LESSON PLAN ZipZap Brain Snap

The amygdala book is divided into six areas.

1. The amygdala- what it is.
2. Fight and flight/neurochemical reaction.
3. Amygdala mistakes small threat for big threat.
4. Evolutionary biology, stone age design.
5. Smart part: reasoning brain is shut down by amygdala.
6. We are hard-wired to react, it's not our doing.

Each area is matched to a coping strategy, detailed at the end of the book.

"There must be something we can do …."

1 Noticing
2 Naming
3 Self-kindness
4 Breathing
5 Relax body
6 Connect to the senses (what you can see, hear, etc)

It's not necessary to read through the whole book then do the six clues at the end. Rather, mix the clues in along the way, referring to the back of the book for prompts.

Also, it's a long book for kids. Easy to break it into small sections.

WAYS OF APPROACHING THE BOOK WITH PRIMARY AGED KIDS

(please adjust the sophistication according to age group)

Lesson One- The amygdala- what it is

- Where is the amygdala? Direct kids to use their index fingers to point to either side of the head, towards the back, mid-ear level.
- Q What is the size of the amygdala? A Pea-sized. *Have you eaten a pea? Was it soft or hard? Do you think the amygdala would be soft or hard?*
- What is its purpose? To keep me safe. *How do you feel when you are safe? Draw how it feels.*
- How does it keep me safe? It rings an alarm.
- Is it a real alarm, like an alarm clock or fire alarm, that you can hear? No, it's …
- *So, how do you know there's been an alarm? (heart beats faster, etc.)*
- Do you ever feel like an alarm goes off in you? What does it feel like? Where do you feel it? What feelings does it give you? (ie, rushed, scared, nervous, jittery, etc.)
- What is something you can do to feel better? In the book it says to notice as it's happening, instead of getting carried away by the feelings.

FUN ACTIVITY

Amygdala Orchestra. Divide your group into four. Each group takes one syllable each, 'a' 'mig' 'da' 'la'. Be the conductor, gesturing to each group in turn to say their syllable. When established, vary the pace or vary the pitch. Gesture high for a high note and low for a low note. (If it's a smaller group, use less syllables, ie, 'amig' and 'dala').

Lesson Two- The fight and flight/neurochemical reaction

Amygdala is triggered when you feel unsafe. It might make you want to

(1) fight or struggle

(2) run away, escape

(3) freeze, like you can't move, you're immobilised.

The Three 'F's

- What letter do these three words start with? (F)
- Do you ever get the urge to punch or fight when something has happened that upsets you?
- Have you ever wanted to escape or run away when you're feeling uncomfortable about something?
- Have you ever found yourself unable to reply, or find the words to say, when you're nervous, angry or frightened?
- Do you get an uncomfortable feeling inside, or all-over, when you're upset by something? That could be the chemicals released into the bloodstream by the amygdala. It makes us feel very uncomfortable and makes us want to change the situation.

FUN ACTIVITY

Play/hum music for kids to dance to. Instruct kids to freeze when music stops. When you call 'fight' kids do pretend fisticuffs on the spot. 'Flee' they run to end of room and back. 'Freeze' they stay still for longer. Later, when you've completed the pfc (section 5) you can add 'PFC'- sit down or lie down quietly.

Lesson Three: Amygdala can mistake a small threat for a big threat.

REAL THREATS

The amygdala is designed to keep us safe and it often does. When you quickly step back onto the footpath away from a speeding car, that's the amygdala saving you from danger. It makes you act immediately, without thinking.

Or if you hear a rustle in the bushes you might go quiet and keep very still, even without thinking about it.

- What are some other situations which might save your life by acting automatically, without much thought? (*hear an explosion and dive to ground; hear raised voices and freeze; jumping back if a fenced dog suddenly barks ferociously at you*.)

PERCEIVED THREATS

Not all threats are life-threatening. Amygdala gets confused and can mistake things to be more dangerous than they actually are. It can cause us to overreact; often we behave badly when that happens. (When we understand it's happening, we can use the clues to calm down, feel better and behave better).

- Have you heard of the saying 'make a mountain out of a molehill'? What do you think it means? What is a mole hill? Do we have moles in Australia? What animal (that builds a mound) could we use instead?
- Look at the pictures in the book. How do you feel when you look closely at the spider? At the shark? What are some things that scare you? Make a list.

- Draw the scary things, then notice how you feel when you think about them. Does your skin crawl or your heart beat faster? Are these creatures really a threat? Are they a threat right now, this very moment, on the page? Does amygdala know the difference?

Lesson Four: Evolutionary biology, stone age design.

How old is the operating system on your phone or tablet? Maybe only a few years, or less?

The early model of the brain, the human operating system, developed millions of years ago. In the distant past, living conditions were tough and dangerous. It was important for the brain to have a strong alarm system. That's how we got the amygdala.

These days, although there's no tigers lurking in the bushes, no warriors invading our caves, the amygdala is still on the alert.

In place of responding to stone-age threats, the amygdala doubles down on the daily strains of modern life.

- In the picture it says: "bullying, expectations, obligations, traffic lights, rejection, comparison, pressures, shame". There's a lot of adult words here … what words would you write here?

- Can you name some of the daily strains you undergo?

- What do you think life would have been like in the stone age, when humans lived in caves and hunted for food, when there were no shops or supermarkets? Would the amygdala have been especially useful?

- Do you know why it is called the stone age? It's because people hadn't yet discovered how to make metal. And they hadn't started to farm crops for food. Fire and rock were very important. There was no money.

- Are you glad you have the amygdala for keeping you safe or do you think it's outdated? Do you think it does a good job? Or a bit of both good and bad? Does it sometimes get confused? Do you get confused?

Lesson Five: The Smart Part, PFC.

The sort of brain we have today developed hundreds of thousands of years ago. Diet improved, which nourished the brain. People interacted more in clans, and between clans, which also helped develop the brain.

- Can you imagine what it would have been like, when the very first smarter humans emerged? What would they have thought about?

The upgrade was a new piece called the pre-frontal cortex (PFC) that evolved in front of the old brain

- What is PFC short for?
- What could be a better name than pre-frontal cortex? Can you make one up?

The PFC helps us think clearly and make smart decisions. It helps us have more perspective over situations. It gives our mind more processing power. We feel less aggressive or fearful, more clear and peaceful.

- When you're happy and playing, does it feel like your mind has lots of space? Can you draw that, or find some words for it?

- When you're upset, does your mind feel tight? Or dark? Can you describe it?

When the amygdala is triggered, it commandeers the brain's processing power by shutting down the pathways to the PFC, the smart part. It wants us to act urgently. It doesn't give us time to stop and think. (Luckily we can change the situation by taking a pause when we notice we're upset).

- Have you noticed how you can't think straight or clearly when you're really upset? Can you make a sign, gesture, symbol or body shape, of how that feels?

There are lots of ways we can open the pathways again, by calming the amygdala. ZipZap Brain Snap suggests six ways, one at the end of each section.

- Which clue do you like the best? (noticing, naming, self-kindness, slowing breathing, relaxing tightness in the body, or the senses?)
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Lesson six and 'the end bit'.

So, that's the story of the amygdala.

The amygdala's reaction happens automatically. It's programmed into our brain, hard-wired.

We can't rewire the brain to switch off the amygdala. But we can learn methods or techniques (in the book they're called 'clues') to help calm down the amygdala and bring the PFC back online.

Then we feel better and happier and more free.

- What does 'automatic' mean? Can you name things that work automatically? Such as instincts, night and day, digestion, a washing machine.
- How about things that are not automatic, like talking, drawing, playing.
- Do you think you can start to notice when your amygdala has taken over, after reading this book? Do you think your life will be easier if you teach yourself the clues?

Have fun with the ideas … please feel free to communicate anything you come up with, I'd love to hear.