

Mathematics Anxiety



SUPPLEMENTARY MATERIALS

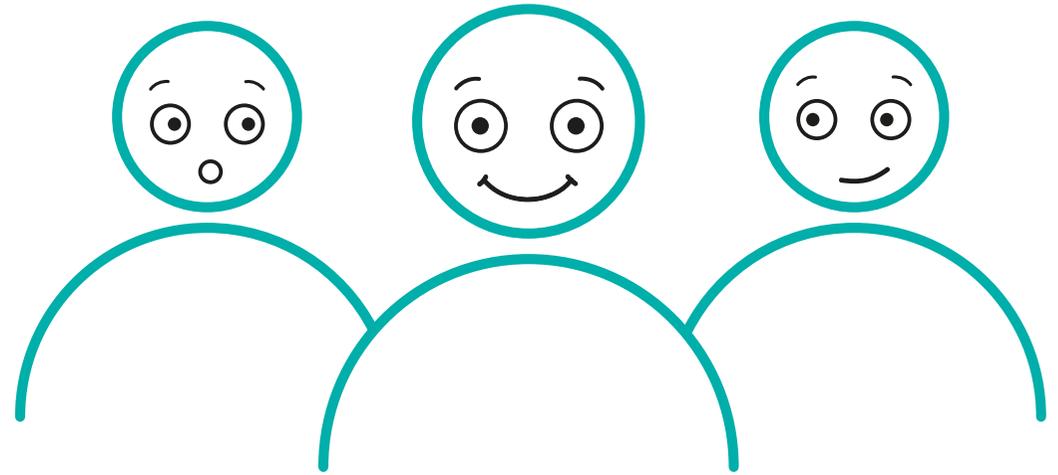
ENGAGEMENT ACTIVITIES

Team-Based Activity

STIMULUS: 10 MINUTES

Watch the following video:

<https://www.youtube.com/watch?v=7snnRaC4t5c>



ACTIVITY: APPROXIMATELY 1 HOUR

- 1** After watching the video, break into small groups or discuss with a colleague your history with mathematics anxiety whether that be your own experience of mathematics anxiety or anxiety you have seen experienced by students, friends or family members.
- 2** Reflect either individually or with your colleagues on how this video and the model for mathematics anxiety represented in Figure 2 resonates with your context:
 - a** Where do you see evidence of mathematics anxiety? With students, staff, parents?
 - b** What aspects of the video and the data it presents about mathematics anxiety did you already know and what was new?
 - c** What are some ways of identifying mathematics anxiety and negative beliefs about mathematics in students and the wider school community?
 - d** What could you, as a school, do to support all students, staff and parents to see the value of mathematics and numeracy and to build self-confidence across the system?
- 3** From your reflection, identify ways you can support all students, staff and parents to see the value of mathematics and numeracy and to build self-confidence across the system. Describe how these things will help to promote positive beliefs about mathematical learning and mathematics potential.

ENGAGEMENT ACTIVITIES

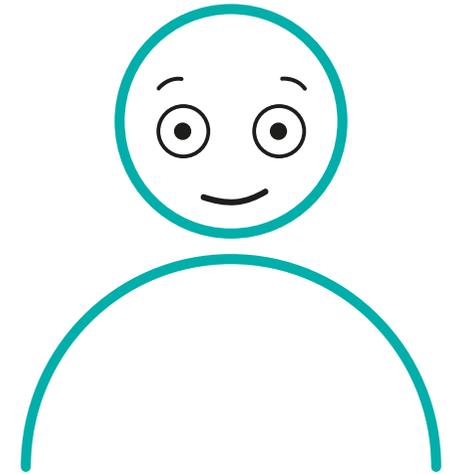
Individual activity

STIMULUS: 10–20 MINUTES

Choose one of the following articles to read:

<https://www.psychologytoday.com/au/blog/nudging-ahead/201804/why-your-students-should-journal-test>

<https://www.apa.org/pubs/journals/features/xap-0000013.pdf>



ACTIVITY: APPROXIMATELY 40 MINUTES

- 1 Reflect on your current practice, your attitudes towards mathematics, ideas about teaching mathematics and the mathematical beliefs of your students.
 - a For **mathematics teachers**: Think about your students and consider if you are aware of their feelings toward mathematics. Could some students that appear disengaged actually be avoiding mathematics because of anxiety? What kinds of beliefs do your students hold about mathematics potential? Do the students in your class value mathematics? In answering this question, remember that anxiety is always connected to some type of mathematics value and value can come in different forms – it could be enjoyment, it could be considering mathematics useful or it could be thinking that it is linked to ‘being smart’.
 - b For **non-mathematics teachers**: What types of beliefs do you have about mathematics? How are they reflected in the way that you talk about mathematics? How might the way you talk about mathematics influence your students’ attitudes.
- 2 Link your reflection to the reading on expressive writing.
 - a For **mathematics teachers**: How do you typically help a student who is mathematically anxious? Have you ever tried helping a student who is mathematically anxious without discussing mathematics or by suggesting ways to reduce the symptoms of their anxiety? How could you incorporate expressive writing into a lesson plan and what type of lesson would work best?
 - b For **non-mathematics teachers**: Try developing your own mathematics metaphor (see above) to highlight beliefs and patterns of thinking that you have about mathematics.
- 3 Discuss how the ideas in the reading and your reflection will impact on your future classroom practices.
 - a For **mathematics teachers**: Could modifying your language around mathematics help to encourage more positive mathematical beliefs? What changes will you make to your teaching practice to prevent or reverse the development of mathematics anxiety in your students? Endorsing a growth mindset in the mathematics classroom does not mean that you believe that every student will become a high-level mathematician. It means that you believe that every student can improve with practise and effort.
 - b For **non-mathematics teachers**: Could modifying your language around mathematics help to encourage more positive mathematical beliefs? How can you better demonstrate to students the importance of mathematics and numeracy in your subject area?

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