

Evidential understanding, period knowledge and the development of literacy:

a practical approach to 'layers of inference' for Key Stage 3

Claire Riley is a Newly Qualified Teacher of history at Chadwell Heath School (11-18 comprehensive) near Romford, Essex.

Claire Riley

Claire Riley explains how she developed and improved the 'layers of inference' diagram—already a popular device since Hilary Cooper's work—as a way of getting pupils fascinated by challenging texts and pictures. Working with the whole ability range in Year 9 she analyses her successes and failures, offering many practical suggestions for moving pupils into rigorous, extended and historically-grounded responses. The significance of her work is the relationship between evidential understanding, period knowledge and the development of literacy. By equipping pupils to read, enjoy and analyse challenging texts she defines history's direct contribution to literacy. If the Head of English (and I would add the 'Deputy Head responsible for Curriculum!') remains ignorant of the sophisticated learning happening in history—on audience, context, purpose and form of texts—then the school is failing to co-ordinate and to value its work in raising standards in literacy. Claire Riley also lays much stress on the medium-term planning context. As well as the tight learning objectives relating to evidence, it is the wider lesson sequence, built around a valid historical question, that transforms a text (or a picture) from being 'difficult' into being fascinating and intriguing, even for the so-called 'less able'.

Since the growth in popularity of the Schools History Project (SHP) during the 1980s, source-work has played an important role in many history lessons. But as any good history teacher knows, when used badly, sources serve only to confuse pupils, leaving them with a fragmentary and confused picture. All too often, pupils take a quick glimpse at a source, think 'What does this source tell me?' discard it as biased (and therefore useless) and move onto Source B.¹

By contrast, used imaginatively, sources allow pupils to develop both historical knowledge and valuable evidential and literacy skills that will allow them to reach balanced and rigorous conclusions.² Hilary Cooper's idea of helping pupils to distinguish between different degrees of certainty or, as I was trained to think of it in my PGCE year, 'layers of inference', is one such imaginative approach (See Figure 1).³ Originally developed for primary schools, it can be used to help develop the thinking of all ages and abilities, from 'bottom set' Year 7s, to the 'A grade' candidates at GCSE and A Level.

'Why are we looking at even MORE sources, Miss?'

The purpose of layers of inference

The reason why many sources are discarded is because the pupil is unable to explain precisely what the source is useful for and the extent of its usefulness. Cooper's approach encourages pupils to consider carefully the usefulness of sources.

The value of the four questions in Figure 1 is that the pupil is immediately moved away from a scant surface examination of the source, and onto a complex and precise consideration of the usefulness of the source on a variety of levels. Sources can then be retrieved from the rubbish bin, uncrumpled and re-examined with careful attention to what exactly they do and do not tell us.

I developed Cooper's approach to help lift my Year 9 pupils out of the typical drudgery of a sequence of lessons within the National Curriculum's Study Unit

Figure 1

This generic analysis sheet can be used successfully with pupils aged 8 to 18.

The pupil is immediately moved away from a scant surface examination of the source

What does the source definitely tell me?	
What can I infer from the source? (or, What does the source suggest?)	
What does the source not tell me?	
What else would I like to find out? (or, What further questions do I need to ask?)	

What other questions do I need to ask?

What doesn't this source tell me?

What guesses can I make? What can I infer?

What does this source tell me?



Figure 2

Pupils annotated the sources with clear instructions to position their comments in the appropriate ring. Picture reproduced with the permission of The Museum of London.

3: Britain 1750-1900. The topic for the sequence of lessons was Victorian housing, with the main aim of the lesson sequence being that eventually my pupils would be able to produce an analytical answer to the 'Big Question' 'How healthy were Victorian towns?'⁴ The double page spread in the textbook did not appeal. The pupils had already done more than enough of this style of decontextualised, empty, 'historical skill'-type exercises. Nevertheless the sources in the textbook had great potential. What was needed was a way of maximising this potential by *engaging* the pupils, deeply and totally, with these sources. What was being sought was not vague generalisations, but rather precise commentary on the source's value for a particular enquiry about the condition of Victorian housing.

To achieve this, a range of textual and visual sources were enlarged and reproduced. To motivate the pupils (by intriguing them!) this mixture of visual and written sources were placed on pieces of coloured A2 card. The source was set in the middle, with four boxes drawn around it. In the four boxes the pupils were to write their responses to the four 'layers of inference' questions, as shown in Figures 2 and 3.

The 'Big Question' governing the lesson sequence meant that, from the start, the lesson where I used these sources had a clear purpose. During any lesson sequence it is vital that the teacher stresses, repeats and displays constant fascination towards the 'big question'. It is no good just casually mentioning the question a couple of times. Either the question is governing the lesson sequence (the 'enquiry') or it is not! The importance of carefully laying down the context and focus of the lesson sequence was highlighted by a similar activity undertaken with a group of Year 7 pupils on the Battle of Hastings. Here the pupils were using the Bayeux Tapestry. When asked what this source 'definitely' told them about the Battle of Hastings, the most intelligent answer was 'Well Miss, there was some sort of a battle; look that man's got a sword through him!' At this point, I abandoned my flawed lesson plan and returned to the textbook! With Year 9, the tight structure of the task and the broader context of a clear, substantial enquiry concerning Victorian Britain, pre-empted any similar confusion and helped to sweep away any Piagetian criticisms of source-work as being an exercise which is simply too complex for children of lower secondary school age.

'What are all these boxes for, Miss?'

**Practical context:
layers of inference in the classroom**

I began the lesson by recapping what the pupils had already discovered about Victorian Britain. This served both to refresh their memories and to give them the confidence necessary to tackle the sources. Then, as a class, we undertook a quick brainstorm of all the things we might look for in pictures in order to answer our

'Big Question'. All of the pupils were eager to contribute their ideas about how to find out if Victorian towns were unhealthy. Once I was confident that pupils were immersed in their existing historical knowledge and focused on the 'big question', I divided the class into small groups (twos and threes—keep the groups *small*) and allocated the sources.

On the whole, the source work itself was successful. The inference section was exceptionally pleasing. Many of the groups were confidently using the word 'inference' and 'infer' in their discussions. Examples of perceptive inferences came from many groups, with comments including 'there aren't enough facilities at the moment'. Other inferences included 'there are some attempts to help the poor' and 'clean running water unlike elsewhere'.

The answers to the question 'What else would I like to know?' were generally good. There were certainly no problems with the pupils being unclear about what they were being asked to do. But the main problem lay in ensuring that the responses to this question were not falling into irrelevance. Nevertheless, some really thoughtful and significant questions were asked that directly related to the topic and which I could pick up in subsequent whole-class oral work. The responses of one group are shown in Figure 3. This written source is potentially (and some defeatist teachers would say *prohibitively*) challenging. Straightforward textbook-style questions on utility and reliability would have got nowhere. Here, the activity structure encouraged the pupils to dig deep and to persevere. It made them alert to irony, to the audience of the text and to layers of meaning and their value for the historian. When one compares this with the limited responses gleaned from banal textbook activity or the way in which many pupils, without this supportive structure, normally give up on the 'difficult' words, the benefits of this activity structure are persuasive.

A further lesson was spent allowing the pupils to research some of the areas that their questions had thrown up, and anything else they felt that they needed to know. This helped to underline the importance of their responses to all four of the 'layers of inference' questions and highlighted the point that sources are not only useful for what they definitely tell us, but are also valuable for what they suggest and do not tell us. Including a focus on these issues meant that the final answers produced by the pupils were very comprehensive surveys of the state of towns in Victorian Britain and were full of critical, qualified references to actual historical evidence.

'Miss, has this cat got fleas?'

**Pupils' misconceptions and
problems with levels of inference**

Where many pupils struggled was over the varying levels of inference. Although most understood the concept

**It is vital that
the teacher
stresses,
repeats and
displays
constant
fascination
towards the
'big question'**

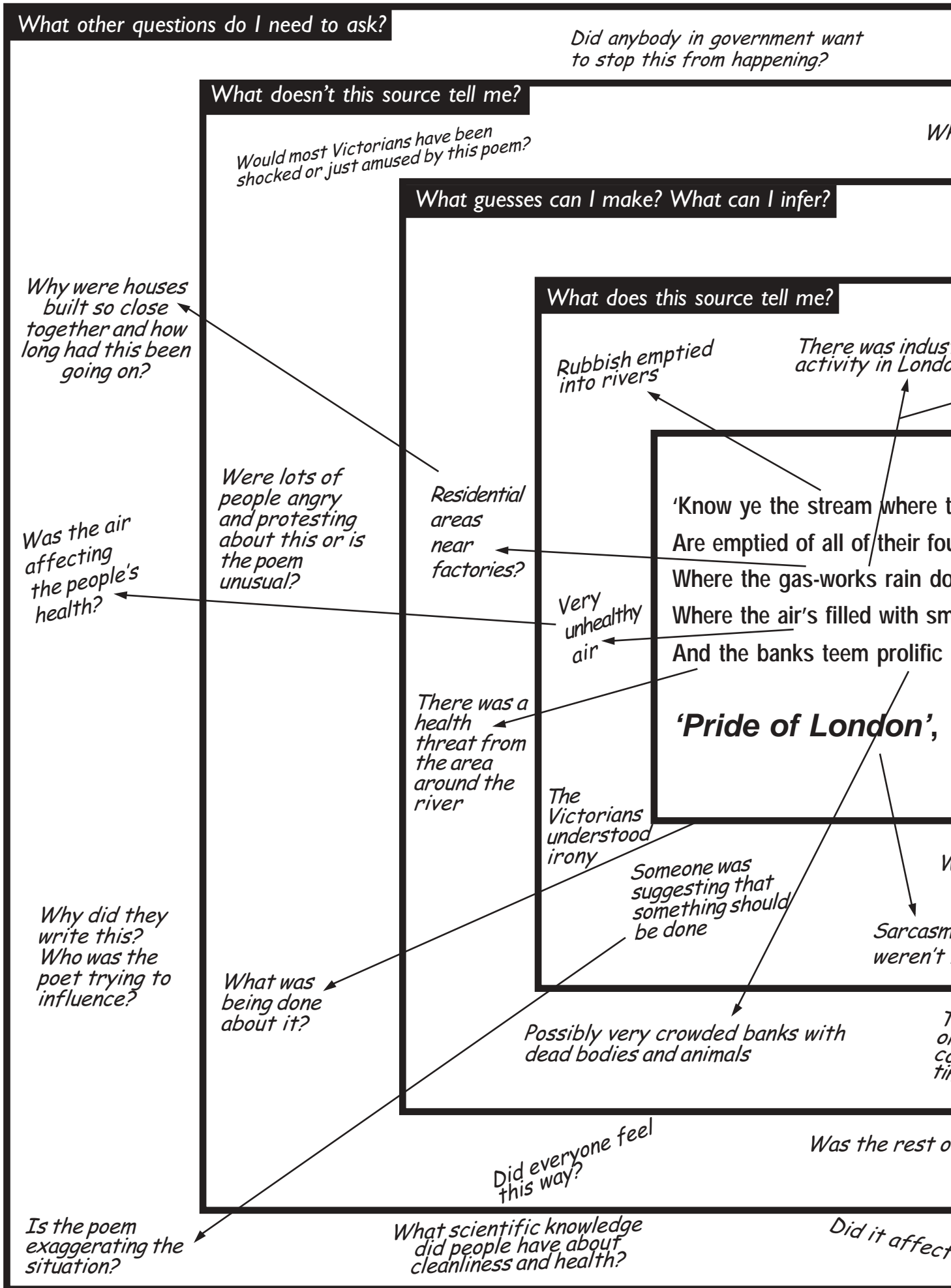


Figure 3 Pupils annotated the sources with clear instructions to position their comments in the appropriate ring.

Why it was like this

trial on

There were gas works at this time

Air's filled with smells-people were dirty

The whole place was dirty

The cesspool and the sewer
slushes and slimes
down the blackest of soot
smells that no nose can define
with corpses canine'

from Punch 1852

Written in a magazine

—these people really proud

There was little or no pollution control at the time

of Britain unclean?

the public?

Who read the magazine?

The river was very dirty, definitely not clean

Very unhealthy streets

Dead bodies in the Thames

Dogs and other animals in the Thames

No one to clear dead bodies off street

Sewage in streets no drainage system

Animals running around free

It doesn't tell us if sewage in the Thames was a mistake/accident or if it was the normal way of doing things

Why was there no drainage system?

Why wasn't anyone cleaning them up?

It doesn't tell us whether things were this bad everywhere?

Why didn't they try and stop this?

'Layers of inference' questions can rescue sources from the bin of uselessness

of 'What does the source suggest?' many had problems with the concept of a source 'definitely' telling them something. The responses to this question tended to be too generalised, with pupils remarking on the fact that the source definitely showed them that 'there were lots of people', or that 'nobody looks happy'. Others found this particular question even harder to answer. One group of pupils had worked out that the source was referring to something in the future, and therefore was likely to be addressing the problems of the present, but they failed to see that their rather perceptive comment (that the markets were open) was an inference, and not a fact. This may have been due to the fact that they did not clearly understand the difference between fact and inference. This was clearly an issue to address in similar lessons in the future.

Of course, the real point of the idea of the 'definitely' category is that some sources supply the historian with *unwitting evidence*. This is a very useful idea for pupils to acquire and to work with, too often left by some history departments to GCSE or even A Level. I need to spend more time exploring how we can teach the concept of 'unwitting evidence' at Key Stage 3.

One possible way of getting around some of the most common misunderstandings is to produce cards with definite facts, and inferred facts, and ask the pupils to fit these to the relevant boxes.⁵ This would allow them to discuss the facts, and move them around and between the boxes until satisfied with the answer. Most importantly of all, the exercise would avoid them spending their time in a desperate search for vague and unhelpful generalisations. It would be an ideal 'scaffold' for the lower attainer, lifting them into more challenging work.

A second concern raised by the pupils' work was their eagerness to hunt ruthlessly for hints of the sources of filth and disease, even when none were immediately obvious. This was a useful indication of the 'emotional baggage' that the pupils brought into the classroom. Guy Claxton has written about what he calls pupils' 'mini-theories', by which he means the beliefs and attitudes that both pupils and teachers alike bring into the classroom.⁶ I had failed to consider this problem sufficiently before teaching this topic. Rather than encouraging the pupils to leave this baggage behind and focus simply on what they were and were not told by the sources, I had simply reinforced their belief that every Victorian town was an unhealthy place to live.

This meant that the pupils concerned themselves with physical cleanliness, and neglected other important issues. For example, one group of pupils asked 'Why aren't people clean?' Another group, failing to 'read' a nineteenth-century painting for period-significant clues, was chiefly concerned about why the family had

allowed a cat that might have had fleas to sit near the dining room table. These were not the significant, period-sensitive questions I had hoped the pupils would ask. Unless the teacher can ensure that these questions are relevant to the enquiry, and that pupils apply prior knowledge, this aspect of the activity remains useless in terms of pupils' learning.

This problem is hard to avoid. What the teacher must ensure is that the pupils constantly have in the forefront of their minds the 'Big Question' that they are seeking to answer. This will help them to remain consistently relevant when asking questions of sources. Only then will pupils ask questions of significance to their enquiry. A complementary strategy to overcome this problem of insignificance would be to insist that the pupils were only allowed to ask a limited number of questions about the source. This should help them to focus on the key issues and ask significant questions about them, in this case things such as sewer improvement or attitudinal clues, and to overlook insignificant details such as the state of the family cat!

These observations about pupil misconceptions in no way invalidate the activity. On the contrary, they demonstrate ways in which the activity can be improved, refined and used as a generic tool in other settings. 'Layers of inference' questions can rescue sources from the bin of uselessness and firmly establish source-work as a productive learning activity for pupils of all ages and abilities. Learning will happen in the three areas of evidential understanding, literacy and period knowledge. Moreover, the good history department will work towards a collective, practical view on how these three areas of learning interlock. Used wisely, this technique is yet another weapon in the armoury for transforming otherwise tedious trawls through historical content into exciting lessons that yield thoughtful and rigorous responses from our increasingly analytical pupils. Good history teaching is systematic and sophisticated literacy work, teaching pupils to find texts fascinating through an emphasis on audience and form, and properly underpinned by developing contextual knowledge. Try it. And don't let either English or Art Department remain ignorant of your success.

REFERENCES

- ¹ For a fuller discussion of the dangers of pupils discarding sources needlessly, see Lang, S. (1993) 'What is Bias?' *Teaching History* No. 73.
- ² Portal, C. (ed.) (1987) *Sources in History: From Definition to Assessment*, Southern Regional Examinations Board.
- ³ Cooper, H. (1992) *The Teaching of History*, David Fulton.
- ⁴ On the use of 'big questions' to govern a sequence of lessons see, Counsell, C. and the Historical Association Secondary Committee, (1997) *Planning the Twentieth Century World*, Historical Association.
- ⁵ This technique is a development of a similar idea to assist pupils with extended writing put forward by Mulholland, M. (1998) 'The Evidence Sandwich', *Teaching History*, 91.
- ⁶ For a useful discussion of the relevance of Claxton's theories to history teaching see Husbands, C. (1996) *What is History Teaching? Language, Ideas and Meaning in Learning about the Past*, OUP.