Writing Science Integration

### After one year at school:

- write about experiences and ideas as well as writing to record information on different topics.
- begin to use specific processes to create texts, and these processes may vary depending on the particular purpose for writing.
- plan for writing, using talk, text, or drawing; convey simple ideas, responses, opinions, or questions;
- using their developing visual memory to accurately write some key personal words and some understanding simple text types (e.g., personal recounts and simple descriptions) and using them to meet their writing purpose.

### After two years at school:

- develop content that is related to the curriculum topic, with some (mostly relevant) detail;
- They draw on knowledge and skills that include: using their personal content vocabulary of written words as well as words and phrases that are part of their expanding oral vocabulary;
- using appropriate text structures for text types such as simple recounts, descriptions, and reports.

#### Level 1

#### **Nature of science**

Students will:

#### **Investigating in science**

Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models.

### **Communicating in science**

Build their language and develop their understandings of the many ways the natural world can be represented.

#### Participating and contributing

Explore and act on issues and questions that link their science learning to their daily living Lots of demonstrations –

- Life cycles
- Colour changing celery and white flowers
- Candle under jar
- Floating/sinking
- Shadows

Flow charts Technical language that is suitable

## **Early Elementary Science Projects**



Science experiments for 5-6 year olds



Writing Science

After three years at school:

- create texts for instructional writing purposes as well as to meet other learning purposes across the curriculum.
- write in order to think about, record, and communicate experiences, ideas, and information.
- create texts using a process that will help them achieve their specific purpose for writing.
- They draw on knowledge and skills that include:
- using increasingly specific words and phrases (e.g., adjectives and more precise nouns and verbs) that are appropriate to the content of the text:
- using simple written language features (such as alliteration) and visual language features (such as labelled diagrams) to support meaning;

Level 2

**Nature of science** 

Students will:

**Investigating in science** 

Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models.

**Communicating in science** 

Build their language and develop their understandings of the many ways the natural world can be represented.

Participating and contributing

Explore and act on issues and questions that link their science learning to their daily living

• Lots of demonstrations and experiments eg

Integration

Blubber hands, Super-duper

loopers



Science Bob

- Drawing diagrams with labels
- Scaffold with SOLO chart
- Increase in technical language that is suitable- e.g. absorption, reflection, capillary, insulation

Writing Science Integration

After four years at school:

- write in order to think about, record, and communicate experiences, ideas, and information to meet specific learning purposes.
- create content that is mostly relevant to the curriculum task, covers a range of ideas, experiences, or items of information, and often includes detail and/or comment that supports the main points;.
- using language and a simple text structure that are appropriate for the purpose, e.g., an orientation, sequenced events described in the past tense, and linking words to show sequence (for a recount);
- using vocabulary (in particular, nouns, verbs, adjectives, and adverbs) that clearly conveys ideas, experiences, or information;
- visual language features (such as illustrations and diagrams) to support meaning.

Level 2

**Nature of science** 

Students will:

#### **Investigating in science**

Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models.

### **Communicating in science**

Build their language and develop their understandings of the many ways the natural world can be represented.

### Participating and contributing

Explore and act on issues and questions that link their science learning to their daily living Lots of demonstrations and experiments eg – Blubber hands Super-duper loopers Science Bob Science experiments



- Drawing diagrams with labels
- Scaffold with SOLO chart
- Making connections with what they already have experienced.
- Increase in technical language that is suitable- e.g. absorption, reflection, capillary, insulation
- Use of 'Connected' journal series

Writing Science Integration

Five/ Six years at school:

(By the end of year 6, students are required to write more complex texts than students in year 5.)

During these two years, students write about increasingly challenging subject matter. They increase their level of control and independence in selecting processes and strategies to write texts for a range of purposes that includes recounting, describing, narrating, reporting, arguing, and explaining;

 generate content that is usually relevant to the task, supporting or elaborating their main ideas with detail that has been selected with some care:

They draw on knowledge and skills that include:

- using an overall text structure that is appropriate for their purpose, e.g. an introduction, a series of main points, and a logical conclusion (for a report);
- selecting vocabulary that is appropriate to the topic, register, and purpose (e.g., academic and subject-specific vocabulary appropriate for specific learning areas or precise and descriptive words to create a mental image);
- using written language features (such as emotive vocabulary) and visual language features (such as headings, charts, or maps) to extend or clarify meaning and to engage their audience.

Level 3

**Achievement objectives** 

**Nature of science** 

Students will:

**Investigating in science** 

Build on prior experiences, working together to share and examine their own and others' knowledge.

Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.

#### **Communicating in science**

Begin to use a range of scientific symbols, conventions, and vocabulary.

Engage with a range of science texts and begin to question the purposes for which these texts are constructed.

## Participating and contributing

Use their growing science knowledge when considering issues of concern to them. Explore various aspects of an issue and make decisions about possible actions

• Lots of demonstrations and experiments <a href="http://pinterest.com/reallyrachel/science-experiments-and-ideas/">http://pinterest.com/reallyrachel/science-experiments-and-ideas/</a>



- Build on prior knowledge- Make connections text -text, text-self, textworld
- Drawing diagrams with labels
- Making connections with what they already have experienced.
- Increase in technical language that is suitable- e.g. absorption, reflection, capillary, insulation
- Use their growing science knowledge when considering issues of concern to them.
- Use of 'Connected' journal series
- Writing factual reports, instructions, recounts, persuasive, descriptions scaffold using SOLO

Writing Science

By the end of year 8 use their writing to think about, record, and communicate experiences, ideas, and information. Because the writing demands in curriculum activities are often implicit, students need to develop greater independence and flexibility in deciding on processes and in choosing text structures and language that are appropriate to specific tasks. In years 7 and 8, students create texts choosing content, language, and a clear and logical text structure to meet the requirements of the curriculum task (for example, when writing feature articles, research reports, essays).

When students at this level create texts, they:

- understand their purposes for writing and how to achieve those purposes (e.g., by using different ways to examine and present their own thinking and knowledge);
- plan effectively, where appropriate, by using strategies such as mind mapping or skills such as information-literacy skills to find and record the information they need for their writing;
- create content that is concise and relevant to the curriculum task, often including carefully selected detail and/or comment that supports or elaborates on the main points;
- using language that is appropriate to the topic, audience, and purpose (e.g., expressive, academic, or subject-specific vocabulary) and discussing these language choices using appropriate terms, such as register and tone;
- visual language features to engage the audience and/or convey meaning.

Level 4

**Achievement objectives** 

**Nature of science** 

Students will:

**Investigating in science** 

Build on prior experiences, working together to share and examine their own and others' knowledge.

Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.

### **Communicating in science**

Begin to use a range of scientific symbols, conventions, and vocabulary.

Engage with a range of science texts and begin to question the purposes for which these texts are constructed.

# Participating and contributing

Use their growing science knowledge when considering issues of concern to them. Explore various aspects of an issue and make decisions about possible actions.

- IntegrationIncrease in technical language that is suitable
- Interpreting data and graphs
- Labelled diagrams and drawings
- Hypotheses
- Explanations/justifications
- Persuasive Writing
- building on prior experiences,
- Descriptions and observations
- working together to share and examine their own and others' knowledge,
- ask questions,
- Summaries
- find evidence.
- explore simple models,
- Interpreting data and graphs
- carry out appropriate investigations to develop simple explanations



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