

Challenging Assumptions

Breaking Patterns to build Innovation Skills



NOTES FOR TEACHERS

Using Challenging Assumptions to explore how we learn.

'Challenging Assumptions' takes participants through a learning process as they try to find out how to solve a problem.

It uses a range of learning methods that encourage active learning. It is collaborative, problem-based and generative, drawing upon appropriate past experience and using it in a new context.

The design of the jigsaw puzzle, and the nature of the exercise, requires learners to think about the learning process in which they are involved. In order to achieve success in the task they must 'think about their thinking' and consider changing what they are doing in order to get different results.

Follow the instructions and run the activity exactly as described in the accompanying notes for adult use. You need to make no changes to the activity process, although you may need to consider the length of time you ask the students to work for before intervening. Judge this upon their levels of concentration and focus and build in breaks/progress reviews as required.

Challenging Assumptions is an ideal exercise with which to make learners think about how they learn. It requires them to:

1. Make use of previous experience but not rely on it
2. Challenge what they think they know
3. Question their own assumptions
4. Experiment and test out new ideas
5. Show persistence in seeing the task through to the end

These are the key learning points to draw out from the exercise. These can be used when supporting students in preparing for any new learning challenge, helping them to determine their own preferred strategies for studying and building their confidence in experimenting with different patterns of thought and behaviour.

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REVIEW

Suggested questions to use when reviewing Challenging Assumptions.

1. What was the very first thing you did when you poured the pieces onto the table?
2. Why do you think you did this? What can you learn from that experience?
3. At the beginning, did you think the puzzle was possible? How did you feel during the first few minutes of the exercise? Did anything happen which changed those feelings?
4. When someone turned over the first piece, what was the reaction from other people in your group?
5. What did you do to attempt to make the puzzle work (eg. trial and error, sorting pieces into sizes/ shapes, looking for patterns)?
6. Did you want to finish the puzzle when you had worked out 'the trick', or did you want to give up?
7. What does this experience tell you about how you like to learn?
8. How might you be able to use this own experience when you have to tackle something new in the future?

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LEARNING SUMMARY

When summarising the learning from the exercise, reinforce the following learning points.

1. It is important to think about what you have learned in the past. However, it is not helpful to assume that things will always be the same. What worked in the past may not always work in a different context.
2. Make sure you know exactly what you are trying to achieve. Clarify exactly what a 'correct solution' would be and work towards that.
3. If what you are doing is not working for you, think about what you could change. If you continue to do what you have always done, you are unlikely to get different results.
4. Ask yourself lots of questions such as, "What would happen if...." in order to stimulate new ideas.
5. Don't be frightened of suggesting an idea or asking a question – even if it seems stupid to you. Your 'stupid idea' may trigger someone else's creative solution and if you have a question, other people may also appreciate the answer.
6. Even when you have found a solution to a problem, you may still need patience and persistence to complete the task. Learning something new is very satisfying when it is done but can be a frustrating and uncomfortable process. We need to learn to manage these negative emotions.