

# GUIDED SILENT READING

*Using non fiction text*

**BOOK FOUR**

**Part 3 and 4 School Journals 1990-2000**



**Hilton Ayrey**

**sample eBook**

---

# GUIDED SILENT READING BOOK 4

## CONTENTS

---

Introduction to this Resource	3
Lesson Format for Guided Silent Reading	4
Follow up activities—Using Bloom’s Taxonomy	9
<b>SET 5 : Reading Age 9-10½ years</b>	
5:1 <i>Cockroaches</i> by Amba Morton School Journal Part 3 Number 1 2002	13
5:2 <i>Fast Food in Tibet</i> by Celia Smith School Journal Part 3 Number 2 2000	15
5:3 <i>Remember Stop! Drop! Flop!</i> by Pauline Cartwright School Journal Part 4 Number 1 1997	17
5:4 <i>Down Under</i> by David Hill School Journal Part 3 Number 3 1994	19
5:5 <i>Millions and Millions of People</i> by John Bonallack School Journal Part 4 Number 3 1999	21
<b>SET 6 : Reading Age 10-12 years</b>	
6:1 <i>The Limpet Mystery</i> by Kim Westerskov School Journal Part 3 Number 3 1986	23
6:2 <i>The Dunker</i> by Margot Wiseman School Journal Part 3 Number 1 1994	25
6:3 <i>Keeping Geckos</i> by Diana Noonan School Journal Part 3 Number 1 1995	27
6:4 <i>Jonah Lomu</i> by Norman Billbrough School Journal Part 3 Number 2 1999	29
6:5 <i>Royal Jelly for a Queen</i> by Beverly Dunlop School Journal Part 3 Number 1 1987	31
<b>SET 7 : Reading Age 11-13 years</b>	
7:1 <i>The Deadly Touch</i> by Andrew Crowe School Journal Part 4 Number 3 1996	33
7:2 <i>Needling an Elephant</i> by John Parker School Journal Part 3 Number 1 1995	35
7:3 <i>The Compost Heap</i> by June Walker Leonard School Journal Part 3 Number 1 1986	37
7:4 <i>Ben Hall : Bushranger - This was your life</i> School Journal Part 4 Number 3 1991	39
7:5 <i>Walking on Water</i> by Diana Noonan School Journal Part 4 Number 3 1994	41
<b>SET 8 : Reading Age 12-16 years</b>	
8.1 <i>Is that a soft drink bottle you’re wearing?</i> by Pat Quinn School Journal Part 4 Number 1 1999	43
8.2 <i>Ancient but Earthquake-proof</i> by Lynne Beaven School Journal Part 3 Number 2 2001	45
8.3 <i>Global Warming</i> by Jill MacGregor School Journal Part 4 Number 1 2002	47
8.4 <i>The Motorway Debate</i> by Pat Quinn School Journal Part 4 Number 1 1992	49
8.5 <i>Atomic Energy</i> by John Bonallack School Journal Part 4 Number 2 1986	51

# Introduction to this Resource

---

***“Guided Reading is the heart of the reading programme for early and fluent readers. It gives the teacher and a group of students the opportunity to talk, read and think their way purposefully through a particular text.”***

**The Learner as a Reader ; Ministry of Education, Learning Media. Wellington, 1996.**

This resource aims to support the busy classroom teacher in this important instructional procedure by providing detailed lesson plans, strategies for implementing them, and a series of follow up activities that will encourage meaningful revisiting of the text. The suggestions offered here are a combination of the author's own teaching experience, many hours spent observing and giving feedback on GSR to trainees in the teacher training programme at NZGSE, and current theory and research on best teaching practice in reading.

## **The challenges of Non-Fiction text**

Non-fiction text presents the reader with challenges that are quite different to those of narrative text. The strategies students learn when reading narrative do not automatically transfer to other kinds of text. Children become very familiar with the features of narrative from an early age. While narrative carries the reader along with its storyline, non-fiction is often an impersonal, systematic unfolding of information. There is little repetition, no frills, it often lacks a personal touch, becomes increasingly laden with specialised vocabulary and longer, more complex sentence structure, and often requires background knowledge to comprehend. It is well documented that many students have difficulty understanding transactional text in secondary schools.

The recently published report of the New Zealand government's Education and Science Committee (2001) on the inquiry into the teaching of reading, emphasised the importance of explicitly teaching comprehension strategies, particularly strategies that help students understand expository or non-fiction text. The report also noted that many students were not taught these strategies.

## **What are these strategies?**

One Guided Silent Reading technique aimed at improving students' comprehension and critical reading, which is backed by research and is used successfully in NZ classrooms, is Reciprocal Teaching. This involves the members of the reading grouping making predictions, clarifying ideas, generating questions, and summarising information. A feature of this method is the transfer of responsibility for leading the discussion from the teacher to the group in a structured and planned way.

Nicholson (1999) argues that to teach students about how texts are designed and to help them focus on what makes a text interesting, will help them to get a better understanding of the content of the text. Knowledge of text structure can greatly enhance the reader's ability to process information and see the big picture.

Both approaches advocate close, active reading of text. While reading mileage and the pursuit of personal reading interests are always one of the desired outcomes of a classroom reading programme, we must not neglect the specific, systematic teaching of close, active reading.

For non-fiction text, this involves teaching students how to process and make sense out of information (i.e. reading, retelling, clarifying) and how to organise or reorganise it (i.e. summarising, identifying main points, diagramming it in webs and flow charts), all of which help the reader and learner to master and remember content information. The lesson plans included here follow this approach.

## **Using School Journals**

School Journal articles are the vehicle for this process. While they do not always represent a consistent genre for exploring non-fiction writing, the articles chosen for this resource do follow a familiar pattern, are written specifically for children, are graded by reading age and are available in all schools.

## **References for further reading**

***“I've found my memory! Reciprocal Teaching in a Primary School,”*** by Marie Kelly and Denis Moore (in SET 2, New Zealand Council for Educational Research, Wellington 1993)

***READING COMPREHENSION What is it? How do you teach it?*** By Susan Dymock and Tom Nicholson (NZCER, Wellington 1999)

***READING COMPREHENSION What is it? How do you teach it? Supplementary Material : Transactional*** By Susan Dymock and Tom Nicholson (NZCER, Wellington 2002)

# GUIDED SILENT READING *using non-fiction text*

## sample LESSON PLAN from BOOK FOUR

Instructional Reading Age of text

SLO's derived from English achievement objectives

Division of the article into small chunks of text

Summary of the content

Concepts, vocab that may need clarifying

Suggested format for Guided Silent Reading to ensure close and active reading of the text

Purpose of each step

<b>Set 6:3 LESSON PLAN - Keeping Geckos</b> by Diana Noonan																							
<b>SPECIFIC LEARNING OUTCOMES</b> Students can.....	<b>Summary</b> Gemma, a great pet lover with a large collection of different animals, talks about her pet forest geckos and how she looks after them.																						
<b>Critical Thinking</b> 1. Identify text structure / select main ideas in non-fiction text 2. Respond to non-fiction text through Bloom's Taxonomy	<b>Text Features</b> A descriptive text structure (focuses on the attributes of forest geckos). Can be diagrammed as an information web (Activity 7) using the topic headings suggested in <i>Summary of Text</i> below.																						
<b>Exploring Language</b> 3. Identify "hooks" in the introduction to a non-fiction article 4. Identify summarising and reflective statements in the conclusion of a non-fiction article.	<b>Introduction</b> - an editorial introduction to Gemma, as the article doesn't have an introduction itself. <b>Body of Text</b> - moves between descriptive information and anecdote. Includes a footnote about geckos as protected species. <b>Conclusion</b> - good example of a reflective statement.																						
<b>Processing Information</b> 5. Gather, sort, summarise, present information																							
GSR Strategies	Teacher Prompts ..... Possible Responses																						
<b>BEFORE READING</b>	Introduce the title <i>Keeping Geckos</i> "What information do you expect to find in this article?"  Brainstorm student's prior knowledge about geckos. What are they? How do you look after them?																						
<b>GUIDED READING</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 54 Editor's Introduction</b>                      "How has the editor introduced the topic? Is there a hook?"                       ...The editor introduces Gemma who looks after geckos                 </td> <td style="width: 40%; padding: 5px;"> <b>Summary of text</b> </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 54 *Footnote (explain footnotes)</b>                      Explains the need to have a permit - a protected species                       May need to clarify - <i>menagerie (vocab)</i> </td> <td style="width: 40%; padding: 5px;"> <b>The law on geckos</b>                      • most are protected                      • need a permit to keep them                      • NZ forest geckos are non-protected                      • check with Dept of Conservation                 </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 54</b>  <b>Where Gemma got her geckos and how to identify forest geckos</b>                       May need to clarify - <i>breeder, species (vocab)</i> </td> <td style="width: 40%; padding: 5px;"> <b>Getting a forest gecko</b>                      • from a breeder                      • hard to find in the wild                      • live in trees   <b>Identifying a forest gecko</b>                      • v-shaped mark on their head                      • one large scale between nostrils                 </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 55 Paragraph 1</b>  <b>What you need to provide for the geckos</b>                       May need to clarify - <i>vitamins</i> </td> <td style="width: 40%; padding: 5px;"> <b>Making a home</b>                      • glass tank                      • line it with leaf litter, pieces of bark                      • small plants to climb                      • milk bottle lid to drink from                 </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 55 Paragraph 2</b>  <b>What to feed the geckos</b> </td> <td style="width: 40%; padding: 5px;"> <b>Food</b>                      • vitamins in water                      • need live food                      • moths (favourite), crickets, flies, earwigs, spiders                 </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 56 Paragraph 1</b>  <b>How they go about catching their live prey</b> </td> <td style="width: 40%; padding: 5px;"> <b>Hunting</b>                      • creep up on prey                      • snap victim in their jaws                 </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 56 Rest of the page</b>  <b>Cleaning up after the geckos</b> </td> <td style="width: 40%; padding: 5px;"> <b>Cleaning up droppings</b>                      • wipe droppings from side of the tank                      • dip the bark in boiling water                 </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 57 Paragraph 1</b>  <b>Explains how geckos respond to temperature - cold blooded</b> </td> <td style="width: 40%; padding: 5px;"> <b>Geckos are reptiles</b>                      • slow down in cold weather                      • don't have to feed as often                 </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 57 Paragraph 2</b>  <b>Another important part of caring for geckos - removing ticks from the soft parts of their bodies</b> </td> <td style="width: 40%; padding: 5px;"> <b>De-ticking Geckos</b>                      • special formula from pet shop                      • dab formula on ticks with cotton buds                      • find them around eyes, armpits, ears                      • get distressed by this for a few days                 </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 58</b>  <b>Geckos reproducing - an anecdote about Gemma's experience with her geckos having babies</b> </td> <td style="width: 40%; padding: 5px;"> <b>Having babies</b>                      • bare their young live                      • don't lay eggs                      • look after themselves straight away                      • babies are silvery grey colour                      • 3 cm long                      • parents may eat the babies                 </td> </tr> <tr> <td style="width: 60%; padding: 5px;"> <b>Page 58 Final paragraph : Conclusion</b>                      "How has the author finished off the article? Look for summarising and reflective statements"                       .....reflection by Gemma about how much she values her geckos                 </td> <td style="width: 40%;"></td> </tr> </table>	<b>Page 54 Editor's Introduction</b> "How has the editor introduced the topic? Is there a hook?"  ...The editor introduces Gemma who looks after geckos	<b>Summary of text</b>	<b>Page 54 *Footnote (explain footnotes)</b> Explains the need to have a permit - a protected species  May need to clarify - <i>menagerie (vocab)</i>	<b>The law on geckos</b> • most are protected • need a permit to keep them • NZ forest geckos are non-protected • check with Dept of Conservation	<b>Page 54</b> <b>Where Gemma got her geckos and how to identify forest geckos</b>  May need to clarify - <i>breeder, species (vocab)</i>	<b>Getting a forest gecko</b> • from a breeder • hard to find in the wild • live in trees  <b>Identifying a forest gecko</b> • v-shaped mark on their head • one large scale between nostrils	<b>Page 55 Paragraph 1</b> <b>What you need to provide for the geckos</b>  May need to clarify - <i>vitamins</i>	<b>Making a home</b> • glass tank • line it with leaf litter, pieces of bark • small plants to climb • milk bottle lid to drink from	<b>Page 55 Paragraph 2</b> <b>What to feed the geckos</b>	<b>Food</b> • vitamins in water • need live food • moths (favourite), crickets, flies, earwigs, spiders	<b>Page 56 Paragraph 1</b> <b>How they go about catching their live prey</b>	<b>Hunting</b> • creep up on prey • snap victim in their jaws	<b>Page 56 Rest of the page</b> <b>Cleaning up after the geckos</b>	<b>Cleaning up droppings</b> • wipe droppings from side of the tank • dip the bark in boiling water	<b>Page 57 Paragraph 1</b> <b>Explains how geckos respond to temperature - cold blooded</b>	<b>Geckos are reptiles</b> • slow down in cold weather • don't have to feed as often	<b>Page 57 Paragraph 2</b> <b>Another important part of caring for geckos - removing ticks from the soft parts of their bodies</b>	<b>De-ticking Geckos</b> • special formula from pet shop • dab formula on ticks with cotton buds • find them around eyes, armpits, ears • get distressed by this for a few days	<b>Page 58</b> <b>Geckos reproducing - an anecdote about Gemma's experience with her geckos having babies</b>	<b>Having babies</b> • bare their young live • don't lay eggs • look after themselves straight away • babies are silvery grey colour • 3 cm long • parents may eat the babies	<b>Page 58 Final paragraph : Conclusion</b> "How has the author finished off the article? Look for summarising and reflective statements"  .....reflection by Gemma about how much she values her geckos	
<b>Page 54 Editor's Introduction</b> "How has the editor introduced the topic? Is there a hook?"  ...The editor introduces Gemma who looks after geckos	<b>Summary of text</b>																						
<b>Page 54 *Footnote (explain footnotes)</b> Explains the need to have a permit - a protected species  May need to clarify - <i>menagerie (vocab)</i>	<b>The law on geckos</b> • most are protected • need a permit to keep them • NZ forest geckos are non-protected • check with Dept of Conservation																						
<b>Page 54</b> <b>Where Gemma got her geckos and how to identify forest geckos</b>  May need to clarify - <i>breeder, species (vocab)</i>	<b>Getting a forest gecko</b> • from a breeder • hard to find in the wild • live in trees  <b>Identifying a forest gecko</b> • v-shaped mark on their head • one large scale between nostrils																						
<b>Page 55 Paragraph 1</b> <b>What you need to provide for the geckos</b>  May need to clarify - <i>vitamins</i>	<b>Making a home</b> • glass tank • line it with leaf litter, pieces of bark • small plants to climb • milk bottle lid to drink from																						
<b>Page 55 Paragraph 2</b> <b>What to feed the geckos</b>	<b>Food</b> • vitamins in water • need live food • moths (favourite), crickets, flies, earwigs, spiders																						
<b>Page 56 Paragraph 1</b> <b>How they go about catching their live prey</b>	<b>Hunting</b> • creep up on prey • snap victim in their jaws																						
<b>Page 56 Rest of the page</b> <b>Cleaning up after the geckos</b>	<b>Cleaning up droppings</b> • wipe droppings from side of the tank • dip the bark in boiling water																						
<b>Page 57 Paragraph 1</b> <b>Explains how geckos respond to temperature - cold blooded</b>	<b>Geckos are reptiles</b> • slow down in cold weather • don't have to feed as often																						
<b>Page 57 Paragraph 2</b> <b>Another important part of caring for geckos - removing ticks from the soft parts of their bodies</b>	<b>De-ticking Geckos</b> • special formula from pet shop • dab formula on ticks with cotton buds • find them around eyes, armpits, ears • get distressed by this for a few days																						
<b>Page 58</b> <b>Geckos reproducing - an anecdote about Gemma's experience with her geckos having babies</b>	<b>Having babies</b> • bare their young live • don't lay eggs • look after themselves straight away • babies are silvery grey colour • 3 cm long • parents may eat the babies																						
<b>Page 58 Final paragraph : Conclusion</b> "How has the author finished off the article? Look for summarising and reflective statements"  .....reflection by Gemma about how much she values her geckos																							
<b>FOLLOW UP ACTIVITIES</b>	<ul style="list-style-type: none"> <li>• Go through the ACTIVITIES sheet with the children</li> <li>• Brainstorm and discuss ideas, model activities where necessary</li> <li>• Assign activities or allow choice depending on time constraints / needs of children</li> </ul>																						

Brief summary of the article content

Identifies significant features of the article

Suggestions for prereading discussion

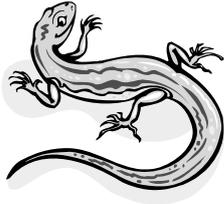
Suggestions for passage topic and main points

Once the article has been completed the follow up activities provide opportunities to revisit the text

# GUIDED SILENT READING *using non-fiction text*

## sample ACTIVITIES from BOOK FOUR

You can assign activities, allow choice, set up as a work contract



# Keeping Geckos

by Diana Noonan



## Set 6:3 ACTIVITIES

School Journal  
Part 3 Number 1 1995

### KNOWLEDGE - Finding the facts

1. How can you tell whether a gecko is a forest gecko?
2. What do geckos like to eat?

*Bloom's Level One*  
Locating literal  
information from the text

### COMPREHENSION - Show that you understand the information

3. Why do you have to have a permit to keep most geckos?
4. Explain why geckos slow down in winter

*Bloom's Level Two*  
Interpreting information  
in own words

### APPLICATION - Using what you have read in the article

5. Design a pamphlet for a pet shop, about how to look after geckos.
6. Write a story about a day in your life as a gecko.

*Bloom's Level Three*  
Using the information  
in the article in another  
situation

### ANALYSIS - Organising the information in the article

7. Make an INFORMATION WEB titled *Geckos* using the information in this article. This will help you see how the article has been organised by the author, and is a good way to help you remember information.

*Bloom's Level Four*  
Organising the information  
diagrammatically

### SYNTHESIS - Coming up with new ideas

8. Design a new gecko house. Make sure it includes all the things mentioned in the article that geckos need and like.  
Add any extras you think would make life interesting for the gecko.  
Include labels to explain the features you have included.

*Bloom's Level Five*  
Creating new ideas  
from the information

### EVALUATION - Seeing both sides

9. *"Everyone should be allowed to keep geckos as pets if they want to"*  
List your reasons for agreeing with, and disagreeing with this statement.

I agree because.....	I disagree because.....
----------------------	-------------------------

*Bloom's Level Six*  
Evaluating an idea.  
Learning to see both  
sides of an argument

### Making judgments about information

10. Do you think this article was well written  
Was there a hook in the introduction?      Hook :                      Rate 1-10  
Was the information organized clearly?      Organisation :              Rate 1-10  
Was there an effective conclusion?          Wrap up :                      Rate 1-10  
Give a brief reason for each of your ratings

Making judgments  
about the quality of  
the writing based on  
established criteria

# Set 5:1 LESSON PLAN

# Cockroaches

RA 9-10yrs SJ Part 3 Number 1 2002

by Amba Morton

## SPECIFIC LEARNING OUTCOMES

Students can.....

### Critical Thinking

1. Identify text structure / select main ideas in non-fiction text
2. Respond to non-fiction text through Bloom's Taxonomy

### Exploring Language

3. Identify "hooks" in the introduction to a non-fiction article
4. Identify summarising and reflective statements in the conclusion of a non-fiction article

### Processing Information

5. Gather, sort, summarise, present information

### Summary

A look at one of the creepiest and strangest of insects, the cockroach.

### Text Features

A descriptive text structure (the attributes of cockroaches).

Can be diagrammed as an information web (Activity 5) using the headings in the article as suggested in *Summary of Text* below.

**Introduction** - starts with an editorial introduction.

**Body of Text** - the article is already divided neatly into passages with headings indicating what each passage is about - a good model of how to summarise content with headings.

**Conclusion** - includes a summarising and a reflective statement about the possible future of cockroaches.

### GSR Strategies

*Text divided into Chunks for GSR*

*Summary of Text (Step 3)*

### BEFORE READING

Brainstorm what the students know already about cockroaches.

Introduce the title **Cockroaches Creepy or Incredible ?**

"What information do you expect to find in this article?"

.....**things about cockroaches that are creepy but also some things that are incredible**

### GUIDED READING

For each selected chunk of text . . .

#### Step 1:

#### SET A PURPOSE

As you read .....

- Look for the main topic
- Think of a suitable heading

#### READ SILENTLY

"Engaging the reader"



#### Step 2:

#### RETELL and CLARIFY

Have we got the message right?

- DETAILED RETELLING to make sure the text has been read closely
- CLARIFY AS WE GO to ensure vocab and concepts are understood

"Developing sentence level comprehension"



#### Step 3:

#### SUMMARISE

What is this passage about?

- Decide on a suitable HEADING or HEADINGS which would summarise the information in the chunk
- Reduce information to bullet points - ie. main ideas

"Developing big picture comprehension"

(see page 4 for further details)

#### Page 12 Editor's Introduction

"How has the article been introduced? Is there a hook?"

"Why has the editor written an introduction?"

....**the title has an effective hook...poses a question to get the reader interested**

....**the editor may have felt the article didn't have an introduction**

#### Summary of text

#### Page 12 "Survivors"

Describes how cockroaches are very hardy insects

#### Survivors

- a week without water
- month without food
- will eat anything

#### Page 13 "The Ultimate Escape Artist"

Facts about the cockroach and its how / why it is a survivor

#### The Ultimate Escape Artist

- runs at 5 km per hour
- squeezes through small gaps
- skeleton on the outside of body
- fat inside is stored energy
- brain spread along 1 side of body
- female mates only once

#### Page 13 "That's Stinky"

Description of the NZ native cockroach - one of the stinkiest

#### That's Stinky

- 4000 different kinds
- NZ kekerengu - one of the stinkiest
- 4 cms long
- eats rotton wood
- favourite food of brown kiwi

#### Page 14 "Night Workers"

Nocturnal creatures - describes how they respond to the world around them

#### Night workers

- hide under things during day
- come out at night
- sense things with antennae
- also hairs on backs of legs
- damage our eyes
- give us cancer
- unwelcome gift

#### Page 14 "Before the Dinosaur"

Speculation about how long cockroaches have been around

#### Before the Dinosaurs

- maybe been here for 350 million yrs
- 180 million yrs before dinosaurs

#### Page 14 : Conclusion

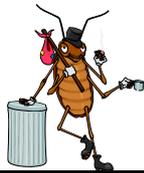
"How has the author finished off the article? Look for summarising and reflective statements."

..... **summary - species is very good at keeping itself going**

**reflection - how successful you can be - even when you lose your head**

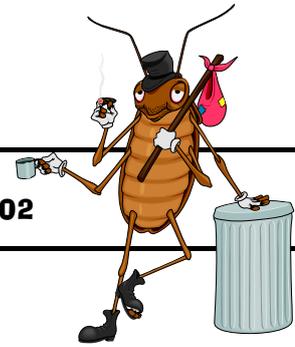
### FOLLOW UP ACTIVITIES

- Go through the ACTIVITIES sheet with the children
- Brainstorm and discuss ideas, model activities where necessary
- Assign activities or allow choice depending on time constraints / needs of children



# Cockroaches

by Amba Morton



## Set 5:1 ACTIVITIES

School Journal  
Part 3 Number 1 2002

### KNOWLEDGE — What are the facts

1. Make a list of 5 facts about cockroaches from the article.

### COMPREHENSION — Show that you understand the information

2. Why does the author think the cockroach is one of the strangest creatures in the world ?
3. Think of another title which would give the reader clues about the theme of the article.

### APPLICATION — Using what you have read in the article

4. Write a short story titled "A day in the life of a Cockroach" using what you now know about cockroaches from the article.

### ANALYSIS — Organising information from the article

5. Make an INFORMATION WEB titled *Cockroaches* using the information in this article. This will help you see how the article has been organised by the author, and is a good way to help you remember information.

### SYNTHESIS — Coming up with new ideas

6. Design a mutant species of cockroach with some new interesting changes to the creepy features they already have.  
Include a drawing and labels of all the features of your creation.

### EVALUATION — Seeing both sides

7. *"Cockroaches will take over the planet"*

List your reasons for agreeing with and disagreeing with this statement.

I agree because.....	I disagree because....
----------------------	------------------------

### Making judgments about information

8. Do you think this article was well written

Was there a hook in the introduction?

Hook:

Rate 1-10

Was the information organised clearly?

Organisation:

Rate 1-10

Was there an effective conclusion?

Wrap up:

Rate 1-10

*Give a brief reason for each of your ratings*

# Set 8:5 LESSON PLAN

RA 13-16yrs SJ Part 4 Number 2 1986

# Atomic Energy

by John Bonallack

## SPECIFIC LEARNING OUTCOMES

Students can.....

### Critical Thinking

1. Identify text structure / select main ideas in non fiction text
2. Respond to non-fiction text through Bloom's Taxonomy

### Exploring Language

3. Identify "hooks" in the introduction to a non fiction article
4. Identify summarising and reflective statements in the conclusion of a non fiction article

### Processing Information

5. Gather, sort, summarise, present information

### Summary

Ping-pong balls and mousetraps are used in this explanation of what happens in a nuclear chain reaction.

### Text Features

A sequential text structure - a series of events which progress over time (a nuclear chain reaction).

Can be diagrammed as flow charts (Activity 7) of uncontrolled and controlled nuclear reactions.

**Introduction** - the illustration of ping-pong balls and mousetraps provides a necessary hook into a complex topic.

**Body of Text** - follows a pattern of illustration / scientific explanation.

**Conclusion** - there is no conclusion.

## GSR Strategies

Text divided into Chunks for GSR

Summary of Text (Step 3)

### BEFORE READING

Brainstorm students' prior knowledge about atomic energy

Discuss title **Atomic Energy**

"What information do you expect to find in this article?"

..... **atomic energy - what it is, how it works - no clues in the title.**

### GUIDED READING

For each selected chunk of text . . .

#### Step 1:

#### SET A PURPOSE

As you read .....

- Look for the main topic
- Think of a suitable heading

#### READ SILENTLY

"Engaging the reader"



#### Step 2:

#### RETELL and CLARIFY

Have we got the message right?

- DETAILED RETELLING to make sure the text has been read closely
- CLARIFY AS WE GO to ensure vocab and concepts are understood

"Developing sentence level comprehension"



#### Step 3:

#### SUMMARISE

What is this passage about?

- Decide on a suitable HEADING or HEADINGS which would summarise the information in the chunk
- Reduce information to bullet points - ie. main ideas

"Developing big picture comprehension"

(see page 4 for further details)

#### Page 12 First Column : Introduction

"How has the author introduced the topic?"

.....**the ping-pong balls and mousetraps are an easily understood hook into the theory that follows**

#### An uncontrolled chain reaction

- ping pong balls on the mousetrap springs
- some mousetraps are touchy
- one goes off by itself
- sets off others

#### Page 12 Second Column

Describes how an atomic bomb works in the same way

#### An Atomic explosion

- some atoms are unstable (radioactive)
- break up - spit out tiny particles / release energy
- flying particles crash into other unstable atoms
- more particles and more energy sent out
- lots of unstable atoms close together = atomic explosion

#### Page 13 First Column

Back to the mousetraps and ping-pong balls to illustrate a controlled reaction

#### Controlling the reaction

- reduce the number of mousetraps
- spread them out
- don't set each other off so quickly
- could use treacle trays to slow it down further
- steady chain reaction until the energy is used up

#### Page 13 Second Column

Describes how scientists control nuclear reactions in a similar way to produce useable energy

#### How a nuclear power reactor works

- tubes of uranium pellets produce chain reaction
- control rods soak up the radiation
- rods moved in and out to control speed of reaction
- heat energy given off makes high pressure steam
- steam drives turbines - makes electricity
- turn propeller to power a ship

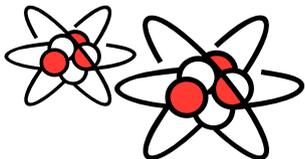
#### Conclusion

"How has the author finished off the article? Look for summarising and reflective statements."

..... **there is no conclusion**

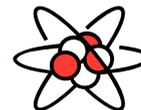
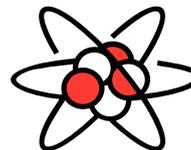
### FOLLOW UP ACTIVITIES

- Go through the ACTIVITIES sheet with the children
- Brainstorm and discuss ideas, model activities where necessary
- Assign activities or allow choice depending on time constraints / needs of children



# Atomic Energy

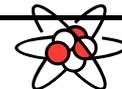
by John Bonallack



## Set 8:5 ACTIVITIES



School Journal  
Part 4 Number 2 1986



### KNOWLEDGE — Recalling the facts

1. What is another name for unstable atoms ?
2. What does the article say about uranium ?
3. When atoms break up, what happens to them ?

### COMPREHENSION — Show that you understand the information

4. Explain in your own words how scientists control a nuclear reaction.
5. Think of another title for this article which would give the reader more clues about what to expect.

### APPLICATION — Using what you have read in the article

6. The mouse traps and the ping-pong balls were an excellent way of demonstrating how a chain reaction works.  
Think of another way to demonstrate a chain reaction to young children.  
Make a poster using drawings and labels to explain how it works.

### ANALYSIS — Organising information from the article

7. Make FLOW CHARTS of the information in this article to show the steps in an uncontrolled chain reaction and a controlled chain reaction.  
You can use drawings and labels or explain the steps in writing.  
Remember to include a title.

### SYNTHESIS — Coming up with new ideas

8. Design a toy for children that is powered by atomic energy.  
Include a drawing of your invention with labels to explain what it does and how its power source works.

### EVALUATION — Seeing both sides

9. *"Trying to use atomic energy is too dangerous and should be banned"*  
List your reasons for agreeing with and disagreeing with this statement.

I agree because.....

I disagree because....

### Making judgments about information

10. Do you think this article was well written
 

Was there a hook in the introduction?	Hook:	Rate 1-10
Was the information organised clearly?	Organisation:	Rate 1-10
Was there an effective conclusion?	Wrap up:	Rate 1-10

*Give a brief reason for each of your ratings*