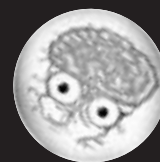# BRAINWAVES

Non-fiction to grab the grey matter!

Orange Set
Teaching Guide

Merryn Whitfield

Series adviser: Julie Galliard, Literacy Consultant, Cambridgeshire LEA

Contents

Introducing Brainwaves

Non-fiction is probably the most important kind of writing for school and work success. Almost everything we write is non-fiction. We write to inform, to discuss, to explain, to persuade, to teach, to direct, and so on. There are many strategies that can be usefully applied when reading and writing non-fiction texts—adult readers/writers tend to use them without being aware that they are doing so. These strategies can be broken down into simple actions and steps, and they can be taught.

The *Brainwaves* books are full-colour, non-fiction chapter books that will grab pupils' attention and encourage their active involvement. Even the most reluctant readers will be motivated to pick up the books and then to read on because their interests are catered for in the topics chosen, and in the design elements and visual appeal of the books.

The *Brainwaves* Teaching Guide provides you with the background knowledge you'll need to teach your pupils a wide range of strategies to use when reading and writing non-fiction—as well as concrete lesson plans to help you do it. It contains a guided comprehension lesson and a non-fiction writing lesson for each book in the *Brainwaves* series. Each lesson targets a specific focus strategy. These lessons can be given as the need arises—to address questions that arise in the course of pupils' own reading or writing, to teach particular reading/writing strategies and skills, or for support when teaching a specific text type. The lessons can be adapted to involve one pupil, a small group, or the whole class.

Each lesson involves the following basic stages, in which you:

- first model the strategy;
- give pupils guided practice, then independent practice, in using it;
- have pupils apply the strategy in real reading and writing.

In this way, each lesson is designed to allow gradual release of responsibility from you to the pupil. Scaffolding can gradually be given up as pupils become more competent in using a particular strategy.

The integration of reading and writing with high-interest themes in Humanities and in Science means that the *Brainwaves* books are ideal for use in the literacy programme, or during a thematic unit that can link to one of the topics in the series. See the overview chart on page 7 for a helpful list of ways into the books. This teaching guide provides a page of suggestions for cross-curricular links plus a Copymaster. You can dip into or adapt these activities to suit the needs or interests of your pupils or a theme you are currently working on.

Reading and comprehending non-fiction

Pupils usually have greater background and experience in reading narrative text, which is generally based on the structure of orientation, complication, resolution. However, even pupils who are comfortable with the narrative form may find reading non-fiction texts more difficult. One reason for this is that non-fiction has a variety of structures (see page 5). Current research shows that when pupils are familiar with these structures, their comprehension improves.

The teaching notes for each *Brainwaves* book include comprehension questions (both literal and higher order). These questions provide a useful way to assess pupils' comprehension of the text. However, they do not actually teach pupils any comprehension strategies—and comprehension does need to be taught. To improve their comprehension, pupils need explicit instruction in comprehension strategies. The comprehension lesson plans in this guide take you beyond the simple asking of comprehension questions, and allow you to teach comprehension as well as assess it.

Comprehension strategies

Comprehension strategies include:

Previewing when readers activate background knowledge, make predictions, and set a purpose for their reading.

Self-questioning when readers generate questions to guide their reading.

Making connections when readers relate reading to themselves, to the text and to others.

Visualising when readers create mental pictures while reading.

Knowing how words work when readers understand words. They develop their vocabulary, and figure out unknown words using their knowledge of letters and sounds and of the way in which sentences and clauses are constructed, and their understanding of the meaning of the text.

Monitoring when readers ask, 'Does this make sense?' and use different strategies if it doesn't.

Summarising when readers pull together the most important ideas in a text.

Evaluating when readers make judgements about what they are reading.

Writing non-fiction

In a balanced literacy programme, writing is as important as reading. During the reading unit, pupils learn comprehension strategies. During the writing unit, pupils learn how to think about, plan, draft, revise and share their work as writers. As with focused comprehension lessons, guided writing lessons allow you to give explicit instruction in targeted skills and strategies. The teaching plans in this guide give detailed notes showing you how to actively model and scaffold strategies at each stage of the writing process.

Stages in the writing process

The first thing pupils need to consider at the beginning of any writing session is which stage in the writing process they are up to. This is fundamental to any writing lesson, as it determines which strategies it will be useful for them to apply.

There are five basic stages in the writing process:

Planning involves discussing and brainstorming to gather thoughts and ideas about a topic, and to determine the purpose and audience for the piece.

Drafting is the first attempt at writing. The writer organises and shapes their planning ideas into a first draft.

Revising requires the writer to clarify and improve their work. Writing can be reorganised on four levels: the whole piece, then each paragraph, then each sentence, and finally each word.

Proofreading is the polishing stage. The writer makes sure that spelling, grammar and punctuation are correct.

Publishing provides motivation for revising and proofreading. In this stage, the writer makes the piece available for others to enjoy. Not every piece of writing will be taken to this final stage.

It is assumed that pupils will have writing folders or notebooks containing work at various stages in the writing process. The lessons in this guide can be used with writing from these folders, or you can teach at a point of need. For example, if several pupils are up to the stage of revising a procedure, you can use the table on page 7 to find the lesson in which the revision stage of writing and the procedure text type are included in the writing focus.

Text types

Within each stage of the writing process, a writer needs to think about the purpose and audience for the piece of writing. This will determine the text type or structure of the writing. While most writing in the real world combines several text types—for example, something that is essentially a report text can contain descriptive elements and explanations—separating out individual text types and explicitly naming their features can be invaluable in helping pupils gain an understanding of the underlying structures of non-fiction texts and in helping pupils structure their own non-fiction writing.

The NLS suggests pupils become familiar with a range of text types which include:

Information report to describe an entire class of things in general terms, or to present factual information about something;

Discussion to look at different points of view about an issue, to present different opinions, or to examine an issue and then make a recommendation;

Explanation to explain how or why something happens, or to explain the stages or steps something goes through;

Argument to argue the case for or against a point of view;

Persuasion to persuade people to accept your point of view, or to persuade people to act in a particular way;

Procedure to tell how to do or make something;

Recount to tell what happened, to record past experiences and judge their importance, or to record a series of events in the order that they happened;

Description to describe the features of a particular thing;

Response to summarise a text, to respond to a text or work of art, or to analyse a text or work of art.

Features of good writing

The writing lessons in this guide teach the features of all good writing but their forms will vary across the different text types. For example, the text will be organised differently in a procedure to an argument, and word choice in a persuasion will be different to word choice in a description.

The features of good writing include:

Ideas and details that are clear and focused;

Organisation that shows coherent structure, sequencing and idea development;

Voice appropriate to the purpose and audience;

Word choice appropriate to the purpose and audience, and which effectively conveys the message;

Fluency of sentences so that the writing has flow and rhythm, and is easy and enjoyable to read;

Conventions of punctuation, spelling, capitalisation, paragraph breaks, grammar and usage.

Non-fiction text supports in Brainwaves

The layout and text of every *Brainwaves* book supports pupils' reading of non-fiction. Pupils can spend more time on making connections with the text than on decoding it.
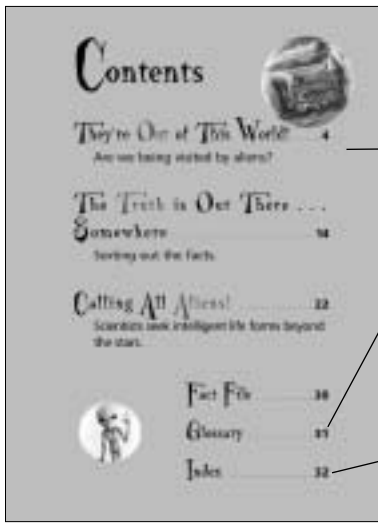
Chapter openers with fun cartoon art

Headings

Interesting introductions

Table of contents

Glossary to support unfamiliar or technical vocabulary

Index

Accessible page layout with clear font. Increasing text load with approximately 120 words of main text per spread

Jokes and cartoons to add humour

Headings

Different text types modelled

Full captions and labels

More complex graphics and charts

Glossary words in bold

Fun fact file

Brainwaves Orange Set Overview

READING AGE: 8+   INTEREST AGE: 8–13

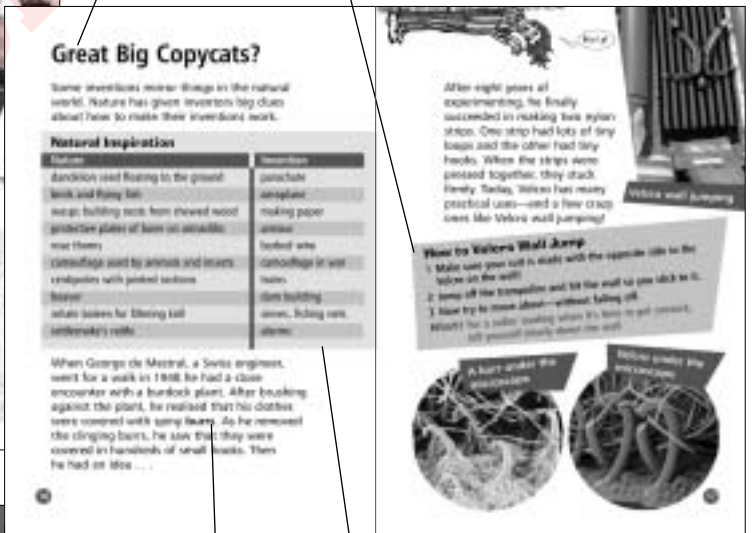| Themes	Modelled Text Structures *Page references are to pupil books*	Modelled Visual Literacy Features *Page references are to pupil books*	Guided Comprehension Lesson Focus	Non-fiction Writing Lesson	Cross curricular CM Focus
Extreme sports, Endurance, Records	Information report 6, 24, 26; Explanation 18; Discussion 25 (top); Recount	Matrix chart 7; Sidebars and boxes 8, 16, 27, 29; Labelled diagram 9; Labelled photo 19; Graph 25; Captions	Making connections — CM 1	**Process:** Planning **Text type:** Information report **Feature:** Ideas and details — CM 2	**Science** Heart and blood circulation — CM 3
Animals, Records	Information report 6 (para 3), 29 (photo labels); Description; Explanation 28–29 (chart)	Labelled photo 7, 17, 29; Magnification 7, 17; Graph 7; Labelled diagrams 9, 18–19, 24; Charts 11, 21, 24; Map 12; Flow chart 28–29; Captions	Self-questioning — CM 4	**Process:** Revising **Text type:** Information report **Feature:** Fluency — CM 5	**Art and Design** Create an animal — CM 6
Waves, Surfing, Storms, Tsunamis	Information report 7, 9, 18, 27; Recount 8 (para 2); Description 24; Explanation 26 (box); Procedure	Sidebars and boxes 7, 8, 24, 25, 26; Matrix chart 10–11; Labelled photo 12; Labelled diagram 13; Maps 19, 29; Cutaway 25; Captions	Knowing how words work — CM 7	**Process:** Drafting **Text type:** Recount **Feature:** Voice — CM 8	**Art and Design** Stormy images — CM 9
Aliens, Alien sightings, Fakes and forgeries, Roswell, Men in Black, Space, NASA probes	Information report 9; Description 10 (box), 11 (box), 12; Recount (para 2), 21; Discussion 15–19	Charts 9, 13, 17; Sidebars and boxes 10, 11, 20, 21, 25; Magnification 25; Labelled diagrams 27, 28; Captions	Visualising — CM 10	**Process:** Drafting **Text type:** Discussion **Feature:** Organisation — CM 11	**Humanities** Time capsule — CM 12
Mysteries, Stonehenge, Bermuda Triangle, Forensics, Crime scene investigation, Iceman	Information report 7; Description 10, 21–top 24; Recount 17; Procedure	Map 6, 11; Sidebars and boxes 7, 9, 11, 15, 18, 28; Timeline 10–11; Captions	Summarising — CM 13	**Process:** Proofreading **Text type:** Description **Feature:** Conventions — CM 14	**Science** Investigating footprints — CM 15
Inventions, Inventors, Flight, Thomas Edison, Leonardo da Vinci, Wright Brothers	Information report 8–9; Explanation 16 (para 2), 17, 18, 20–21, 21 (box); Recount 17; Procedure	Sidebars and boxes 6, 7, 15, 17, 21; Labelled diagram 7; Flow chart 8–9; Matrix chart 11; Chart 16; Magnification 17; Labelled photos 25, 29; Captions	Monitoring — CM 16	**Process:** Revising **Text type:** Explanation **Feature:** Word choice — CM 17	**Science** Designing an invention — CM 18

Linking Brainwaves to NLS (ORANGE)

Text structures corresponding to NLS ranges

ORANGE	Text structures	Year 3	Year 4	Year 5	Year 6	Year 7
To the Limit	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Discussion	–	Term 3	–	Term 2	Sn 13f, W16
	Explanation	Term 3	Term 2	Term 2	Term 3	Sn 13c, W12
	Recount	Term 3	–	Term 1	Term 1	Sn 13b, W10
Animal Records	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Explanation	Term 3	Term 2	Term 2	Term 3	Sn 13c, W12
Wild Waves	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Explanation	Term 3	Term 2	Term 2	Term 3	Sn 13c, W12
	Recount	Term 3	–	Term 1	Term 1	Sn 13b, W10
	Procedure	Term 2	Term 1	Term 1	–	Sn 13d, W13
The Alien Files	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Recount	Term 3	–	Term 1	Term 1	Sn 13b, W10
	Discussion	–	Term 3	–	Term 2	Sn 13f, W16
It's a Mystery	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Recount	Term 3	–	Term 1	Term 3	Sn 13b, W10
	Procedure	Term 2	Term 1	Term 1	–	Sn 13d, W13
Whose Crazy Idea was That?	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Explanation	Term 3	Term 2	Term 2	Term 3	Sn 13c, W12
	Recount	Term 3	–	Term 1	Term 1	Sn 13b, W10
	Procedure	Term 2	Term 1	Term 1	–	Sn 13d, W13

In Year 7, pupils will revise the stylistic conventions of the main types of non-fiction (indicated as Sn above) and be taught to write a variety of text types (indicated as W above). In addition, all *Brainwaves* texts link directly to reading objective 6, writing objective 1 and sentence level objectives 8, 9, 10, 11, 12 and 14.

The teacher support materials include suggestions for encouraging pupils to practise and extend their oral skills. Direct links can be made to the QCA document 'Teaching Speaking and Listening at Key Stages 1 and 2'. The objectives for Year 7 build on these specific expectations for primary pupils.

NLS Objectives chart linked to comprehension lesson plans

Page	Year 3 Term 1	Year 3 Term 2	Year 3 Term 3	Year 4 Term 1	Year 4 Term 2	Year 4 Term 3	Year 5 Term 1	Year 5 Term 2	Year 5 Term 3	Year 6 Term 1	Year 6 Term 2	Year 6 Term 3
ORANGE												
Page 12	T18, 21, 22			T16, 27	T15, 19			T21, 22		T13, 17		T22
Page 20	S10, 12, 13	S9	S5, 7	S1, 5	S4	S2	S3, 7	S9	S4, 7	S5, 6	S3	
Page 28			T22	T16			T21, 24			T14		
Page 36				S4, T16	S1 (some)	T16, 17, 21, 23			S7, T19		S5, T15, 16, 18	
Page 44		S2	T21		S1	S4	S3			S4, 5, T18 (some)	S3	T19, 22
Page 52	S3, 9			S2, 4 (some)	T20			W9, T15, 22, 24	W13	S2	S1	S1, 3, T15, 21
GREEN												
Page 12	S10, 11, 12, 13	T13		S5, T26	S4		S1, T22					
Page 20		T14, 16		T18, 25, 26			T21, 25					
Page 28	W16, T17 (some)	W20, S2	W12	T18	W9			W9, T24		T12, 17		T19
Page 36	W5, 10, 11, 12, 13	W5, T14, 16	W5	W2, S5	W2, S4	W2	W1, S3, S6	W1, S8, 9	W1, S4	W1, S5, 6	W1, S3	W1, S4, T21
Page 44					S1	T19, 25			S2, T15			
Page 52								T19 (T15, 22 if flow charts included)				T15, 22
PURPLE												
Page 12	S13, T18, 23	S17	S12		S4 T19, 22	S4	S1	W9, T21	S7	S4, T17	S3	T19, 21, 22
Page 20	T18, 23			T18			T21, 24	S4, T21		T12, 15		T22
Page 28		T17 (some)	T25	T16	T21	T16, 17, 21, 22, 23	T23, 26, 27		T18, 19		S8, T15, 18	T21, 22
Page 36	W13, S3			S3	S9, T20, 24, 25		W7, S3, S8 (some)	W9, T19, 23		S2	S1 (some)	S1, T15, 20, 21
Page 44	W5, S10, 11, 12, 13	W5, T14, 16	W5	W2, S5, T25, 26	W2	W2, S3 (some)	W1, S3, 9, T21, 25	W1, T24	W1	W1	W1	W1, S1, T22
Page 52			S5	T21 (some)	T17, 19, 22		T21 (some)	S10	S7	S4, T11, 14	W1	T18, 21

To the Limit

Content summary

Chapter one explains how adrenaline works and includes details on the fastest vehicles on land, water and in the air. It also discusses extreme sports such as street luge and downhill skiing.

Chapter two examines some extreme adventures people participate in. Activities such as bungee jumping, base jumping, caving and skysurfing are discussed.

Chapter three looks at how people keep testing their own endurance. It examines free-diving, rock climbing and triathlon.

Focus text type structures and features

Information report—the main text in *To the Limit* is an information report. It has short paragraphs that give details about particular features and aspects of the topic. It uses nouns and noun phrases with specific technical vocabulary.

Explanation—the second paragraphs on pages 6, 24 and 26 are explanations that state their topic in the first sentence, followed by a sequence of events. They are written in present tense, use connectives to sequence events through time, use technical vocabulary and show cause-and-effect relationships.

Discussion—'Down in the Dirt' (page 18) includes a statement of the topic in the first paragraph, arguments for both sides in the second paragraph and a concluding statement in the last paragraph. It is written in present tense and contains action verbs, descriptive adjectives and connectives.

Recount—page 25 'The First Great Diver' retells a sequence of events and includes details on 'who', 'when' and 'where'. It is written in past tense and features noun phrases and connectives.

Visual literacy features

Matrix chart	Labelled photo
Sidebars and boxes	Graph
Labelled diagram	Captions

Reading focus strategy

Making connections

Writing focus strategy

Process: Planning
Text type: Information report
Feature: Ideas and details

Assessment

Speaking and Listening

- Explains why people get an adrenaline rush from exciting activities
- Discusses personal connections with aspects of the text
- Explains how personal connections affect their understanding of the text

Reading and Viewing

- Explains the link between words on a content flow chart
- Identifies factors which may impact on their ideas about the text
- Examines the written and visual parts of a text to make meaning
- Identifies topic-specific vocabulary in the text
- Creates a connection chart using subheadings
- Lists possible connection starters

Writing

- Identifies the structures and features of information reports
- Deconstructs an information report
- Examines the use of paragraphs in the text model
- Chooses an appropriate topic for planning an information report
- Develops ideas for a planning scaffold
- Writes a snippet draft for an information report
- Draws a diagram to match the written text

Reading non-fiction

Building background

Discuss activities the pupils have been involved in that were exciting, such as winning a grand final, surprise parties, roller blading or going on a roller-coaster for the first time. How did they feel? Did they have more than one type of feeling? Ask them to explain the physical effects the activity had on their body.

You will need four different coloured pens for this activity. Write the word 'extreme' at the top of a piece of chart paper. Discuss the meaning of 'extreme' with the pupils and have them give examples of activities or behaviour that are considered extreme. Write these on the chart. Ask the pupils if they would like to be involved in some of the activities that have been listed and have them explain their answers. Colour code the listed ideas into those related primarily to speed, adventure and endurance.

Introducing the book

Construct a content flow chart on a flip chart featuring key words and ideas from the text. The key words might include 'speed', 'adrenaline', 'streamlined', 'downhill', 'danger', 'adventure', 'risks', 'claustrophobic, 'bored', 'endurance', 'records' and 'achievement'.

Discuss the possible meanings of these words with the pupils. Examine the words and how they relate to the text. Make small notes from the discussion between each word on the chart.

Revisit this flow chart at the end of each chapter, and the end of the book, to evaluate the accuracy of the original ideas. Have the pupils discuss the ideas that were not accurate, and why this may be the case.

Questions

Chapter one—Extreme Speed

Literal questions
- What is the name of the hormone that makes the heart beat faster?
- How fast does the Concorde travel through the air?
- What protective clothing do street lugers wear?
- What is the world record speed for downhill skiing?

Higher order questions
- What does it mean when the text says 'You've left your stomach at the last corner'?
- How do you think it would feel to fly in a jet fighter?
- Why did Harry Egger vomit at the bottom of the mountain?

Chapter two—Extreme Adventure

Literal questions
- Who were the original bungee jumpers?
- What does BASE stand for?
- What sporting skills are involved in skysurfing?

Higher order questions
- Would you jump from a skyscraper with a rope around your ankles? Why or why not?
- What do you think is the most dangerous form of adventure? Why?

Chapter three—Extreme Endurance

Literal questions
- What do free-divers do before they go underwater?
- What special equipment do rock climbers use?
- What does a triathlon involve?

Higher order questions
- Why do free-divers often black out on the way back to the surface?
- If you were going to compete in a team triathlon, what leg would you do? Choose two people who would compete with you in the other two sections. Explain your choices.

Guided comprehension lesson plan

Strategy

Making connections

Text selection

Modelling: 'Bored? Try-athlon', pages 28–29
Applying: 'Speed Thrills', pages 6–7

Modelling the strategy

Before you begin the lesson you will need an enlarged copy of the model text 'Bored? Try-athlon' on flip chart.

Read the model text. As you read talk about your own impressions and experiences related to the text. Discuss the visual and written text, along with text inserts and encourage pupils to add their own opinions and ideas. Extend this discussion by having pupils identify the text type being used on these pages. Ask them to explain reasons for their answers and identify the structure and features of the text type. Highlight these features on the enlarged copy of the text, this will be referred to later in the Writing non-fiction lesson plan (page 12).

Look at specific vocabulary used in the text like 'endurance', 'achievement', 'extraordinary' and 'absolute'. Discuss the different contexts in which pupils have seen or used these words. How does the meaning of each word change according to the context? What does each word mean in this context?

Using the above discussion, create a connection chart on a large piece of paper. Divide the paper into two columns with the headings 'Features' and 'My personal connection'. In the first column write the following subheadings 'Content', 'Text type' and 'Vocabulary'. Leave enough space between each subheading for notes from the text. Go back through the model text and add each key word or point to the relevant section of the chart. Discuss each feature with the group and, in the second column, write how you have made a personal connection to the content, text type or vocabulary of the text. You should include connection starters such as 'It reminds me of', 'It makes me remember when', 'I had an experience like' in the second column.

On the whiteboard, make a list of the connection starters used in the second column and write down any additional ideas as you discuss each one. These will be used later in the lesson.

Applying the strategy

Pupils will need a copy of 'Speed Thrills' and **CM 1** for this activity. Have pupils read through the passage and discuss the content, text type and vocabulary. Answer any questions the pupils may have to ensure they understand the text before completing the activity.

Pupils should then complete **CM 1** which includes writing a short statement about how they made a personal connection with different features of the text. They should use the connection starters from the previous activity in these statements.

Discuss the pupils' individual connection charts. Look at the different content, text type features and vocabulary selected by the pupils. Did everyone choose the same features? Why or why not? Ask the pupils how the connection chart has affected their understanding of the text. Each pupil should evaluate whether their understanding has been improved, or remained unchanged, and why.
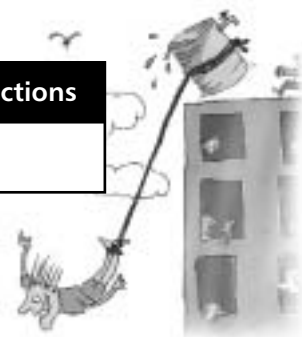
Linking to writing

Pupils could write a short piece of text about an event in their lives that relates to the text. They could write a diary entry, or a letter to a friend, and should use the connection starters in planning and writing their work.

Connection chart

Title: _____

Text type: _____

Complete the connection chart below after reading the passage.

Features	My personal connection
Content	_____ _____ _____ _____
Text type structure and features	_____ _____ _____ _____
Vocabulary	_____ _____ _____ _____

Write your answers to the following questions on the back of this sheet.
• How has the connection chart affected your understanding of the passage?
• What is the strongest personal connection you made with the text? Why?

Writing non-fiction lesson plan

Process

Planning

Text model

Information Report: 'Racing in the Streets', pages 8–9

Feature

Ideas and details

Teaching the feature

Read the passage 'Racing in the Streets' with the pupils. Hold a discussion about the written and visual text and write any significant points on the whiteboard. You should ask the pupils whether or not they found the text interesting, and which structural and language features the author has used. Focus closely on what the author does well in this text, such as using the personal pronoun 'you' to involve the audience, and using interesting verbs like 'hurtle' and 'battle'. Next, have the pupils suggest who the target audience may be. Now re-read the passage with the group and discuss how reading the text a second time helps them add points to their summary.

Pupils should then identify the text's use of grammar, vocabulary and structure. Discuss their importance in the text as a whole. They should also examine how the author has used paragraphs and to what effect. Discuss some of the possible subheadings the author may have used when he was first planning the text.

Review the notes taken during the above activity and ask the pupils to think about where they would start if they were to write an information report. List pupils' ideas in random order on whiteboard or flip chart. These may include going to the library for research material, drawing a picture, listing what they already know about the topic, writing a list of subheadings, listing questions the audience might ask about the topic or identifying the requirements of the text type. Go through this list and discuss which activities should be completed first in the planning stage. Rewrite the list in sequential order on a separate piece of paper.

Applying the feature

Pupils will need a copy of **CM 2**. They will also need to choose a topic for their information report. Topics should relate to 'extreme' sports or adventures. It might help to brainstorm some possible topics on the whiteboard before proceeding with the activity.

Inform pupils that they will be developing a planning scaffold for an information report on their chosen topic. Using the scaffold on **CM 2** have the pupils write brief notes on how they will meet the requirements of the text type, how they will make the text interesting, any subheadings they might use and where they could find information on their topic. The pupils can also draw illustrations (on the back of the worksheet) that will complement the text, such as the physical setting, equipment used or a person performing the activity.

At the end of this scaffolding process, ask pupils to write a 'snippet draft' (or a brief paragraph) in which they put some of their initial ideas and details together. Some authors like to write snippet drafts as it helps them get rid of extraneous material.

Group sharing and evaluation

In the class group, examine and discuss the pupils' topics and planning scaffolds. Select pupils to identify which features they intend to use in their information report, how they will locate information and answer their audience's questions.

Going further

The next step for pupils is to begin a first draft of the information report. They need to work on creating an interesting lead (introduction) to their topic. They will also need to look at connecting devices to create fluency between sentences and paragraphs.

Name   **Date**

Planning scaffold

Topic   **Text type**   **Audience**

Structural features:

_____

_____

Language features:

_____

_____

Possible subheadings:

_____

_____

Notes:

_____

_____

_____

Read through your notes again and write down the most important details below.

_____

_____

_____

- On the back of this sheet, draw an illustration that will help the reader better understand your text.
- Now, on a new piece of paper, write your snippet draft.

Cross curricular activities

Maths

- Have the pupils create a single bar graph of the fastest speeds reached by different vehicles using the information in the chart on page 7.
- Measure the distance around the school oval or playground. Calculate the number of laps to equal the distance of one kilometre. Each pupil in the class walks this distance and times themselves using a stopwatch. Use this to work out how fast each pupil walks in kilometres per hour. How does this compare with the chart on page 7? Who has the fastest walking speed in the group?

Humanities

- Pupils could research the origins of extreme sports. Were any sports a result of cultural rituals, for example the vine divers of Vanuatu led to today's bungee jumpers.

Science

- Look at how wind tunnels are used to make vehicles more wind resistant and therefore faster. Freeze a unit of ice in a 2 litre ice-cream container. Tip it out of the container and place it in front of a fan. What shape does the ice become when the fan is blowing on it? Why? How does this relate to vehicle speed and streamlining?
- Pupils could examine what happens to their bodies when they exercise. Investigate how the internal organs and muscles use nutrients and oxygen from the blood. What happens if their bodies cannot get enough oxygen? What happens if they have not eaten enough to give their bodies the fuel they need? Where is excess fuel stored in the body? (See **CM 3**.)

PSHE

- Develop your own school triathlon with the class group. The pupils may need to change some of the events (for example if swimming is not an option, try skipping or step-ups). Work out the order of events and the course to be followed. Discuss what sort of training regime the pupils should follow. Hold an official competition day and reward the competitors and winners.
- Have the pupils investigate how fit their heart is. Each pupil should find their pulse and count the beats for ten seconds while at rest. They should then run on the spot for 30 seconds, after which they should take their pulse again. Finally, have the pupils rest for three minutes and take their pulse for a third time. Graph the results from each of the three tests and compare them. The fittest pupils will have a lower resting pulse rate that doesn't increase excessively when active, and recovers quickly following physical activity.
- Examine and list the essential safety equipment for a variety of extreme sports such as rock climbing, skysurfing and luge. Compare this to the safety equipment pupils wear when playing football, or riding a bike.
- What are some of the health dangers associated with free-diving? How can these be overcome?
- Look at exercise-related health issues such as asthma. How can it be managed effectively? What are the first aid requirements?

Music

- Have the pupils investigate different theme songs that have been used in the Olympics or football World Cup. They could read the lyrics and identify the main themes in each song, and possibly look at the tempo of the music and the effect this would have on the audience.

Pump it up!

How does your circulation system work to send oxygenated blood around your body?
Draw a flow chart in the space below to show what happens.

1 Why does your heart pump faster when you exercise?

_____

2 Why do you need to breathe in more oxygen when you exercise?

_____

3 What happens if your body does not get enough oxygen?

_____

4 What effect does adrenaline have on your heart rate?

_____