Learning involves so much more than just attending class. It involves not only listening but also understanding what you are learning and how you learn it. This means you need to know and be able to do particular things such as apply skills, ideas or knowledge to new problems or unfamiliar situations. Below you will find 16 Thinking Tools to help you get the most out of your classes by encouraging you to think, question, critically analyse and use information. The only way to successfully learn content and achieve excellent marks is to think about what you are studying. The 16 Habits of Mind, De Bono’s Thinking Hats, Bloom’s Revised Taxonomy and DATT are four examples of Thinking Tools that you can use to increase your higher order thinking skills and ensure you achieve the best possible results!

### Habits of Mind

The 16 Habits of Mind were developed by Arthur L. Costa and Bena Kallick. They show how you can be successful in approaching assessment tasks throughout your senior years.

Below, you will find each habit listed with a brief explanation on its use. Throughout this year you will find ways to incorporate each habit into your learning. By practising the use of each habit, they will in effect, become your habits!

#### Persistence

It is important not to give up on a problem, regardless of how ambiguous the situation may seem. Analyse the problem and come up with alternative ways to solve it. Remember, if one strategy doesn’t work you can always try another!

#### Striving for Accuracy

Taking the time to check over your work is essential to success. You will need to continuously review your work to ensure it meets the set criteria.

#### Managing Impulsivity

The value of thinking before reacting is somewhat understated. By gathering information and taking the time to reflect on your possible answer and actions, you will find that a better suited one may come to mind!

### Listening with Empathy and Understanding

Listening involves understanding what the other person is saying. Make an effort to hold back values, judgments, opinions, and prejudices in order to listen to and consider another person’s thoughts.

### Thinking Flexibly

The ability to think flexibly requires you to keep an open mind and to approach problems from different angles. You should develop alternative solutions, whilst working within rules, criteria and regulations. Display confidence in your intuition!

### Thinking about your Thinking

When approaching a problem, it is important for you to develop a plan of action and monitor its effectiveness through reflection and evaluation upon completion. This habit also involves the ability to recognise when to make changes to your approach and placing them into action – in effect, altering your initial plan.

### Applying Past Knowledge

The knowledge gained from past experiences is a key information source which is often overlooked. When approaching a new problem or situation, you should draw upon this knowledge and allow past theories, experiences and solutions to aid in developing a plan of action.
Thinking and Posing Problems
The ability to ask questions that provide you with the information you don’t know is a characteristic of an effective problem solver. Identifying and questioning discrepancies and occurrences within your environment will allow you to gain a better understanding of the problem and possible solutions.

Thinking and Communicating with Clarity and Precision
Refining your language aids with your ability to think critically, which in turn allows you to action problems more effectively. Use precise language and support your statements with explanations, comparisons, quantification and evidence.

Gathering Data through All Senses
It is a known fact that all information is derived through our senses (sight, smell, touch, taste, sound), therefore to increase your knowledge base, pay attention to your environment and allow your senses to absorb all that is around you.

Creating, Imagining and Innovating
By allowing yourself to go beyond your perceived boundaries, you can discover and generate new approaches you never thought possible. Examine each potential approach from different angles and accept criticism – both positive and negative – to help you refine your solution.

Responding With Wonderment and Awe
Effective problem solvers are curious individuals who commune with their environment. They find the world fascinating, seek problems and approach learning with enthusiasm and passion.

Taking Responsible Risks
By thinking outside your usual parameters you can learn so much more. Being adventurous and taking responsible risks allows you to add to your knowledge base by discovering new information. It is important to note, however, that not all risks are appropriate and it is important to be able to differentiate between those risks you should take and those you should not.

Finding Humour
Humour has been found to trigger higher level thinking skills such as visual imagery, creating analogies and discovering new relationships. Find the humour in situations and laugh at yourself. Remember, there is a fine line between humour and harassment, so do not laugh at others, violence or profanity — to laugh is to condone.

Thinking Interdependently
Working with other people allows you to generate more information, which aids in establishing new ideas and possible solutions. You can also draw on the collective intelligence to test and improve current strategies you have in place.

Remaining Open to Continuous Learning
Learning never stops! Intelligent people know that they do not know everything and continually strive for improvement by increasing their body of knowledge, allowing them to become better problem solvers.

Bloom's Taxonomy

You may not be aware, but there are six different levels of thinking that you can use in the classroom. They are: Remembering, Understanding, Applying, Analysing, Evaluating and Creating. These levels range from a basic understanding of a topic through to the development of higher order thinking skills such as evaluative and creative thinking.

Remembering

When in class it is important for you to observe what is going on, listen to the information being given, take notes, and participate by answering questions and asking questions to clarify anything you do not understand. You know that you have retained knowledge by being able to answer: who, what, where, when, why and how.

Understanding

Understanding involves forming your own meaning about the information you have been given. You should be able to explain information to others in your own words. Use different examples to explain the information to your friends, family or teacher.

Applying

When approaching a new situation, task or problem, you should refer to all your past knowledge or skills. Identify which skills and information you can use to help you with the new problem, task or situation and use them!

Analysing

Analysing involves examining information closely, breaking it down into separate parts and being able to explain how each part contributes to each other and the information as a whole.

Evaluating

Evaluating involves being able to identify any discrepancies between an item or procedure and the standard it should be at, as well as making wise decisions that are supported by knowledge and information you have acquired.

Creating

Creating involves generating, designing or producing something new by re-organising or revamping the existing situation, idea or structure. Your ability to create is determined by how well you can use all your knowledge and skills in the development of new ideas, alternatives, plans and tools!