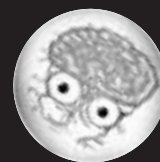# BRAINWAVES

Non-fiction to grab the grey matter!

GREEN SET
Teaching Guide

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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 judgments 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.

Table of contents

Glossary to support unfamiliar or technical vocabulary

Index

Headings

Interesting Introductions

Use It or Lose It

Your brain never quits!

Even when you rest, your brain keeps working. It makes up only about 2 per cent of your body's weight, but it uses about 20 per cent of your body's energy. So a lot of what you eat is needed to power your brain.

Chapter openers with fun cartoon art

Simple sentence structures so pupils can focus on fluency and comprehension

Headings

Glossary words in bold

Clear font

Insect Takeaway

An insect looking for food lands on a Venus flytrap. As the insect moves, it brushes against small **trigger hairs**. If it touches three hairs, it's trapped! The trap closes tighter and tighter on the insect. Then the plant eats it.

Venus flytraps live in swamps and **bogs** where the soil is poor. To get enough food,

they must feed on the meat of animals. Plants like the Venus flytrap that feed on meat are called **carnivorous** plants.

Accessible page layout with approximately 80 words of main text per spread

Photographs with captions and labels

High-interest content

Jokes and added humour

All Wrapped Up

People also imagined that mummies had power after death. They thought mummies put a curse on anyone who disturbed their graves. Tutankhamen was an ancient Egyptian king who died when he was nineteen. In 1923, Howard Carter, an English explorer, found and opened his grave. Carter didn't believe in the curse.

Then people began to die. First it was Lord Carnarvon, who gave Carter money for his explorations. Then two of Lord Carnarvon's relatives died suddenly. Were they all cursed by the mummy?

Making a Mummy

Different text types modelled

Variety of graphics and charts

Fact File

One of Barnum's exhibits was called "The Great Unknown". People paid to see it but when they got inside, they saw ... NOTHING!

If you read or hear the name Loof Lirpa, be suspicious of whatever comes next! Spell Loof Lirpa backwards to see why.

In 1917, two English schoolgirls took fake photographs of themselves dancing with fairies. The photos fooled people for years.

Sir Peter Scott gave the Loch Ness monster in Scotland a scientific name: Nessiteras rhombopteryx. If you rearrange the letters, they spell out: monster hoax by Sir Peter S.

Fun fact file

Brainwaves Green Set Overview

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
Codes, Patterns, Communication, Spies	Information report — 11, 18, 23, 26, 29; Procedure — 7, 24; Explanation	Chart — 7, 9, 11, 16, 24, 29; Labelled photo — 7, 19, 27; Flow diagram — 23; Some short captions	Self-questioning — CM 1	**Process:** Revising; **Text type:** Procedure; **Feature:** Fluency — CM 2	**Art and Design** Creating visual symbols — CM 3
Animals, Animal communication, Animal behaviour, Communication, Social structures	Information report — 19; Procedure — 15, 25, 29; Description	Graph — 9; Labelled photo — 10–11; Charts — 10–11, 15, 17, 19, 28–29; Poster — 25; Some short captions	Making connections — CM 4	**Process:** Drafting; **Text type:** Procedure; **Feature:** Organisation — CM 5	**Science** Observing a pet — CM 6
Plants, Defence mechanisms, Relationships, Habitats	Information report — 6, 10 (para 2), 18–19, 28–29; Explanation — 10 (para 1); Description	Flow diagrams — 18–19, 28–29; Cutaway — 28; Some short captions	Visualising — CM 7	**Process:** Revising; **Text type:** Description; **Feature:** Word choice — CM 8	**Science** Designing a plant to suit a habitat — CM 9
Monsters, Myths, Movies, Fears, Social change	Information report — 6; Description — 16, 20–21; Procedure	Posters — 6, 17; Magnification — 9, 29; Maps — 10–11, 18; Keys — 10, 13; Matrix chart — 13; Flow diagram — 20; Short captions	Knowing how words work — CM 10	**Process:** Proofreading; **Text type:** Information report; **Feature:** Conventions — CM 11	**Humanities** Monsters through history — CM 12
Hoaxes, Newspaper, radio and television hoaxes, Tall tales, April Fool's Day, Loch Ness monster	Information report — 6 (poster); Persuasion — 11, 17; Description — 15; Procedure	Posters — 6, 7; Labelled photos — 11, 17; Flow diagram — 18–19; Some longer captions — 15	Evaluating — CM 13	**Process:** Planning; **Text type:** Persuasion; **Feature:** Ideas and details — CM 14	**Humanities** School newspaper article — CM 15
Human body, Human/animal brains, Health, Central nervous system, Human growth and development, Sleep, Optical illusions	Information report — 6 (para 1); Description — 9, 11; Comparison — 20, 28 (para 2); Explanation — 25; Procedure	Labelled diagrams — 4, 7, 20, 21; Charts — 8, 11; Labelled photos — 12–13; Magnification — 16–17; Graph — 10, 19, 29; 19; 28; Some longer captions	Summarising — CM 16	**Process:** Planning; **Text type:** Explanation; **Feature:** Ideas and details — CM 17	**Science** Testing brain power — CM 18

Linking Brainwaves to NLS (GREEN)

Text structures corresponding to NLS ranges

GREEN	Text structures	Year 3	Year 4	Year 5	Year 6	Year 7
Break that Code	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Procedure	Term 2	Term 1	Term 1	–	Sn 13d, W13
	Explanation	Term 3	Term 2	Term 2	Term 3	Sn 13c, W12 R7
Animal Talk	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Procedure	Term 2	Term 1	Term 1	–	Sn 13d, W13
Plants That Bite Back	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
Myths and Monsters	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Procedure	Term 2	Term 1	Term 1	–	Sn 13d, W13
Hoaxes, Fibs and Fakes	Information report	Term 1	Term 1, 2, 3	Term 2	Term 1, 3	Sn 13a, W11
	Persuasion	–	Term 3	Term 3		Sn 13e, W15
	Procedure	Term 2	Term 1	Term 1		Sn 13d, W13
Brain Power	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 R7
	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

	Year 3			Year 4			Year 5			Year 6		
	Term 1	Term 2	Term 3	Term 1	Term 2	Term 3	Term 1	Term 2	Term 3	Term 1	Term 2	Term 3
ORANGE												
Page 12	S13, T18, 23			T16, 27	T15, 19			T21, 22		T13, 17		T22
Page 20	S10, 12, 13	S9	S5, 7	S1, 5	S4	S2	S3, 7		S4, 7	S5, 6	S3	
Page 28	T18, 23		T22	T18			T21,24			T14		
Page 36				T16	S1 (some)	T16, 17, 21, 23			S7, T19		S5, T15, 16, 18	
Page 44		S2	T21	S4, T16	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			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			T15, 22
Page 52					T20, 23, 25			T19 (T15, 22 if flow charts included)				
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		T17, 19, 22		T21 (some)	S10	S7	S4, T11,14		T18, 21

Break that Code

Content summary

Chapter one looks at the history of coded messages and the people who invented, and broke, famous codes. The chapter includes details on the morse code, the Braille system and the Alberti disk and asks pupils to use these methods to decode a message.

Chapter two looks at ways in which pictures and symbols have been used to send messages. This chapter concentrates on Mayan glyphs, Egyptian hieroglyphs and how archaeologists cracked the code of the hieroglyphs.

Chapter three examines how codes have been used in both modern and ancient wars to send and receive secret messages. Methods covered include the scytale, Caesar cipher and the Enigma machine and Navajo code talkers from World War II.

Focus text type structures and features

Information report—the main text in *Break that Code* is in the form of 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.

Procedure—*Break that Code* includes procedural texts on pages 18, 23, 26 and 29. Features include a heading that indicates the procedure's aim, a numbered list of steps to follow, and pictures to illustrate specific steps of the procedure. These procedural texts are written in the present tense and include action verbs.

Visual literacy features

Chart
Flow diagram
Labelled photos

Reading focus strategy

Self-questioning

Writing focus strategy

Process: Revising
Text type: Procedure
Feature: Fluency

Assessment

Speaking and Listening

- Identifies thick and thin questions
- Creates their own thick and thin questions
- Brainstorms the word 'communication' to create a semantic map
- Answers literal questions from the text
- Answers higher order thinking questions

Reading and Viewing

- Identifies parts of a text they want to know more about or that causes confusion
- Identifies literal questions as 'thin'
- Identifies higher order thinking questions as 'thick'
- Answers thin questions by reading the text
- Compares different people's responses to the same text
- Understands how thick questions improve their comprehension of the text

Writing

- Understands the difference between revising and proofreading
- Looks at the specific details of a text in order to revise it
- Identifies the features of sentence fluency
- Identifies ways of improving sentence fluency
- Compares draft and revised texts
- Revises their own text looking at sentence fluency
- Marks their own writing using the fluency checklist
- Evaluates the revision process
- Explains how revising improves their text

Reading non-fiction

Building background

Bring examples, or pictures, of signs and symbols to class. These might include road and traffic signs, 'no smoking' signs, and commonly used symbols for toilets. You might also draw on the whiteboard symbols such as a heart or a cross. Discuss the meaning of each sign or symbol with the group. How do the pupils know what each one means? Where do they commonly see each one? Does each pupil give them the same or similar meanings? Why or why not?

Once pupils are familiar with all of the signs and symbols displayed, arrange them so that they convey a message, or tell a story. For example, you might place the stop sign, picnic area sign and food symbols in a line, with the intended message being that pupils will stop in the picnic area for lunch.

Ask pupils what they think these signs and symbols mean when they are put in this order. Encourage a range of responses so that it is clear that not everyone understands these signs and symbols in the same way. Inform pupils of the intended meaning of the message. How close were their ideas? Discuss the efficiency of using symbols as a method of communication.

Introducing the book

Following on from this discussion, encourage the pupils to think of a word that would describe what the signs and symbols are intended to do. The key word they should arrive at is 'communication'.

This word 'communication' now becomes the main focus of a semantic map, which should be completed in groups and on large piece of paper. Have the pupils focus their semantic map on the different methods of communication. Thinking about 'who', 'what', 'where', 'when', 'why' and 'how' will help them develop their ideas.

Next, ask pupils to focus on each subsection, this time brainstorming and listing specific vocabulary, words and phrases related to each method of communication. The pupils should use a different colour pen or pencil for this part of the activity. This semantic map can later be used by pupils to create a procedural text on the topic of communication.

Questions

Chapter one—Code Breaking Made Easy

Literal questions
- What is on the door?
- How was morse code sent?
- What does SOS mean?
- How do you make dots and dashes using the telegraph?
- How can blind people read?

Higher order questions
- Why do you think Samuel Morse developed his code?
- Do you think it was a good system of sending messages? Why or why not?
- Why does the text use coloured dots instead of raised dots for the Braille?

Chapter two—Codes in Pictures

Literal questions
- What did Blackbeard's flag look like?
- What are picture signs called?
- What are the people who work with ancient objects called?
- What is the Egyptian symbol for 'L'?
- Why is the Rosetta stone so important?

Higher order questions
- If you were a pirate, what would your flag look like? Why?
- Why don't people today write like the ancient Mayan people?
- Are there any similarities between the way we write today and the ancient Egyptian hieroglyphs?

Chapter three—Secret Spy Codes

Literal questions
- How did Lysander win the battle?
- What is a scytale?
- What code did Julius Caesar invent?
- When was the Enigma machine used?
- What made the Navajo code so important?

Higher order questions
- What would happen if the batons on the scytale weren't the same?
- Why did Caesar develop his own code?
- Why do you think the Navajo code was never broken?
- What do you think was the easiest code to use? Why?

Guided comprehension lesson plan

Strategy

Self-questioning

Text selection

Modelling: '• • • - - - • • • Means SOS', pages 6 and 7
Applying: 'The Enigma Machine', pages 26 and 27

Modelling the strategy

Ask the pupils if they have ever read a piece of writing and had questions about it. Share and discuss these personal examples.

Have ready a supply of small post-it notes with a question mark on them. These will be used to highlight areas where questions arise in the text. Read aloud with the pupils the title and text of the passage '• • • - - - • • • Means SOS' on pages 6 and 7. While you are reading, express your thoughts and any questions you have about the text. Each time you have a question, place a post-it note with a question mark next to the passage and explain your reasons to the pupils, then write the question on the whiteboard. For example, 'I wonder why they have put these dots and dashes in the title?' or 'Why aren't all codes meant to be a secret?'. Once the pupils understand the process, encourage them to come up with their own questions and observations as you read. Place a post-it note with a double question mark next to sections of the text that have the pupils confused and discuss these with the class group.

At the end of reading, return to the list of questions and have the pupils locate the answers to the questions. Write the answers on the whiteboard. Discuss the questions that were not clearly answered in the text—how will the pupils find answers to these? What sort of information are they looking for and why can't they find it in the text?

Introduce the concept of thick and thin questions. The questions from the above example that could be answered directly from the text were thin questions. Make a list of the words that were used to start thin questions, such as 'what', 'when', 'where' and 'who'. The questions that involved looking at the text's theme and concepts, or seeking background experiences and information, were thick questions. Make a list of the words used to start thick questions. These often include 'why', 'how come', 'I wonder' or 'what if'.

Applying the strategy

Supply pupils with their own post-it notes with question marks on them, a copy of **CM 1** and a copy of 'The Enigma Machine' from pages 26 and 27. The pupils should place a post-it note next to any section of text that is unclear, or raises a question in their minds. They should write all of their questions on **CM 1** as they arise.

Have the pupils share their questions with a partner once they are ready. Did they have the same questions? Why or why not? Pupils should then examine the types of words used at the beginning of each question to identify the thin questions, then should locate the information and write their answers on the CM. If the pupils are not able to answer the question directly from the text, it is a thick question and should be noted as such on the CM.

As a class group discuss whether the pupils asked more thin or thick questions. Why did this happen? Which type of question is more interesting, and which gives them a greater understanding of the text? Why? When asking questions of others about written and spoken texts, should they ask thin or thick questions? Why?

Linking to writing

Pupils could use this strategy to ask questions about their own writing during the revision stage.

CM 1

Name   **Date**

Thin and **thick** questions ?

Read the passage 'The Enigma Machine'. Write down your questions about the passage as you read.

Thin or **thick?**

1

2

3

4

1 _____

2 _____

3 _____

4 _____

Once you have read the text, write your answer to each question below. In the column above write down whether each question was thin or thick.

1 _____

2 _____

3 _____

4 _____

Thin question words I have used:

_____

Thick question words I have used:

_____

The most interesting question someone asked:

_____

Writing non-fiction lesson plan

Process

Revising

Text model

Procedure: 'How to Make an Alberti Disk', page 11

Feature

Fluency

Teaching the feature

In this session, the example text has been rewritten with altered sentence fluency so that the pupils can make revisions. Make a copy of the example text (below), either on large piece of paper or on an overhead projector sheet, then read through it with the class.

How to Make an Alberti Disk

In order to make the disk known as the Alberti disk named after the famous Italian cryptographer Leon Battista Alberti you need to have a piece of cardboard a pair of scissors a split pin and a pen. Draw a big circle. Draw a small circle. And cut. Now take the smaller circle you have cut out and around its outside edge write the 26 letters of the alphabet in alphabetical order. Take the large circle. Write the letters of the alphabet in random order. Write them around the edge. The two circles, the large one and the small one need to be combined so use the split pin to push through the centre of the two circles and attach them together so that they can rotate. Turn the circles. Make the 'a' of the small inside circle line up with any chosen letter on the larger outside circle. Keep the disk in this position. Write your secret message matching up the alphabet letters with the code letters. Make sure that the person decoding your message has a disk. Their disk needs to be exactly the same as your disk. The two disks need to have the 'a' in the same position to start with.

Ask pupils if the text was easy to read. Did it make sense? Did they enjoy reading it? Then ask them what they would do to improve the text.

Discuss simple sentence structure with pupils and then have them consider whether the sentences work together, or if the writing is fluent.

Explain that the pupils will be revising the text to improve its fluency. Ask the pupils to consider whether they paused halfway through the text, or if they can remember what they read at the beginning of each sentence once they reach its end. Have the pupils think about ways they could fix these problems. They should consider the whole text, paragraphs, sentences and then individual words.

Make changes to the text based on the pupils' suggestions. Once the text has been revised, compare it to the original by discussing how its appearance has changed, and therefore its structure. Identify other changes such as consistent sentence length and sentence structures. Have the pupils mark both the original and revised text out of ten and ask them to explain reasons for the different marks given.

Applying the feature

Have pupils select a piece of text from their writing folders that is at draft stage. If they do not have a piece of writing ready to revise, have them write a procedural text on how to send an SMS message (see page 30 of *Break that Code*).

Have the pupils read their text, then give it a mark based on the fluency checklist on **CM 2**. This should direct pupil's revision by identifying areas that need to be improved. Once they have made revisions, they should give the new text a mark based on the fluency checklist.

Group sharing and evaluation

Bring the pupils back together to share their original and revised texts. Discuss how the revision process has improved their original text and what they thought about the process. You might also have them consider what would make the revision process easier, such as carefully planning their writing.

Going further

Pupils will need further experiences in revising both their own and other people's texts, focusing on other features of writing such as paragraph and sentence organisation, word choice and voice.

Name	Date

Let it flow!

Read through your draft text and score its fluency on the checklist below.

If the answer is *always* score 2, *sometimes* score 1, *never* score 0.

How does your draft rate?

Fluency check list	Draft text	Revised text
My text can be read with expression.		
My text uses different types of sentences.		
My sentences are not too long.		
My sentences are not too short.		
I don't use a lot of unnecessary words.		
I don't have to stop and re-read the text for it to make sense.		
Total		

Now read through your draft text again. Look very closely at the text and write down some examples of sentences that need to be revised.

How can you reorganise, condense or expand these sentences to improve them? Write your new sentences here.

_____

_____

_____

Now write your revised draft on the back of this sheet and mark it using the fluency check list at the top of the page. How does your text rate now?

How have you improved your text?

_____

_____

Do any other parts of your text need to be improved? How will you do this?

_____

_____

Cross curricular activities

Maths

- Have the pupils look at the patterns contained within some codes, and repeat, recreate or adapt them to create new codes.
- Ask the pupils to create a code by replacing the letters of the alphabet with numbers. Is it a random choice, or is there a pattern involved? Pupils could write a message using their new code and see if one of their friends can decode it.

Humanities

- Conduct a research project into how particular cultures use codes or symbols to communicate messages, such as in indigenous paintings. Look at their choices of symbols which often reflect their environment, and the types of messages they communicate about daily life experiences.
- Study your country's flag. What symbols does it use? What do these symbols represent? Are these symbols still relevant in modern society? Ask the pupils what symbols they would use if they were to design a new flag for their country, and what these symbols would represent.
- Research the flags of other nations. Make a list of symbols and colours used and what they represent. Are there any common themes?

Science

- Examine how forms of communication have changed over time, from smoke signals and beating drums to the telegraph and high-speed fibre-optic cables. Look at how technological changes have advanced methods of communication and, in particular, the speed and accuracy of these communications.
- Design and make a new code or method of communication.
- Provide the pupils with a lighted candle, or stick of wax, and have them write a secret message on a piece of paper. Have them swap their message with a friend and paint over the paper to reveal their secret. (Note: ensure pupil safety by being vigilant when class is working with candles as they can pose a fire risk.)

Art and Design

- Once pupils have designed a new flag (in the Humanities activity) have them create it on paper. Focus on the use of different media to create a variety of effects, for example by using oil paints or watercolours, by blending colours, or by creating a collage of paper offcuts.
- Have the pupils create a series of symbols or pictures, like hieroglyphs, that can be used as a secret code. After creating their code, they could write a short procedural text on how the code works, then hand their code over to a partner who could use it to write a secret message back to them. See **CM 3**.

Music

- Music has its own code. It uses symbols such as those for quavers, semiquavers, flats and sharps to communicate to a musician which notes to play and for how long. Have the pupils create symbols for each of the notes, and use this code to write down and then play a short musical piece on a xylophone.

Drama

- Divide the pupils into small groups of about three or four. Have them create their own code language so that they can pass on secret messages to one another. For example 'Mama Bear has left the cave', meaning the head teacher has left her office, or 'all the ants are at the picnic', meaning the children are having their lunch.
- Have the pupils play a game of charades, using only their hands and body movements to convey their message.

Name **Date**

Secret message
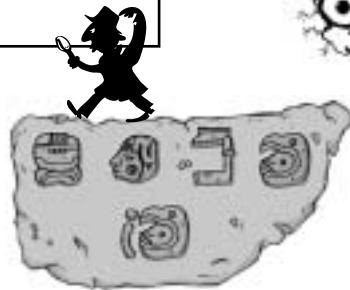
Think about a secret message you would like to send to a friend. Write your message out here.

_____

_____

_____

_____

_____

Underline the main words in your message. In the box, create a symbol for each of these words.

Now write your secret message using the pictures.

On a new sheet of paper, write a text that tells how to use your secret code, then write out your message. Give your procedure, and your secret message, to your friend and see if he or she can work it out.