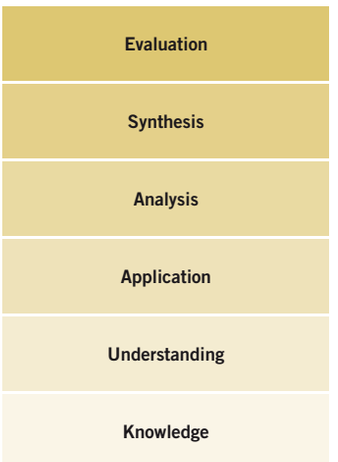
Questioning

The following tables outline different types of questions based on Bloom's taxonomy (Krathwohl, 2002), and provide samples of each type.

Bloom's taxonomy of questioning



Knowledge

Question cues		Sample questions
tell	list	What happened after …?
define	name	How many …?
when	where	Who was it that …?
identify	show	Can you name the …?
state	locate	Describe what happened at …
relate	who	Who spoke to …?
		Can you tell why …?
		Find the meaning of …
		What is …?
		Which is true or false …?

Understanding

Question cues		Sample questions
retell	summarise	Can you write in your own words …?
describe	explain	Can you write a brief outline …?
discuss	interpret	What do you think could have happened next …?
outline	predict	Who do you think …?
restate	compare	What was the main idea …?
estimate	contrast	Who was the key character …?
		Can you distinguish between …?
		What differences exist between …?
		Can you provide an example of what you mean …?
		Can you provide a definition for …?

Application

Question cues		Sample questions
solve	show	Do you know another instance where …? Could this have happened in …? Can you group by characteristics such as …? What factors would you change if …? Can you apply the method used to some experience of your own …? What questions would you ask of …? From the information given, can you develop a set of instructions about …? Would this information be useful if you had a …?
use	illustrate	
construct	complete	
examine	classify	
apply	demonstrate	
calculate	modify	

Analysis

Question cues		Sample questions
analyse	distinguish	Which events could have happened …? If … happened, what might the ending have been? How was this similar to …? What was the underlying theme of …? What do you see as other possible outcomes …? Why did … changes occur? Can you compare your … with that presented in …? How is …similar to …? What was the problem with …? What evidence can you list for …?
compare	contrast	
investigate	categorise	
identify	separate	
order	explain	
connect	infer	

Synthesis

Question cues		Sample questions
create	invent	Can you design a … to …? Why not compose a song about …? Can you see a possible solution to …? If you had access to all resources how would you deal with …? Why don't you devise your own way to deal with …? What would happen if …? How many ways can you …? Can you create new and unusual uses for …? Can you develop a proposal which would …?
compose	predict	
plan	construct	
design	imagine	
propose	devise	
formulate	combine	

Evaluation

Question cues		Sample questions
judge	select	Is there a better solution to …? Judge the value of …? Can you defend your position about …? Do you think …is a good or a bad thing? How would you have handled …? What changes to … would you recommend? What would you predict/infer from …? How effective are …? What do you think about …? How would you create/design a new …?
choose	decide	
justify	debate	
verify	argue	
recommend	assess	
rate	prioritise	

Teacher-designed tasks and tests

Planning sheets

Planning sheets can be useful when preparing to use tasks as an assessment method. A sample planning sheet is shown below with a photocopiable version provided in Appendix B, p. 94.

Class(es)	Date	Subject(s)	Curriculum objectives
What class(es) are the children in?	What date will the children complete the task(s)?	What subject(s) is being assessed?	Which curriculum objectives are being assessed through the task(s)?
Resources	**Time**	**Organisation**	**Actions**
What resources do the children need?	How long will it take to complete the task(s)?	What classroom organisation (whole-class, group, pair, or individual) is most suitable from the point of view of children's involvement and the need to carry out teacher assessment effectively and efficiently?	What are the main actions that the teacher needs to take from the initial presentation to the children, through the various stages of the task(s), to the conclusion?
Teacher's notes:			

Sample test questions

Examples 1-11 below illustrate a range of question types which teachers may find useful in designing paper and pencil tests.

Example 1: Closed test questions

Closed test questions are usually used to elicit a specific response that is either correct or incorrect, as in the following sample.

Sample closed test question: 2, 4, 8, … What will the next number be? The answer 10 might indicate that the connection between the numbers was thought to be a simple increase of 2, instead of doubling the last one.

Example 2: Open test questions

Open test questions allow a wider range of responses than closed questions as shown in the following sample.

Sample open test question: Name one of the Loughs on the River Shannon.

Example 3: Multiple-response questions

Multiple-response questions elicit a range of responses and can be solved in a variety of ways as in the following sample.

Sample multiple-response question: ☐ + ☐ = 9

Example 4: Free response questions

Free response questions allow an even wider range of responses than multiple-response questions. Questions which require narrative responses can provide the teacher with information about the depth and breadth of the child's understanding, the child's thinking, and the areas where he/she may benefit from further support or work.

Sample free response question: Write a paragraph about the purpose of the soup kitchens in the Great Famine.

It is advisable to structure the question in order to identify whether the child displays real understanding of the topic or issue addressed in the question, rather than encouraging an unstructured reply that may hide gaps in the child's knowledge, for example:

Sample free response question: Name three factors that contributed to the development of the Great Famine.

Example 5: Correcting responses

An interesting variation of test questions is for the teacher to prepare well-written but conceptually flawed responses or answers for the children to correct and edit. These responses may contain common misunderstandings, correct but incomplete responses, or completely incorrect facts and ideas.

Example 6: Matching

The matching format is an effective way to test the child's recognition of the relationships between words and definitions, events and dates, categories and examples, and so on.

Example 7: Multiple-choice questions

Responses to multiple-choice questions provide information on the child's ability to discriminate between the correct response and incorrect alternatives. As such, the child's response demonstrates his/her ability to recognise the correct response rather than to produce it.

Sample multiple-choice question:
297 + 352 = 649
The number fact in bold text is true.
Which one of the following number facts is true?
a) 397 + 362 = 659
b) 649 – 352 = 317
c) 29.7 + 35.2 = 6.49
d) 287 + 342 = 629

Example 8: True-false questions

True-false questions can be used to gather information about common misconceptions by children.

Sample true-false question:
Look at the sum. Is the answer true or false?
Put a tick (√) in the box if you think ***yes, the answer is true***.
Put an X in the box if you think **no, the answer is false**.

$$\begin{array}{r} 18 \\ +23 \\ \hline 311 \end{array} \quad \square$$

The teacher may add an 'explain' column in which the child writes one or two sentences justifying his/her response.

Example 9: Questions presented in a novel way

Presenting questions in an unconventional form can be used to test children's understanding of a particular concept.

Sample question presented in a novel way:
To assess a child's understanding of place value present him/her with misaligned columns of numbers.

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  4
 35
+24
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Ask him/her to read the numbers and then to write the answer. When finished ask the child to read the answer aloud. Ask him/her to justify the answer using a probing question, such as *does that sound right*?

Example 10: Scales

Scales can be used to help children respond to open questions. This provides some structure for children while still enabling them to choose from a range of responses.

Below is an example of a scale to help children respond to a piece of art.

Tulips by Afternoon Light, unknown.

Look carefully at this painting. Record your response to it on a 1-7 scale by circling a number. For example, what time of the day is it in the painting? If you think it is morning, give it a 1. If you think it is night, give it a 7. If you think it is somewhere in between, choose a 2, 3, 4, 5 or 6. Write down a reason for your answer after you have circled a number.

What kind of light is in the painting?
Bright? 1 2 3 4 5 6 7 Dark?
Give a reason for your score.

_____

Are the edges of things
Clear and sharp? 1 2 3 4 5 6 7 Soft and fuzzy?
Give a reason for your score.

_____

Is the paint
Thin? 1 2 3 4 5 6 7 Thick?
Give a reason for your score.

_____

Is the mood of the picture
Happy? 1 2 3 4 5 6 7 Sad?
Give a reason for your score.

_____