or row or to complete a negotiated number of tasks of their choice.

They present responses in suitable formats of their choice.

## SKILLS CHECKLIST

- technical language
- clear communication
- different perspectives considered
- accurate information
- logical, evidence based analysis
- sources acknowledged with in text referencing and a bibliography



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	<b>Is? does?</b> PRESENT	<b>Has? Did? Was?</b> PAST	<b>Can?</b> POSSIBILITY	<b>Should?</b> OPINION	<b>Would? Could?</b> PROBABILITY	<b>Will?</b> PREDICTION	<b>Might?</b> IMAGINATION
<b>What?</b> EVENT	What is pollination?	What crop has usually been hand pollinated?	What can you do to help bee populations in your district?	What should farmers do to help pollinators?	What would a day in the life of a bee on an almond farm look like?	What impact will climate change have on pollinators?	What might be the benefits of pollinator diversity for ecosystems and crop systems?
<b>Where?</b> PLACE	Where is the best place to put bee hives in an almond grove?	Where was the bee hive invented?	Where can you find native bees?	Where should native bee hotels be placed?	Where would you find pollinators on the school site?	Where will pollinated crops be grown in the future?	Where might be the most unlikely place on earth to find pollinators?
<b>When?</b> TIME	When is the best time of year to put bee hives in an apricot orchard?	When was varroa mite detected in Australia?	When can bees start pollinating flowers?	When should bee hives be removed from almond groves?	When could wasps be more useful than bees for pollination?	When will Australia be varroa mite-free?	When might pollinators become protected by law in Australia?
<b>Which?</b> CHOICE	Which type of pollinator is the most important for agriculture?	Which was the most important pollinator in Australia before colonisation?	Which horticultural crops can birds help pollination for?	Which pollination strategy should ALL farmers adopt?	Which broadacre crop would benefit most from healthy bee populations?	Which colour flower will attract the most pollinators?	Which pollinator might become extinct first?
<b>Who?</b> PERSON	Who is in charge of beekeepers in South Australia?	Who was the person who detected varroa mite in Australia?	Who can own a beehive in SA?	Who should the National Farmers Federation hire as a pollination ambassador?	Who would be most affected by a varroa mite outbreak in SA?	Who will benefit most from beehives in almond groves – the apiarist or the almond farmer?	Who might be able to protect pollinators from climate change?
<b>Why?</b> REASON	Why is the shape of a flower important for pollination?	Why has the United Nations Food and Agriculture Organisation created a “global action for pollinators” strategy?	Why can pesticides be harmful to pollinators?	Why should the Government invest money in native bee research?	Why would “smart” bee hives like the “BeeWise BeeHome” be a good investment for farmers?	Why will a shortage of pollinators reduce food production?	Why might varroa mite be a “blessing in disguise”?
<b>How?</b> MEANING	How does a bee pollinate an almond tree?	How did First Nations people interact with pollinators?	How can some crops grow and produce well without pollinators?	How should a grower decide how many hives they will need in their orchard?	How would a varroa mite outbreak in SA affect South Australian orange farmers?	How will fruit trees be pollinated in the future?	How might robotics be used for pollination?