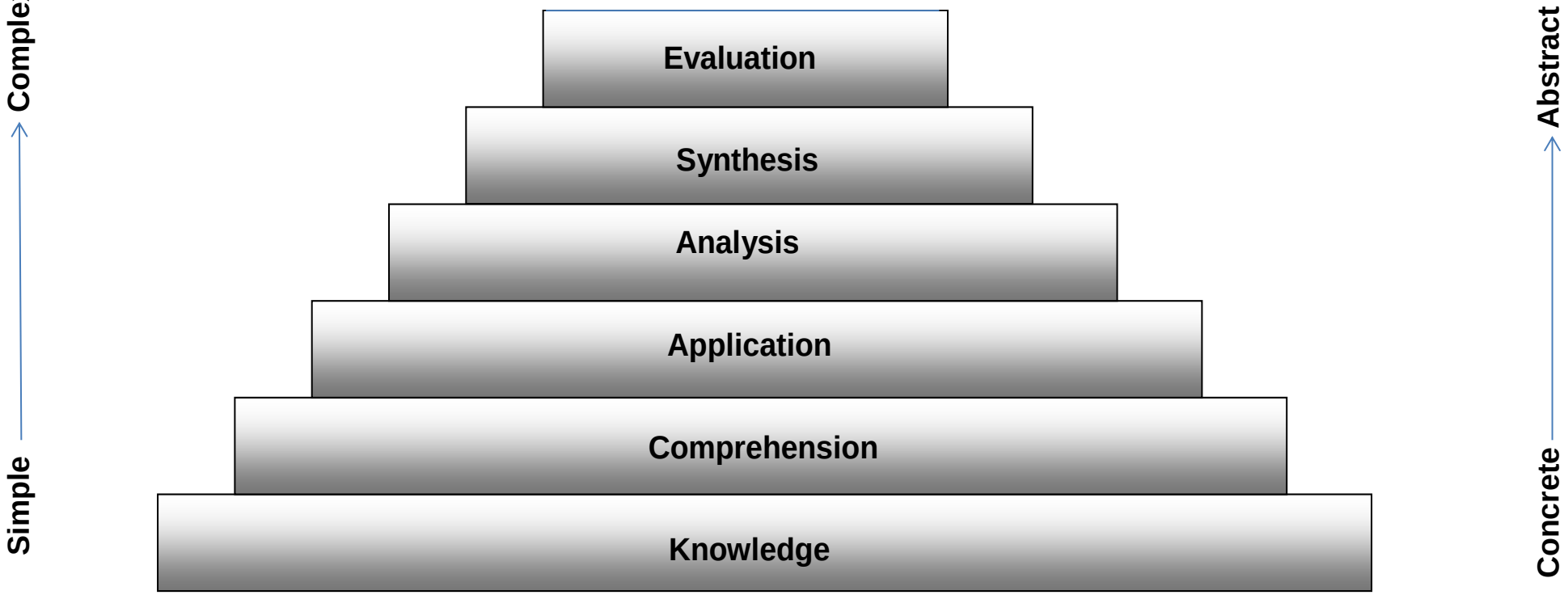
Using Bloom's Taxonomy to improve questioning



Competence	Questions Cues	Examples
Knowledge - remembering something previously learned	What? Which? List Describe Show Label Name How Recall Select Remember	Make a fact file or database card Write a list of what you can remember Create a glossary Make a chart showing… Draw (and label) what you know Mindmap what you know
Comprehension - basic understanding of ideas/concepts. - can translate into new words	Describe…..in your own words Predict What does this mean? Give an example of… Explain what is happening…in your own words Read the graph/table Sequence Match Compare Classify Sort Locate Summarise	Draw/paint pictures to explain an investigation Sequence a science process in a storyboard or flowchart Write and perform a play relating to a science idea Model a science idea Communicate an idea, fact or definition etc in own words Write a summary report Edit a presentation

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Application - using knowledge or skill in a new situation - solving problems using acquired knowledge or skills	Apply Complete Show Solve How could you use…? What method could you use? What examples can you find…? Demonstrate how What do we know that might help? What would happen if…? What evidence do you have? How could we use what we have learned today? How can you show me your understanding?	Construct a model to show how something works Create a short film / photograph / sound recording to demonstrate a science process Make a puzzle or game using what you know about magnetism or electricity to help with your design Create a presentation that shows your solution to a science problem
Analysis - breaking down into parts - relating to the whole - seeing patterns and links	Give reasons for… Why do you think…? What is the relationship between…? What conclusions can you draw? What evidence can you find? Justify your decision Formulate a hypothesis How could you test…? What is the function of…? Analyse Order Connect Link	Design a questionnaire to gather further evidence or information Write a commercial to sell a new product, using evidence from your science enquiry Conduct an investigation to produce evidence supporting a point of view Present data and support evidence using a graph to illustrate a point or reinforce a conclusion Use a flow chart or tree diagram to present information Write an index and glossary Reorganise a brainstorm or mindmap and add information to it

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Synthesis - create something new from your knowledge - make generalisations - predict and draw conclusions	Rearrange Design What would happen if…? How could you improve…? Suggest an alternative What would you suggest? Think of a new way to… Use your knowledge to predict, create, develop Tell me a rule about What else could you…?	Invent a machine or a process for a specific task Create a new product Write your prediction about how the science related to this topic would change in time or place, e.g. forces on the moon, unusual habitats, life cycles in the dinosaur age Identify your own success criteria for a particular scientific enquiry Use thinking hats to consider a particular question or context
Evaluation - judge according to a set of criteria and state why - make choices based on evidence	Assess Test Judge Rank Select Conclude Which is the best…? Find the errors What may have caused the errors? Which information is the most important? Do you agree with…and why What do you think about…and why? What would you recommend…and why? What would you advise…and why?	Use criteria to make judgements about the quality of evidence in own or another person's investigation Debate an issue of relevance to science Use thinking strategies - Conscience corridor, Decision alley, Positive, Minus, Interesting (PMI) – in considering an issue Write a persuasive letter, or draft an email, arguing a strong, evidence based case Six Hat thinking – explore ideas, problems and questions in different ways