## Thinker's Keys

LI I can use and apply thinking keys to develop and extend my knowledge of The Solar System

## Ryan's Thinking Keys

| The Reverse Listin | The What If Key | The Disadvantages | The Combinat | The |
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| Place words such as cannot, never or not in a sentence. <br> Eg. Name 3 things you cannot do in Space | You can ask virtually any What If question. Use the ideas wheel to record responses. <br> Eg. What if our planet started to orbit further away from the Sun | Choose an item and list a number of its disadvantages. Then list some ways of correcting or eliminating these. <br> Eg. An unmanned satellite | List the attributes of two dissimilar objects, and then combine the attributes into a single object. <br> Eg. A Space shuttle and a powerful telescope | Make an item BIGGER, ADD something to it, REPLACE something on it. <br> Eg. A research satellite equipped with a camera |
| The Brick Wall Key <br> Make a statement which could not generally be questioned or disputed, and then try to break down the wall by outlining other ways of dealing with the situation. <br> Eg. You cannot survive on the Moon | The Alternative Key <br> List ways in which to complete a task without using the normal tools or implements. <br> Work out 3 ways to <br> - The Earth could orbit the Sun without gravity? | The Picture Key <br> Draw a simple diagram and pupils work out ways to link it to the topic. | The Prediction Key <br> Ask for a series of predictions in regard to a particular situation, product or set of circumstances. <br> Eg. Predict how the Earth would change if the gases in our atmosphere changed | The Different Uses Key List some different uses for items from your topic (emphasis on reusing and recycling). <br> Eg. The Mir Space station |


| The Ridiculous Key <br> Make a ridiculous statement that would be virtually impossible to implement, and then attempt to substantiate it. <br> Eg. Everyone should live in space | The Commonality Key <br> Decide on 2 objects which would normally have nothing in common, and try to find common points between them. <br> Eg. The surface of Jupiter and the Earth | The Question Key <br> Start with an answer and list five questions that give that answer. <br> Eg. The Moon <br> Mars | The Brainstorming Key State a problem which needs to be solved and brainstorm a list of solutions. <br> Eg. Pollution in our atmosphere | The Inventions Key Inventions which are constructed in an unusual manner. Outline on paper and then possible construction. <br> Eg. Invent: A method for exploring space too far away for humans to travel to |
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| The Alphabet Key <br> List an A-Z of words about Space and define these terms with a picture or diagram | The Variations Key <br> This key employs a special group of words. Start each question with "How many ways Can you view space with your naked eye?" | The Construction Key <br> Construct something on or related to topic using list of items <br> Design/Construct a space station which will house crews for 'long term' stays | The Forced Relationship Key <br> Develop a solution to a problem by employing a number of dissimilar objects <br> Eg. You fix a small leak in your space shuttle using only a piece of plastic, a box of matches and an elastic band | The Interpretation Key <br> Give three possible explanations for..... <br> E. $g$ Your neighbour claiming to have been visited by aliens |

