Agriculture

Using headings as question prompts

Content and alignment

Learners are often expected to learn course content through reading. This is often in the form of workbooks, webpages, PowerPoints, posters or tutor notes. Feedback from Agriculture tutors has indicated that many learners struggle to remember and apply what they have read. It is often assumed that learners are able to read to learn, and have strategies to do this, or that this will happen naturally. Unfortunately, many learners struggle to read to learn, as they have little in the way of reading strategies, except to read and re-read. The good news is that reading strategies can be taught and learned within the context of the Agriculture content.

Intent

The intent of this resource is to provide learners with an additional reading strategy which they can continue to use independently throughout their lives. Additionally, tutors can use this approach to design a range of reading and thinking activities.

This resource is designed to develop the learners' independent reading skills by teaching them to use headings as tools to learn. Because headings are highly condensed summaries, they can be used to generate questions, which can then be used by the learner to evaluate their understanding. The sequence below has proved successful, but can be adapted in any way to support learners' reading skill. This resource is supported by a template that can be handed out to learners Agriculture: Using headings as question prompts - template.

Sequence

There are three parts to this sequence. Learners will:

1. change headings into questions
2. use heading questions to evaluate their own comprehension
3. match summaries to headings in groups.

1. *Change headings into questions*

Good readers set reading goals for themselves. These goals usually relate to identifying specific information. For example, when reading a course workbook, a good reader will already know what information they are looking for and seek to find it.

One way to help learners set goals is to encourage learners to change the headings into questions.

This approach has three advantages:

- It activates the learners' prior knowledge
- It provides the learners with a reading goal
- It helps learners monitor their own comprehension.

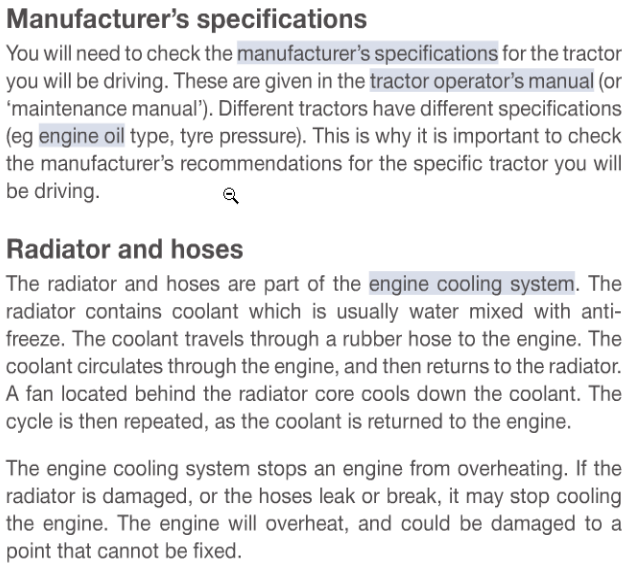
Step one: Ask the learners to identify three headings within a specific course workbook. Give them a short time to look through their books.

Step two: Write one of the headings on the whiteboard.

For example, the adjacent text, has two headings:

- Manufacturer's specifications
- Radiator and hoses

Write '**Radiator and hoses'** on the whiteboard.



Manufacturer's specifications

You will need to check the manufacturer's specifications for the tractor you will be driving. These are given in the tractor operator's manual (or 'maintenance manual'). Different tractors have different specifications (eg engine oil type, tyre pressure). This is why it is important to check the manufacturer's recommendations for the specific tractor you will be driving.

Radiator and hoses

The radiator and hoses are part of the engine cooling system. The radiator contains coolant which is usually water mixed with anti-freeze. The coolant travels through a rubber hose to the engine. The coolant circulates through the engine, and then returns to the radiator. A fan located behind the radiator core cools down the coolant. The cycle is then repeated, as the coolant is returned to the engine.

The engine cooling system stops an engine from overheating. If the radiator is damaged, or the hoses leak or break, it may stop cooling the engine. The engine will overheat, and could be damaged to a point that cannot be fixed.

Step three: Ask learners, "What do you think this paragraph is about and what questions should we ask ourselves?"

Encourage learners to take educated guesses about the content and to be as specific as possible. In doing so they will have to draw on what they know about radiators and hoses. A concept map is a useful tool to generate learners' ideas and categorise them. An example can be found in Agriculture: Concept map tractor.

Write the learners' ideas on the whiteboard. Then ask them to rewrite the heading into a question. The question may be very simple:

What is a radiator and hose?

Or, more complex:

What is the function of the radiator in a tractor?

How does a radiator work?

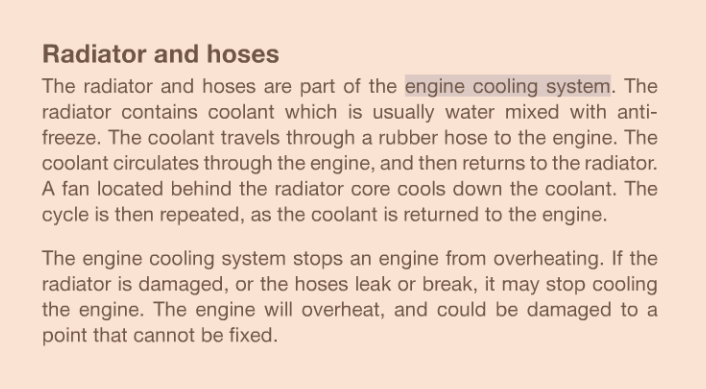
Write these questions on the whiteboard and ask the learners which is the best question.

2. Use heading questions to evaluate their own comprehension

Step one: Once each learner has selected a question, ask the class to read the paragraph to themselves with the goal of answering the question. Suggest that they may read the paragraph several times.

Step two: Have the learners share their answer to their question with a classmate.

Ask learners to rate themselves on a scale of 1 to 5 on how well they think they were able to answer their question.



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Step three: Ask for volunteers to state the question they selected and then answer it in their own words.

For example:

Tutor: Tell us what your question was and how you answered it.

Learner: I chose 'How does a radiator work?' as my question. After reading the paragraph the answer is that the radiator holds the liquid that flows through pipes to the engine to cool it.

Next, ask another learner to share their question and answer with the class. This opens up opportunities to have a discussion about the accuracy of the answers, and to add content if need be.

Learner: My question was also 'How does a radiator work?' A radiator is part of the coolant system that cools down the coolant by having a fan blow on it. The coolant is then recirculated through the engine.

Ask the learners to **evaluate** their answers. Did the answer really answer the question as well as it could? Did they cover the correct information from the paragraph? Did they need to read it twice?

You may even model a good answer yourself, by verbally answering one of the questions.

Step four: Ask the learners which of the questions was best answered by the paragraph. Learners begin to appreciate that some questions are better than others.

Step five: Ask learners to work in pairs to repeat the process with a different heading. This time learners work in pairs to change a heading into a question, read the text, and answer the question.

Note: Changing section headings into questions is a skill that develops over time. It is always difficult in the early stages. Encourage the learners to persist – it will enhance their ability to understand and remember content.

3. Match summaries to headings in groups

Learners work in pairs to change a heading from a course workbook into a question. After reading the paragraph the learners **write** the answer to their question on a card or strip of paper. Following this, the tutor collects the answers. The answers (not the question) are then given to different learners. The learners are required to read the answer, and identify which paragraph it relates to.

Learner question:

What are the manufacturer's specifications?

Manufacturer's specifications

You will need to check the manufacturer's specifications for the tractor you will be driving. These are given in the tractor operator's manual (or 'maintenance manual'). Different tractors have different specifications (eg engine oil type, tyre pressure). This is why it is important to check the manufacturer's recommendations for the specific tractor you will be driving.

This answer is handed to a different pair who must match the answer to the corresponding paragraph in the workbook.

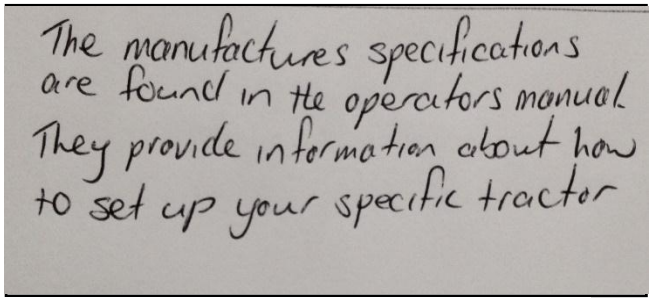

Fig. 1. Actual learner answer to the question

Finally, once the pairs have identified the corresponding paragraph, they attempt to identify what the question was. As can be seen in the example, learners do not always write great answers. By repeating this activity and discussing the characteristics of a good or not-so-good answer they will improve.

Final notes:

Ideally, learners will begin to add this practice to their own comprehension strategies independently. The form in Agriculture: Using headings as question prompts - template can be used by learners to create a record of their question/answer responses. Learners can glue this form into their study books and use it regularly.

Summary

Learners can improve their ability to learn from reading and to comprehend texts, by practising methods such as changing headings into questions and answering them in their own words. The challenge is to demonstrate to learners that this is a worthwhile strategy. This takes time and is not always immediately successful. However, it will improve over time. In summary, encourage learners to read the headings and make educated guesses about the content of the paragraph. Secondly, ask learners to generate a question about the paragraph. Learners then read the paragraph with a goal – to answer the question. Their ability to do so will help them evaluate their understanding of the paragraph and take appropriate action.