FAMILY CASE FILES · BOOK 4

THE LANTERN CODE

Teacher & Homeschool Guide

Six detective lessons for ages 10 and up, built on the six cases in the book.

- A lesson plan for every case
- Discussion questions and writing prompts
- Student notes sheet (copy one per student)
- Class tracker
- Where to find every answer in the book

FREE · BY AMIRA FINN

You need one copy of *Family Case Files: The Lantern Code* (Book 4). This guide may be copied freely for home, classroom and club use. amirafinn.com

HOW TO USE THIS GUIDE

Each case becomes one lesson of two 40-minute sessions (three where a case is marked 3 sessions), about 13 sessions in all. Students work in groups of four; one book per group is best.

You need	Details
The book	One copy for the teacher; one per group of four is best.
Copies	The book allows you to photocopy p. 4, the exhibit pages, the scratch pads and the membership card, for home and one classroom (copyright page). Copy every page of this guide freely.
Supplies	Pencils, a protractor or compass rose (Case 1), a clock or timer.
Teacher answers	All answers are in the book: Grown-ups cheat sheet, skills grid, lock-word notes and "where kids get stuck" (p. 112), case solutions (pp. 114–125), Quick Case answers (p. 126), exam answers (p. 127). (page list on the last page).

Three ways to play. Rookie (☆, ages 10–11): the ☆ questions, each case's Reply Flash and the culprit. Standard: add the Standard exhibit. Master (teens): add the Master and Teen questions.

Group roles (groups of four). Map Reader handles maps and measuring. Timekeeper writes every time and date. Code Breaker fills in the code letters. Note Taker writes the proof. Rotate roles each session.

The lesson rhythm. Session 1: read the case opener aloud (5 min); groups work the first exhibits (25 min); each group shares one fact they are sure of (10 min). **Session 2:** finish the exhibits (20 min); complete the suspect board and code word (10 min); each group accuses with ONE piece of proof while the class tries to knock it down (10 min). Read the solution together only after every group has accused, or open the next session with it. **Session 3 (cases marked 3 sessions):** recap sure facts (5 min), final exhibits (20 min), accusations (10 min), read the solution (5 min).

One rule for every lesson: evidence before opinions. A guess only counts when a student can point to the page that proves it.

Standards links (Common Core): RI.5.1 / RI.6.1 cite text evidence · W.5.1 / W.6.1 argument writing · SL.5.1 / SL.6.1 discussion · 4.MD.C.5 angles · 6.RP.A.3 rates · 4.OA.C.5 patterns · 6.SP.B.5 the mean.

Differentiation and extras. Support: the Rookie route, with the hint page facing each Accuse page, plus the stuck-points on p. 112 read aloud. Stretch: the Master route, then students write a mini-case of their own. Early finishers and warm-ups: Quick Cases (5-minute warm-ups). Assessment: the Detective Exam (pp. 107–108) after the final case.

LESSON PLANS

"During" questions are safe to ask while students work. "After" questions give away the answer: save them for after the solution.

CASE 01

The Runaway Drone

STARTS P. 5 · 2 SESSIONS · SKILLS: BEARINGS ON A COMPASS ROSE, MEASURING ANGLES IN DEGREES

Objective: Students read compass bearings to find where three lines of sight cross.

Hook (5 min): Stand in the middle of the room. Ask: "If north is the door, which way is 90°? 180°?"

During (safe while solving):

- Start at north. What bearing does each clue give?
- Where do the two bearings cross on the map?
- Where do the three lines meet?

After the solution (spoilers):

- A drone failsafe should have landed it nearby. Why does that matter to the case?
- What would a careful drone pilot have done?

Writing prompt: Write safe-flying rules for the drone club, including one rule about logging every flight.

CASE 02

The Thunder Alibi

STARTS P. 23 · 2 SESSIONS · SKILLS: DISTANCE FROM SECONDS BETWEEN LIGHTNING AND THUNDER (RATES)

Objective: Students use "seconds ÷ 5 = miles" to work out how far away someone really was.

Hook (5 min): Ask: "Sound travels about a mile in 5 seconds. If thunder comes 10 seconds after lightning, how far is the storm?"

During (safe while solving):

- Count the seconds in each report. How far away was the storm from each person?
- Does each person's story fit that distance?
- Time the 7:44 phone message. How far from the silo was the caller?

After the solution (spoilers):

- The loudspeaker called the table 4 judge during Pryce's "I'm home" message. What did that prove?
- How can a storm be a witness?

Writing prompt: Write the weather report for that evening, including the lightning-to-thunder times as evidence.

CASE 03

The Pebble Dots

STARTS P. 39 · 2 SESSIONS · SKILLS: GRID PAIRS AND COORDINATES (ROW FIRST, THEN COLUMN), DOT CODES

Objective: Students read row-then-column pairs on a grid to decode a message.

Hook (5 min): Draw a 5×5 letter grid on the board. Give pairs like 2-3 and ask students to find the letter (row first!).

During (safe while solving):

- Row first, then column: what letter is pair 4-3?
- Which message makes sense, and which is nonsense?
- Which way of reading the pairs makes real words?

After the solution (spoilers):

- Ferrier wanted Celeste and Teddy to learn something. What, and why did he use pebbles?
- Why does the order of a coordinate pair matter?

Writing prompt: Make your own grid code and write a five-word message for a partner to decode.

CASE 04

The Missing Marker Post

STARTS P. 57 · 2 SESSIONS · SKILLS: NUMBER PATTERNS AND RULES, DISTANCE ALONG A PATH

Objective: Students find the rule in a number pattern and use it to locate a missing post.

Hook (5 min): Write 2, 5, 8, 11 on the board. Ask: "What comes next, and what is the rule?"

During (safe while solving):

- Write the jumps between the numbers. What is the rule?
- Which post number is missing, and how far along the path is it?
- What is left where the missing post stood?

After the solution (spoilers):

- A changed order looked suspicious but wasn't. How do you tell a coincidence from a clue?
- Why would someone move a marker post?

Writing prompt: Write a number-pattern puzzle with a hidden rule and the answer on the back.

CASE 05

The Missing Sandbags

STARTS P. 73 · 2 SESSIONS · SKILLS: THE MEAN (AVERAGE), DIVIDING TO FIND A RATE

Objective: Students find the mean of a set of counts and use it to work out how many nights someone was digging.

Hook (5 min): Ask five students how many minutes they read last night. Find the average together.

During (safe while solving):

- Add the counts and divide. What is the average per night?
- Which nights fit the pattern?
- Which night of the week has no missing bags?

After the solution (spoilers):

- Norris Pettigrew appears again. What does a repeat offender teach detectives?
- Why is an average useful evidence?

Writing prompt: Write the flood-defense report for the town council, using the mean to explain what happened.

CASE 06

The Lantern Answers

STARTS P. 91 · 3 SESSIONS · SKILLS: KEYWORD CIPHER GRIDS, LOGIC, EVERY EARLIER SKILL

Before you start: Students need each case's Reply Flash pair (lamp boxes, p. 4). Keep p. 40 open.

Objective: Students combine every case's lamp pair, find the keyword grid the replier switched to, and use it with the reply-night tally to unmask the replier and spell the lock word.

Hook (5 min): Show a cipher grid built from a keyword. Ask: "If the grid changes, does the same pair mean a different letter?"

During (safe while solving):

- Decode each lamp pair in the plain grid. Which one makes no sense?
- Which keyword makes Lamp 1 a real letter?
- Which suspect was there on every reply night?

After the solution (spoilers):

- Corvina used a false name. How did the crew see through it?
- What did the crew find in the tunnel, and why does it matter for the series?

Writing prompt: Write the newspaper story of the morning the lantern was found, in five short paragraphs.

DETECTIVE NOTES

Detective name: _____ Case: _____ Date: _____

Exhibit	One fact I am SURE of (with page number)	Code letter
1		
2		
3		
4		
5		
6		
7		

Code word: ___ ___ ___ ___ ___ ___ ___

Suspect	Why they COULD have done it	Why they COULDN'T (proof + page)

My accusation: _____ did it.

My best proof (page ___):

_____

Something I thought at first that turned out WRONG:

_____

What the evidence does NOT prove:

_____

CLASS TRACKER

Mark ✓ when a group cracks the code word with no hint, or H with a hint. Use the Lamp letters column for the book's running mystery.

Group / student	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Lamp letters	Quick Cases (of 12)	Exam (of 10)

Ranks: Exam ranks are on p. 127; students record their rank on the Detective License.

WHERE TO FIND THE ANSWERS

Every answer is in the book, with the full reasoning, so this guide points you to the right page instead of repeating it. Each solution page gives the culprit, the code word, the Master answers and "what the evidence does not prove."

Case	Title	Solution in the book
01	The Runaway Drone	p. 114
02	The Thunder Alibi	p. 116
03	The Pebble Dots	p. 118
04	The Missing Marker Post	p. 120
05	The Missing Sandbags	p. 122
06	The Lantern Answers	p. 124

Everything else:

- The lock word: Case 6 solution, p. 124
- Quick Case answers: p. 126
- Exam answers: p. 127
- Lock-word notes and where kids get stuck: p. 112

Tip: read each solution page yourself before the lesson, so you can nudge groups without giving the answer away.

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