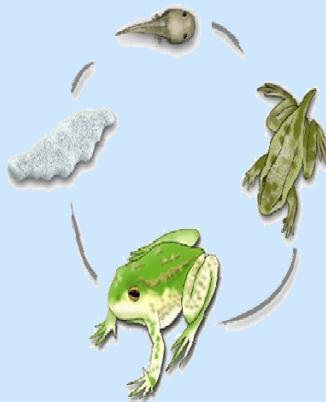




# Engaging in and Exploring Explanation Writing

*A practical guide for classroom teachers*

This resource paper has been designed to assist classroom teachers to review and refine the teaching of explanation writing.



Genre writing papers can be found at  
[www.decd.sa.gov.au/literacy/](http://www.decd.sa.gov.au/literacy/)  
>Resources>Resource Papers

## Key terms:

**Genre** refers to any staged, purposeful social activity which is accomplished through language. Genres may also be referred to as **text types**. Genres are used for specific purposes with each genre having specific language features and schematic structure.

## What is explanation writing?

Explanation texts are factual genres used across all curriculum areas to explain the sequence, cause or theoretical understanding of a phenomenon or event. The purpose of an explanation is to provide logical, time related information to explain and describe events happening in our world.

As a genre, explanations detail and logically describe the stages in a natural (eg *the water cycle*), social (eg *making a law*) or technological (eg *brick making*) phenomenon of our world.

## Common Explanations:

- **Sequential** – details the stages in an event eg: *from apple blossom to fruit; the life cycle of a frog; oil production*
- **Causal** - details what causes the change from one stage to the next eg *how digestion happens; why tsunamis occur.*
- **Theoretical** - details the possible phenomena behind a natural/created process that is not fully understood. eg *The El Niño effect.*
- **Factorial** and **consequential** explanations explain effects and outcomes of processes and are more commonly used in upper primary and secondary contexts for example:

Science– eg *Explain the causes of climate change* (Factorial)

History– eg *Explain the causes of World War 2* (Factorial)

## What students need to know about explanation writing

To be successful, students need to know the **language features** used how language is used to **structure** the text and in an explanation to achieve its purpose. Students also need to develop an understanding of how different **audiences** and **purposes** determine the language choices they make.

The language in an explanation text is influenced by:

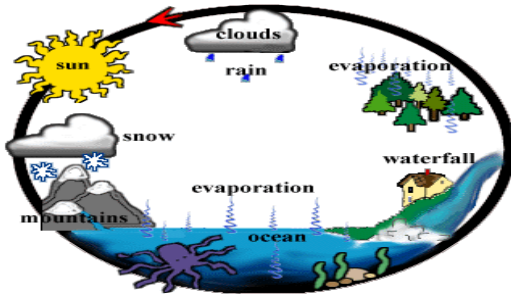
- **Purpose** – What I want my writing to achieve eg give clear sequential detail; give clear cause for phenomenon
- **Audience** – Who am I writing to eg teacher, my peers, those who don't know the explanation
- **Identity** – Who I am writing as eg a student, a business person, a researcher/theorist
- **Attitude** – How I need to make the audience feel eg confident in their understanding of the sequence / stages of a process

## What students need to know about the structure of Explanation Texts

### EXPLANATION – Sequential

The language creating the structure of the text is in bold and italicized. The language features of explanation texts are detailed on page 3.

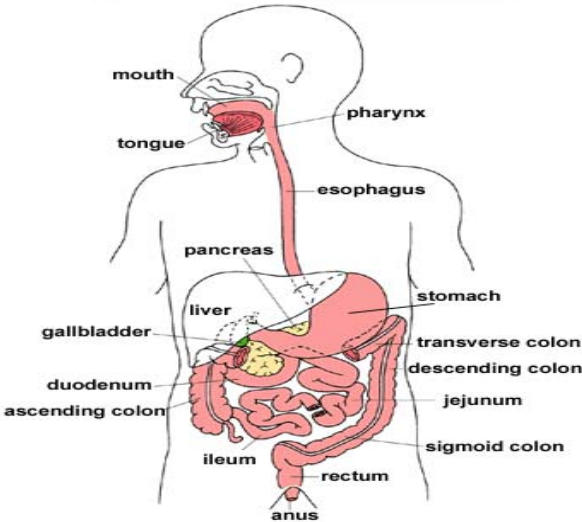
Title	The Water Cycle Year 3 – Year 5 text
<p><b>Introduction</b> - The process being explained may be highlighted in a title or in the first sentence/stage</p>	<p><b>The water cycle</b>, which is sometimes referred to the rain cycle, begins when heat from the sun turns the water molecules (tiny particles) in lakes, rivers and oceans into vapour (gas). This is called evaporation.</p>
<p><b>Logical sequence of stages:</b></p> <ul style="list-style-type: none"> <li>- use of topic words to start each stage</li> <li>- use of circumstances of time or place to stage and develop text</li> <li>- use of diagrams, illustrations</li> </ul>	<p><b>This vapour</b> or water molecules in the form of gas rise up in the air.</p> <p><b>As they get higher</b> the water molecules are cooled and they begin to join together. This process is called condensation and we see it happening when clouds are forming particularly over mountains.</p> <p><b>When the droplets in the clouds get big enough</b> they can fall as rain. If the cloud is very high up the droplets may be swept up to the top of the cloud where they get even colder. These drops then fall as snow or hailstones.</p> <p><b>When the rain reaches the ground</b>, some of it goes into the ground and becomes part of ground water or the water table but most of the rain flows across the ground and into streams, rivers and lakes.</p>
<p><b>Conclusion</b> – Explanations do not have a conclusion but may return to the first stage in cyclic explanations.</p>	<p><b>Streams, lakes and rivers</b> eventually reach the ocean where evaporation of the water molecules begins again.</p>



### EXPLANATION - Causal

The language creating the structure of the text is in bold and italicized. The language features of explanation texts are detailed on P3.

Title	Digestion Year 7– Year 9 text
<p><b>Introduction</b> – The process being explained may be highlighted in a title or in the first sentence/stage</p>	<p><b>Food</b> is taken in by the mouth and is cut and chewed by the teeth.</p>
<p><b>Logical sequence of stages:</b></p> <ul style="list-style-type: none"> <li>- use of topic words to start each stage</li> <li>- use of diagrams, illustration/figures</li> </ul>	<p><b>The muscular tongue</b> turns the chopped up food and this helps to mix the food with the saliva from the salivary glands.</p> <p><b>The saliva</b> contains an amylase enzyme (also known as ptyalin) which begins the digestion of starch and changes this to a simple sugar called maltose.</p> <p><b>The tongue</b> moves the moistened food to the back of the mouth where swallowing pushes the ball of food (bolus) into the oesophagus.</p> <p><b>Muscular movements called peristalsis</b> push the food down the oesophagus into the stomach.</p> <p><b>The stomach</b> secretes hydrochloric acid, the enzymes pepsin, which begins digestion of proteins, and rennin, which works on milk.</p> <p><b>The partly digested food called chyme</b> passes through the pyloric sphincter into the first part of the small intestine.</p> <p><b>The first part of the small intestine</b> is the duodenum. The duodenum receives fluids from the pancreas and gall bladder that continue digestion of food.</p> <p>etc. – Please see the expanded version on page 4.</p>
<p><b>The final stage:</b> signifies end of text ; a concluding statement is not necessary</p>	



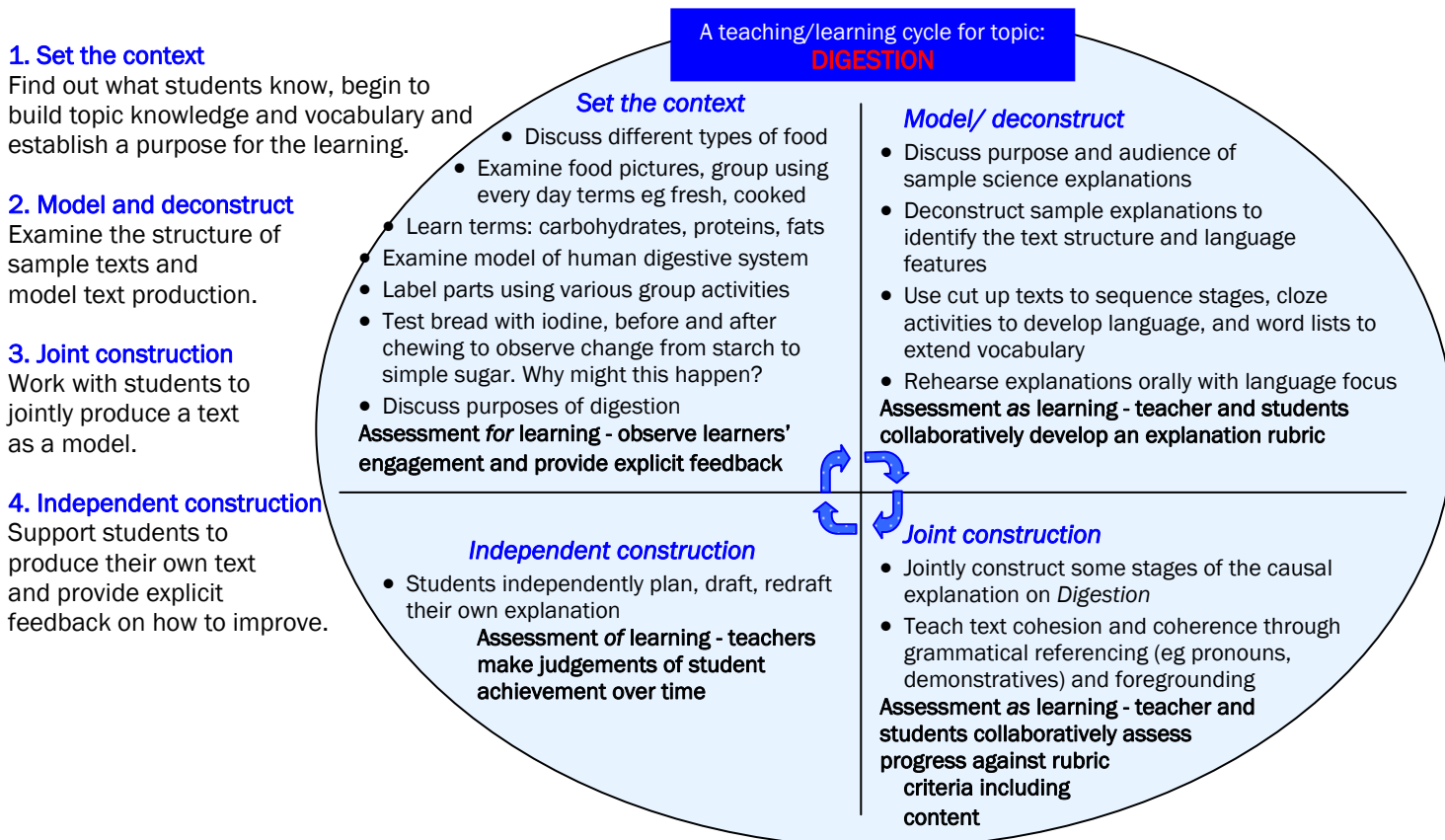
## What teachers need to know to support students with explanation texts

Explanation texts have logically sequenced stages and use objective descriptive language. Supporting students to order their thoughts and develop topic specific vocabulary will assist them to produce explanation genres.

Oral language activities that build vocabulary and provide authentic, relevant purposes enable students to develop the language skills relevant to explanation genres.

Students then need to be strongly scaffolded with a planned and logical sequence of activities to become independent and critical writers of explanation texts. A teaching and learning cycle that provides a gradual release of responsibility to the student will support them to independently construct a text with confidence. Assessment processes that provide explicit feedback and use assessment as, for and of learning help students to understand the criteria to be successful, to reflect on their work and to improve their skills.

## A Teaching and Learning Cycle: a systematic and explicit approach to teaching explanation writing



### Self review – reflecting on your practice

- In what curriculum areas do/could you explicitly teach Explanation texts?
- How might you build students' vocabulary to develop specific explanation language?
- What oral language activities could support students to develop explanation writing language skills?
- What teaching and learning cycle will you provide to scaffold learners?
- How will you explicitly teach the structure & language features for explanation texts?
- What assessment processes will you use to support students and make expectations clear to learners?

### Some useful resources:

More ideas and examples of explanation texts can be found in:

- Targeting Texts (series), Blake Education, Glebe N.S.W.
- Anderson, M 1997, *Text types in English*, Macmillan, 1998.
- Whitfield, M 2001, *Targeting writing across the curriculum*, Blake Education, Glebe, N.S.W.

## What students need to know to make appropriate language choices for explanation texts?

### *An annotated example of a Causal Explanation - Topic: Digestion Year 7 - 9 text.*

<b>Text Structure</b>	<b>TEXT</b>	<b>Language features – (examples shaded)</b>
<b>INTRODUCTION</b>	Digestion is the process whereby food in the form of carbohydrates, fats and proteins is changed to small molecules so that they can be absorbed by the body and used in cell metabolism and growth. Digestion begins in the mouth.	Topic specific vocabulary: <i>carbohydrates; molecules; metabolism</i> Passive voice: <i>is changed; (is) used</i>
<b>Sequence of stages: short paragraphs with topic noun groups foregrounded</b>	Food is taken by the mouth and is cut and chewed by the teeth. The muscular tongue turns the chopped up food and this helps to mix the food with the saliva from the salivary glands. The saliva contains an amylase enzyme, known as ptyalin, which begins the digestion of starch and changes this to a simple sugar called maltose. The tongue moves the moistened food to the back of the mouth where swallowing pushes the ball of food (bolus) into the oesophagus.	Topic specific vocabulary: <i>muscular tongue; saliva; amylase; ptyalin, maltose</i> Passive voice: <i>is taken; is cut; (is) chewed</i> Present tense; <i>changes, moves</i>
NB. Diagrams can accompany explanations and writers may label and refer to these.	Muscular movements called peristalsis push the food down the oesophagus into the stomach. The stomach secretes hydrochloric acid, the enzymes pepsin, which begins digestion of proteins, and rennin, which works on milk. The partly digested food called chyme passes through the pyloric sphincter into the first part of the small intestine.	Topic specific vocabulary: <i>peristalsis, chyme, pyloric sphincter</i> Circumstances of where: <i>'down the oesophagus; into the stomach; into the first part of the small intestine</i> Relative clauses: <i>which begins digestion...; which works on milk</i>
	The first part of the small intestine is the duodenum. The duodenum receives fluids from the pancreas and gall bladder that continue digestion of food. First the alkaline nature of the bile neutralises the acidity of the partly digested food and an enzyme called trypsin is then able to continue the breakdown of proteins to amino acids. The pancreas produces lipase enzyme which with the support of the alkaline bile breaks fats into smaller lipid molecules.	Circumstance of how: <i>with the support of the alkaline bile</i> Use of relational verbs: <i>is</i> Use of higher order verbs: <i>receives; neutralises, produces</i> Verbal group: <i>able to continue</i> Noun group: <i>the acidity of the partly digested food; smaller lipid molecules</i>
	The intestine walls have small protrusions called villi which are richly supplied with blood vessels. The now simple food molecules are absorbed through the walls of these villi into the blood stream.	Topic specific vocabulary: <i>villi</i> Passive voice: <i>are absorbed</i> Present tense: <i>have</i>
<b>The final stage:</b> this signifies end of text but is not a conclusion	Water is absorbed from the remaining food in the large intestine (caecum and colon) and the remaining waste passes through the colon to the anus where it is expelled.	Topic specific vocabulary: <i>large intestine, caecum, colon</i> Passive voice: <i>is absorbed; is expelled</i>

## Graphics in an Explanation

Graphics (eg flowcharts, diagrams) can be an important part of an explanation. In conjunction with the written text, they clarify or expand information. They can be integrated into the whole text in various ways (eg appropriate placement, consistent use of terminology, referral to the graphic in the written text).

## Explanation writing increases with complexity from sequential, through causal to theoretical

Engagement with explanation texts across the year levels should be guided by these continua to make choices about the complexity of the task	Stating facts <i>What is the topic?</i>		Everyday, concrete	Technical, abstract
	Relating to others <i>What identity does the author present?</i>		Novice	Expert
	Creating coherent text <i>How is the message conveyed?</i>		Basic oral explanations using visuals	Formal written text
<b>Examples</b>	<b>Years R-3</b>	<b>Years 4-6</b>	<b>Years 7-9</b>	<b>Years 10-12</b>
<b>Possible learning areas and topics</b>	Simple sequential explanation related to animals or a familiar process	Causal explanation related to a biological or other natural phenomena	Causal explanation related to a more specialised topic/ system	Causal and theoretical explanations requiring technical and science knowledge
<b>Studies of Society and Environment</b>	<i>Milk production</i>	<i>Brick making and firing</i>	<i>Oil production</i>	<i>Wine making</i>
<b>Health and PE</b>	<i>How germs are spread</i>	<i>Digesting carbohydrates</i>	<i>Building voluntary muscle fibres through exercise</i>	<i>The effects of illicit substances on the brain</i>
<b>Science</b>	<i>How tadpoles become frogs</i>	<i>The rain cycle</i>	<i>Respiration</i>	<i>El Niño Southern Oscillation effect</i>
<b>Mathematics</b>	<i>Addition</i>	<i>Maths and shopping</i>	<i>Explain how maths was used to build the Pyramids</i>	<i>Pythagorean theorem</i>
<b>Business, Enterprise and Technology</b>	<i>Explain how scissors work</i>	<i>Explain how a crane works (pulley systems)</i>	<i>How MDF board is produced</i>	<i>Explain the Ponzi system (pyramid selling)</i>
<b>Some examples of language features</b>				
<b>Topic noun groups</b> – to organise text;	<i>frog spawn, tadpoles</i>	<i>brick kiln, carbohydrates</i>	<i>muscle fibre length</i>	<i>a combination of pacific ocean currents and movement of air masses</i>
<b>Relational verbs</b> – to show relationship	<i>have, has, is, are,</i>	<i>consists of,</i>	<i>creates</i>	<i>leads to, results in</i>
<b>Action verbs</b> -	<i>move; rise, grow</i>	<i>swim, chew</i>	<i>separate</i>	<i>masticate</i>
<b>Passive voice</b> -	<i>is changed</i>	<i>is transformed; is converted to</i>	<i>is condensed; is absorbed</i>	<i>is believed to be</i>
<b>Nominalisations</b>	<i>growth, movement</i>	<i>evaporation, condensation</i>	<i>precipitation, metamorphosis</i>	<i>metabolism</i>
<b>Causal language</b> – to show cause and effect between parts	<i>so, because</i>	<i>causes</i>	<i>leads to</i>	<i>resulting in, as a consequence</i>
<b>Circumstances</b>	<i>of place or time: in the water, in the mouth</i>	<i>of place or time: on the underside of leaves; by six weeks of age</i>	<i>of cause: due to the sun's heat</i>	<i>of accompaniment (with what): with increased moisture</i>
<b>Modality</b> – to express certainty, usuality, frequency	<i>will</i>	<i>usually</i>	<i>typically</i>	<i>frequently</i>
<b>Foregrounding</b> of non-human or general participants at the beginning of sentences and paragraphs	<i>topic words: Frogs</i> <i>circumstances of place or time: At night...</i>	<i>circumstances of place or time: In the kiln...; After drying...</i>	<i>circumstances of cause: As a result of offshore drilling...</i> <i>non-finite phrases: Having developed legs...</i>	<i>circumstances of cause: Due to increased muscle mass</i> <i>abstractions: Oscillation</i>