



I, SPY

TEACHING RESOURCES

Suitable for ages 9+



I, SPY: A BLETCHLEY PARK MYSTERY BY RHIAN TRACEY: 4X LESSON PLANS AND IDEAS

INTRODUCTION

Suitable for:

Readers in Year 5 (aged 9+) and above

Ideal for:

Those who love historical and wartime books based on true events with spies and secrets aplenty

About:

The experiences of a girl who finds herself in the middle of a mystery at a secret code breaking centre

Includes:

4x lessons that build towards children cracking their own codes and writing algorithms

Themes:

War; History; Mystery; Codebreaking; Feminism; Secrets; Spies; Nature; Friendship



ABOUT I, SPY: A BLETCHLEY PARK MYSTERY

BLETCHLEY PARK, SEPTEMBER 1939.

Twelve-year-old Robyn has grown up in Bletchley Park, where her father works as a driver. When she's not at school, there's nothing she likes more than helping her dad in the garages.

Then the war begins and everything at Bletchley changes.

Robyn is assigned to help with the carrier pigeons that take messages to the Allies. But first, she must sign the Official Secrets Act and is ordered not to leave the grounds of the park. While Bletchley is buzzing with people recruited for the war effort and all eyes are on the skies, Robyn becomes convinced that there's something sinister going on within Bletchley Park itself.

Together with her friends Mary and Ned, Robyn resolves to uncover the enemy in their midst...

A thrilling mystery adventure set in Bletchley Park at the start of World War II, based on true events. Perfect for fans of Phil Earle and Hilary McKay.

About the author - Rhian Tracey

Rhian Tracey was born in Swansea but moved to the Brecon Beacons where she went to school. She studied English Literature at Aberystwyth then trained as a Drama & English teacher, writing her debut novel during her first few years in teaching.

Rhian works as a SEN teacher as well as volunteering with the charity, Medical Detection Dogs, helping to socialise puppies who will go on to be assistance dogs. She lives with her children and their dog and has just finished writing her ninth book, *I Spy: A Bletchley Park Mystery*.

NATIONAL CURRICULUM OBJECTIVES

ENGLISH: SPOKEN LANGUAGE

- i. use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
- ii. participate in discussions, presentations, performances, role play/improvisations and debates
- iii. gain, maintain and monitor the interest of the listener(s)



READING: COMPREHENSION

Develop positive attitudes to reading, and an understanding of what they read, by:

- i. discussing words and phrases that capture the reader's interest and imagination

Understand what they read, in books they can read independently, by:

- i. identifying how language, structure, and presentation contribute to meaning
- ii. drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence

WRITING: COMPOSITION

Plan their writing by:

- i. discussing writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar

Develop positive attitudes towards and stamina for writing by:

- i. writing narratives about personal experiences and those of others (real and fictional)

HISTORY

The national curriculum for history aims to ensure that all pupils:

- i. know and understand the history of these islands as a coherent, chronological narrative, from the earliest times to the present day: how people's lives have shaped this nation and how Britain has influenced and been influenced by the wider world.

Pupils should be taught about:

- i. a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066

COMPUTING

Pupils should be taught to:

- i. design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- ii. use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- iii. use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

SCIENCE - EVOLUTION AND INHERITANCE

Pupils should be taught to:

- i. identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

PSHE

Pupils should have the opportunity to learn:

- i. about different work roles and career pathways, including clarifying their own early aspirations



LESSON OBJECTIVES AND OUTCOMES



LESSON 1: THE BEAUTY OF BLETCHLEY PARK

Objectives:

- To introduce Bletchley Park and its natural surroundings, and encourage critical thinking and decision-making skills by evaluating and choosing a location for a hypothetical code-breaking centre.
- To learn about the contributions of prominent codebreakers, and their impact on the war effort.

Subjects: English, History, Geography, PSHE

Extract: *Signing the Official Secrets Act* (Pages 32-33 taken from Chapter 5)

LESSON 2: HIDDEN HEROES (WOMEN IN WAR)

Objectives:

- To develop an understanding of the different ways in which women have served in wars and their significance.
- To explore the importance of recognising the efforts and contributions of individuals throughout history.

Subjects: English, History, PSHE (The World of Work)

Extracts:

What does 'Dilly's Fillies' mean? (taken from Chapter 1) - Page 6

A 'Silly' Nickname (Page 111 taken from Chapter 15)

LESSON 3: PIGEON POWER

Objectives:

- To recognise the importance of carrier pigeons in the success of military operations during the Second World War.
- To appreciate their bravery and dedication by creating a biography or poster about an award-winning animal.

Subjects: English, Science, History, Drama

Extract: *Pigeon Perfect* (Pages 38-40 taken from Chapter 6)

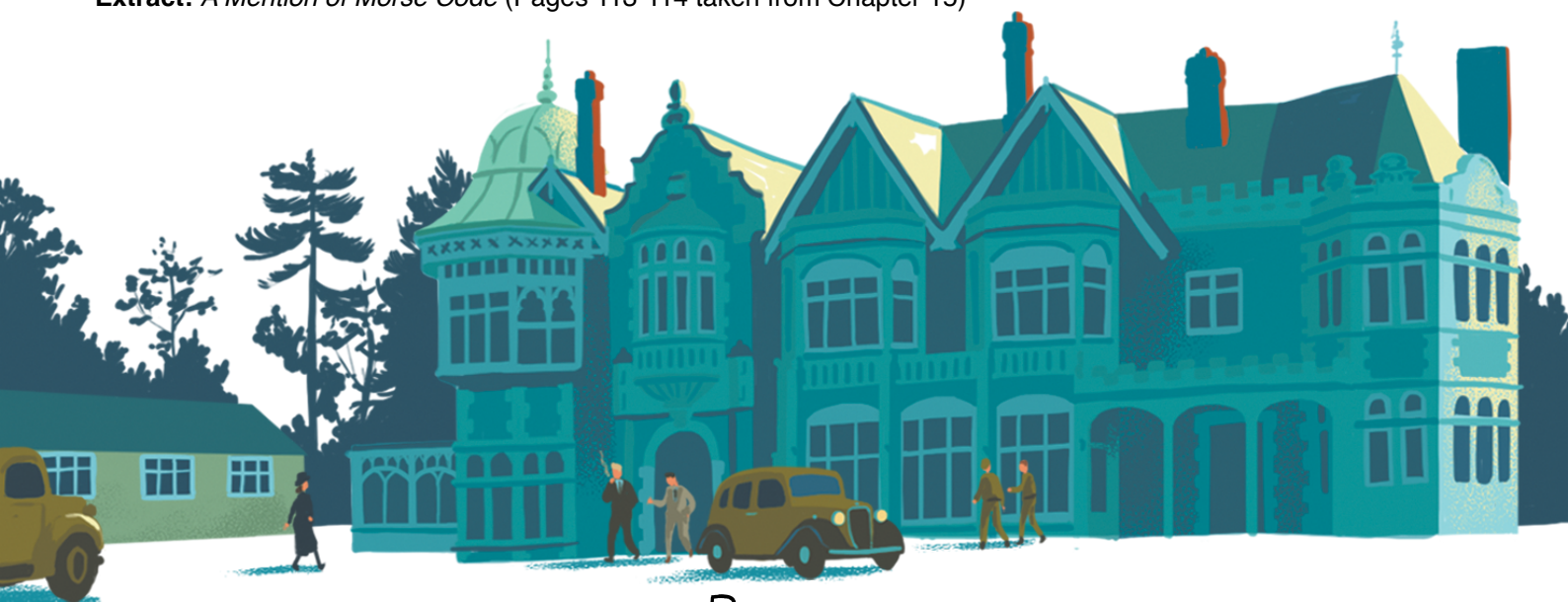
LESSON 4: CRACKING CODES

Objectives:

- To understand the historical context of codebreaking during World War II.
- To practise debugging skills by fixing errors in code and identifying problems.

Subjects: English, Computing, STEM

Extract: *A Mention of Morse Code* (Pages 113-114 taken from Chapter 15)



LESSON 1: THE BEAUTY OF BLETCHLEY PARK



TASK 1:

Start the lesson by showing an image of the exterior view of Bletchley Park. Ask children what they think the significance of this building was during World War II.

Introduce it as a place that became the centre of British code-breaking during the Second World War. Explain that it was staffed by teams of expert code-breakers (including mathematicians, linguists and engineers) who worked to crack the complex codes used by the enemy to communicate their plans.

Tell them that the people who worked there were sworn to secrecy after signing the Official Secrets Act (see Extract), with many of the employees not knowing what their colleagues were working on (as is said at different times in the story), and it was not widely known about for several decades after the war due to the strict confidentiality maintained regarding it, when its records were declassified and made available to the public and the world learned about the important role it played.

TASK 2

After Task 1, show children a map of the United Kingdom and identify the location of Bletchley Park in Milton Keynes. Get them to think critically about the different factors that went into the decision to locate Bletchley Park where it was by asking them why the location of the centre might have been significant.

Highlight how the urbanised city of Milton Keynes actually didn't exist during the Second World War, as it was only founded in 1967, and the area was mostly countryside which was ideal because it provided some level of protection from enemy bombing and allowed the codebreakers to work in relative isolation from the rest of the country. Note the many mentions of wild animals and nature throughout the book.

Then, provide some additional context by pointing out other key military and government sites that were located nearby such as the headquarters of the British Army's General Staff; the Air Ministry and the Air Ministry Research Establishment; the Government Code and Cypher School (GC&CS, and now known as GCHQ, which is now based in Cheltenham) and the British Signals Intelligence Centre.

Discuss how the proximity of these sites to Bletchley Park allowed for easy communication and coordination between the various organisations involved. Hand out the map of the UK included in this pack to each child and ask them to imagine that they are in charge of choosing a location for a secret code-breaking centre today.

Have them consider factors such as proximity to key military and government sites, protection from enemy bombing and accessibility. Where would they choose and why?

Afterwards, they can talk about their findings to the class, including the reasons for the area they have chosen.

TASK 3

Share with the class how there were nearly 10,000 people who worked in the wider Bletchley Park organisation. Write some of the names of famous codebreakers from Bletchley Park on the board. Some examples include Alan Turing, Joan Clarke, Betty Webb, Dilly Knox, Tommy Flowers and Gordon Welchman.

As a class, talk about the importance of recognising their efforts and how their work being kept classified for many years after the war has impacted upon their legacy. Discuss how some individuals also did not receive the recognition they deserved during their lifetimes such as Alan Turing and the female codebreakers (who will be learned about in greater detail in Lesson 3) for reasons such as homophobia, sexism and discrimination.

Explain how as a gay man in mid-20th century England, Alan was prosecuted by the very government he had spent over a decade working for. Today, the UK government has apologised for its treatment, issued him a posthumous pardon (along with others) and commemorated him on the £50 note.

Create a poster to celebrate Alan and his achievements including decoding the Enigma machine and inventions like the Turing Test.

EXTRACT: SIGNING THE OFFICIAL SECRETS ACT (PAGES 32-33 TAKEN FROM CHAPTER 5)

‘Sign your name.’

It was the same large and formidable document as before. How many copies did he have in there? Robyn took in the terrifying words again. She turned around in her chair. Surely the commotion over the pen – and the gun – would bring her father running into the room? But the door remained resolutely shut; maybe they’d locked it?

‘Sign the Official Secrets Act.’

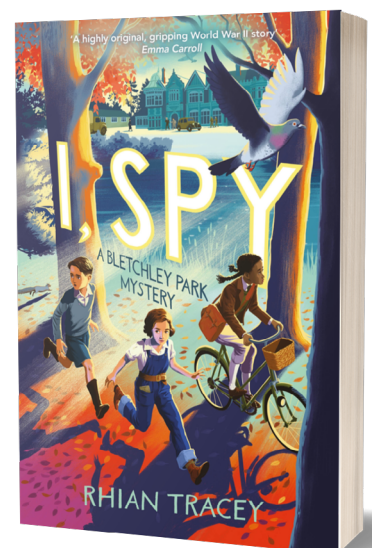
The Heron drew out every word with irritation.

How was she suddenly supposed to be responsible for keeping everything to herself? It didn’t matter because she was going to have to sign the act. And if she broke it – which could absolutely happen, even by accident, because no one was telling her what was secret and what wasn’t – it would result in her death! She was only twelve. She didn’t want to die!

Her hand shook as she tried to print her name in her best capital letters, taking care not to smudge them. She looked at the Heron as she passed the paper back to the Army man. She would not look at the gun. She would not!

‘You have signed an oath for life and will be silent until your death. If the Official Secrets Act is broken or contravened in any way, the traitor – in this case, you – will face death by hanging or firing squad, or will be sentenced to –’ the Heron began, repeating his warning.

‘A traitor? Me?’ she interrupted, imagining herself locked up in the Tower of London.





LESSON 2: HIDDEN HEROES (WOMEN IN WAR)



TASK 1:

To gauge children's understanding, ask them what they know about women in war and record their responses on the board.

Next, show them a diverse variety of pictures of professions that women performed during the war. These could feature: nurses and medical personnel; factory workers, producing weapons and ammunition; agricultural workers; telephone operators; transport workers, driving trucks and buses; journalists; and spies and codebreakers. Ensure that a representative range of women is shown such as Noor Inayat Khan, Ruby Loftus and Nancy Wake.

Explain that women played a full and critical role in the war effort, demonstrating their versatility and bravery in the face of adversity, and challenge any assumptions that they only took on jobs that were traditionally done by men.

Divide the class into small groups and provide each with the set of cards included in this pack that list the different jobs that women performed during WWII.

Ask children to match the job with a picture or description of the task. Afterwards, review the different jobs that women did and their importance in the war effort.

Extension: Children could also create their own cards of the pictures or descriptions of the jobs.

TASK 2

Following on from Task 1, talk about how many women worked as codebreakers at Bletchley Park (around 8,000 who made up 75% of the workforce) including the author's great-aunt who inspired this book. Use the extracts to discuss how the women who worked with Dilly Knox were labelled as 'Dilly's Fillies', a sexist nickname that showed that talented women were being defined by the men they work with.

Share notable names and stories such as Joan Clarke, who worked in Hut 8 with Alan Turing and was a talented cryptanalyst; Mavis Batey and Betty Webb, who were members of the team that broke the German Enigma code; Ruth Bourne who worked in the Testery, which was responsible for breaking high-level German ciphers; and Margaret Rock who was a pioneering computer programmer.

Ask the children to imagine what it might have been like for a woman working as a codebreaker during the war. What would her life be like? What challenges might she have faced?

Once they have thought about these, ask them to write a letter from a woman working as a codebreaker during World War II to her family back home. Encourage them to use their imaginations and to include as much detail as possible, while also being mindful not to reveal any classified information.

As they write, get them to consider their thoughts and feelings. What would she want to share? What might she be missing about home? Were her experiences similar or different to the men working there?

Once completed, have them share them with the class. This can be done through a whole-class discussion, small-group sharing, or a gallery walk where children take a walk around the classroom to see them on tables.

TASK 3

Recall how women's contributions to the war have often been overlooked or forgotten. Ask children to come up with creative ways in which they can help to raise awareness about the female codebreakers at Bletchley Park to ensure that their legacy is remembered and recognised.

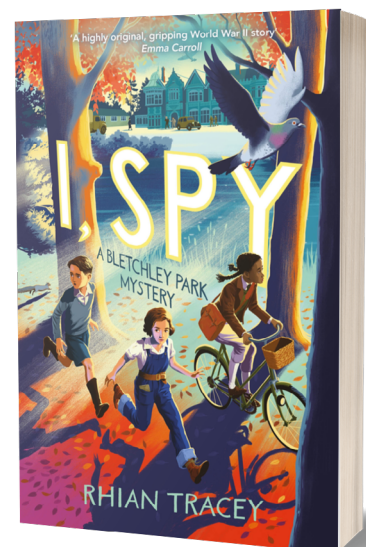
This could include: creating murals or posters to display in the school or local community; writing letters to local government or historical societies to campaign and advocate for monuments or memorials to be established in their honour; organising events or workshops to educate people; or sharing their stories with others on a local, national or international scale.

EXTRACT: WHAT DOES 'DILLY'S FILLIES' MEAN? (PAGE 6 TAKEN FROM CHAPTER 1)

The ladies were unusual for women at the park because they didn't work with the other typists and administrators in the Mansion. Instead, they were closeted in Mr Knox's cottage. Robyn wasn't sure what they were working on, but they most definitely weren't typing up letters for grand-looking men in suits and uniform. They even had a nickname – Dilly's Fillies, which made Robyn screw up her nose and feel wiggly.

EXTRACT: A 'SILLY' NICKNAME (PAGE 111 TAKEN FROM CHAPTER 15)

Mr Knox was sitting at his desk, wearing his horn-rimmed glasses and stuffing his pipe. Robyn took in the four young women who always surrounded him. Dilly's Fillies. She didn't like it; women weren't horses, that name was just silly. She'd been in and out of the cottage running errands for her mother and delivering cakes, so the ladies were all quite familiar to her now. Three of them dressed in plain shirts, cardigans and skirts but one woman, the tallest, and her favourite, wore a pair of high-waisted, wide-leg trousers and a bow tie. All three were talking at once, peering over Mr Knox's shoulder. Reams of papers streamed across the desk and pooled onto the floor at his feet. The tall woman with the bow tie leant forward and snatched up a piece of paper. She circled words with a red pencil triumphantly then handed it to one of the other women, who typed something into an ancient-looking typewriter with flashing lights.



NURSE

**FACTORY
WORKER**

FARMER

**TELEPHONE
OPERATOR**

MECHANICS

CODEBREAKER

**MUNITIONS
WORKERS**

**AIR RAID
WARDENS**

**BUS
DRIVER**

**Treating wounded
soldiers.**

Planting crops.

**Assembling
weapons.**

**Connecting
phonecalls.**

Cracking codes.

**Fixing cars and
other machines.**

**Making sure that people
could get where they
needed to be.**

**Keeping people safe
when the war came
to the home front.**

**Making sure
that industry
continued.**

LESSON 3: PIGEON POWER



TASK 1:

In the story, twelve-year-old Robyn is assigned to help with the carrier pigeons that take messages to the Allies. Give an overview of the history of carrier pigeons and their role in World War II. Describe how they were birds trained to carry messages over long distances. This allowed for quick and reliable communication between soldiers on the front line and their headquarters, even in conditions where telegraphs or telephones were not available.

Show some images or short videos of carrier pigeons and explain how they were trained to fly from one location to another, carrying messages in a small pouch attached to their leg. Discuss the significance of them during the First and Second World Wars, and how they have been used as far back as ancient Roman times.

Provide children with the 'Part of a Pigeon' resource sheet included in this pack. Ask them to accurately label the parts of the pigeon, including the head, beak, neck, wings, tail and feet. Invite them to share what they know about pigeons and what makes them suitable for carrying messages.

As a class, write down their various adaptations such as their strong homing instincts, good eyesight and ability to fly long distances at high speeds on their sheet.

TASK 2

Ask the children to close their eyes and imagine that they are carrier pigeons flying over enemy territory to deliver important messages during the war.

Next, encourage them to empathise by considering the many challenges they would face in this scenario. For example, they would need to fly high enough to avoid enemy planes, but low enough to stay within range of the people on the ground who need to receive the message. They would also need to navigate their way through enemy territory in bad weather and avoid predators, being captured or shot down.

Once the children have had a chance to imagine it, ask them to act it out. Create a simple obstacle course, using props such as cardboard boxes and balloons to represent enemy planes. Have them pretend to fly from one end of the room to the other, delivering their important messages safely to someone on the other side at a designated endpoint, while avoiding the obstacles. The team or individuals who complete the course in the shortest time and with the message successfully delivered wins the game.

Finally, reflect and ask them what they have learned about their bravery and dedication. If children don't wish to take on the role of pigeons, they could use a paper pigeon template, adding details and colour to it as they like.

Extension: This idea can also be adapted where children can design their own board game of a pigeon delivering a message. Using the squares of the board, draw a map of the enemy territory and mark the start and end points.

Label various obstacles along the way, such as enemy planes and predators and make pigeon cutouts to use as game pieces. Decide on the rules for the board and avoiding obstacles. For example, when landing on a space with an enemy plane, they must go back two spaces.

Play the game by having the children take turns rolling their dice and moving their pigeon game piece along the board.

TASK 3

Share with the children the story of Winkie, a brave carrier pigeon who won the prestigious Dickin Medal in 1943 for assisting in the rescue of an aircrew forced to ditch in the North Sea during the Second World War.

Explain how they were in danger and needed immediate help, so they released Winkie with a crucial message that would alert the authorities to their location. Despite facing harsh weather conditions and potential dangers from enemy forces, Winkie successfully delivered the message and helped lead to the rescue of the aircrew.

Children could write a short biography or create a poster about Winkie's achievements.

EXTRACT: PIGEON PERFECT (PAGES 38-40 TAKEN FROM CHAPTER 6)

‘I’d like you to meet Joy and Charity,’ Mr Samuels said, grandly opening the door to the hutch. A bird stepped from the hutch onto Mr Samuels’ hand and he stood up so that she could see better.

‘Why are you keeping a pigeon in a rabbit hutch?’ Robyn asked, mildly disappointed about the lack of a rat.

‘Look about you – there’s lots of them up here, mostly squeakers –’

‘Squeakers?’ she interrupted. She wished he’d speak more plainly.



‘Aye, young uns. Joy and Charity are my experienced carriers, along with Faith and Hope. In my humble opinion, they’re the best of them. Isn’t that right, my lady?’ Mr Samuels cooed to the bird.

When she looked more closely, the pigeon was all the colours of the rainbow. Like a puddle of engine oil in her father’s garage: glossy gold, green, daffodil-yellow, purple, pink, as well as the obvious grey and blue.

‘Soft as velvet,’ Mr Samuels said, more to Joy than her. As he gently stroked the bird’s feathers, he spoke again. ‘A bird of the air shall carry the voice and that which hath wings shall tell the matter. You might remember from your Sunday school bible lessons that Noah was the first man to realise the worth of these birds.’

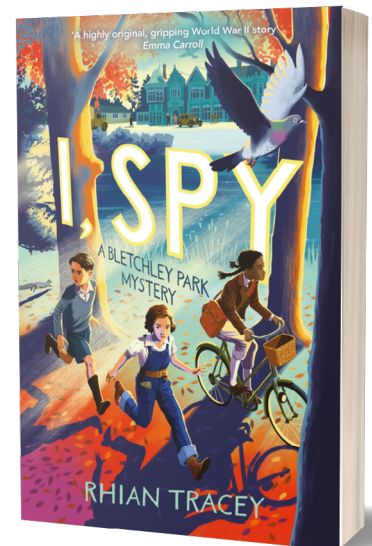
‘I was told to leave Sunday school,’ Robyn warned him.

She really did hope that this man wasn’t going to turn into one of those old people who lecture children using stories from the Bible as moral message. She’d met plenty of them before and decided they were to be avoided at all costs.

‘Let me remind you, then. Noah sent a raven first, but he never came back. Happen he found a tasty treat and forgot all about poor Noah. Not the dove though – reliable as clockwork they are, have an inbuilt compass, powerful as a nail to a magnet. They use the sun by day and fly by the stars at night.’

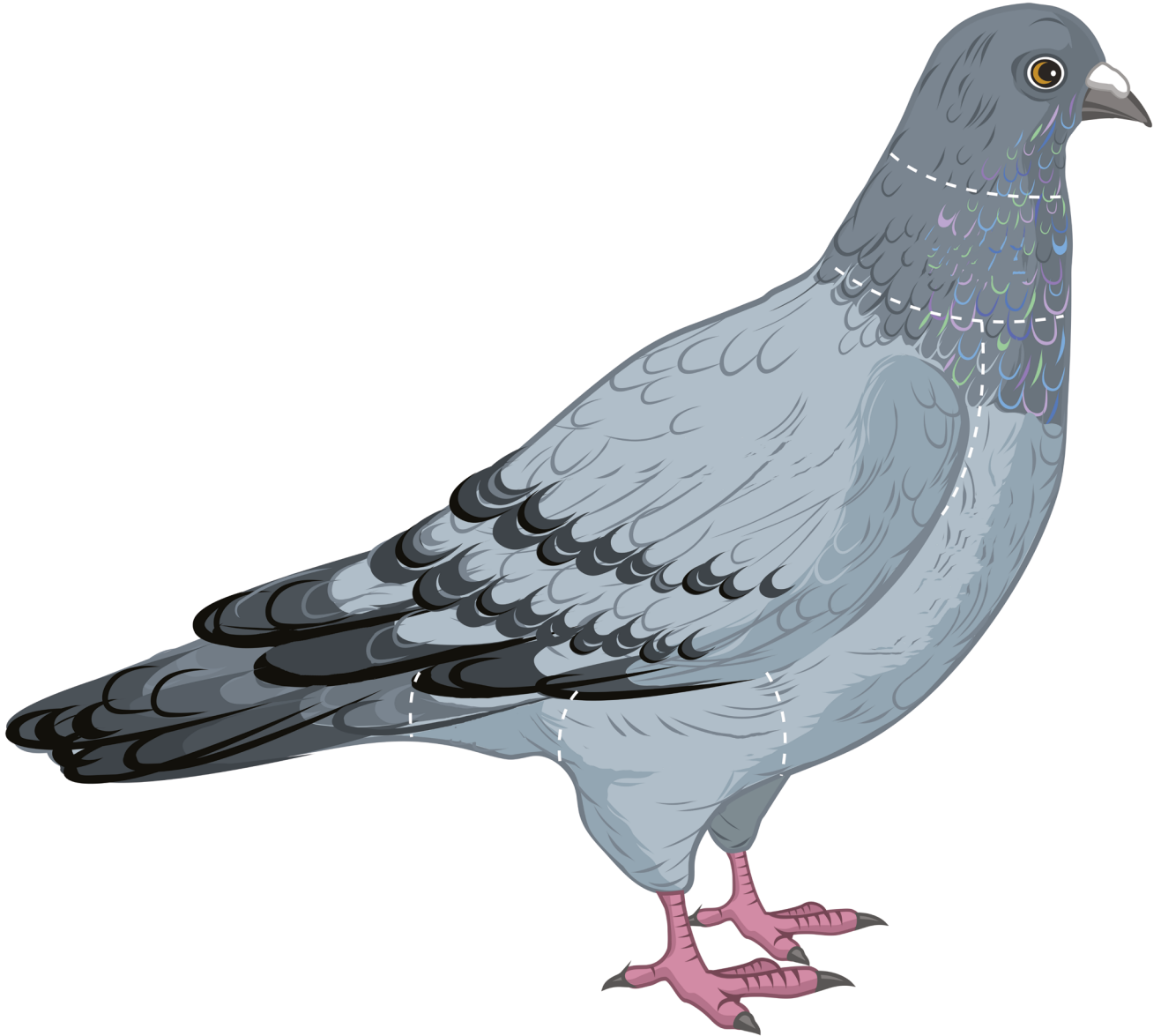
‘She is beautiful, I suppose. For a pigeon, that is.’ She watched Joy preen her feathers.

‘Aye, she is. Hand-reared her at home, just a stone’s throw from here.’ He nodded at the window. ‘Pigeons only fly in one direction and that’s home, although they can learn to have more than one home. Reliability is one of the best things about these birds. And between you and me, some of them are descended from royalty. The king’s angels.’



Parts of a Pigeon

Can you correctly label the following parts: head, beak, neck, wings, tail and feet



How is this pigeon adapted to carry messages long distances?

LESSON 4: CRACKING CODES



TASK 1:

Begin this lesson by introducing the concept of codebreaking and explaining its significance during the Second World War. Discuss the importance of secret communication and why code systems were used to protect sensitive information. Emphasise how breaking these codes could provide valuable intelligence and help turn the tide of the war.

Next, provide the children with an overview of different code systems used during the Second World War, such as the Enigma machine used by the Germans. Show them examples of coded messages and explain how codebreakers were able to decode them.

Demonstrate how simple codes, such as Morse code work, which is mentioned in the extract, and how it can be broken by choosing a simple message such as “Hello” and modelling to children how to translate each letter into its Morse code representation. Explain that a dot is represented by a short sound or flash of light and a dash is represented by a longer sound or flash of light. Emphasise that the timing and spacing between dots and dashes is important in Morse code.

Extension: How long can children make their messages using the Morse code system?

TASK 2

Then, move on to discussing the methods used by codebreakers to break complex codes. Explain how codebreakers would use a combination of skills such as mathematical and algorithm analysis, pattern recognition and intuition to identify and break the code.

To bring the lesson to life, consider using interactive activities and resources such as online games and escape rooms that demonstrate the process of codebreaking and have the children participate in a simulated code breaking activity where they work together to find the solution.

Next, teach the children about debugging, the process of finding and fixing errors in a program. Provide them with a program that contains errors and have them work to find and fix the problems. Encourage them to use a systematic approach and to test their code after making each change. By doing this, they can learn to isolate the problem and identify the root cause of the error.

After this, ask the children to work in pairs or small groups to build a simple game using a programming language such as Scratch or Python. Show them how to incorporate elements such as graphics, sounds and user interaction into their game and once they have completed it, share it with a friend to see if it works as planned or still requires debugging.

TASK 3

Discuss with children about the future of coding and programming and how these skills will significantly impact the world in the years to come. Talk about how schools are now including them as part of the curriculum. Inspire them to pursue a career in technology and raise awareness of the vast and exciting possibilities that it can offer by providing them with a basic introduction to emerging technologies such as virtual and augmented reality, robotics and drones, 3D printing, wearable and smart home technology, and autonomous vehicles.

Show examples and explain how each of these technologies are being used in industries such as healthcare, transportation and entertainment and consequently, they are rapidly changing the way we live and work. Get them to think about what new technologies might be invented in the future and how they might be used to solve problems or improve our lives.

Next, introduce the idea of a ‘job of the future’ and look at some sample job descriptions of careers today. Using these, ask them to create a job description for a job that involves coding and programming that could exist in the future. Encourage them to be creative and think outside the box. To support their learning, provide them with the template in this pack to help them organise their ideas.

EXTRACT: A MENTION OF MORSE CODE (PAGES 113-114 TAKEN FROM CHAPTER 15)

Ned's stomach rumbled again.
'Tell us what happened in there, then?' he prompted.

'I knocked on the door and the women pounced on me and took the package. They opened it and spread it out on Mr Knox's desk and then started speaking in another language,' Mary explained.

'What language?' Ned asked, intrigued. 'German?'

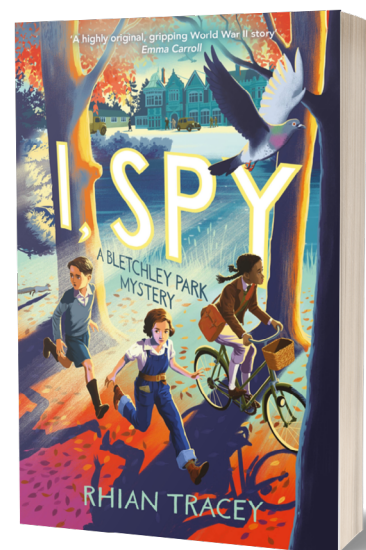
'Italian, I think.' Mary hazarded a guess.

'How do you know Italian?' Robyn queried, trying not to sound jealous.

'Mr Alquin gave me lessons after school. We did some Latin too,' Mary explained. 'And Morse code, although I already knew that, thanks to Dad.'

'Ah! So that's what Owen and Thomas were on about – your special lessons. How come you never told me about them?'
Maybe Mary really was going to go to university.

'You never asked.'



Job of the Future

Job Title:

Description:

Key Responsibilities:

Required Skills:

Education and Experiences:

Salary and Benefits:

FURTHER IDEAS AND ACTIVITIES

1. Read more books that explore the concept of codebreaking, spying and secrets such as *Noor Inayat Khan (My Story)* by Sufiya Ahmed, *Alan Turing (A Life Story)* by Joanna Nadin, *Code Breaker*, *Spy Hunter: How Elizebeth Friedman Changed the Course of Two World Wars* by Laurie Wallmark and Brooke Smart, *Escape Room* by Christopher Edge and *Puzzles for Spies* by GCHQ.
2. Create a timeline of significant events in the years of World War II to help children to understand the sequence of events leading up to and during the war and see how events influenced each other. Add information such as names of people, the impact of the event, and when and where it happened.
3. Research the role of other technology used in the war, such as radar and submarines. Present their findings in a range of ways such as a written report, spoken or technological presentation or poster.
4. Write a diary entry from the perspective of a child living through the war. Focus on the child's experiences, including things like: evacuation and being separated from family and friends, air raids and bomb shelters, rationing and shortages and the end of the war.
5. Set up a coding club in your school, where children can complete a range of coding challenges.

