

Remembering

Students need to know, recall and research certain things as a basis for action. No one can think in a vacuum; there is a core of relevant factual knowledge and theories that students need in order to begin thinking. To do this efficiently, they need to acquire and use a range of research skills and basic subject skills such as procedures in mathematics and science and technical skills in literacy, art and ICT.

Given practice of asking the right questions, students will learn the criteria for good questions and be able to select relevant facts.

Students need to present ideas using a diverse range of efficient recording and communication skills. To support their learning, they need demonstration and examples, practice and opportunities to share with others.

Remembering is involved in activities which ask:

- What happened when...?
- Make a list...
- Write an account...
- Make a summary...



Understanding

Students need to demonstrate understanding. The lower order understanding tasks include: paraphrasing, explaining and selecting relevant information to answer a question.

However, exceptionally able students need to use higher order understanding skills. They need to learn how to interpret knowledge by presenting a new perspective, comparing and contrasting data and viewpoints, re-ordering information and examining consequences.

Higher order understanding is shown through activities such as:

- Write a summary of the main points...
- Explain why that happened...
- Discuss this from the point of view of...
- What are the similarities between...?
- Explain the differences between...
- What would have happened if ...?
- How would this affect...?
- Why did... react in this way...?
- What were the results of this ...?



Applying

Students need to use knowledge to solve problems and to see what is problematic in what had previously been taken for granted.

Students need to manipulate or construct something using their new knowledge, to reproduce in a different format, to apply to a similar situation, to build a model, to illustrate, or to apply to an example.

Applying knowledge involves the following activities:

- How would you use this to ...?
- How does this rule apply...?
- How can you use what you have learned to solve this...?
- Does the same principle apply in this...?
- What else do you know that would apply...?
- Is this the same kind of ...?
- Construct a diagram to show...
- Conduct an experiment to prove...
- Paint a picture to show...



Analysing

Students need to understand overall relationships and patterns.

Students need to fit the pieces of the 'jigsaw' into a whole; they need to identify connections, patterns, sequences and themes. They need to see the 'big picture' and to be aware of how 'the bits' they are learning are contributing to a coherent plan.

Analysis can be shown through activities such as:

- In what ways are they the same/different/ better/worse...?
- What was the overall plan...?
- How do the elements combine...?
- Discuss why the causes had inevitable consequences...
- What is the general rule...?
- Explore the possible future consequences...



Evaluating

Students need to make decisions and judgements. Impulsive decisions and actions which cannot be justified usually result from bias, prejudice and woolly thinking. Students can be taught how to balance decisions against reason and evidence.

Evaluation can be developed by asking students:

- How do you know...?
- On what grounds can you justify...?
- What is the evidence ...?
- Why would you make that decision...?
- What are the arguments for and against...?
- Why do you believe...?
- Did... have a valid case...?
- Draw a conclusion giving reasons...

Although the range of higher order learning skills increases in complexity as students develop greater knowledge and maturity, even younger students can use the full range of higher order learning skills.



Creating

Students need to create something new with the knowledge and skills they learn. Knowledge lies in a stagnant pool unless it is used for thinking and action. If all learning is merely the acquisition of other people's knowledge, then nothing new is created.

Students need to design, invent, imagine, change and improve.

Synthesis is shown in activities which ask:

- Do you agree with...?
- How would you change ...?
- What would happen if ...?
- Is there another way...?
- Is there another conclusion...?
- In how many ways can you...?