



Reading Skills Overview: Infer

Make inferences from the text/explain and justify inferences with evidence from the text

The verb 'infer' is the root word of the noun 'inference' and is defined as 'being able to reach an opinion or decide that something is true on the basis of information that is available.'

(Oxford dictionary, 2019)

When people talk about 'inference' they often refer to the expression 'reading between the lines', but what does this actually mean?

Anne Kispal (*Effective Teaching of Inference Skills for Reading, 2008*) suggests that, when authors write, they do not describe every detail of events, characters' feelings or their motives. There are often 'gaps' in the narrative, requiring the reader to comprehend or 'work out' the implication, instead of being provided with every specific detail. It is this technique which makes their writing interesting, requiring the reader to use their imagination and therefore raising the level of enjoyment. An author will expect the reader to use information from the text to arrive at other implied information or conclusions.

We all use inference daily and in many different scenarios, often determining a person's mood or emotions based on their body posture or facial expression. We can also make inferences on their preferences by the clothes they wear, food they eat and music they listen to.

Inference is an essential skill to help us understand the world in which we live and we all need the ability to infer in order to decode. Some of this is innate, however, inferences can be simple or complex and it is therefore important to teach and explicitly demonstrate this to children. They often need a good vocabulary and background subject knowledge to be able to make plausible inferences from a text.

Within KS1, children must be able to "Make inferences on the basis of what is being said and done."

Within KS2, children must be able to "Draw inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence."

(National Curriculum, 2014)

As good readers, we make inferences all the time - inference being fundamental to understanding the true meaning of a text.

A variety of sources can be used when teaching how to infer in a Primary School setting:

- Texts / short extracts (fictional)
- Photographs / drawings / other images
- Objects / props
- Film clips
- Song lyrics
- Poetry
- Real life people/drama productions

The Skill

Professor Daniel Willingham, the American cognitive psychologist (<https://education.nsw.gov.au/our-priorities/innovate-for-the-future/education-for-a-changing-world/media/documents/exar/How-to-teach-critical-thinking-Willingham.pdf>), explains that inference is not really a skill that we can practise and get better at in the way that we can practise decoding. He suggests that learning how to infer is more of a trick than it is a skill. The "trick" of knowing how to infer requires the ability to do or possess three things:

- To be aware of whether or not you are understanding what you read
- To connect ideas together
- To have a wide vocabulary and general knowledge

Clare Sealy (<https://www.tes.com/news/inference-how-teach-it-primary-school>) builds upon this and says that, for effective inference making, the comprehension must be both integrative (being able to integrate information present in the text to make connections within it) and constructive (incorporating general knowledge from outside the text to fill in missing details and understand it as a whole).

It is clear that making inferences can be split into a number of different categories. However, there are two commonly used categories that most researchers agree with.

- 1. Coherence inferences:** Necessary for basic comprehension, these types of inferences can be created from an understanding of the text's cohesive devices, such as pronouns. Coherence inferences are the inference skill that we use most when reading.

For example:

'Katie begged her mum to take her to the park.'

In this sentence, the reader needs to understand that the pronoun 'her' is referring to Katie (use of cohesive devices) and that Katie wants to go to the park to play. These two pieces of information are essential to be able to construct meaning. There is very little background knowledge needed here to understand what is happening, how Katie feels or what she wants.

- 2. Elaborative inferences:** these types of inferences are not necessary to basic comprehension, however they give us more information and make a text more interesting by enhancing or intensifying details. For example, an elaborative inference may be about the consequences of an action, a prediction or speculation. Elaborative inferences depend on background knowledge and therefore are often more challenging than coherence inferences.

For example:

'Kevin sat in the dentist's chair. He heard a drilling noise coming from behind him. He began to sweat.'

These brief sentences require the reader to draw upon personal life experiences of a visit to the dentist to have work done requiring the use of a drill, or they need to make connections to general knowledge or pre-formed opinions of dentists. It is necessary to know that a visit to the dentist is often perceived as an unpleasant experience, involving treatment that can be quite uncomfortable and painful. The text omits these key details and, by doing so, stimulates the reader's imagination and enhances the mental image created.

Bowyer-Crane and Snowling (2005) also refer to the importance of children having strong background knowledge to make elaborative inferences, stating that children's ability to comprehend the meaning of a text or read it legibly will be affected if their general knowledge cannot assist them in reaching a conclusion.

Clare Sealy talks further about the importance of background knowledge in the making of inferences. She says that, although some children might have opportunities at home to build their world-knowledge, a number of children are not presented with these experiences. Therefore we as teachers must provide them with a broad curriculum, enriching experiences and opportunities to enhance their capital culture to enable them to build their knowledge in the school environment.

It is important to note that a better understanding of the world will help children to improve their reading comprehension, as they will be able to 'fill the gaps' in texts and interpret meaning through making connections.

The extract below is an example of how knowledge of WW2 (KS2 history) can support inferences:

Letters from a Lighthouse (Emma Carroll)

We were halfway through the news when the **air raid started**. It was a Friday in January: we were at the Picture Palace for the 6 p.m. showing of *The Mark of Zorro*. All month the **Luftwaffe** had been attacking us, **their bombs falling on London** like pennies from a jar, so the fact they couldn't hold off for just a few measly hours made me hate the Germans that little bit more.

Question: When was this story set?

Answer: The Luftwaffe was the German Air Force which carried out air raids on London during a large part of World War Two. World War 2 started in 1939 and ended in 1945, and therefore this story must be set in this period.

In addition to general knowledge, children will also need to have a strong vocabulary to comprehend and infer meanings within texts. A limited vocabulary will affect their understanding and therefore it is essential that other reading skills are also utilised when inferring. Defining skills may be needed when children are exposed to unfamiliar vocabulary and if recall is an issue, then annotating paragraphs with summaries to aid memory may be required.

For inferential skills to be truly mastered, an initial understanding of the text should be the highest priority, including understanding the vocabulary required to achieve simple meaning. Only then can inference be the focus.

The strategies

There are numerous strategies that can be used to support children drawing inferences from texts. First, each skill will need demonstrating. Then the children should be given the opportunity to practise and apply these skills through a range of contexts across the curriculum. The concept of inference should be introduced to children as looking for clues and creating a hypothesis from the evidence that they find – being detectives.

1. Asking why? Training the pupils to ask themselves 'why questions' during reading will help to support their understanding. Marzano (2010) suggested that teachers could support inference-making by suggesting pupils asking themselves four questions whilst reading:

- What is my inference?
- What did I use to make my inference?
- How good was my thinking?
- Do I need to change my thinking?

These questions could be used in conjunction with the 'think aloud' strategy below.

2. Teacher modelling of inferencing. As reading comes naturally to most adults, we don't stop and ask questions, doing this subconsciously to assist in forming

a conclusion based on evidence in front of us. When teaching children how to comprehend what they are reading, we must slow down our thought processes, verbalising them to demonstrate the steps we are taking in our heads in order to reach conclusions.

- Teachers can use 'thinking aloud' to express their thoughts as they read to pupils, (e.g. I think the story is set in woodlands because the author uses the words 'briars' and 'ferns'.)
- They may ask themselves questions to show how they monitor their own understanding, such as 'what I know from this text' and 'what I think' (e.g. I know that the man is described to have "white, snowy hair" and "a wrinkled forehead" - this makes me think that he may be elderly.)
- They may also refine or reject inferences explaining 'what I thought.. because...but...so' (e.g. I thought that he was going to steal the prize because the text says "Tom stared at the trophy with envy", but then the text also says that Tom is a respectful and sweet young boy, so this makes me think he wouldn't steal.) We can ask ourselves, do we agree with the inference being made?

3. Objects and visual representations: Children at almost any age can make inferences and, using picture books, this can be seen in children who are not yet decoding. Images, however, should not be limited to EYFS as they are extremely valuable for practising inference skills in KS1, KS2 and higher. One benefit of using objects or images is the removal of potential barriers such as decoding issues or reading speed and fluency, which might disrupt the ability to make inferences as the brain is focused solely on reading words. Again, using 'think aloud' strategies can be used to guide pupils' thinking, particularly for reluctant readers, through discussing and annotating pictures. Inference using pictures is teaching students to make connections between what they're seeing and the knowledge they already have on the subject.

- Where images include characters, teachers can also model inference by creating thought or speech bubbles based on an impression of the character provided by the picture.

One shall remind the people that this is one's hall and that I decide the happenings in the grounds.



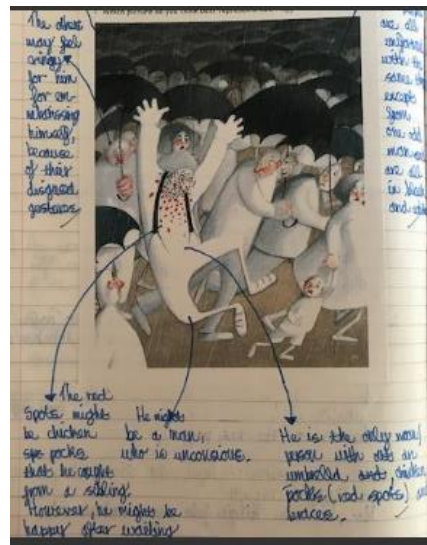
Why should I sit here and listen to him, I know just as much as Mr Toad, but I'm just not as loud or intruding.

- They could assign objects to characters from a text, e.g. if reading a fairy tale you could investigate who a bowl of porridge is most likely to belong to.

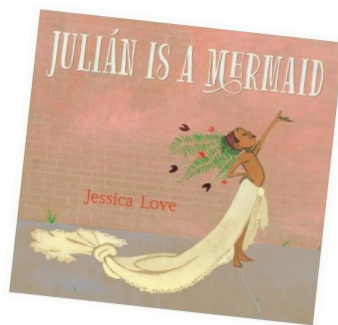
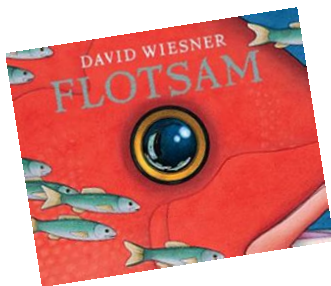


@primaryteachew – Inference lesson to match shoes up with character description/motive.

- Or another idea could be for pupils to annotate their images with inferences made and justify their conclusions.



- Alternatively, use wordless book or picture books to enable discussion and draw inferences based on what evidence you can see.



4. **Using real-life scenarios:** Making inferences about situations or people is something we do every day. However, children do not necessarily connect the inferences they make about people with inferences in reading - they see them as separate skills. A useful strategy is to use models such as the 'think aloud' to explore day to day scenarios, using clues to make inferences about people's preferences, locations or relationships. For instance, you could listen to a conversation between two people – what inferences can we make about them and their relationship? Or watch a short film clip and ask questions about relationships between the characters, their goals and motivations. The Disney Pixar Short Films would be an excellent resource.

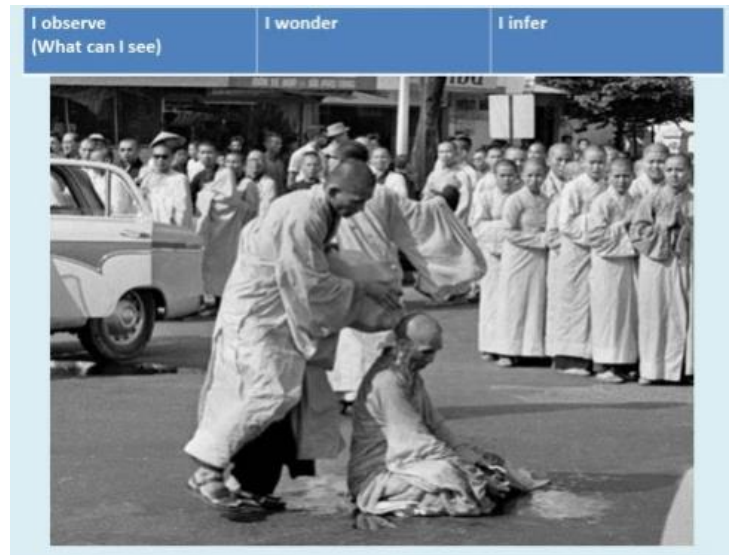
5. Graphic Organisers: Graphic organisers can really help children to think carefully and structure their inference. These techniques are especially helpful when children are asked to provide evidence for or an explanation of their inferences. It is important to explicitly model the thinking process behind and completion of these strategies. Examples of useful graphic organisers include:

- a. T-charts
- b. I can see...I know...I think or I observe... I wonder... I infer

32 What impressions do you get of Piper's house?

Give **two** impressions, using evidence from the text to support your answer.

Impression	Evidence



KS2 Reading SATs paper 2019

*Luke Richardson, 2017 -
Improving children's inference
skills with pictures*

6. Modelling inference: When working with children to draw inferences from the text, it is good practice to do this orally as well as in writing. To help them structure their thought processes, the following model will be useful:

- Read the question aloud or talk about your concept.
- Locate the key words in your concept or question. Scan the text for those key words and highlight or underline them.
- Read around the key words.

- Discuss what the text tells you about the key words or concept.
- Demonstrate using this information to make an inference about the key words or concept. – *It is important in this step to activate prior knowledge Activation of prior knowledge and ask the pupils to generate associations around a topic, and discuss and clarify their collective knowledge.*
- Model justifying your inference using the text.
- Check that the information answers your concept or question.

Questioning

It is important for teachers to read extracts of any texts prior to the lesson to identify where inferences can be made or drawn upon. Whilst children are reading, they should not be interrupted by questioning, or introduced to questioning immediately afterwards. They need a short amount of time to digest what they have read and discuss any vocabulary they are unsure of.

For the lesson to be successful it is important to choose texts that are pitched correctly and provide plenty of opportunities for inference.

Questions on inference would normally include words or phrases such as:

- Why...? / How...? / Which...?
- Explain why...
- Give two reasons...
- Give an impression...

Children need to learn what the meaning of the question words such as ‘who’ , ‘when’ and ‘why’ so that they can understand the question and identify the correct part of the text or image to answer appropriately.

Other questions to discuss might be, for example, ‘what impression do you get...’, children must understand that, in this context, ‘impression’ refers to a characters personality based on their appearance, their actions or motives. It can also be referring to an object that creates an image in the mind or an opinion of something based on how it looks or how it is described.

The skill of inference is also assessed through a number of question types which may require specific modelling, such as ‘true or false’ questions, or ‘impressions and evidence’ questions (KS2 only).

The quality of answers expected:

Questions should be very clear and require an answer that can be justified by written evidence within the text or visual evidence in an image.

Usually, inference questions ask for than one piece of information. This should be explained to children. Most questions that assess this skill require an explanation or justification of the readers' opinion. Often, the reader is often expected to use direct evidence to validate their answer. One way to ensure a well-developed response to an inference question is to use the phrase 'PEPE' (Point, Explain, Point, Explain).

For example:

Question: How do you know Timothy is angry?

Answer:

Point	Explain
"He stormed into the classroom slamming the door behind him"	This tells us that he is angry because he is acting violently towards the door and 'storming in' suggests he is walking quickly and aggressively.
"He threw his books across the floor"	This suggests that he is not in the mood to do work and that he is taking his emotions out on his books in an aggressive way.

Answering using PEPE would award 3 marks here, by providing 2 pieces of evidence and 2 justifications the child more than secures these marks.