



Swartz & Parks' Taxonomy

The linear nature of Bloom leads to misinterpretation so Swartz and Parks (1994)¹ developed this non-hierarchical model of thinking skills to help with the setting of questions such as:

¹ Swartz, R. & Parks, S. (1994) *Infusing the Teaching of Critical and Creative Thinking into Content Instruction* Pacific Grove CA: Critical Thinking Books and Software

Pros & Cons

- What are the positives and what are the negatives of the discussions?
- How does this make you feel towards the proposal?
- Can any of the pros and cons be resolved to sway you one way or the other?

Setting Priorities

- What do you need to do and in what order?
- Why do you need to prioritise?
- Can any be left for another time?
- What needs to be done soon to avoid another problem developing?

Making decisions

- What decisions need to make and why do need to make those decisions?
- What are the options?
- What are the consequences of each option?
- How important are the consequences and what is the best option?

Planning and monitoring

- What are you trying to achieve?
- What must be considered when planning
- What are the options to help you achieve those aims?
- How do they fit together to help you achieve your aims?
- How will you know if it has worked?

Evaluating outcomes

- What are the results of the proposal?
- Is the outcome as you expected is it better or worse?
- How might the outcome be improved?
- What will be the new outcomes?

Goal setting

- What do you want to achieve?
- What do you need to do to achieve those outcomes?
- How are these things best accomplished?
- When will you know you have achieved your goal?

Determining Solutions

- What is it that you need to be able to do?
- What is stopping you?
- What are your options?
- What are the consequences of these options?
- Which will best help you to do what you need to do?

Defining and clarifying problems

- Why might your idea not work?
- Has everything been done as it was intended
- Are there any flaws in your reasoning
- What are the options?

Recognizing cause and effect

- What are the possible causes of the events in question?
- What evidence would support or oppose the possibilities?
- What evidence do you have that is relevant to determining what caused the event?
- Which is the most likely possibility based on the evidence?

Generating ideas

- What do you need these ideas for
- How do you best generate ideas?
- What are the most obvious ideas?
- Are there any unusual possibilities?

Identifying bias and reliability

- What is the source of the information?
- Is it trusted by others who work in this area?
- Was it found by careful research and has it verified by more than one source?
- What was the reason for finding out the information and does it relate to the question?

Drawing conclusions

- What is the source trying to convince you of?
- How are they trying to do this?
- Does the language they use influence you?
- What reasons do they provide for their opinion?
- Is there any evidence for this?
- What conclusions do you reach about what the source is saying?

Predicting and hypothesising

- What might happen?
- What changes will occur and how big are they likely to be?
- What evidence indicates this?
- Based upon the evidence, is the prediction likely or not?

Comparing and contrasting

- How are the items similar?
- How are the items different?
- Which similarities and differences are significant?
- What patterns are suggested?
- What conclusions can you draw from the patterns and significant differences and similarities?

Analysing and identifying relationships and correlations

- What are the parts that make up the whole?
- Are there any relationships that mean variables affect each other?
- Are there correlations that indicate complex relationships?
- If any of the parts were missing what would happen to the whole?
- What is the function of the parts?

Sorting, classifying, grouping using criteria

- What features do the items possess that become key criteria?
- What classification does this suggest?
- Why should we classify these items?
- What is the best way of doing that for this purpose?
- Which items fit this category?

Sequencing, ordering information

- Why do we need to order the items?
- What is the best way to do this?
- What do we need to know to order them?
- Where does each fit and are there any patterns?