

Higher Order Questioning Techniques for All students. Why?

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Rationale

ALL students require questioning skills that range from low to higher order. Students who experience learning difficulties, as well as students with language and other related learning difficulties do not learn to think and question automatically. They need to be taught **HOW** to engage in higher order questioning in order and comprehension skills to make sense of oral and written text.

Rationale

Often only higher achieving students are taught how to use higher order thinking and questioning techniques.

However, ALL students need to learn and assimilate these skills into their everyday lives.

Research tells us that these skills help to “build the life long interaction and communication skills” and help students to “ master the habits of mind (critical, creative and self-regulated), needed to function as productive members of society.”

Aims of the Program

- ❖ To teach students how to understand and answer questions.
- ❖ To teach students requiring additional support, strategies to access effective comprehension and higher order questioning techniques.

Deep knowledge	
Deep understanding	
Problematic knowledge	
Higher order thinking	
Meta-language	
Substantive communication	
Explicit quality criteria	
High expectations	
Student direction	
Background knowledge	
Cultural knowledge	
Knowledge integration	
Connectedness	
Narrative	

Questioning

Questioning is a key aspect of the teaching and learning process.

Questions should draw students into the learning process as well as checking on acquisition of knowledge.

When students ask questions this leads to more talk, higher level thinking and can result in academic and social benefits.

Purpose of Questioning

- ❖ To help the teacher gauge how effectively students are learning.
- ❖ To assist the teacher with forward planning.
- ❖ To give students opportunities to articulate their understanding.
- ❖ To provide opportunities for successful answers **but also to provide challenge.**
- ❖ To help improve social skills.
- ❖ To provide **opportunities for students to ask questions which can lead to more sophisticated discussions.**
- ❖ To lead students to question their own learning and thus enter the world of meta-cognition (reflecting on the learning process), with wide-ranging benefits.

Category 1
Questioning

- ❖ Factual
- ❖ Closed
- ❖ Convergent
- ❖ Lower level/low order
- ❖ Low enquiry

Category 2
Questioning

- ❖ Higher cognitive
- ❖ Open
- ❖ Divergent
- ❖ Higher level/high order
- ❖ High enquiry

Type of question	Student responses	Type of response
Low enquiry (convergent)	<ul style="list-style-type: none">❖ Recall/memorise❖ Describe in words❖ Summarise❖ Give an example of❖ Classify on basis of known criteria	Closed
High enquiry (divergent)	<ul style="list-style-type: none">❖ Create an original design or report❖ Give an opinion on❖ Make a judgement about❖ Consider the attitude of persons who....	Open

Low enquiry vs high enquiry

- ❖ Low enquiry questions tend to reinforce “correct” answers.
- ❖ High enquiry questions stimulate a much broader range of responses. And tend to stimulate high levels of thinking.

Evidence supports the using of both types of questions as low enquiry will help to sharpen students ability to recall and focus on details while high enquiry encourages divergent and critical thinking skills needed for all students to engage successfully in society.

Knowledge of the types of questions and their predicted effect on student thinking is important. However researchers have found that there are other factors associated with questioning that can enhance critical and creative thinking.

Wait Time

Current research reports that if a teacher uses wait time (up to 5 seconds), before requiring an answer, it:

- ❖ Allows students to work out a longer, more detailed response to a question.
- ❖ Enhances ‘speculative thinking’ by the students.
- ❖ Increases the logical consistency of students’ explanations.
- ❖ Increases the number of questions asked by the students.
- ❖ Results in greater participation by all learners.

Activity. (low order vs high order thinking)

If I ask you to tell me or list all the kinds of graphic organisers you know you will engage in one type of thinking. If I ask you to design a graphic organiser that no-one in the world has ever thought of that causes your mind to process in a completely different way.

List as many graphic organisers as you can. What skills did you use?

Discuss with a partner what you think is the biggest graphic organiser in the world. What skills did you use?

Now decide what is the smallest graphic organiser.

Higher order thinking is much more fun.

Teacher's questions

Research reports that in a typical classroom 60% of teacher's questions require students to recall facts, 20% ask about procedures and only approximately 20% require any kind of higher order thinking

If we want to foster critical and creative thinking in the classroom then this pattern of questioning must be changed.

Teacher's checklist for Effective questioning

- ❖ Do I make certain that all students develop a deep understanding of key declarative and procedural knowledge by emphasising higher order questioning?
- ❖ Do I encourage discussion in my classroom by using open-ended questions?
- ❖ Do I decide on the goals or purposes of my questions?
- ❖ Do I avoid 'yes' or 'no' questions?
- ❖ Do I use 'probe' questions to encourage students to elaborate and support assertions and claims?
- ❖ Do I ensure my students understand my questions and don't have to guess?
- ❖ Do I anticipate students' responses to my questions, yet allow for divergent thinking and original responses?
- ❖ Do I use purposeful strategies to help students deal with incorrect answers?

Teacher self evaluation

- ❖ How many questions do I ask?
- ❖ How many are lower order?
- ❖ How many are higher order?
- ❖ What wait time do I give?
- ❖ How do I respond to students' responses?
- ❖ Do I encourage students to formulate their own questions?
- ❖ Do I wait for full attention from the class before I ask a question?
- ❖ How many different students answer questions?
- ❖ Are certain students invited to answer repeatedly? Do some never answer?
- ❖ How else do I invite responses, apart from direct questions?

Strategies to develop less 'imperative' and more 'interrogative' classrooms.

- ❖ Think-pair-share, to allow students to respond to questions cooperatively.
- ❖ Allow students to 'unpack their thinking' by describing how they arrive at an answer.
- ❖ Promote active listening by asking for summaries of individual and class responses to key questions.
- ❖ Surveying class opinion – How many of you agree?
- ❖ Emphasise 'how' and 'why' questions.
- ❖ Use hypothetical thinking: What happens if..?
- ❖ Use analogies: How is this like..?
- ❖ Analyse points of view.
- ❖ Employ prediction strategies.
- ❖ Reciprocal reading and CSR– students asking their own questions of a text?
- ❖ K-W-L with a difference. Ask why after W and ask how after L.

Practical Strategies

- ❖ Invite students to make up questions about a topic before it has been taught, promoting a sense of enquiry.
- ❖ Use a 'question wall' or 'question box' where students can put their questions which occur as a block of work in progress.
- ❖ When a student asks a question instead of you answering allow a student to.
- ❖ Set up pairs or groups to answer more difficult questions.
- ❖ Set homework of returning the next day with a question.
- ❖ Give rewards for good questions instead of good answers.
- ❖ Invite a student to teach part of a lesson including appropriate questions.
- ❖ Recap and review types of questions at the end and beginning of lessons.

Try these Strategies

The following strategies are very useful when working with students who struggle in the classroom. The strategies listed here will assist your students to listen, understand and retain the skills that this program teaches. Teaching explicitly involves each of these teaching tools.

- ❖ When you are teaching new concepts or asking questions always allow students to have thinking time.
- ❖ Restate the question but be careful not to make it sound like a different question.
- ❖ Use short sentences.
- ❖ Give step by step explicit instructions (no more than 3 at a time). This applies to verbal and written questions.
- ❖ Get students to restate the question or task in their own words.

- ❖ Sit students with peers who will give instructions and assistance without giving answers away (need to teach students this).
- ❖ Alert students before commencing the lesson and during the lesson to refocus their attention (ie this next instruction is important, everyone listening etc).
- ❖ Establish classroom routines.
- ❖ Use visual and oral prompts.
- ❖ Before each lesson confirm that students know what is expected of them
- ❖ Teach organisational skills (allows minds to focus on task).
- ❖ Present print in a clear and uncluttered format.
- ❖ The Marion Blanks levels of questioning are excellent to introduce into any classroom. They teach/practise questioning at different levels.

‘Habits of Mind’ asks students to become self reflective about their use of life long thinking ‘habits’ including the ability to be self regulated, critical and creative.

Samples of student focused questions.

- ❖ Have you made a plan for what you want to accomplish?
- ❖ Have you collected all the resources for what you want to accomplish?
- ❖ Are you evaluating how it is going and what you would change next time?
- ❖ Are you actively seeking accuracy in the information you are receiving? Are you questioning it?
- ❖ Are you being open-minded about the information?
- ❖ Are you still engaging in the task even when it becomes difficult or are you withdrawing?
- ❖ Are you continually trying to see the situation in new and unique ways?

Using Knowledge Meaningfully asks students to apply their knowledge to real-life, decisions, investigations, experiments, problems.

Decision Making	Investigation	Experimental Inquiry	Problem Solving	Invention
<p>What are Your choices? How will each choice help you get what you want? Which choice will do the best job?</p>	<p>What do you want to find out? What disagreements or confusions do people have about it? (if any) How can you support your conclusions?</p>	<p>What do you see or notice? How can you explain it? What if..? How can you test your 'What if..?' What happened?</p>	<p>What are some ways you can overcome what you can't do? How do you make sure you can do what you need to? What solutions will you try?</p>	<p>What do you want to make or make better? What is an outline, model or sketch of your project? How can you improve on it?</p>

Lesson 1

Purpose:

- ❖ To introduce the purpose and structure of questions.
- ❖ To identify Types of questions (here, hidden, head).
- ❖ To identify words that show what type of answer is needed.

Resources:

- ❖ Question type posters
- ❖ Sample questions
- ❖ Predetermined groups of three or four students
- ❖ Paper for students to write group questions on
- ❖ For more information – PASH book p166-167

Introduction:

- ❖ We are going to start learning about some thinking strategies that we can use in our thinking, and in our everyday lives. The strategies can help us with school work, but they can also help us solve problem we have such as making decisions when we are not sure what to do.
- ❖ We are going to start by looking at questions that people ask.
- ❖ Why do we ask, or get asked, questions? To find out information, to check information or to see if someone knows something.
- ❖ Who has ever been asked a question, or asked to do something and found they were unsure of what to say or do? That happens to all of us. Today we are going to look at some ways that can help us to understand questions or tasks that we are asked to do.

Explicit teaching

- ❖ When we are asked a question what type of response or answer do people expect from us? (guide students to answers such as: yes or no, a piece of information, a long answer).
- ❖ There are three main types of questions that people usually ask. They are: here, hidden and head. If we know about the three types of questions it helps us to know what type of answer is expected of us.
- ❖ **HERE** – (Use poster). A here question has an obvious answer. The answer is right or wrong and it has been given to us somewhere. We just have to find it. Can anyone think of a sentence they could ask that could be a here question? (Let one or two students try).
- ❖ Give some sentence examples ie what colour hair does Sarah have? Do you like chocolate? Where do you live?
- ❖ Answers to here questions are usually yes or no or a piece of information. The answer is generally not long. Allow some more examples

- ❖ **HIDDEN** –(Use poster). A hidden question can be a little harder to answer. We will not have all of the answer, just a bit, and we have to think about what would make sense to complete the answer. Sometimes we need to join several pieces of information –some that we have been given and some we know. Give several examples. Eg Would your teacher encourage you to hit someone who annoyed you? (hidden or inferred because students know school rules). Can anyone think of another example?
- ❖ The hidden questions often start with words like What, tell, how, which and what. eg what is it like...how does it... how are they different...what would/could they say next...
- ❖ Answers to hidden questions are partly information you have been given and partly your thinking. The answer will be more than one word.

- ❖ **HEAD – (Use poster).** Head questions are about what is in your head – your feelings, what you think could/would happen, your opinion.
- ❖ These questions start with words such as: why did, what could, what should, how can, and why isn't. eg Why do you think it is important to be able to read? Do you like playing soccer or football best? What is your favourite movie and why? What could the flood victims do to save some of their things? Can anyone give me an example?
- ❖ The answers to hidden questions can start with words such as: I think, I believe, If.... They can be longer answers if you think they need to be. The answer can sometimes include a reason.
- ❖ Give a few more students the chance to share questions.

Practice

- ❖ Go through the types of questions quickly, asking several students to explain what type of question it is and what clues there are to help you.
- ❖ Split class into groups (predetermined) and give them 5 minutes to produce a couple of questions (they choose the type).
- ❖ The class comes back together and groups share their questions. The class discusses what type of question each is and how they knew. Teacher should provide feedback and correction when necessary.

Conclusion

- ❖ Ask the class – what did we learn today?
- ❖ Was there anything (or any information) that you think is very important to remember, and that you will try to use this week?
- ❖ How can this new knowledge help us to better understand and answer questions we are asked?

Classroom follow up ideas

- ❖ After asking a question ask students what type of question it was, how they knew and what type of answer they need to give.
- ❖ When students ask questions, point out what type of question it was and how you knew.
- ❖ In comprehension activities clearly identify the types of questions being asked.
- ❖ Encourage anyone giving news to ask specific types of questions.

Lesson number 2

Purpose

- ❖ Introduce the purpose and structure of questions.
- ❖ Identify types of questions (here, hidden, head).
- ❖ Identify words that show what type of answer that is needed.
- ❖ Begin identifying how to find the answer to questions.
- ❖ Note: this is a good lesson to link with the introduction of grammar skills you are teaching.

Resources

- ❖ **Question type posters**
- ❖ **Sample questions (lesson 1 and lesson 2 questions)**
- ❖ **Questions groups devised in lesson 1.**
- ❖ **Wh posters.**
- ❖ **Photocopy of text for each student. Sample is from ‘Buggaluggs bum thief’ but any text you are using is useful.**
- ❖ **For more information see PASH book p 166-167.**

Introduction/review

- ❖ During the last lesson we started talking about the different types of questions. Can you remember anything that we discussed? What was something that you learnt?
- ❖ Review the three types of questions. Ask students if they can explain each one, adjusting, guiding or correcting their answers.
- ❖ As a class, look at OHP examples and discuss what type of question each one is. How do you know? What kind of answer is the question looking for?
- ❖ If the students are OK with the concept move on. If they are not, continue to review questions that the class wrote in lesson 1 until it becomes clearer.

Explicit teaching

- ❖ We know that whenever a question is asked, there is a reason for the question. It might be to find out something like a piece of information, to check a piece of information, to find out how we feel/think about something and sometimes we are asked questions just to check if we know something.
- ❖ There are certain things that we are commonly asked about, and today we are going to look at what some of them are, and how to locate or find the answers. What are some of the words that you hear/read in a lot of questions? – who, what, when, where, why, which, how...
- ❖ As a class discuss the when and where posters. Discuss words that make the answers clear. Eg If we are asked when, the question is looking for a time, so words like tomorrow, yesterday, Christmas or 2 o'clock might answer the question. Where is looking for a place so answer cues might be – park, school, bed, home, shops etc

Practice

- ❖ As a class and then in pairs go through the text passage. Read it right through together before beginning activity.
- ❖ Instruct class – as we read through sentence by sentence – that we will be looking specifically for when words first. Use a green pencil and circle any when words.
- ❖ Note: ensure any student who is a struggling reader is paired with a more capable student.
- ❖ After the first paragraph or a pre-determined piece of text, stop and discuss any words circled. Point out any missed by the students. In pairs let them continue through the text. At the end discuss each paragraph.
- ❖ Instruct class – as we read through again to look for where words and circle them in red. Follow previous strategy.
- ❖ As a class make word lists for when and where.
- ❖ In following lessons continue with who, what, which and how words and make word-banks for all as cues for students when answering questions.

Conclusion

- ❖ Ask the class – What did we learn today?
- ❖ Was there anything (or any information), that you think is very important to remember, and that you will try to use next week?
- ❖ How can the new knowledge help us to better understand and answer questions we are asked?
- ❖ As a teacher wrap up the lesson by reviewing content.
- ❖ Point out to class that what they are learning is important for use in comprehension/literacy activities or any other time they will be asked questions. It is even helpful for answering out loud questions or homework. Challenge the class to identify opportunities for appropriate use of the strategies.

Classroom follow up ideas

- ❖ Revise all content. Keep reinforcing types of questions, where and how to find the answers.
- ❖ Regularly stop and revise who, when, where, how and why cues.

Lesson number three

Purpose

- ❖ Practise identifying types of questions, locating and giving answers.
- ❖ Practise formulating questions.
- ❖ Discuss and practise organising and presenting answers.

Resources

- ❖ Question type posters.
- ❖ Wh posters.
- ❖ Copies of Buggalugs Bum Thief passage.
- ❖ Copy of questions (either OHP, whiteboard or handout).
- ❖ A list of predetermined groups.
- ❖ Blank OHP sheets and OHP markers for each group.
- ❖ Card/art paper for groups.

Introduction/review

- ❖ We have talked about a lot so far – what have we learnt?
- ❖ Has anyone had the chance to use any of the knowledge?
- ❖ Has anyone started using some of this information in their learning or in their talking and listening? Has knowing this helped you so far in any way?
- ❖ Today we are going to be looking back at everything we have done, and use it to help us answer some questions, and then write some questions for other people. We will be using a passage from ‘The Buggalugs Bum Thief’ – the same one we used in lesson two.
- ❖ Before we start we will quickly review the types of questions. Discuss as a class.
- ❖ We have also looked at the kinds of words that help us to find the answers. What are they? Review **wh** words and what each means. Rote answers can be accepted.

Explicit teaching

- ❖ Use example OHP and discuss as a class. Talk about what type of question it is, how you know that and what type of answer it requires.
- ❖ Explain group task. 1. read the text just to have it fresh in your heads. 2. design 5 questions for another group in the class. Make sure you use more than one type of question. 3. Make sure you have the answers ready to check that the group answers correctly. 4. Work out how you will present your questions. Display these steps so students can refer back to them
- ❖ Discuss presentation of questions, reminding students they need to be easy to read and understand. You can write it on a card, OHP or paper. Remember to leave space for answers to be recorded. Display some options as examples.
- ❖ Give the students a task card and ask them what they might need to think about as they work on their task.

Practice

- ❖ Groups have 15 minutes (less if takes less), to work out and write down their 5 questions. Call the class together and each group swaps its questions with another group. Allow time for groups to discuss and write answers.
- ❖ Once enough time has been given, call the class together to explain the next part of the task. Go through the task card step by step. Ensure that all groups understand what is required. Give groups time to discuss and work out presentation of their thoughts.
- ❖ One group at a time has a couple of minutes to present to the class their answers and responses to task questions. Group that wrote the question gives feedback.

Conclusion







- ❖ Tell class that we have discussed how easy/hard questions were to understand and how we went about answering them. Was there anything they realised about asking or answering questions today?
- ❖ Was there anything (or any information) you think is important and that you might use this week?
- ❖ How can the new knowledge help us to better understand and answer questions that we are asked?
- ❖ As a teacher review content of lesson.

Classroom follow up ideas

- ❖ Ensure you ask different types of questions as often as possible. Allow students to ask and answer all level of questions – in sentences.
- ❖ Wherever appropriate have class work out answers to tasks or devise tasks.

Task card

As a group discuss the following questions

-  Were the questions that you were given easy to understand?
What made them easy/hard for you to understand?
-  Was it easy/hard to tell what type of answer each of your questions needed? What made it easy/hard?
-  What things/key words or tricks did you use to help you find the answers?
-  Describe how your group worked together.
-  Work out how you will present your answers (to the questions your group was given and to this task card) to the class. One person can do the talking, everyone could do a little bit each, or any other ideas you have.
-  Present to the class.

Lesson number four

Purpose

- ❖ Practise working out what a task requires.
- ❖ Practise working out what a question is asking.
- ❖ Practise working out what type of answer the question requires.
- ❖ Practise working out how to present answers to the questions.
- ❖ Practise using the question types and wh clues.
- ❖ Practise working in a group.
- ❖ Practise asking for clarification if necessary.
- ❖ Practise asking questions verbally.
- ❖ Practise presenting answers

Resources

- ❖ Question type posters.
- ❖ **Wh** posters.
- ❖ Same student groups as last week.
- ❖ Paper, tape recorders (if needed), art paper, card, computers, OHP sheets and markers and any other convenient presentation materials.
- ❖ People to interview. This will need to be organised ahead of time. They may be student from another class, parents, school volunteers or other people you can think of. It is best not to use class members, because the children know a lot about them and because not all class members will have a turn at being interviewed.

Introduction/review

- ❖ What have we learnt so far?
- ❖ What has helped you in your learning?
- ❖ What are some of the things we need to know about asking/answering questions?

Explicit teaching

- ❖ Give student groups a task handout. Go through each step explicitly explaining what they need to do. It may be a good idea to go right through the process as a class, basing the task on one student in the room. An OHP or interactive white-board are good ways to demonstrate and make clear every step of the process so that visual learners are clear as to what they need to do. Encourage the students to be creative, accurate and clear in their work and in their presentation. Remind students to be careful to write questions that will get the answers they are looking for.

Practice

- ❖ Groups begin to design the questions that they will ask. They need to think about how they will ask the questions and how the material could be presented later. Teacher needs to be very mobile during this time.

Conclusion

- ❖ Ask the class how the task is going so far. Are there any questions they need to ask about writing or presenting their material? If there are, discuss these as a class and see if the students can answer the questions.
- ❖ Ask students- What are some of the questions you are planning to ask?
- ❖ Were there any new things you learnt today? Was there anything that really made you think?










Class follow up ideas

- ❖ Continue to revise all content
- ❖ Give students more class time to plan until all groups are ready

Task card 2

As a group you are going to interview a person that you do not know very well. You need to find out very important information about them (what do you think is important to find out?), and some personal details eg what they like to eat). You will later present your information to the class.

In order to do this you will need to work out these things:

-  Find out who you will interview.
-  Design some questions that you could ask (at least 6).
-  Work out who/how you will ask the questions. Will it all be verbal with someone taking notes, will you give them a survey or will you try several ways of getting the information?
-  Work out how you will record the answers to your questions
-  Start thinking about how you will present your information.
-  Design your presentation. Include both the questions and your answers in the presentation.
-  Practise your presentation, fine tune it and then present it.
-  Take feed back from the class and teacher on good things about the presentation and things that could be improved next time.
-  Give positive feedback to other groups.

Lesson number five

Purpose

- ❖ Practise presenting information.

Resources

- ❖ Question type posters.
- ❖ Wh posters.
- ❖ Same student groups as last week.
- ❖ Paper, tape recorders (if needed), art paper, card, computers, OHP sheets and markers and any other convenient presentation materials.
- ❖ Completed interview presentations
- ❖ If possible, people who were interviewed so that they can share the results of the interview

Introduction/review

- ❖ What have we learnt so far?
- ❖ What has helped you in your learning?
- ❖ What are some of the things we need to know about asking/answering questions?
- ❖ What was the task that all groups have completed?
- ❖ Today we will complete the task by presenting the information we gathered.

Explicit teaching

- ❖ Review talking rules- this is how good presenters should behave.
- ❖ Review listening rules- this is how good audiences should behave. To be good at questioning you need to be a good listener.

Practice

- ❖ Groups present their interview (this may need to happen over several lessons)
- ❖ After each presentation discuss as a class- what was done well, what was not clear or was difficult for class to understand? How could it be made clearer? What did you like about the presentation? General positive comments. Make sure it concludes on a positive student and teacher comment. Ask group- what did you think of your presentation? Conclude with positive teacher comment.

Conclusion

- ❖ What did you learn from the task?
- ❖ What skills/ideas can you remember and use in the future to help you understand, answer and ask questions?

Class follow up ideas

- ❖ Continue to revise all content
- ❖ Give students more class time to plan until all groups are ready

Class follow up ideas

- ❖ Provide a lot of opportunities for students to ask and answer open ended questions. Give less confident students opportunities to ask/answer questions in small groups, with partners or teacher.

Lesson number six

Purpose

- ❖ Conclude program
- ❖ Evaluation of program and student self assessment

Resources

- ❖ Question type posters.
- ❖ Wh posters.
- ❖ Student interviews displayed around room.
- ❖ Student evaluation stencil.

Introduction/review

- ❖ We have worked hard over the last five lessons to learn about questions. What type of things have we learnt?
- ❖ Who thinks the skills we have learnt will help them? How?

Explicit teaching

- ❖ Explain how to fill in the evaluation/assessment.

Practise

- ❖ Students complete evaluation/assessment.

Conclusion

- ❖ Does any one have a comment they would like to share?

Class follow up ideas

- ❖ Provide opportunities to revise and practice skills where ever possible.

Student evaluation

- Name: _____ Date: _____
- What skills did I learn during this program?
- Which skills do I think will be most useful for me?
- Why is it important for me to be good at understanding questions that other people ask me?
- Why is it important for me to be good at asking questions?
- What questioning skills am I good at?
- What questioning skills do I need to work on?
- What group work skills am I good at?
- What group work skills do I need to improve?
- What do I think should be added to this program?
- What do I think should be left out of the program?
- Other comments I would like to make