# Maths Anxiety

Helping my child using the Growth Zone Model

When a learner becomes stuck with their maths they may experience a range of feelings. There may be a slight feeling of anxiousness mixed with excitement or confusion and all of these feelings are normal and can be helpful to the problem solving brain. However, when a learner becomes so panicked that they are unable to think and feel sick, they are no longer in a helpful position to learn.

The Growth Zone Model was developed as part of Sue Johnston-Wilder's research with colleagues into developing mathematical resilience (**Developing Mathematical Resilience in school-students who have experienced repeated failure (2015))** and is a framework for understanding different learning experiences and the feelings associated with each of those experiences.
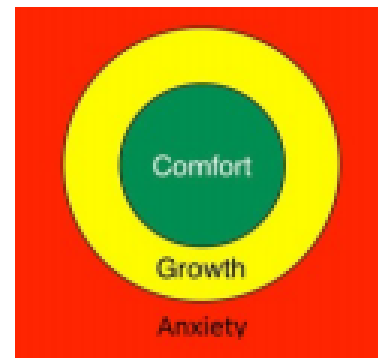
Learners who are in the **comfort zone** find the maths easy. They do not feel challenged but may begin to feel bored and are unlikely to be learning anything new. They need to be comfortable to move out of this zone and into the growth zone.

In the **growth zone**, learners feel challenged. There may be moments of slight uncomfortableness when trying to find a solution but it can be exciting and fun. Learners in this stage need to show resilience and perseverance and be prepared to try different approaches and to make mistakes.

However, if the task is too challenging, learners may find themselves in the **anxiety zone.** Here learners may feel isolated, panicked, highly anxious, confused and upset. At this point, learners need to be helped back into the comfort zone for a short period of time so that the brain can reboot and prepare for learning again.

How do I know where my child is?

Over time it is helpful for your child to recognise for themselves which zone they are in and how to move themselves from one zone to another. Typical emotions associated with each zone include:

Comfort	Growth	Anxiety
Confident	Challenged	Angry
Bored	Anxious	Ashamed
Relieved	Alert	Tearful
Comfortable	Excited	Confused/ Foggy head
Successful	Nervous	Sick/ shaking
Happy	Engaged	Embarrassed
Shut-off/ distracted	Hopeful	Nervous
Over confident	Motivated	Aggressive
	Eager	Blank mind
	Satisfied	Frustrated
	Motivated	Sad
	Enjoyment	Distracted
	Frustrated at times	Overwhelmed
	Keen	Quiet
	Chatty	Pointless
	Engrossed	Failure
		Can't think/frozen

How do I help my child move zones?

If you, or your child, has identified that they are working in the comfort zone, or the anxiety zone, you will need to look at strategies to help them move to a better learning state. Over time, it would be helpful for your child to manage themselves and identify the strategies needed to move themselves out of the comfort and anxiety zones towards the growth zone.

If your child is in the **comfort zone:**

- Praise them for their successes – celebrate their effort and hard work rather than getting answers right
- Identify what has worked well and what has enabled their success
- Encourage them to challenge themselves further and to try harder problems – how can they use what they know already?
- Move them onto harder problems small steps at a time – too big a jump may land them in the anxiety zone.

If your child is in the **growth zone:**

- Be encouraging and supportive, praise their efforts and perseverance
- Try not to give them the answers or do the maths for them, ask questions and try to help them find the right strategies for themselves (this will give

them a wonderful feeling of pride and satisfaction when they solve it for themselves)
- If *you* find the problem hard, try not to share your anxiety or be negative about the situation. Use it as an opportunity to show how a calm approach, positivity and resilience can lead to positive outcomes.
- You may want to ask:
  - Have you done anything like this before? How did you solve it?
  - Which bits do you understand? Which are the tricky bits? (Highlight and praise the bits they understand and their ability to identify what is causing the problem)
  - What have you tried already? What worked? What didn't work?
  - What do you think you might need to do?
  - Can you explain the problem in your own words? Can you use objects to show what the problem means? Can you draw a picture to help you understand what to do? Can we try and act it out?

If your child is in the **anxiety zone:**

- Be encouraging and supportive, praise their efforts and perseverance
- Try not to share your anxiety or be negative about the situation. Use it as an opportunity to show how a calm approach, positivity and resilience can lead to positive outcomes.
- Your child will need to de-stress. Try:
  - 7/11 breathing: Breathe in for a count of 7 and out for a count of 11. Out-breaths decrease your blood pressure, dilate your pupils and slow your heart rate. This moves the body's physiological state from 'fight or flight' to 'rest and digest'.
  - Distraction: To move thoughts away from the task in hand, ask your child to list 5 things they can hear or describe 5 things they can see and talk about those..
  - Calmly asking them to talk about, draw or write how they feel
  - Reminding them of all the things they can do by doing another activity that is in their comfort zone. Allow them to stay in the comfort zone until they are ready to be challenged again.

Helping your child manage their own anxiety

By discussing how your child feels at each stage of the growth zone model, over time they should be able to identify which area they are in and recognise if they feel they are moving towards the anxiety zone. Help them to understand the strategies that work for them to move them from the comfort zone to the anxiety zone and out of the anxiety zone if they become overwhelmed.
- Encourage your child to make their own growth zone chart.
- Ask them to write down how they feel in each area. This can be built up over time as your child experiences new feelings whilst tackling different problems.
- Identify what works best for your child and help them to recognise when they may need to change the way they are working and how they can do this.

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My Growth Zone Chart

Comfort

Growth

Anxiety