



THE BRAIN LEARNS BETTER WHEN THE MIND IS RIGHT

Tammy-Anne Caldwell

The Mind-Brain Lady, Educational Neuroscience Specialist Teacher and Presenter,
You Can Do It! Education Trainer, Consultant and Co-Author

“

Since the brain is central to all learning, it makes sense to know how students' brains learn best. In YCDI!, we support students' mental development through brain-based, social-emotional learning activities. This leads to better engagement, effective learning, improved memory and application. Helping students, calm their amygdala and develop various pre-frontal cortex functions is enormously beneficial for life.

Michael E. Bernard, Ph.D. Professor,
Founder, You Can Do It! Education

BRAIN-BASED, SOCIAL-EMOTIONAL LEARNING IN YOU CAN DO IT! EDUCATION

Professor Michael Bernard designed the online SEL curricula, Program Achieve, to help students of all ages (fifth edition available January 2023):

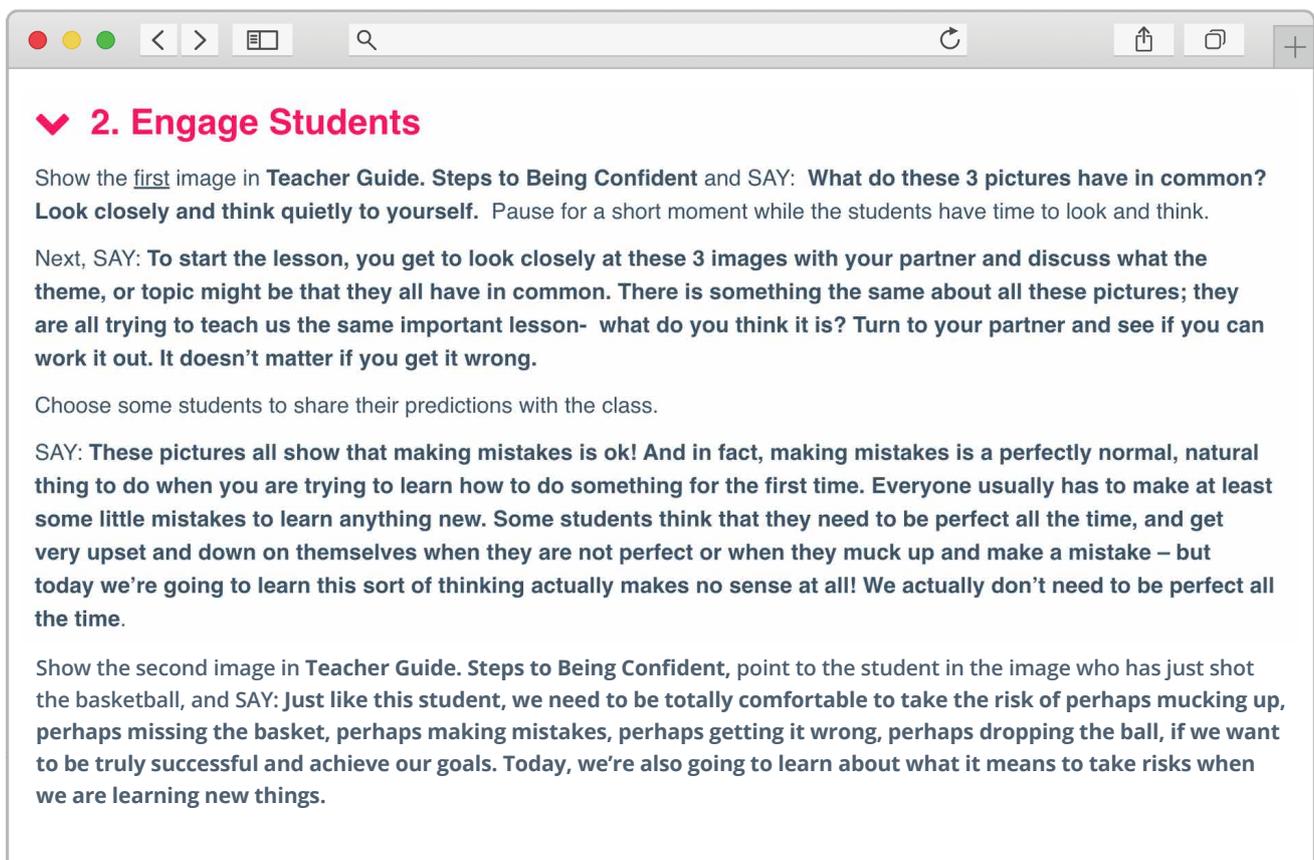
1. strengthen the five key SEL skills of Confidence, Resilience, Persistence, Organisation and Getting Along
2. learn the 12 Positive Attitudes (e.g., self-acceptance, optimism, growth mindset, working tough) to support these skills and help reduce mental health difficulties like anxiety, anger, worry and feeling down
3. understand the importance of values and character strengths.



Based on the current science of brain-based teaching and learning, Program Achieve (5th Ed.) incorporates a variety of new brain-based social-emotional learning activities, which:

1. Increase the type of positive, interactive, social learning activities to heighten dopamine levels at the beginning of many lessons
2. Incorporate visually stimulating images, props, and discussion prompts that arouse students' curiosity (producing Dopamine). The release of dopamine due to their curiosity is what hooks their attention as dopamine motivates them to want to pay attention and be able to stay alert
3. Include more re-coding activities that aid students' processing and memory of new content via different learning modes
4. Include relatively challenging tasks that require students to exert some effort and develop their pre-frontal cortex
5. Help students see the lesson content and skills as meaningful and relevant to their own lives and prior experiences
6. Help students connect new social-emotional knowledge and skills with what they remember about similar previously learnt content.
7. Incorporate activities (as we have done in the previous edition) to increase student awareness of ways to regulate their amygdala when stressed (e.g. slow, deep breathing)

Following is an example of a brain-based, social and emotional learning activity illustrating several of these instructional methods (Year 4, Lesson 4. Steps to Being Confident).



2. Engage Students

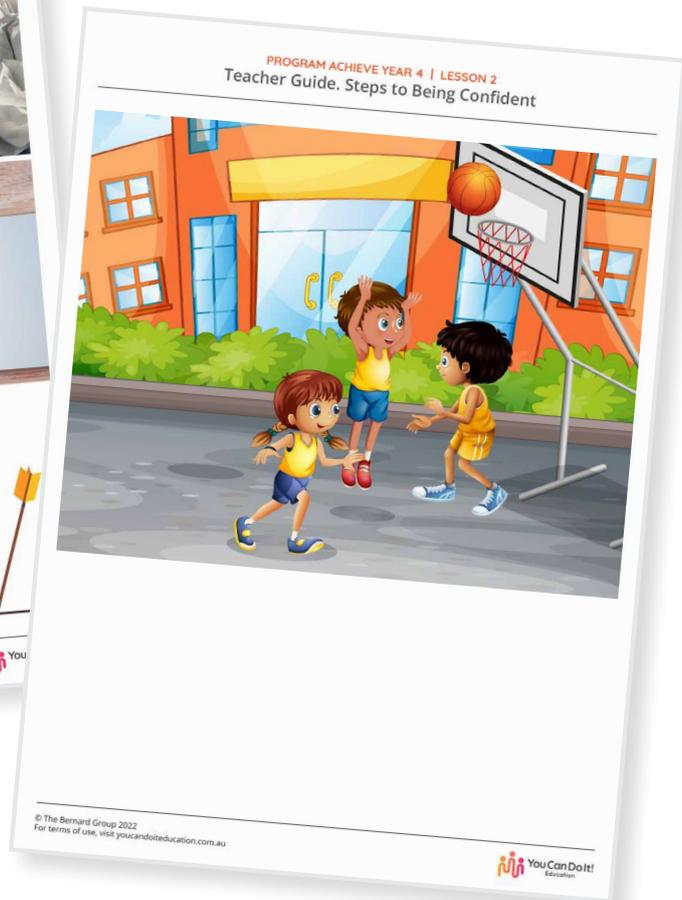
Show the first image in **Teacher Guide. Steps to Being Confident** and SAY: **What do these 3 pictures have in common? Look closely and think quietly to yourself.** Pause for a short moment while the students have time to look and think.

Next, SAY: **To start the lesson, you get to look closely at these 3 images with your partner and discuss what the theme, or topic might be that they all have in common. There is something the same about all these pictures; they are all trying to teach us the same important lesson- what do you think it is? Turn to your partner and see if you can work it out. It doesn't matter if you get it wrong.**

Choose some students to share their predictions with the class.

SAY: **These pictures all show that making mistakes is ok! And in fact, making mistakes is a perfectly normal, natural thing to do when you are trying to learn how to do something for the first time. Everyone usually has to make at least some little mistakes to learn anything new. Some students think that they need to be perfect all the time, and get very upset and down on themselves when they are not perfect or when they muck up and make a mistake – but today we're going to learn this sort of thinking actually makes no sense at all! We actually don't need to be perfect all the time.**

Show the second image in **Teacher Guide. Steps to Being Confident**, point to the student in the image who has just shot the basketball, and SAY: **Just like this student, we need to be totally comfortable to take the risk of perhaps mucking up, perhaps missing the basket, perhaps making mistakes, perhaps getting it wrong, perhaps dropping the ball, if we want to be truly successful and achieve our goals. Today, we're also going to learn about what it means to take risks when we are learning new things.**



Lessons in Program Achieve help students to perceive, interpret and evaluate reality in level-headed, non-extreme ways, positively affecting their thinking, emotions and behaviours. Learning rational beliefs (e.g. self-acceptance, risk-taking, independence, growth mindset, high frustration tolerance, acceptance of others) helps students of all ages emotionally cope when encountering life's stressors. Program Achieve ultimately guides students to acquire the self-belief to handle stressful situations or difficult people without always needing the help of others. As a result, students learn to self-regulate their Amygdala activation and retain the use of their Pre-Frontal Cortex.

In Program Achieve, two powerful tools, the *Catastrophe Scale* and the *Emotional Thermometer*, help students re-evaluate how 'bad' an event is, lowering their emotional intensity and boosting their rational thinking.

Students also learn different mindfulness techniques, such as breathing, meditation and yoga, which help to calm the Amygdala and increase emotional regulation in times of stress, anger or anxiety.

BRAIN-BASED, SOCIAL-EMOTIONAL LEARNING IN YOU CAN DO IT! EDUCATION

When students repeat, revise and recall any given thought, action, skill or piece of knowledge, that particular neural pathway becomes stronger, well-worn, familiar and dominant. In doing so, the electrical impulses can travel that pathway faster and more powerfully. When this occurs, students have formed a memory.

Program Achieve lessons revise and build on fundamental topics in an increasingly complex fashion from Year 1 to Year 10. Each lesson begins with a brief 'Review Previous Lesson Challenge' section before the new lesson builds on this prior knowledge.

The lessons within a term cover different components of the same social-emotional skills, allowing for continuous revision and elaboration over eight weeks. Lessons include previously learnt knowledge and skills so students can link to their prior knowledge. A range of effective repetition and re-coding activities in various learning modes are spread throughout the lessons, including reading, writing, discussing, role-playing, drawing and more. Importantly, each lesson ends with a Goal Setting Challenge to encourage the topic to be remembered and practised throughout the week.

These repetitive components mean that students can form stronger neural pathways, creating solid memories of the skills and content taught in Program Achieve.

PRODUCING ESSENTIAL MESSENGER CHEMICALS

Program Achieve lessons include a range of engaging and effective learning strategies to help students' brains create the essential neurotransmitters or messenger chemicals needed for enhanced learning and improved memory formation.

At the very beginning of every lesson, particularly in the Engage Students section of the Lesson Plan, you will find various visually stimulating images, props, and discussion prompts to hook students' attention, arouse their curiosity and thus release Dopamine. Lessons involve strategies for students to understand the topic's relevance and realise it is meaningful and beneficial to them (creating Acetylcholine), helping focus their attention.

Age-appropriate, relatively demanding aspects of every lesson, such as timed activities, involve students exerting effort (producing Epinephrine) to complete challenging tasks.

THE AMYGDALA AND THE PREFRONTAL CORTEX (PFC)

You Can Do It! Education focuses on understanding how students' observable 'external' behaviour (what they say and do) is caused by unseen 'internal' mental events: how students feel and think (self-talk). Professor Bernard has discovered that at the core of student mindset are a set of positive and negative attitudes – or rational and irrational beliefs. Program Achieve focuses on helping young people to become aware of and change their negative attitudes into positive ones, which is a role of the PFC. Learning to change their attitudes does a lot to help students promote positive rather than negative self-talk, feelings and behaviours and can prevent or reduce emotional and behavioural difficulties. To this end, Program Achieve lessons teach students the power of 12 positive attitudes, including rational ways to think (self-talk), which strengthen the five key social-emotional skills. These SELs, when used together, result in less activation of the amygdala and aid retention of the prefrontal cortex capabilities when stressful events occur.

Using repetition and revision, students progressively and repeatedly practice these 12 Positive Attitudes (and become aware of their 12 negative opposites) so helpful ways of thinking can become automatic. Students can apply them when bad things happen without needing to be reminded. Program Achieve ultimately guides students to acquire the self-belief to handle stressful situations or difficult people without always needing the help of others.

The lessons help students perceive, interpret and evaluate reality in level-headed, moderate, non-extreme ways,

positively affecting their thinking, emotions and behaviours - so that they are not extreme or self-defeating. These rational beliefs (e.g. self-acceptance, risk-taking, being independent, growth mindset, high frustration tolerance, acceptance of others) help students of all ages to emotionally cope when faced with life's stressors.

As a result, Program Achieve, by teaching students how to change the way their mind thinks, helps them to self-regulate their amygdala activation and retain the use of their pre-frontal cortex.

Resiliency is particularly important, and a core SEL skill taught in YCDI's Program Achieve. From a brain-science perspective, resilience is an essential skill that allows us to retain the use of our pre-frontal cortex when bad events occur by preventing the amygdala from being activated (or at least to prevent it from becoming intensely activated) and shutting down our ability to think, learn and problem solve.

Resilience includes developing an inner ability to rebound quickly and calm our brain even after a highly negative response to an event by using strategies to switch off an activated amygdala and regain the use of the pre-frontal cortex.

THE MIRROR-NEURON EFFECT

Teachers must be excited, positive, and genuinely 'on board' with the importance of social-emotional learning when presenting lessons from Program Achieve. As teachers, our emotions and attitudes towards the lessons we teach are quite literally contagious due to a phenomenon called the Mirror Neuron Effect. To increase staff 'buy-in' and enthusiasm, have teachers participate in You Can Do It! Professional Development sessions to learn more about the incredible importance and benefits of social-emotional learning and the various components of Program Achieve. Increasing teachers' enthusiasm for and genuine interest in

teaching the topics in Program Achieve will mean students' brains will mirror their positive emotions about the lessons.

As a school-wide community, students, parents and teachers should learn the relevance of social-emotional learning by understanding the bigger-picture goal behind You Can Do It! Education is to help students be successful and happy in school and life, academically and from a wellbeing perspective.