



AN EDUCATIONAL UNIT FOR PRIMARY SCHOOLS



Researching produce in your local region

YEAR 6

Geography and English

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The material in this Unit of Work is made available for the purpose of providing access to general information about food and fibre production and primary industries in Australia.



As content of the websites used in this unit is updated or moved, hyperlinks may not always function.

Rationale

This resource material aims to help teachers and students in primary schools investigate and understand more about primary industries in Australia.

The objectives of the educational resources are to:

- Support Primary Industries Education Foundation Australia and its members in expanding awareness about primary industries in Australia by engaging and informing teachers and students about the role and importance of primary industries in the Australian economy, environment and wider community.
- Provide resources which help build leadership skills amongst teachers and students in communicating about food and fibre production and primary industries in Australia.
- Develop educational resources that can be used across Australia to provide encouragement, information and practical teaching advice that will support efforts to teach about food and fibre production and the primary industries sector.
- Educate school students on ways food and animals are raised and grown.
- Demonstrate to students that everyone can consider careers in primary industries and along the supply chain of food and fibre products.
- Assist school students to spread this message to their families and the broader community.
- Develop engaging learning programs using an inquiry process aligned with the Australian Curriculum.
- Develop in school communities, an integrated primary industries education program that emphasises the relationship between food and fibre industries, individuals, communities, the environment and our economy.

These educational resources are an effort to provide practical support to teachers and students learning about food and fibre production and primary industries in schools.

An integrated primary industries education program that emphasises the relationship between food and fibre industries, individuals, communities, the environment and our economy.

The approach used, is the inquiry approach through five phases: Engage, Explore, Explain, Elaborate and Evaluate.

Several key principles underpin the theoretical and practical application to this unit.

In providing an integrated *framework for inquiry*, complemented by rich explorations of texts that are, in turn, supported by an emphasis on undertaking a challenge or task, the unit requires students to:

- Search for information using both digital and non-digital means
- Use research techniques and strategies
- Use thinking and analysis techniques
- Present findings to a real audience, and
- Reflect both on the product created and the process undertaken.

Rather than seeing knowledge as something that *is taught*, the emphasis in this unit is on knowledge and understanding that *is learned*.

The unit involves students in:

- Working from a basis of their prior knowledge and experience
- Seeing a real task or purpose for their learning
- Being directly involved in gathering information firsthand
- Constructing their knowledge in different ways
- Presenting their learning to a real audience
- Reflecting on their learning.

The approach used, is the inquiry approach through five phases: **Engage, Explore, Explain, Elaborate** and **Evaluate**. The phases of the model are based on the 5Es instructional model (Bybee, 1997). This unit of work containing student activities assists students to raise questions, gather and process data, make conclusions and take action. These phases are:

- **Engage:** The 'Engage' phase begins with lessons that mentally engage students with an activity or question. It captures their interest, provides an opportunity for them to express what they know about the concept or skill being developed, and helps them to make connections between what they know and the new ideas.
- **Explore:** The 'Explore' phase includes activities in which they can explore the concept or skill. They grapple with the problem or phenomenon and describe it in their own words. This phase allows students to acquire a common set of experiences that they can use to help each other make sense of the new concept or skill.
- **Explain:** The 'Explain' phase enables students to develop explanations for the phenomenon they have experienced. The significant aspect of this phase is that explanation follows experience.
- **Elaborate:** The 'Elaborate' phase provides opportunities for students to apply what they have learned to new situations and so develop a deeper understanding of the concept or greater use of the skill. It is important for students to discuss and compare their ideas with each other during this phase.
- **Evaluate:** The 'Evaluate' phase provides an opportunity for students to review and reflect on their own learning and new understanding and skills. It is also when students provide evidence for changes to their understanding, beliefs and skills.

Source: Primary Connections <http://www.primaryconnections.org.au/about/teaching>

Resource description

This is a unit with five inquiry teaching sequences about researching the local region and what it produces.

This unit encourages students to investigate their local region and design a user guide for visitors to the region, highlighting a range of places that produce foods we eat or fibres we wear and use.

Having explored these contexts, students then consolidate and present their understandings to an audience following the study.

At each stage in the investigations, the students are encouraged to share their findings and explanations in a range of appropriate communication forms, selected for their effectiveness and to suit audience and purpose.

Year level: 6

Curriculum focus

In this unit, students:

- Explore a range of products their local region produces.
- Examine examples of existing local produce guides to inform their ideas.
- Examine and experiment with a range of digital tools that might assist them design and create their regional produce guide.
- Examine recent research about students' and teachers' knowledge and understanding of Primary Industries.
- Produce a local produce guide.
- Reflect on and evaluate what they know about the local region and what it produces.

Based on Australian Curriculum, Assessment and Reporting Authority (ACARA) materials downloaded from the Australian Curriculum website in February 2015. ACARA does not endorse any changes that have been made to the Australian Curriculum.

Investigate the local region and design a user guide for visitors to the region highlighting a range of places that produce foods we eat or fibres we wear and use.

Australian Curriculum content descriptions

Geography

Strand: Geographical Knowledge and Understanding

The effects that people's connections with, and proximity to, places throughout the world have on shaping their awareness and opinion of those places [ACHGK036](#)

Strand: Geographical Inquiry and Skills: Observing, questioning and planning

Develop geographical questions to investigate and plan an inquiry [ACHGS040](#)

Strand: Geographical Inquiry and Skills: Collecting, recording, evaluating and representing

Collect and record relevant geographical data and information, using ethical protocols, from primary and secondary sources, for example, people, maps, plans, photographs, satellite images, statistical sources and reports [ACHGS041](#)

Evaluate sources for their usefulness and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams [ACHGS042](#)

Strand: Geographical Inquiry and Skills: Communicating

Present findings and ideas in a range of communication forms, for example, written, oral, graphic, tabular, visual and maps, using geographical terminology and digital technologies as appropriate [ACHGS045](#)

English

Strand: Literacy: Creating texts

Plan, draft and publish imaginative, informative and persuasive texts, choosing and experimenting with text structures, language features, images and digital resources appropriate to purpose and audience [ACELY1714](#)

Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), downloaded from the Australian Curriculum website in February 2015.

Implementing the unit and activities in the classroom

Using the unit

The unit can be used in a number of ways. It will be of most benefit to teachers who wish to implement a sustained sequence of activities following the inquiry stages identified in the **About the approach** section of this unit and content descriptions in Year 6 in Geography and English as stated in the Australian Curriculum.

Selecting activities

At each stage several activities are suggested from which you are encouraged to select the most appropriate for your purposes. Not all activities in each stage of the unit need to be used. Alternatively, you may add to or complement the suggested activities with ideas of your own.

It is suggested that teachers create a hyperlinked unit. Organise the digital resources for your class's use on a website or wiki or provide them on your interactive whiteboard.

Resourcing the unit

The resources suggested are on the whole, general rather than specific. Schools and the contexts in which they exist vary widely as does the availability of some resources – particularly in remote areas. There is a strong emphasis in the unit on gathering information and data; research and observations also feature strongly as these methods develop important skills and ensure that the exploration of the topics are grounded in a relevant context.




Some YouTube and online videos in addition to Internet based resources are suggested in the unit. You will need to investigate what is available in your school.

Adapting the unit

The unit is targeted at Year 6 students. This is a suggested age range only and teachers are encouraged to modify activities to suit the needs of the students with whom they are working.

The unit's topics are based on content descriptions of the Australian Curriculum and on the key cross curriculum priority of sustainability. They embrace content that we believe is of relevance and significance to all students. We encourage you to explore ways in which the content can be adjusted to the context in which you are working.

Many of the activities contain the following icons offering a suggestion on how many students should be involved:

-  Suggested for individuals
-  Suggested for pairs or small groups
-  Suggested for larger groups or entire classes

What about assessment?

Rather than being a task carried out at the end of the unit, assessment is viewed as integral to the entire unit sequence. Each activity should be regarded as a context for assessment of student learning.

When planning and implementing the unit of work make clear decisions on what you will focus on in assessing learning. The unit provides an opportunity for a range of skills and understandings to be observed. We encourage you to devise an assessment plan or assessment rubric that features areas to be assessed over subsequent lessons.

In planning for assessment, student learning in the following areas can be considered:

- Understandings about the topic.
- Development of skills.
- Exploration and clarification of values.
- Use of language in relation to content.
- Ability to use and critically analyse a range of texts.
- Ability to analyse and solve problems.
- Ability to interpret information, perceive its meaning and significance, and use it to complete real-world tasks.
- Ability to work cooperatively with others.
- Approach to learning (independence, confidence, participation and enthusiasm).

For this unit, the following understandings are provided to assist teachers in planning for assessment.

Assessment strategies

Each stage in the inquiry sequence provides information about student learning. There are, however, two stages in the unit that are central to assessment: the **Engage** stage and the **Evaluate** stage. Work that is undertaken in these stages can assist teachers to monitor growth and observe concrete examples of the way student ideas have been refined or have changed through the unit sequence. Work samples should be retained for this purpose.

Each unit contains a 'Student Task' which is well suited for assessment, as it is the summation of the work undertaken by the students in the unit.

Some questions and possible answers

Should I do all the activities?

At each stage of a unit, a number of activities are listed. You would not be expected to do them all. Instead, the unit is designed so that a selection of activities can be made at each stage. You should select the activities according to the needs and interests of your students and the time, relevance to the existing school curriculum and resources available to you.

While you are encouraged to follow the suggested inquiry sequence for each unit, it is quite possible to pick and choose from the range of activity ideas throughout the unit. It may also be used in conjunction with other programs you use.

How do these units fit into my weekly program?

Although the unit integrates a range of key subject areas, it is not designed to be a total program. It is assumed that regular routines that operate in your classroom will continue to run alongside your unit of work. For example, you may have regular times for use of the library, for maths, physical education etc. These things don't change – although student's writing topics or choice of topics to research in the library or in Information and Communication Technology classes may be influenced by this unit.

How long should the unit run?

This will of course depend on your particular circumstances but generally, a few weeks to a term are suggested.

I don't know much about food and fibre production myself – will I be able to teach it effectively?

Yes! The unit is designed in such a way that you, as the teacher are a co-learner, and you are therefore provided with teacher notes, plus readily available resources that are mainly web-based. Most importantly, you will find that you learn with the students and make discoveries with them.

Fast facts about Australian agriculture

National Farmers' Federation Farm Facts 2012



In 2011, there were 157,000 farmers in Australia.



The gross value of Australian farm production in 2011-12 was \$46.7 billion.

This page provides basic food and fibre production information that may be helpful when you interact with the school students.

- Agriculture plays a vital role in Australia, contributing to our social, economic and environmental sustainability.
- In 2011, there were 157,000 farmers in Australia. Around half of these were mixed crop and livestock farmers (22 percent), beef cattle farmers (20 percent) or dairy farmers (8 percent).

Sources: Australian Bureau of Statistics, 2010-11 Agricultural Census; Australian Bureau of Statistics, Australian Social Trends, Australian Farming and Farmers, December 2012, Catalogue No. 4102.0.

- These farmers own or manage Australia's 135,000 farm businesses – 99 percent of which are Australian owned.

Sources: Australian Bureau of Statistics, 2010-11 Agricultural Census; Australian Bureau of Statistics, Agricultural Land and Water Ownership, December 2010, Catalogue No. 7127.0.

- Each Australian farmer produces enough food to feed 600 people, 150 at home and 450 overseas. Australian farmers produce 93 percent of Australia's daily domestic food supply.

Sources: Keogh M, Australian Farm Institute, 2009, "Australia's response to world food security concerns", Address to the 1st National Farmers' Federation Annual Congress – Prime Minister's Science, Engineering and Innovation Council (2010); Australia and Food Security in a Changing World. The Prime Minister's Science, Engineering and Innovation Council, Canberra, Australia.

- The average Australian farmer is male (72 percent), 53 years old (compared with 40 years old for people in other occupations), and a self-employed owner manager (56 percent).

Sources: Australian Bureau of Statistics, 2010-11 Agricultural Census; Australian Bureau of Statistics, Australian Social Trends, Australian Farming and Farmers, December 2012, Catalogue No. 4102.0.

- As of June 2012, there were 290,000 people employed in Australian agriculture. The complete agricultural supply chain, including the affiliated food and fibre industries, provide over 1.6 million jobs to the Australian economy.

Sources: Australian Bureau of Agricultural & Resource Economics and Sciences (ABARES), Australian Commodity Statistics, 2012; Australia's Farm Dependent Economy: Analysis of the role of Agriculture in the Australian Economy. Modelling undertaken by Econtech.

- The agricultural sector, at farm-gate, contributes 2.4 percent to Australia's total gross domestic product. The gross value of Australian farm production in 2011-12 was \$46.7 billion.

Sources: Australian Bureau of Statistics, Value of Agricultural Commodities Produced, 2011-12, Catalogue No. 7503.0; Australian Bureau of Statistics, 2010-11, Australian System of National Accounts, Catalogue No. 5204.0; ABARES, Australian Commodity Statistics, 2012.

- Australian farmers are environmental stewards, owning, managing and caring for 59 percent of Australia's land mass.

Sources: Australian Government Department of Agriculture, Fisheries and Forestry, At a Glance, 2012.

- Farmers are at the frontline of delivering environmental outcomes on behalf of the Australian community, with 94 percent of Australian farmers actively undertaking natural resource management.

Source: Australian Bureau of Statistics, Natural Resource Management on Australian Farms 2006-07.

- Australia's primary industries have led the nation in reducing greenhouse gas emissions: a massive 40 percent reduction between 1990 and 2006.

Source: Australian Government Department of Climate Change, National Inventory by Economic Sector 2006.

Source: National Farmers' Federation Farm Facts 2012 at <http://www.nff.org.au/farm-facts.html>

Meat and Livestock Industry

- Australia's national cattle herd stands at 28.5 million head with the beef industry accounting for 57 percent of all farms with agricultural activity.
- Australia produced around 2.2 million tonnes of beef and veal in 2012–13 directly contributing to 1 percent of Australia's gross domestic product.
- Australia's national sheep flock is 74.7 million head with the sheep industry accounting for 32 percent of all farms with agricultural activity.
- Australia produces approximately 6 percent of the world's lamb and mutton supply and in 2012–13 exported 51 percent of all lamb and 96 percent of all mutton produced.
- Australia's beef and lamb industry employs approximately 200,000 workers across farm, processing and retail.
- Australian cattle and sheep farmers are the custodians of almost half of Australia's land.
- Australia's beef and lamb industry is committed to ensuring a sustainable food supply for future generations with ongoing research and development projects relating to water, soil, biodiversity, animal welfare, energy, emissions and more.

Source: *Meat and Livestock Australia* <http://mla.com.au>

Fishing and Aquaculture Industry

Australia's marine domain, our Exclusive Economic Zone, is one of the largest in the world, covering around 10 million square kilometres. This is larger than mainland Australia (7.69 million square kilometres). Despite the size of this zone Australia ranks 46th in the world for seafood production.

Australia has progressively adopted a more ecosystem-based approach to fisheries management which looks at the effect of fishing practices not just on the target species, but also on the environment and other related species. Fisheries managers monitor both stock and fishing levels as well as a range of other environmental factors to ensure the amount of seafood harvested every year does not deplete stocks. In addition, government observers travel regularly on fishing boats to ensure compliance to quotas, bycatch limits and other regulations.

Source: *Fisheries Research and Development Corporation, 2013* <http://frdc.com.au/>

During 2011–12 in Australia:

- There were 6,991 people directly employed in the commercial fishing, hunting and trapping sector, and 3,642 in aquaculture enterprises.
- The sector comprises approximately 120 wild catch fisheries and 70 aquaculture species.
- The gross value of Australian commercial seafood and products (e.g. pearls) was valued at \$2.3 billion, an increase of 3 percent on the previous year.
- Australian imports of fisheries products increased by 5 percent.
- The value of production for the wild-catch sector declined by 1 percent to \$1.3 billion and production volume decreased by 4 percent to 157,505 tonnes. While the gross value of aquaculture production rose by 10 percent (\$100 million) to \$1.1 billion.
- The largest contributor to Australian aquaculture production in 2011–12 was salmonids, which make up 52 percent of the total aquaculture production volume and 49 percent of the value.
- Tasmania accounted for the largest share of gross value of production (30 percent), followed by South Australia (19 percent) and Western Australia (17 percent). Commonwealth fisheries accounted for 13 percent of the gross value of production.

Source: *ABARES, 2013* http://data.daff.gov.au/data/warehouse/9aam/afstad9aamd003/2012/AustFishStats_2012_v1.0.0.pdf



Australia's marine domain covers around 10 million square kilometres.

Cotton Industry

Australia's cotton growers produce yields almost three times the world average.

40% less water is needed to grow one tonne of cotton lint compared to 2003.

- Every year cotton farmers make an important social and economic contribution to the nation creating jobs for 8,000 people (in Northern New South Wales and Southern Queensland alone), support for more than 4,000 businesses and over \$2 billion for the national economy in export earnings.
Sources: Cotton Australia Pocket Guide to Cotton, Judith Stubbs and Associates Report 2011.
- In 2013, there were 1,181 cotton farms. 63 percent were in New South Wales and 37 percent were in Queensland. Of those farms cotton makes up 17 percent of land area on farm.
Source: Cotton Annual 2014
- Australia's cotton growers produce enough cotton to provide jeans, socks, underwear and a shirt for 450 million people. The overall yield in 2012 was 10.37 bales per hectare – the first time in history that average yields have exceeded 10 bales per hectare. Australia's cotton growers produce yields almost three times the world average.
Sources: Cotton Australia tables (compilation of industry sources), ABARES Crop Report, December 2012, Pocket Guide to Cotton 2014.
- The average Australian cotton farmer is 39 years old, has a family owned and operated farm, employs on average six or more people, grows other crops like sorghum, soybeans, wheat and canola, has 496 hectares of cotton and is not only a farmer but also a builder, mechanic meteorologist, agronomist, conservationist, scientist and marketer.
Sources: Pocket Guide to Cotton 2014, Monsanto audited numbers 20.12.13, 2013 Cotton Practices Grower Survey, Cotton Research and Development Corporation.
- The Australian cotton crop was worth almost \$2.3 billion at the farm gate.
Source: Cotton Australia tables (compilation of industry sources), Cotton Compass.
- The Australian cotton industry has achieved a 40 percent increase in water productivity over the last decade i.e. 40 percent less water is now needed to grow one tonne of cotton lint, compared to 2003.
Source: The Australian Cotton Water Story 2011.
- The ratio of dryland cotton (rain grown) to irrigated cotton varies depending on the market and conditions. Of the 2011–12 crop 5 percent was dryland and 95 percent irrigated. Favourable grain and sorghum prices meant many dryland farmers opted not to plant cotton at that time.
Sources: Cotton Australia tables (compilation of industry sources), ABARES Crop Report December 2012.
- Australian cotton growers have reduced their insecticide use by 95 percent over the past 15 years. *Source: Monsanto Audited numbers 20.12.2013.*
- Cotton growers are good environmental stewards, owning and caring for native vegetation equivalent to 40 percent of the area of their cotton farms, on average.
Source: 2011 Cotton Grower Survey (Cotton Research and Development Corporation and Cotton Catchment Communities Co-operative Research Centre).

Source: Cotton Australia <http://www.cottonaustralia.com.au>

Pork Industry



Australia's pig herd is one of the cleanest in the world.

- Australia is the first nation in the world to introduce the voluntary phase-out of gestation stalls.
- Pork accounts for approximately 0.4 percent of the national greenhouse gas emissions – significantly lower than other agricultural sectors, including beef at 11.2 percent, sheep at 3.4 percent, and cattle at 2.7 percent.

Source: Garnaut, R. 2008, *The Garnaut climate change review – final report*, available at: <http://www.garnautreview.org.au>

- Whether housed indoors or outdoors, a pig spends more time resting than any other domestic animal.
- Australia's pig herd health is one of the cleanest in the world, free from many detrimental diseases found in most other pig producing countries
- The feed component (mainly grains such as wheat, barley and sorghum) makes up about 60 percent of the total cost of producing pork.
- Pigs have a very wide angle of vision (310 degrees) and are therefore easily distracted.
- On average, a sow will produce 10–12 piglets per litter.
- The average growth rate of Australian pigs is around 600–650 grams a day from birth to sale.
- Pigs have colour vision but they can't focus both eyes on the same spot.
- Pigs are unable to perspire and they lose heat through their mouths. Their ideal growing temperature is 20–22°C.

Source: Australian Pork Limited <http://www.australianpork.com.au>

Forestry Industry

Australia has 125 million hectares of forest, equivalent to 16% of its land area.

Forests protect soil and water resources as well as storing carbon.

- Forestry plays a vital role in Australia, contributing to our social, economic and environmental sustainability.
- Forests are also the foundation for a broad range of cultural and spiritual experiences for diverse groups of people. They are a major tourist attraction for Australian and overseas visitors, providing for a vast array of recreational and educational activities.
- In 2010–11, the total turnover of Australia’s forest product industries was more than \$24 billion.
- Australia has 125 million hectares of forest, equivalent to 16 percent of Australia’s land area. Australia has about 3 percent of the world’s forest area, and the seventh largest reported forest area of any country worldwide.
- Australia’s 123 million hectares of native forests are dominated by eucalypt forests and acacia forests.
- 32 percent of all Australia’s native forests (private and public land) are protected for biodiversity conservation. With 73 percent of Australia’s identified old growth forests in formal or informal nature conservation reserves.
- 9 percent (36.6 million hectares) of the native forests were available and suitable for commercial wood production in 2010–11 comprising 7.5 million hectares of multiple-use public forests and 29.1 million hectares of leasehold and private forests.
- Forests protect soil and water resources and are increasingly being recognised for their carbon storage and sequestration capability. The total carbon stored in forests, wood and wood products and paper products was in the order of 400 million tonnes in 2010.
- Australia’s native and plantation forests provide the majority of the timber and a significant proportion of the paper products used by Australians.
- On average, each year, every Australian consumes the equivalent of about 1 cubic metre of harvested log in the form of timber products, including timber for home building, joinery and furniture and paper products.
- Australia’s forest management is among the best in the world in terms of conservation reserves and codes of practice for production forests.
- Australia has two forestry certification schemes that enable users of wood and wooden products to know the source of the wood.
- The sector directly employs 73,267 people in the forest and wood products industry in Australia (2011). This includes full and part time employees with 1.5 percent of all employees being Indigenous.

Sources: <http://www.agriculture.gov.au/forestry>
<http://au.fsc.org/>
<http://www.forestrystandard.org.au/>
<http://www.naturallybetter.com.au/>
<http://www.forestlearning.edu.au>



Step 1: Engage with the topic

Getting started

Purpose

To provide students with opportunities to:

- share information about food and fibre production
- gather information about student's prior knowledge about the production of food and fibre and the people who produce it
- pool ideas and share with others
- build an interest about food and fibre production
- help set directions for an investigation.

List reasons why people produce foods and fibres; why they work in the agriculture, fishing and forestry industries?

Think, pair, share



ASK students to think about what they know about food and fibre production and the people who produce it, what it is, what it comprises, who produces food and fibres and why. Individually, students make a list of sentences or phrases that **DESCRIBE** what they know. Ask students to **SHARE** these with a partner.

After sharing students' ideas make a **LIST** of sentences and phrases as a whole class.

CATEGORISE these into groups about what is known about food production and what is known about fibre production and the people who produce it.

Brainstorm and prioritise



Form groups and ask students to make **LISTS** of reasons they think people produce foods and fibres; why do they work in the agriculture, fishing and forestry industries? Once lists have been made, ask students to **NUMBER** the reasons in order – from what they believe to be the most common or important to the least common or important.

SHARE the groups' ideas.

Predictions



Ask students to make **PREDICTIONS** about food or fibre producers who live in the local region. Students make their predictions individually, then **SHARE** in small groups and finally as a whole class. Make a class chart that indicates the students' predictions. Keep this chart and use it as a reference point for discussion later in the unit.

Setting the task

Note: This is the assessment task

Explain to the class that working in groups, their task is to **LEARN** about the local region, and what it produces and create an information guide for visitors to the region.



READ the following scenario to the class:

We all enjoy fresh food products from the land, from the sea and from our rivers. We like wearing good cotton and woollen clothing, and we like knowing our homes are made from quality wood.

What visitors might not know is that our local region might contain places and people that produce food and fibre. That's where you come in!



Your task is to **DESIGN** an information guide for a range of places in the local region that produce foods we eat or fibres we wear and use, and **ILLUSTRATE** it as an actual guide.



RESEARCH the local region and **CREATE** something to show visitors about what the area produces and the people involved.



Step 2: Explore the topic

Explore the local region

Purpose

To provide students with opportunities to develop their understanding of:

- the local region and what it produces
- ways to describe a region
- how maps can show land use
- different styles of local produce guides
- varying design principles that can be used in produce guides.

Visualise taking a short drive and note any food growing in fields, any sheep, cattle or alpacas in the paddocks, any seafood in the waters, any cotton fields, or any plantation timber trees.

Envision the local region

To initiate the inquiry, **ASK** students to close their eyes and **VISUALISE** they are taking a short drive outside the area that they live and to note whether they come across any fresh food growing in fields, any potential woolly jumpers on the backs of sheep or alpacas, any scrumptious seafood platters swimming in the waters, any potential cotton T-shirts growing in paddocks, any animals that provide us with meat or milk, or any future building frames lined up in a plantation.



ASK questions like:

- Where is your nearest food garden, farm, grower or primary producer?
- What sorts of things does it or they grow or rear or catch?
- What is the nearest source of food or fibre to you, and how is it produced?
- Who might be producing it?
- Who else is involved in getting the produce from the farm or boat to your table?
- Encourage students to mind map their ideas.

Describing the region



Help students **GENERATE** descriptive words and phrases about their region, **ASK** them to answer some or all of the following questions, and keep track of their answers.

- What sounds do you hear in the region outside where you live?
- What tastes can you find in the region outside where you live?
- What smells do you associate with the region just outside where you live?
- What does the region just outside where you live look like?

Investigate land uses and use maps or interviews



To check the student's ideas, as a class **TALK** about the major land uses in the region, and use maps that **SHOW** some of the produce growing in regions.

See: State Departments of Primary Industries for maps or Google Maps and Google Earth).

Google Maps: <http://maps.google.com>

Google Earth: <http://earth.google.com>



Step 2: Explore the topic



TALK about how the students in their groups might find out about what is produced in the region. For example, Internet searches, visiting the local Grower’s Market, Farmers’ Market or by using Google Earth, council records or interviews etc.

Encourage students to **THINK** about:

- Whether they need to interview anyone?
- What questions they might need to ask?
- What area in the local region will they cover?
- What makes their area unique?
- Where do they get their produce from?



SHARE ideas about the different ways students might **COLLECT** their information. Students might **DRAW** a mental map of the area they will research.

Selection of places in the local region

Remind the class that their task is to **DESIGN** an information guide of a range of places in the local region that produce foods we eat or fibres we wear and use, and **ILLUSTRATE** it as an actual regional guide.

They are to **RESEARCH** the local region and **CREATE** something to **SHOW** visitors about what the area produces.

Local produce guides and food trails

SUPPORT students in their inquiries and **PROVIDE** them with samples of some local produce, tourism and/or regional guides.



FIND OUT about a local produce guide titled ‘Growing Abundance’ from the Victorian region of Castlemaine. See: <http://www.cch.org.au/growing-abundance-at-the-castlemaine-community-house/local-produce-guide/>



TALK about the features used in this local produce guide. **VIEW** the cover design and logos used.

- What do these features ‘communicate’?
- Are they an effective way to promote producers? Is the message clear?



FIND OUT more about designing a logo at Logo Design: 60 Pro Tips: <http://www.creativebloq.com/graphic-design/pro-guide-logo-design-21221>

BROWSE ‘The North East Local Produce Guide’ online at: <http://www.nelocalproduce.com.au/>

TALK with the students about the designer’s use of images, text, maps, legends, colour, listings and acknowledgements.

Research the local region and create something to show visitors about what the area produces.



Find out if there is a 'food trail' that showcases the produce of your local area, or surrounding region, to tourists.



DISCUSS and **COMPARE** the different ways symbols, colour, lines and patterns are used to represent information.

ASK questions like:

- Which symbol best represents its information?
- What is the purpose of the key or legend?
- How might you show different foods we eat or fibres we wear and use that might be grown in the region you are investigating?



Invite students in their groups to **VIEW** other examples of produce guides and **DECIDE** on design principles that they might like to use in their local produce guide.



FIND OUT if there is a 'food trail' that showcases the produce of your local area, or surrounding region, to tourists. Use Google Maps to **FOLLOW** the food trail – or **CREATE** your own food trail with the information you gather from your research.

INVESTIGATE a food trail. See 'Food Trails in New South Wales' at: <http://www.visitnsw.com/things-to-do/food-and-wine/food-and-wine-trails> and 'Eyre Peninsula's Seafood Trail' at: <http://www.seafoodtrail.com/>

Develop a retrieval chart

Remind groups to **DEVELOP** a retrieval chart on which they **DOCUMENT** information and ideas that are collected about their region's products, growers and producers and the design ideas they would like to use.



Step 3: Explain understandings

Purpose

To provide students with opportunities to:

- consider the tools used to design and produce information guides
- describe the foods and fibres produced in a nearby region
- gather information about what is grown or reared in a nearby region
- develop presentation ideas and information
- develop a regional producer guide.

Working with their data

There are many ways students might use the material gathered through their research. The suggested ideas below may provide some guidance.

Data charts: Ask students to set up a data chart on which to **SUMMARISE** main points from their research.

Story maps: Ask students to develop story maps to **SUMMARISE** key research findings and **LOOK** for common threads through the information.

Tools



Ask students to review and **CHOOSE** a range of digital tools that might assist them **DESIGN** and **CREATE** their regional produce guide.

Photography tips:

<http://photography.nationalgeographic.com/photography/photo-tips/>

Creating a narrated tour in Google Earth:

<http://www.google.ca/earth/outreach/tutorials/kmltours.html>

Maps Mania:

<http://googlemapsmania.blogspot.ca/2010/08/create-travel-guide-with-google-maps.html>

Kathy Schrock's – Digital storytelling tools:

<http://www.schrockguide.net/digital-storytelling.html#tools>

ANBLIK website tools:

<http://www.anblik.com/list-of-top-10-best-website-builder-to-create-your-own-free-website/>



On completion, ask students to **RECORD** their chosen tools for later use in this unit.

The importance of planning



TALK with the students about the importance of capturing the reader's interest and attention when producing their local produce guide.



Ask students to **DEVISE** their information about places in the local region that produce foods we eat or fibres we wear and use and share with each other in the group, checking for:

Planning:

- Have we made a detailed plan of the layout of our produce guide before starting?

Focal point:

- Have we included a clearly presented focal point (picture or heading)?

Headings:

- Have we included clear and informative headings to separate information?

Text:

- Have we chosen a font type and size that is easy to read?



Find out if there is a 'food trail' that showcases the produce of your local area, or surrounding region, to tourists.

Graphics/diagrams:

- Have we used labelled graphics?
- Are they referred to in the text?
- Have the graphics been placed in a logical spot?

Positioning:

- Have we positioned the content in a way that it easily directs the audience's eyes to the next section?

Sourcing:

- Have we acknowledged our sources?
- Have we kept a bibliography? Taking note of web links, date information was sourced, what was found at each source: information text, or image.
- Have we found the author of the webpage and the date it was created?

Presentation planning

Using the information gathered, each group of students **DESIGNS** a user guide about a range of places in the local area that produce foods we eat or fibres we wear and use.



Step 4: Elaborate on concepts and ideas

Deeper thinking and presentation planning

Purpose

To provide students with opportunities to:

- consider the key findings of their investigations
- revisit their earlier predictions about food and fibre production in the local region
- consider recent research findings about food and fibre and the people who produce it
- plan their presentation
- conduct their presentation
- share investigation findings.

Our local region

TALK with the class about some of the information found about the local region and what it produces.



Ask the students to **DISCUSS** how their findings about what is produced in a region might differ or be similar. Did their findings surprise them? Did the differences in what is being produced surprise them?



ENCOURAGE the realisation that we all 'see' things differently and we usually see what is important to us; therefore each group may have selected very different products to include in their local produce guides.

What do we now know about where our food and fibre might come from?



REVISIT the predictions students made in the 'engage' phase of the unit. **USE** the chart that was kept as a reference point and **TALK** about the predictions the students made about food or fibre producers who live in the local region.

TALK about what the students now know about food or fibre producers who live in the local region and what they produce.

Recent research

DISCUSS how many young people may not know where their food and fibre comes from.



SHARE the following statistics and statements with the students.

A survey in 2011 found that

- 75 percent of year 6 students thought cotton socks were an animal product
- 27 percent of year 10 students thought yoghurt was a plant product
- 45 percent of students could not identify that bread, cheese and bananas all originate from farmed products, and
- 50 percent of year 6 students knew that cheese could be made from cows', sheep or goats' milk.

Source: Hillman, K & Buckley, S. (2011) Food, Fibre and Future. A Survey of students' and teachers' knowledge and understanding about Primary Industries', Australian Council for Educational Research.



DISCUSS the statements and talk about whether the students now feel they know more about where some of the foods we eat and the fibres we wear and use come from, as a result of their investigations in this unit.

Talk about whether the students think it is important to know about where our foods and fibres come from. Why? Or why not?



Every family needs a farmer



INTRODUCE the Agforce Queensland campaign titled 'Every Family Needs a Farmer' at: http://www.agforceqld.org.au/index.php?page_id=153



In groups, **DISCUSS** how each student may bring this to the attention of their own family members.



TALK about whether the local produce guide being developed by the students in the class could aid in developing an understanding in their own families, and our reliance on farmers who produce the food we eat and the fibres we wear and use.

Going further with the development of the local produce guide

Invite students to **REVISE** and **FINE-TUNE** their local produce guides before presenting them to the class.

Share the presentations

Note: This is the suggested assessment task



ASK students to present their local produce guides. Provide students in the audience with a reviewer's sheet where they **SUMMARISE** information learned from each presentation.

Include opportunities for students to **COMMENT** on the following features of the local produce guides' design features.

Focal point: Did the group include and clearly present a focal point (picture or heading)?

Headings: Did the group include clear and informative headings to separate information?

Text: Did the group choose a font type and size that is easy to read?

Graphics/diagrams: Did the group use labelled graphics? Are they referred to in the text? Have the graphics been placed in a logical spot?

Positioning: Did the group position the content in a way that it easily directs the audience's eyes to the next section?

Sourcing: Did the group acknowledge their sources? Did they keep a virtual bibliography? Did they take note of web links, date information was sourced, what was found at each source: for example, information text, or image? Did they source the author of the webpage and the date it was created?



Students could also:

- Present their local produce guide to other classes at the school, parents or via a social media tool.
- Speak to other classes and share their research.
- Present an assembly item.



Step 5: Evaluating

Think back and evaluate

Purpose

To provide students with opportunities to:

- reflect on their own learning and
- provide a source of data for assessment.

To provide teachers with:

- insights into students' understandings and attitudes, as well as their perceptions of their own strengths and weaknesses.

Reflective writing

Begin by modelling reflective writing through a whole class learning log.

Provide students with a set of focus questions for their writing:

- Write about something new you learnt in this unit about your local region and what foods or fibres it produces.
- Describe what you now know about products from the land, from the sea and from our rivers.
- Describe what you know about fibre products that we like to wear and where they come from.
- How might you help others know more about how your local region is involved in producing foods we eat and fibres we wear and use?
- What have you learned about the design techniques used by creators who promote where our food and fibres can come from?
- How well did you participate in any group/team learning activities?
- What questions do you have about the topic at the moment?
- What piece of work are you most satisfied with?
- If the teacher did this unit again, what would you suggest they change or continue to do?

References

- Australian Academy of Science. (2005) *Primary Connections*, Canberra, Australia.
- Cecil, N. (1995) *The Art of Inquiry: questioning strategies for K-6 classrooms*, Peguis, Canada.
- Gardner, H. (1985) *Frames of Mind: the theory of multiple intelligences*, Basic Books, New York.
- Hamston, J. and Murdock, K. (1996) *Integrating Socially: units of work for social education*, Eleanor Curtin, Melbourne.
- Hill, S. and Hill, T. (1990) *The Collaborative Classroom*, Eleanor Curtin, Melbourne.
- Hillman, K & Buckley, S. (2011) *Food, Fibre and Future. A survey of students' and teachers' knowledge and understanding about Primary Industries*, Australian Council for Educational Research, Melbourne.
- Wilks, S. (1992) *Critical and Creative Thinking: strategies for classroom inquiry*, Eleanor Curtin, Melbourne.

Websites (viewed February 2015)

This is a list of websites used in this unit for teacher use. As content of the websites used in this unit is updated or moved, hyperlinks may not always function.

AgForce Queensland. Every Family Needs a Farmer
http://www.agforceqld.org.au/index.php?page_id=153

ANBLIK. Website Tools
<http://www.anblik.com/list-of-top-10-best-website-builder-to-create-your-own-free-website/>

Australian Curriculum, Assessment and Reporting Authority. Australian Curriculum
<http://australiancurriculum.edu.au>

Australian Forestry Standard
<http://www.forestrystandard.org.au/>

Australian Government Department of Agriculture
<http://www.agriculture.gov.au/forestry>

Australian Fisheries Statistics 2012 http://data.daff.gov.au/data/warehouse/9aam/afstad9aamd003/2012/AustFishStats_2012_v1.0.0.pdf

Australian Pork Limited
<http://www.australianpork.com.au>

Castlemaine Community House. Local Produce Guide
<http://www.cch.org.au/growing-abundance-at-the-castlemaine-community-house/local-produce-guide/>

Cotton Australia
<http://www.cottonaustralia.com.au>

Creative Bloq. Logo Design
<http://www.creativebloq.com/graphic-design/pro-guide-logo-design-21221>

Creative Commons
<http://creativecommons.org/licenses/by-nc-sa/3.0/au/>

Fisheries Research Development Corporation
<http://frdc.com.au/>

Forest Learning
<http://www.forestlearning.edu.au>

Forest Stewardship Council Australia
<http://au.fsc.org/>

Garnaut Climate Change Review
<http://www.garnautreview.org.au/>

Google Earth
<http://earth.google.com>

Creating a narrated tour in Google Earth <http://www.google.ca/earth/outreach/tutorials/kmltours.html>

Google Maps
<http://maps.google.com>

Google Maps. Maps Mania. Create a travel guide with Google Maps
<http://googlemapsmania.blogspot.ca/2010/08/create-travel-guide-with-google-maps.html>

Kathy Schrock's guide to everything: Digital Storytelling
<http://www.schrockguide.net/digital-storytelling.html#tools>

Meat and Livestock Australia

<http://www.mla.com.au>

National Farmers' Federation. Farm Facts 2012

<http://www.nff.org.au/farm-facts.html>

National Geographic. Photo tips

<http://photography.nationalgeographic.com/photography/photo-tips/>

North East Local Produce Guide

<http://www.nelocalproduce.com.au/>

Primary Connections

<http://www.primaryconnections.org.au/about/teaching>

Regional Development Australia. Whyalla and Eyre Peninsula. Eyre Peninsula's Seafood Trail

<http://www.seafoodtrail.com/>

Visitnsw.com. Food Trails in New South Wales

<http://www.visitnsw.com/things-to-do/food-and-wine/food-and-wine-trails>

Wood, Naturally Better

<http://www.naturallybetter.com.au/>



primezone
The place for all your primary industry resources
www.primzone.edu.au