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YEAR 4

UNIT SUMMARY

**ENGLISH:** Language and Literacy: **Persuasive and Informative Texts** including signs, brochures, information reports. Fact and Opinion. Navigating websites

**SCIENCE:** Biology: Roles of producers, consumers, decomposers. Food chains, food webs. Biodiversity on the Granite Belt. Introduced predators on the Granite Belt.

Greater Glider

**HASS:** Geography: Importance of natural vegetation and water sources on the Granite Belt. Water testing.

**ART:** Visual Arts Planning and creating visual art with a purpose or message. Crisps Art Show Entries.

**ASSESSMENT TASKS with RUBRICS -** Information report: Science and English

**Note:** Throughout the planning, “endangered” refers to vulnerable and endangered species of the granite belt. Lists of both are available [here](https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?AreaID=tile-100k-stanthorpe&Kingdom=animals&SpeciesFilter=Native) (animals) and [here](https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?AreaID=ibra-subregion-stanthorpe-plateau&Kingdom=plants&SpeciesFilter=Native) (plants).

| **Subject/Content Descriptions** | **Teaching and Learning** | **Resources and Vocabulary** | **Notes** |
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| ENGLISH | | | |
| **Language: Text Structure and organisation**  Students identify how texts across the curriculum have different language features and are typically organised into characteristic stages depending on purposes [AC9E4LA03](https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/english/year-4_year-5_year-6/content-description?subject-identifier=ENGENGY4&content-description-code=AC9E4LA03&detailed-content-descriptions=0&hide-ccp=0&hide-gc=0&side-by-side=1&strands-start-index=0&subjects-start-index=0&view=quick) | *The following lessons focus on* ***signs, posters, brochures,*** *and infor****mation texts*** *because they are the texts that may be used and/or created within the unit. Add others that you would prefer to use and remove any that are not relevant for your students at this time.*  ***Learning Focus 1* Signs and Posters**  *We are learning that different texts use different language features, stages and structures because they have particular and different purposes*.  Have some **signs and posters** available for students to browse and discuss with a partner or learning team. **Or** discuss how to search online for signs and posters and have each student choose one of each for discussion with a partner.  ***Class discussion:*** What are the greatest differences you see between a sign and a poster?  ***Possible responses:***   * A sign has fewer words, may be a bright colour or a particular shape. * A poster has more words and pictures. May have diagrams and information under headings.   Why are they so different?  Their **purpose** is different.   * A sign usually has one message or instruction e.g., EXIT * A sign may be a warning e.g., STOP. * A sign is easy to see because it is meant to be viewed as a whole to get the message across.   A poster’s purpose will be to   * a**dvertise** something e.g., McDonalds poster. * to give **information on a topic**, e.g., animals of the sea. * to make you **think or feel** a certain way e.g., a poster of your favourite singer, or a poster about endangered animals.     After this initial discussion, go through the Signs and Posters PowerPoint: Stages, Purpose, Structure using it as a teaching/learning tool.  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **Possible Follow up activities:**   * Students demonstrate some non-verbal signs for the class to guess. * Talk about the power of signs - they instruct, warn and send a message without any words at times. That is because **we are familiar** with the structure and language features of many visual and non-verbal signs in our world. * Using one of the posters, change the structure so that it is a sign. For example, The McDonald’s poster could become the logo and an arrow as a sign. * turn a sign into a poster by changing the stages and structure as described in the PowerPoint. * Present and if necessary discuss a range of examples with a purpose and requiring a purposeful text e.g. *A number of koalas have been hit on a particular stretch of road. The purpose of the text is to ................ The best text for this purpose would be ............ because ...............* Students provide answers. They could even provide the scenario. | **Resources:**  Provide student access to a variety of texts which may include signs, posters, information books, brochures, maps, factual recounts, biographies, information reports, procedural texts, arguments, explanations.  **Vocabulary:** purpose, structure, stage, language features, narrative, brochure, sign, poster, information, informative, text type, features, text  **Resources**  Two PowerPoints covering language features, stages structures and purposes of other texts have been created.  Signs and Posters PowerPoint: Stages, Purpose, Structure provides information as well as discussion questions.  Brochures and Information Reports PowerPoint: Stages, Purpose, Structure provides information for discussion and learning. | Links to ...  English: Analysing, Interpreting, Evaluating  [**AC9E4LY03**](https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/english/year-4?view=quick&detailed-content-descriptions=0&hide-ccp=0&hide-gc=0&side-by-side=1&strands-start-index=0&subjects-start-index=0)  The Year 3 unit covers the structure and language features of text types, so begin with those lessons if required  Add/remove information and texts in the PowerPoint to suit your lessons. |
|  | **Learning Focus 2 Brochures and Information reports.**  *We are learning that different texts use different language features, stages and structures because they have particular and different purposes.*  Proceed as above, accessing the appropriate PowerPoint  Culminating activity 2 - students choose the best text to suit the purpose of different scenarios.  **Activity: Which Text is Best?**  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **Possible Follow up activities:**   * Change a paragraph from a brochure to information text. * Design the front of a brochure which is advertising the beauty of the granite belt for the purpose of encouraging tourism.   \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* | **Resources:**  Activity Sheet: **Which Text is best?** | At this point you could also introduce or revisit *persuasive text as it appears in text types such as advertisements, posters, etc.* |
| **Language for interacting with others**  [AC9E4LA02](https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/english/year-4/content-description?subject-identifier=ENGENGY4&content-description-code=AC9E4LA02&detailed-content-descriptions=0&hide-ccp=0&hide-gc=0&side-by-side=1&strands-start-index=0&subjects-start-index=0&view=quick)  Students identify the subjective language of opinion and feeling, and the objective language of factual reporting. | **Learning Focus 1**  *We are taking a closer look at the language used in texts, identifying the language elements of fact and the language elements of opinion.*  You and the students have identified that information texts contain information which is not personal and does not express an opinion. That is because their purpose is to provide facts about a topic.  **Posters** may use both the language of facts (objective language) and the language of opinion and feeling (subjective language) depending on the purpose.  An information poster about the Great Barrier Reef will use **objective, factual language.**  Discuss examples of the language features.  A travel poster about the Great Barrier Reef will use mostly **subjective, feeling and opinion language. There will be some objective language as well.**  Discuss examples of the language features.  Why? Because the **purpose** of each is different.  One is to **inform** and the other is to **present a positive opinion about the place, to persuade people to travel there, and to provide facts about the location etc.**  What are some of the clues when we are trying to find out if something is a fact or an opinion?  With the class, list words and textual pointers which indicate that what you are reading is either fact or opinion. For example,   |  |  | | --- | --- | | **Factual pointers** | **Opinion pointers** | | Diagram | I think | | Table | We feel | | Photographs | I like | | Quotes | It might | | It was reported that | I suppose | | Scientists have discovered | This is good | | Statistics show | That is bad | | There is evidence | I wonder |   **Activity:** In Learning Teams students construct 5 statements that are either fact or opinion.  As a whole class, decide which are fact, which are opinion share and discuss the pointers or any other clues.  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **Possible Follow up activities:**   * Watch some advertisements. Students pull out the facts only. Discuss the impact of subjective language in selling the product. You can also discuss related topics such as purpose, audience, etc *(See resources)* * Create a class poster that promotes the importance of knowing the difference between fact and opinion. * Comprehension activities related to the topic   \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **Ask: Why is it important to be able to tell the difference between fact and opinion**? Discuss in Learning Teams, with someone taking notes. Follow with whole class discussion.  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* | <https://parks.des.qld.gov.au/parks/girraween?utm_source=google&utm_medium=organic&utm_campaign=gmb&utm_content=girraween>  Girraween National Park website  <https://www.youtube.com/watch?v=fPQPBgVrHv4>  Girraween National Park video 3m 30s  <https://www.youtube.com/watch?v=keOaQm6RpBg>  Ed Sheeran’s Heinz Commercial  1m 19s  <https://www.youtube.com/watch?v=f_Qr8SXxzQc>  Nike Commercial  1m 52s  <https://www.youtube.com/watch?v=eOMhOjgNd7Q>  Open that Coca Cola commercial  2m 12s |  |
| **Literacy: Analysing, interpreting and evaluating**  [AC9E4LY03](https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/english/year-4/content-description?subject-identifier=ENGENGY4&content-description-code=AC9E4LY03&detailed-content-descriptions=0&hide-ccp=0&hide-gc=0&side-by-side=1&strands-start-index=0&subjects-start-index=0&view=quick) Students identify the characteristic features used in imaginative, informative and persuasive texts to meet the purpose of the text. | **Learning Focus 1**  *We use what we already know and understand about informative language, persuasive language and imaginative language to identify their characteristic features.*  *We understand that their language features are used to meet the purpose of each text.*  In Learning Teams, discuss and write:  What are the features of informative language, persuasive language and imaginative language.  Students fill in the handout for this or can write in their activity books. Leave some room to add information later.  **Features of Language Yr 4**   |  |  |  | | --- | --- | --- | | **Informative language** | **Imaginative Language** | **Persuasive Language** | |  |  |  |   Come together as a class. Discuss, share, allow time for students to add to their tables.  We already know that language features are used to suit the purpose of the text.  With a partner, think of a text that would use informative language? How many can we think of?  Share, write a couple down in the Informative Language column.  Ask: So what is the purpose of all these informative texts?  Repeat the above using the other two text types.  If it hasn’t already come up, talk about   * texts that may have 2 purposes e.g., to Inform and Persuade. Think of examples e.g., a poster about climate change. * How both fact and opinion are language features of specific texts   **Possible Follow up activities:**   * Students practise writing the language types. * Create a class poster that uses both informative and persuasive language! * Comprehension activities related to the topic. | **Resources:**  Handout document **Features of Language Year 4**  Handout filled in with responses Features of language Year 4 Teacher |  |
| **Language: Text Structure and organisation**  Students identify text  navigation features of online texts that enhance readability including headlines, drop-down menus, links, graphics and layout.  [AC9E4LA05](https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/english/year-4_year-5_year-6/content-description?subject-identifier=ENGENGY4&content-description-code=AC9E4LA05&detailed-content-descriptions=0&hide-ccp=0&hide-gc=0&side-by-side=1&strands-start-index=0&subjects-start-index=0&view=quick)  **Interacting with others** [AC9E4LY02](https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/english/year-4/content-description?subject-identifier=ENGENGY4&content-description-code=AC9E4LY02&detailed-content-descriptions=0&hide-ccp=0&hide-gc=0&side-by-side=1&strands-start-index=0&subjects-start-index=0&view=quick)  **listen for key points and information to carry out tasks and contribute to discussions, acknowledging another opinion, linking a response to the topic, and sharing and extending ideas and information** | **Learning Focus 1**  *We are learning about the navigational features of online texts and how these features help us find information successfully.*  As a class talk about the meaning of the words “navigation, to navigate”. Include in this introduction the different situations in which we might need to navigate, such as   * In a car * walking * In a boat * In an information book   And the various tools we use to navigate  (compass, map, directions from a friend when walking; GPS in a car, etc.)  **Navigating Websites**  In a car we start at one place and follow a course to get to the next place. In a website we start at the Home Page and use the tools to find our way to the information we want.  ***Teacher models:***  Using the **Girraween National Park website** (or something similar and related to the Granite Belt District) locate and use the navigational tools present - Home Page, menu, Search Tool, icons, hyperlinks.  How easy is it to get back to the Home Page?  How many ways of searching are there?  Why do we sometimes get lost or off track when navigating a website?  In Learning Teams of 3 or 4 students are given one of the websites listed in the Resources. They can spend a few minutes browsing the site prior to specific tasks in the next session.  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **Students:** In the same Learning Teams students return to the website opened in previous session. They will identify as many of the navigational tools as they can and complete the table on the prepared worksheet (or use your own information gathering tool).  As a team they will evaluate the effectiveness of navigating the site.   * Evaluate the navigational tools on your site (Teacher could give them a rating scale to use) * What was the most useful navigational tool? (Opinion)   \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **Whole class:** Each learning Team will present their site and take the others through its navigational features, recounting various aspects of how the journey unfolded for them and including their evaluation. Have the site displayed or allow them to have the site on their laptops - they follow along as appropriate for your lesson.  Encourage other class members to ask questions about the navigational features of the site.  Comparative discussions would also be effective in consolidating understanding.  You may also choose to discuss the purpose of each site, and how they align with one another. These sites will be useful to the students in their Science investigations. | **Resources:**  *(Teacher)*  [*https://parks.des.qld.gov.au/parks/girraween?utm\_source=google&utm\_medium=organic&utm\_campaign=gmb&utm\_content=girraween*](https://parks.des.qld.gov.au/parks/girraween?utm_source=google&utm_medium=organic&utm_campaign=gmb&utm_content=girraween)  Girraween website  *(Students)*  <https://animalsaustralia.org/>  Animals Australia Organisation  <https://www.wilderness.org.au/>  Wilderness Organisation  <https://www.wwf.org.au/#gs.mtzegh>  World Wildlife Fund  <https://www.natureaustralia.org.au/>  Nature Australia  <https://www.greenpeace.org.au/>  Greenpeace  <https://www.wires.org.au/>  Wires  (Teacher)  **Website nav tools Teacher Yr 4** (has filled out responses using Girraween Nat Park website)  *Note: You might use Teacher copy to walk the students through the activity prior to their engagement.*  (Students)  **Website Nav tools worksheet Yr 4**  **Vocabulary:** navigate, navigation, website, scroll, cursor, browse, icons, hyperlink, search button, sidebar, menu, navigate, user friendly, design, layout, criteria,  Home Page, enhance, readability, drop-down, graphics.  **Vocabulary:**  Compare, comparison, features, characteristics. | **Navigation -** the process of moving or directing someone from one place to another.  In an online context, navigation refers to the way users move around and interact with an application or website.  When users access the navigation tools, they are more likely to find the information they want, move confidently through the site and perform actions.  A clear, easy to use navigation structure will provide a successful experience for the user. |
| SCIENCE | | | |
| **Biological Sciences**  Students explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships.  AC9S4U01 | **Learning Focus 1**  *We are learning about the roles of consumers, producers and decomposers within a habitat. We will be able to explain what they do.*  Have a pot of good garden soil and the following statement displayed:  **Everything begins and ends with soil.**  **Ask:** Is this a fact or an opinion? After some discussion, help the students to decide that at this stage we do not know. *If it is a fact, we need to prove it. If it is an opinion, we may have a different one.*  **Ask:** Why **might** it be a fact?Do you have any information or knowledge about soil that would help us to decide? Do you have any questions we need to answer?  Record responses for students to be able to see and refer to them. After discussion, point out the questions that still need to be answered.  Watch the video **“Producers, Consumers and Decomposers.**” Students may take notes.  Return to the discussion. Continue to the point out that the statement is either accepted, or a new statement is made. Students may now conclude that It all begins and ends with the Sun. Or, It all begins and ends with energy.  **To consolidate:**  Students independently, in pairs or Learning Teams (your choice) complete the worksheet. Teachers have been provided with a sample answer sheet.  Note: There is also a Microsoft Word version which they may save and complete in Word.  Spend some time sharing responses in mixed Learning Teams or as a whole class. | **YouTube Resources:**  <https://www.youtube.com/watch?v=poSnXPbNV5M>  Producers, Consumers and Decomposers (Includes Energy Pyramid)  4min 31sec  **Resources:**  Producers, Consumers, Decomposers. **Worksheet**  <https://www.youtube.com/watch?v=feF5r9ZDUJk>  getting the buzz about bees and plants for pollinating 4:08 | A **food chain** is a model or diagram that shows how energy flows between living things in an ecosystem.  Food chains show relationship between animals in a habitat.  **An ecosystem** is a community of living things and their nonliving surroundings that interact with each other. It includes all the plants, animals, and microorganisms in a specific area, as well as the air, water, soil, and other physical factors that affect them.  Changes in one part of an ecosystem can affect many other parts,  so it's important to take care of our ecosystems to ensure the survival of all the species that live within them.  **A habitat** refers to the specific place where a particular species lives and grows, providing the resources and conditions that the species needs to survive.  A habitat would be a waterhole at Girraween National Park. The ecosystem would be all the habitats in Girraween. |
|  | **Learning Focus 2**  *We can explain about the roles of consumers, producers and decomposers within a habitat.*  Using the students’ completed worksheets, refresh understanding about the roles of producers, consumers and decomposers.  **Ask:** What do all plants and animals need to survive. Answers may vary.  **Food and water** should be primary answers.  What is it that food gives all organisms.  **ENERGY** to grow, move, reproduce.  The role of each producer, consumer and decomposer is to share and pass on energy as food.  **What about pollinators?**  Insects such as bees and butterflies are consumers (nectar) but also pollinators who assist in the reproduction cycle of plants.  Activity: Watch “Getting the buzz about bees and plants for pollinating.”  Watch YouTube video which covers producers, consumers, decomposers, habitats and introduces food chains with beautiful video and simple explanations.  Model a simple “backyard” food chain on the board with students contributing ideas. ***See Word Document “Examples of food chains”.***  As you construct the food chain in words, the students could replicate as pictures. The arrows depict the direction the energy moves to. The sun is included as the source of plant energy and thus the source of all energy.  Further possible activities   * Watch <https://www.youtube.com/watch?v=vxFxdhap8FM> and ... * Create a Bee Hotel for native Australian Bees (with Costa) 3m 8s.   In order to encourage our native bees into the food chains and webs, students construct some bee hotels around the school, and for home. (Native bees don’t sting).   * Students independently, in pairs or in Learning teams construct food chains. * Students make comparisons between different food chains. * Students construct food chains in which they are the top consumer (they will enjoy adding   their favourite foods). | <https://www.youtube.com/watch?v=xvW4Cg-1g4U>  Kids Learn about the Food chain  Up to 7.33 provides excellent information and video to recap producers, consumers, decomposers  7.33 - 9.31 Food chains in habitats  <https://www.youtube.com/watch?v=CZhE2p46vJk>  Food Chains and Food webs  15m 56s  **This is good but watch the above video first.**  **Resources:**  **Word doc.** Examples of Food Chains Yr 4  *All images are Creative Commons and can be freely copied.* |  |
|  | **Learning Focus 3**  *We identify that food webs are a more detailed representatai9on of relationships in a habitat.*  **Food webs** will also form a part of the classroom learning. It is possible that the students themselves will identify that the transfer of energy occurs more naturally as a web rather than a chain. Feeding relationships are more complex than linear.  As for the food chains, model a food web and provide activities for the students to create some as well. | **Vocabulary:**  A set of Natural environments *Word Cards Yr 4* is available and can be printed for display. Students will add more vocabulary to the set as the unit progresses, hence the blank cards. |  |
| **Biological Sciences**  Students explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships  AC9S4U01 ***(Cont.)*** | ***See Word Document “Examples of food webs”.***  Further possible activities:   * Students independently, in pairs or in Learning teams construct food webs. * Students make comparisons between different food webs. * Students construct food webs in which they are the top consumer - or maybe not, if they are eaten by a bear ☺ * As a whole class and using balls of string to show the flow of energy, create a food web with the students taking on the roles of producers, consumers, decomposers. * Create food web posters for sharing with other classes. | **Resources**  Word Document “Examples of food webs” |  |
| **Biological Sciences**  Students explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships  AC9S4U01 ***(Cont.)*** | **Learning Focus 4**  *We are investigating the feeding relationships of producers, consumers and decomposers in some Granite Belt habitats.*  This is a great, ongoing knowledge sharing activity.  As a class list every known animal or plant that is encountered in a habitat on the Granite Belt. This list can be added to as students continue to discover other organisms through research, questioning members of the community, observation.  **Local habitats**  Bushland  Water - creeks, dams, waterholes all include the bank areas.  Backyards and gardens  School grounds  Rocky, granite outcrops  Others?  Using a table or other graphic organiser, students categorise the list into probable Producers, Consumers, Decomposers of a particular local habitat - individually, in partners or Learning Teams***.***  *Recommendation: This is a great opportunity to work with the SmartArt features in Microsoft Word.*  ***See two examples in Word doc Producers, Consumers, Decomposers of the Granite Belt bushland and Producers, Consumers, Decomposers of the Granite Belt Quart Pot Creek*** | **Resources:**  [**https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?AreaID=tile-100k-**stanthorpe&Kingdom=animals&SpeciesFilter=Native](https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?AreaID=tile-100k-stanthorpe&Kingdom=animals&SpeciesFilter=Native)  **Native wildlife of the Granite Belt -animals, birds, reptiles, insects, fish**  *Queensland Government: Dept of Environment and Science*  <https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?AreaID=ibra-subregion-stanthorpe-plateau&Kingdom=plants&SpeciesFilter=Native>  **Native plants of the Granite Belt -**  *Queensland Government: Dept of Environment and Science*  <https://www.gbwildlifecarers.org.au/gb_wildlife.html>  Granite Belt Wildlife Carers  Wildlife of the Granite Belt List  Word Documents -   * Producers, Consumers, Decomposers of the Granite Belt bushland * Producers, Consumers, * Decomposers of the Granite Belt Quart Pot Creek | **Note:** the following link - plant species in the Granite Belt are that are of concern and endangered.  <https://apps.des.qld.gov.au/regional-ecosystems/list/?bioregion=13&landzone=12> |
| **Biological Sciences**  Students explain the roles and food chains represent feeding relationships  AC9S4U01  ***(Cont.)*** | **Learning Focus 5**  We understand the term **“biodiversity”.**  *This lesson will give them understandings that will be further developed in following lessons.*  Brainstorm the term with the class and list their ideas. Break up the word into its meaning  Bio (Greek) - life Think of Biology (the study of living things). Biography (A written recount of someone’s life)  Diversity - variety  So, Biodiversity is the variety of life in a particular habitat, ecosystem area or over the whole earth.  Watch the first video which provides many beautiful visual examples of biodiversity.  Discuss the video.  Generate examples of biodiversity in the Granite Belt Region.   * Girraween and other National Parks where the biodiversity is protected. * Quart Pot Creek. * Bushland and land that has not been cleared * Can we see biodiversity in our own yards/gardens?   Include the learning related to Food Webs. If you see a food web working well, and all living things in the habitat have plenty of food, the biodiversity is healthy. Have the students refer to their local habitats’ food webs. In pairs or Learning teams, they take turns explaining the biodiversity and how it works in their food webs.  Conclude with some reflections/ questions born out of the small group discussions and rewatch the video. | <https://www.youtube.com/watch?v=b6Ua_zWDH6U>  What is Biodiversity - David Attenborough  3m 04s  Good intro to the concept  Refer to the **Granite Belt Fact Sheet which** gives an overall picture of climate, habitats and importance of biodiversity in the region  <https://www.gbwildlifecarers.org.au/gb_wildlife.html>  Granite Belt Wildlife Carers  Wildlife of the Granite Belt List, *as well as others on previous page.* | **Biodiversity is the variety of all living things on Earth, including plants, animals and microorganisms. It means that there are many different types of living things in the world and they all play an important role in keeping our planet healthy.**  The ***natural environment*** consists of land-based ecosystems such as grasslands and forests, aquatic ecosystems such as rivers and wetlands, and coastal and marine ecosystems such as mangroves and sea-grass meadows.  A species is “**vulnerable”** ifits population has declined at least 50 percent and the cause of the decline is known. **Habitat loss** is the leading known cause of population decline. *Nat.Geog. Society 2023* |
| **Literacy: Analysing, interpreting and evaluating.**  [AC9E4LY05](https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/english/year-4/content-description?subject-identifier=ENGENGY4&content-description-code=AC9E4LY05&detailed-content-descriptions=0&hide-ccp=0&hide-gc=0&side-by-side=1&strands-start-index=0&subjects-start-index=0&view=quick) **use comprehension strategies such as visualising, predicting, connecting, summarising, monitoring and questioning to build literal and inferred meaning, to expand topic knowledge and ideas, and evaluate texts.** | **Learning Focus 6**  *We will consider the impact of introduced predators into the food webs of these local habitats.*  **We will research how the removal of a food source within a habitat can affect other living things in the habitat.**  Present the class with a list of introduced (feral) species that are found in the Granite Belt area.  For example:  Foxes (introduced)  Feral dogs  Feral cats - ***considered to be one of the biggest threats to the biodiversity of the Granite Belt region.***  Rabbits (introduced) - considered pests to our native vegetation.  Hares (introduced)  **The impact of feral and introduced animals on our local habitats and ecosystems.**  **See example in Yr 4 Resources Folder.**  **As a class create a typical food web found on the granite belt that contains the following organisms:**   * **Native grasses** * **Insects** * **frog** * **Lizard** * **Small birds** * **Red-bellied black snake** * **Spotted-tail quoll**   As a class create the web with the native animals connected up by arrows tracing the flow of energy (food). Note that the quoll is the only native top predator.  Then, bring in 1 or more feral animals, such as cat, wild dog, fox. Connect them with arrows of a different colour.  From discussion and teaching, the following will be understood by the students.   * There is **competition for resources**, especially food * Foxes, feral dogs and feral cats sit at the top of the food web as predators, but the quoll is the only native predator. It is greatly outnumbered. * **The quoll is endangered** because it has to compete for food. * Quolls sometimes resort to eating domestic chickens because there is not enough food to go around. Therefore, they are hunted by landowners which is another threat to their species. * **Feral cats** (as well as some domestic ones) kill and eat native lizards and birds. * **Wild dogs** attack domestic livestock and native animals. * **Habitat destruction.** Feral pigs, rabbits and hares destroy vegetation. * **Introduced plants** will outgrow native plants and take over their space.   Learning Team discussions and then whole class.  Share with the class some more examples of vulnerable and endangered organisms in our region. The links on the right will probably have been used in previous sessions. When using the government sites, if students click on the scientific or common name of the organism, they will be given further details about it.   * What would happen if we took the quoll out of the food web because it has become extinct? * What would happen if some native frogs became extinct? How would that affect the food web of a habitat? (New England Tree Frog and Tusked frog have Vulnerable status).   **Research**  Is it possible that the cane toad could enter our Granite Belt Ecosystem? What might happen if it did? What would we need to do to protect the biodiversity of our ecosystem?  Is it possible that the fire ant could enter our Granite Belt Ecosystem? What might happen if it did? What would we need to do to protect the biodiversity of our ecosystem?  Conclude with the video “Natural Wonders of Australia” as a reflection on the amazing and beautiful natural ecosystems that are in our care.  **NOTE:**  **The assessment and rubric can be edited for assessment of a different text, e.g., brochure or poster.**  **Year 4 ASSESSMENT (Science and English) Information Report**  **Task**  **Write an information report on one vulnerable or endangered bird, animal or plant in a Granite Belt ecosystem. Use the planner to organise your information and notes.** Explain why it is important to help protect this bird, animal or plant.  **Resources:**  **As well as your report, include:**   * **A food chain or food web that involves your organism.** * **Notes that you made when researching.**   **Write your information in sentences and in your own words.**  **Your Resources:**   * Planner * Food chains and food webs * Fact sheets on local endangered/vulnerable organisms * PowerPoint of features, structure, stages of an information report * Scientific Vocabulary cards or wall * Teacher and peer support during the planning stages * Websites   A planner has been created if you wish to use it. It would ALSO be a useful scaffolding resource.  An A-E assessment rubric has also been constructed for you to use or to adapt to your assessment needs and those of the students. You will find it as the last page of the planner. | **Resources:**  [**https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?AreaID=tile-100k-**stanthorpe&Kingdom=animals&SpeciesFilter=Native](https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?AreaID=tile-100k-stanthorpe&Kingdom=animals&SpeciesFilter=Native)  **Native wildlife of the Granite Belt -animals, birds, reptiles, insects, fish**  *Queensland Government: Dept of Environment and Science*  <https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?AreaID=ibra-subregion-stanthorpe-plateau&Kingdom=plants&SpeciesFilter=Native>  **Native plants of the Granite Belt -**  *Queensland Government: Dept of Environment and Science*  <https://www.gbwildlifecarers.org.au/gb_wildlife.html>  *Factsheets*  **Resources**  [https://www.youtube.com/watch?v=Ewan2YcodSM](https://www.youtube.com/watch?v=EWan2YcodSM)  “Natural Wonders of Australia” 3m 2s  Australian Natural Environments  **Teacher Resources:**  **See the assessment handout in document Year 4 Assessment**  **See Planner with Rubric Handout in Assessment Planner and Rubric**  **See Rubric on its own in document Year 4 Assessment Rubric**  **Resources for research:**  Australian National Botanic Gardens  [anbg.gov.au](http://anbg.gov.au/)  Australian Plants Online  <http://australianplantsonline.com.au/>  (This is a commercial site, but good information on plants.)  Australian Plant Society N.S.W  <https://austplants.com.au/>  IndigiGrow  <http://indigigrow.com.au/>  an area. This is the case of the Granite Belt region, which is defined by the presence of granite rock. | **“Endangered”** means that there are very few of a certain kind of animal or plant left in the world. They might be in danger of becoming extinct, which means they might not be around anymore.  A species is classified as “**critically endangered”** when its population has declined at least 90 percent and the cause of the decline is known. *Nat.Geog. Society 2023*  *“It is that range of biodiversity that we must care for - the whole thing - rather than just one or two stars.” David Attenborough*  **Introduced species** are those that have been brought into the area by people - intentionally or accidentally.  **Granite Belt Examples:**  Cattle and sheep for farming and grazing  European honeybees for pollination and honey  Ornamental plants such as roses and lavender  Cats and dogs as pets  **Feral Species** are those that have escaped or been released into the wild and have become a part of the ecosystem and food webs.  **Granite Belt Examples:**  Feral pics for hunting  Feral cats  European rabbits for hunting.  **A note about dingoes**  It is believed that dingoes were brought to Australia about 3 500 years ago. Although not native they have assimilated over that period to be considered native. However, it is also believed that some of our native predators became extinct after the arrival of the dingo.  Cane toads would be unlikely to enter the Granite Belt region because of the colder temperatures. However, cane toads are extremely adaptable to any environment so it is possible that they may be seen in our ecosystems one day.  Fire ants have been found in several parts of Queensland including some areas near the Granite Belt. In 2021 fire ants were detected in Warwick.  Report suspected sightings to authorities such as the Queensland Department of Agriculture and Fisheries.  **Resources:**  [*https://parks.des.qld.gov.au/parks/girraween?utm\_source=google&utm\_medium=organic&utm\_campaign=gmb&utm\_content=girraween*](https://parks.des.qld.gov.au/parks/girraween?utm_source=google&utm_medium=organic&utm_campaign=gmb&utm_content=girraween)  Girraween website  *(Students)*  <https://animalsaustralia.org/>  Animals Australia Organisation  <https://www.wilderness.org.au/>  Wilderness Organisation  <https://www.wwf.org.au/#gs.mtzegh>  World Wildlife Fund  <https://www.natureaustralia.org.au/>  Nature Australia  <https://www.greenpeace.org.au/>  Greenpeace  <https://www.wires.org.au/>  Wires |
| GEOGRAPHY | | | |
| Students explore  the importance of environments, including natural vegetation and water sources, to people and animals in Australia and on another continent  **AC9HS4K05** | **Learning Purpose 1**  *We are learning about the importance of natural vegetation to an environment.*  Brainstorm and list all the known natural vegetation of the Granite Belt. You will possibly get something like the following:  **eucalypts - gum trees**  **acacias - wattle trees**  **native grasses**  **wildflowers**  There is a more comprehensive list in the folder “Fact File” *Native Vegetation of the Granite Belt Region*  You may wish to give each student a copy or display the document.  Have a general discussion about the roles of plants in an ecosystem and in the food chain/web.   * Plants are the producers in a food web. They produce energy in the form of food for animals who eat the seeds, pollinate, eat the whole plant. * When a plant dies, decomposers break it down into nutrients for the soli and for future plants. * Trees provide places for homes, shelter, and protection. Possums and other small animals make their homes in hollowed out holes in the trunk. * Shrubs and bushes do the same.   Have a look at your own gardens at home and also in the school grounds. Talk about any evidence you find, bring in a small sample of the leaves, flowers, etc. You could create a Science/Geography table of labelled specimens.  **Research and write:** Students independently, in pairs or as a Learning Team choose 1 plant from the Granite Belt to research.  Their **task** is to write a **paragraph description** of the plant and include any information on what the plant does, or how the plant supports its habitat.  You may or may not also want them to create a food web or food chain in which their plant is a member.  You may also ask them to publish their final copy in a Word document, in which case they could include a photograph of their plant.  The students’ work may be displayed, discussed as a whole class or incorporated into artwork for the Crisps” Art show. More on that towards the end of the unit. | **Resources:**  Class set of Atlases or bring maps up on Smart board.  **Resources for research:**  Australian National Botanic Gardens  [anbg.gov.au](http://anbg.gov.au/)  Australian Plants Online  <http://australianplantsonline.com.au/>  (This is a commercial site, but good information on plants.)  Australian Plant Society N.S.W  <https://austplants.com.au/>  IndigiGrow  <http://indigigrow.com.au/>  an area. This is the case of the Granite Belt region, which is defined by the presence of granite rock.  **Bonzle Digital Atlas of Australia**  <http://www.bonzle.com/c/a>  Many interesting Australian topics to browse.  Below is the link to Quart Pot Creek and tributaries. Students can scroll down and click on links in the map to zoom into specific locations.  <http://www.bonzle.com/c/a?a=p&cmd=sp&p=207914&st=&s=quart%20pot%20creek>  This page also invites users to add to the information on the site with stories, facts, photographs etc. The students may like to contribute! |  |
|  | L**earning Purpose 2**  *We are learning to identify the* ***importance of water*** *to the* ***environment*** *and* ***the lives of people*** *and* ***animals*** *in Australia.*  We will explore a water system of the granite belt and the river Nile in Egypt.  **Quart Pot Creek.** Inform students that at this stage we are collecting facts not stories, but they will be able to share stories in a later session.  **Ask:**  What do you already know?  What questions do you have about Quart Pot Creek?  What would you like to know about Quart Pot Creek?  List facts and questions on board, in Word doc, etc.  Direct students in pairs to the Bonzle link that will bring up the map. Give them some time to explore the route of Quart Pot Creek, find tributaries etc.  Have them make notes as they go.  Share findings and add new knowledge/ questions etc to the lists.  Ensure that the students understand that Quart Pot Creek doesn’t just go through town and wander off. It is a big part of a water system that spreads across the Granite Belt.  **Optional:** Give Learning Teams or pairs butcher paper and see if they can draw the system without the towns, buildings etc.  **Ask:** Is the Quart Pot Creek system important to the Granite Belt? How and why? For example,   * A water source for wildlife * A home for some wildlife * Natural beauty * Places to swim * Fishing * Tourism   **Ask:** Who remembers the drought? What was it like? How did it affect your families? Farmers?  General discussion, add pertinent comments to the lists.  What did the Quart Pot Creek system look like?  Who would it have affected? Discussion continues.  Compare ethe role of Storm King dam to the one of the Quart Pot Creek systems. The Dam provides water and a home for some wildlife, but its main purpose is to ....... provide water for the people of the Granite Belt.  Some students will rely on tank water at home so this could be discussed as well.  You could have Learning Team discussions and then return as a whole class to share or keep it at whole class throughout.  Return to the lists.  Who has learned something new? (Share)  Who has had a question answered? (Share)  Which questions are unanswered, and we still want answered? Have some students volunteer to research at home.  **Conclusion:** In their books students complete ......  “The Quart Pot Creek system is important to the ecosystems of the Granite Belt because .......”  Ensure they understand that you are hoping for a paragraph, not 1 sentence. (Give them about 10-15 mins) | **Bonzle Digital Atlas of Australia**  <http://www.bonzle.com/c/a>  Many interesting Australian topics to browse.  Below is the link to Quart Pot Creek and tributaries. Students can scroll down and click on links in the map to zoom into specific locations.  <http://www.bonzle.com/c/a?a=p&cmd=sp&p=207914&st=&s=quart%20pot%20creek> | **NOTE:** Greg Thouard is the Chairperson of the River Trust. He has a wealth of knowledge about the history and management of this system stretches from the Severn Rive in the South to the Pike’s creek tributaries and comprises hundreds of kilometres of waterways.  He would be most happy to talk to the class about Quart Pot Creek and the River Trust.  **Granite Belt region**  The Granite Belt region is located in the southern part of Queensland, Australia. It is situated in the Great Dividing Range and stretches from the New South Wales border in the south to the towns of Stanthorpe and Texas in the north. The region is bounded by the Darling Downs to the west and the Scenic Rim to the east. It is roughly defined by the towns of Stanthorpe, Tenterfield, Texas, and Warwick, and it encompasses the Girraween and Bald Rock national parks, as well as many other smaller towns and villages.  ***Opinions may vary as to where the Granite Belt Region begins and ends. For our purposes and to simplify things this unit will consider an area from Dalveen to Wallangarra.*** |
|  | L**earning Purpose 3**  *We are learning to identify the* ***importance of water*** *to the* ***environment*** *and* ***the lives of people*** *and* ***animals*** *on another continent.*  On a world map, students locate the continent of Africa, and then the Nile R.  Have students locate Australia and other places that will help them “place” the Nile R in context with Australia.  Turn to a political map of Africa.  Find the countries that the Nile progresses through.  (there are 11). Ensure that students locate the source and the mouth and understand the direction of flow.  Locate Egypt.  Turn to a physical map of Africa, locate Nile and Egypt.  Using the key have the students determine the natural biome that is most likely in Egypt. (Desert).  Where then do you think most people live? Why? What is the importance of the Nile to the Egyptians?  Students access the **GeoKids link** and in pairs read through the main facts and look at the map.  **Conclusion:** Go back to the paragraph you wrote about the importance of the Quart Pot Creek system to the ecosystems of the Granite Belt. Could what you wrote also apply to the ecosystems of Egypt? Discuss, maybe even debate! Ensure objectivity!  Other possible subjects for discussion?   * What would happen to our ecosystems and our people if the Quart Pot system dried up? * What would happen to their ecosystems and their people if the Nile River dried up? | Atlases  Large map of Africa or Egypt  **Resources:**  <https://www.natgeokids.com/uk/discover/geography/physical-geography/nile-river-facts/>  National Geographic Kids Facts about the Nile River |  |
| VISUAL ARTS | | | |
| **Creating and Making**  Students use visual conventions, visual art processes and materials to create artworks that communicate ideas, perspectives and/or meanings.  **AC9AVA4C01** | ***Any 2D artwork related to the unit may be submitted into the Crisps Art Show***  **Option 1**  Drawing on some of the topics covered in this unit, that focus on our local wildlife, students consider one that they would like to express **persuasively** in artwork. Topics could include ...  An endangered plant or animal of the Granite Belt  Biodiversity  Food chains/food webs  The importance of water for biodiversity.  The students mind maps some ideas that link to their topic to explore multiple possibilities such as “what do I already know about this?” “What are my questions about this?” What do I want to tell other people about this? How will I express my ideas?  **Assist the children as they explore the purpose of their artwork.**  Do they want to persuade people in the community to protect our wildlife?  Do they want to communicate a message about local endangered animals?  Is their purpose to warn everyone about the dangers of natural disasters to our local natural environments?  Do they want to encourage people to protect local natural environments?  Do they want to express the beauty of local natural environments?  Do they want to illustrate the connections and relationships in a natural environment that promote biodiversity?  The students decide on a format that will best display their artwork and its purpose. Examples ...  Poster  Brochure  A3 picture  They document their reasons for selection of their format, as well as the purpose behind their artwork.  Once any other criteria determined by teacher and/or students have been fulfilled, the students are ready to produce their piece.  **The final product can be entered into the Crisps art show, while the whole process may be considered as an assessment piece.** |  | **Remind students that the product will be a piece of art. Some text is acceptable but only what is necessary to get the message across.**  **Their challenge is to visual art processes and materials to get the message across.**  You may prefer to begin the artwork earlier in the term in which case the focus would be on earlier Science and Geography topics, possibly teacher’s choice |