

Bead #2  
My Ancient Reptile Brain  
Starring Roxie the Reptile

"Thoughts are not facts."

— Anonymous



# Bead #2

**How much** do you think or know about your brain? Not much, right? However, you probably know it is a pretty important thing to have. In some ways it is like the engine in a car or the hard drive in a computer — you can't run a car without an engine or a computer without a hard drive — and we need our brain to function.

**Our brains are working** pretty much constantly managing and controlling everything we think, say and do. We can't really get to know ourselves better without some basic understanding about our brains. To get started, here are some cool facts about the brain.

- ★ **Your brain** is the most complex, amazing organ in the universe.
- ★ **The brain** weighs only about three pounds and is 85% water.
- ★ **It is estimated** that the brain has 100 billion nerve cells and more connections in it than there are stars in the universe.
- ★ **Information** in your brain travels at about 268 miles per hour.

**WOW!** Your brain sounds ultra-cool and complicated but it's actually really **OLD**. On the outside you may be a totally with-it girl with an awesome sense of style and the latest technology in your back pocket, but part of your brain is not quite so hip. In fact, it's downright **PRIMITIVE**. Yep, primitive as in caveman. Here's a short science lesson to help you understand just what we mean:

# Your Reptile Brain Explained

**You've heard of reptiles, right?** Crocodiles and lizards are common examples. You may have even heard of the "reptilian brain" which was the first way the brain developed and appeared hundreds of millions of years ago. The reptile brain evolved to control critical processes like the heart beat, breathing, and sleeping. The reptilian brain is really focused on survival. You can imagine the life of reptiles and dinosaurs. They weren't texting friends and playing video games. They were constantly on the move to find food, a safe place to live and someone to date. Life was difficult and only the strong or smart survived. Good thing their basic brain function was to assess danger and respond with the "fight or flight" response. That is precisely what happens when your brain senses danger: your heart rate goes up, you become really aware of your situation and react quickly. In order to survive, you needed to quickly decide – "should I RUN or FIGHT?" because the wrong choice could cost you your life!

**When small mammals first appeared** – about two hundred million years ago – a new area of the brain evolved. This "limbic" area allowed mammals to feel emotions and connect to one another. So the main difference between reptiles and a dog or horse is that the dog and horse are capable of emotional actions like wagging a tail or nuzzling your arm when content. But even dogs and horses and other more developed mammals have brains that are still very simple and focused mostly on survival.

**Are you with us?** Good. As time marched on, the brain kept growing and changing. So let's fast-forward to the time of primates (apes) and humans. Unlike the reptiles and small mammals, they emerged with brains that allow them to think and feel about complex stuff. In humans, especially, there is a part of the brain that is highly developed (but not FULLY developed until a person is in their 20s – more on that later). The newest part of the brain allows us to do lots of things including speak, think, imagine, dream, and solve complex problems.

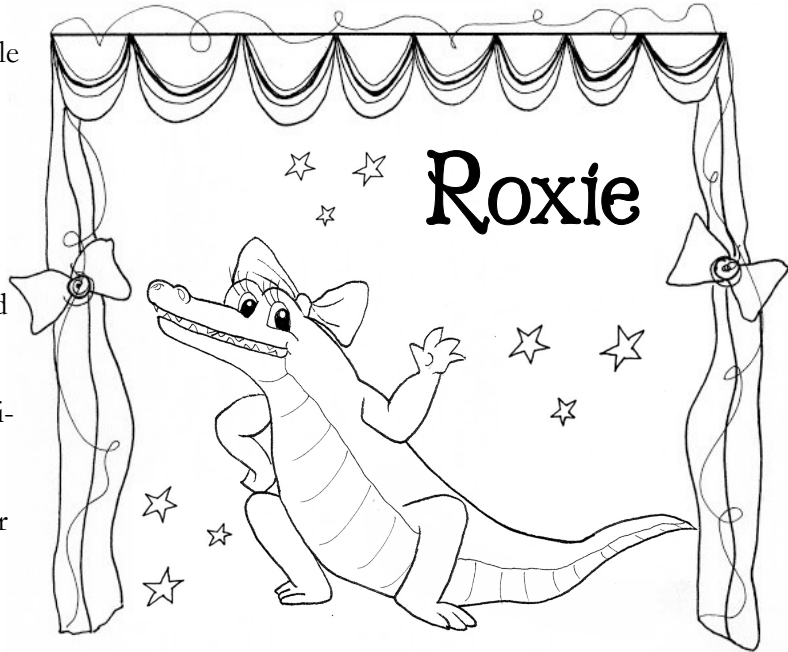
**So what does this have to do with you?** Your brain has all three parts:

- The reptilian brain that manages your bodily functions, focuses on survival and reacts quickly
- The mammalian/limbic brain that allows you to feel emotions and have relationships
- The new magnificent brain that is capable of complex thinking and problem-solving

**These three parts work together in a most amazing,** brilliant, super complicated way. Scientists are learning more and more about the human brain every day and it is truly stunning. It is so complex there are special scientists who only study the brain. Now that you know about the three parts of the brain it will assist you in understanding how we humans behave.

## Now that class is over, let's see what this has to do with us:

**First**, it means that your reptile brain (let's call her Roxie) is alive and well, guiding and motivating your unconscious instincts and behavior. Roxie can be bossy and thrives on emotion. If something emotional happens, she is alert and ready to jump to conclusions! It's important to remember that even though your magnificent brain may be capable of straight As, Roxie is always there, ready to hijack the other parts of your brain and catch you by surprise.



**Second**, Roxie really wants to protect you. That's what millions of years programmed her to do: Survive! Good thing we usually have plenty of food and shelter to calm her down. Sometimes she feels like a worry machine with constant messages to "look out, be careful, don't do that" whenever she senses a threat. Or she may obsess over something that happened in the past. And it's not only the conversations going on in your head. Your mind can also create sweaty armpits, a fast beating heart, and a stomach ache in response to the fear it creates to protect us.

**So that's good, right?** Roxie is there to protect us? Yes and no (we never said this would be easy). If you were a reptile then maybe the answer would be a simple yes. But, Roxie can be right AND she can be wrong, really wrong!

**Why?** Because this part of the brain is quick to act and can jump to conclusions without knowing all the facts, especially when you're excited, emotional or stressed. It's not Roxie's job to pause and think about risk and consequences. That part of the brain develops last, which is why your parents have to set limits and make some decisions for you.

**Also**, Roxie can anticipate danger where none exists. In fact she can take her job too seriously and think of all kinds of things that went wrong in the past or could go wrong. If you've ever felt paralyzed with fear, it's likely Roxie was busy at work!

**So, that's the tricky part** – knowing when your brain is right (and listening to it) and recognizing when it's wrong (and coping with it).

**Here's an example:** Let's say you want to run for Student Council, which requires you to give a speech to the entire school body. Perhaps your teachers have said you would be a strong leader. Maybe your friends are encouraging you to do it. Or possibly, you have some good ideas for improvements at your school. But wait, Roxie has other ideas. Her job is to protect you from all possible threats, so, she may remind you of all the things that could go wrong such as:

What if you lose?

What if you have to run against a good friend?

What if you make a mistake and everyone laughs?

Add a few ideas of what YOUR Roxie brain might say to you here:

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**Think of a time** when your reptilian brain got your attention by sensing danger and keeping you safe. Write down what happened and what you did.



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**Think of a time** when your reptilian brain jumped to conclusions about something that happened and then you realized you were wrong about the situation. (For example, you see two girls whispering and think it's about you.) Write down what happened and what you did.

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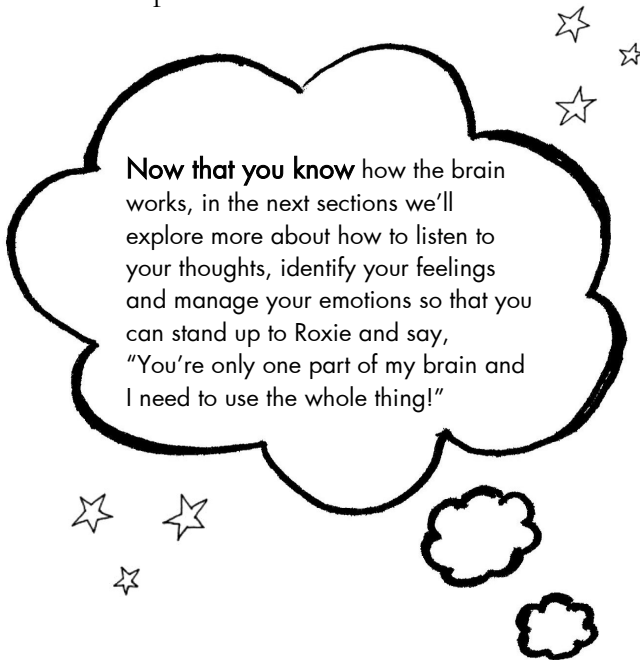


**When your reptilian brain** responds, you have some choices. You could:

- A. Listen to it, agree with it and act accordingly (for example, not run for Student Council).
- B. Argue with your reptile brain and come up with all the reasons it's wrong.
- C. Listen to your inner Roxie, thank it for its input and then move on.

**All three choices have pros, cons and consequences.**

There are times when listening to your cautious mind is a fantastic thing to do — like when you are thinking about forwarding a mean text message or are being dared to steal something from a store. But there are also many times when your brain is telling you to fear something because it doesn't have the complete picture or is just flat wrong. In these cases, you need different strategies.



Now that you know how the brain works, in the next sections we'll explore more about how to listen to your thoughts, identify your feelings and manage your emotions so that you can stand up to Roxie and say, "You're only one part of my brain and I need to use the whole thing!"

# Activity

Unscramble each of the words found in this chapter. Then, copy the letters from the numbered spaces to the bottom line with the same number to solve the phrase.

ICJHAK

                         
2        16

IRXOE

                 
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VIIMTREPI

                                 
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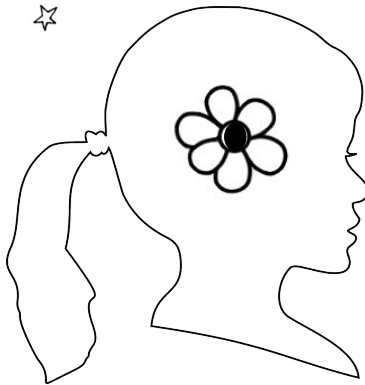
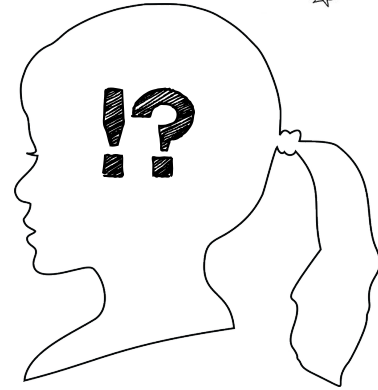
Write the letters in each box here to write a final reminder about this section:

                                                                              
1 2 3 4 5    6 7 8 9 10 11    12 13 14    15 16 17

# Journal Activity

**Think about a time** when Roxie was trying to keep you safe by alerting you to a possible threat. Don't pick an event that was truly dangerous but rather something that caused you to be nervous, anxious or doubtful. Here are a few ideas:

- ★ Attending the first day of school
- ★ Confronting a friend after a fight
- ★ Watching a group of students tease another student
- ★ Trying out for a sports team or school play
- ★ Interviewing for a babysitting job
- ★ Attending a sleepover where the other girls are posting mean comments on a website



**Now, close your eyes** and in your mind really try to re-create the scenario including sights, sounds and smells. Think of all the people there, what they were saying and how they acted. Turn your thoughts toward yourself. What physical sensations did you experience? What feelings (sadness, anger, joy, fear, surprise, disgust) did you experience? What thoughts were going on? Do you notice a difference between how you felt in the moment and how you feel now after having time to think about it?



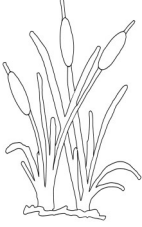
**Now, open your eyes** and use the next page to journal your observations. Write quickly and without judgment! There are no wrong answers. This should only take a few minutes, then take a deep breath and smile.

**You are on your way to discovery and have earned another bead!**

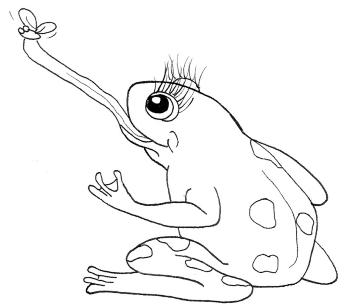


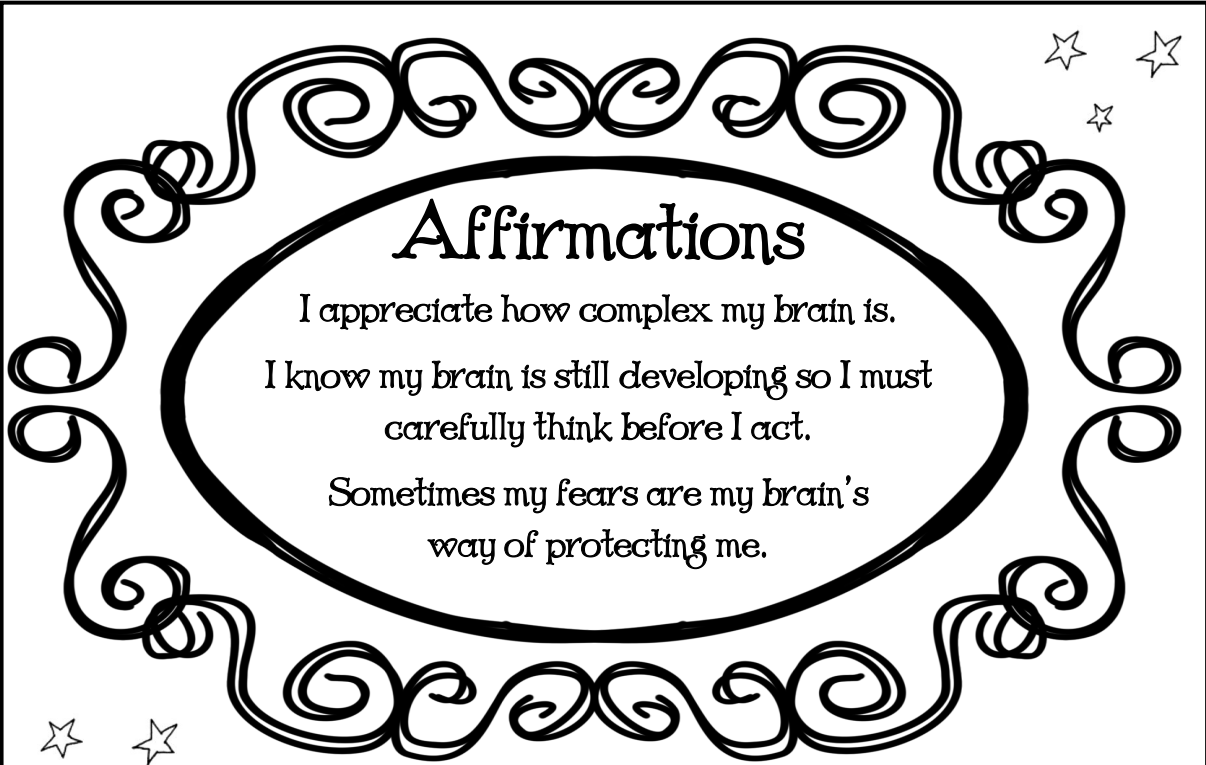


# Journal



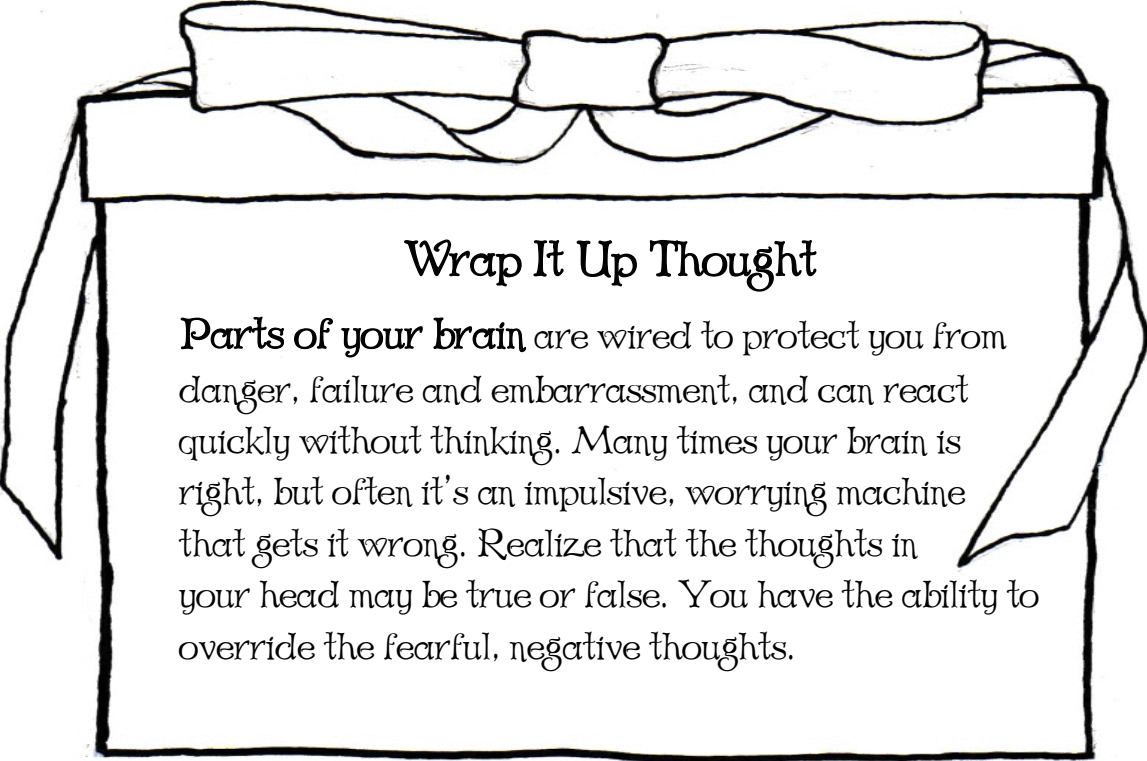
Journal page with horizontal lines for writing.





# Affirmations

I appreciate how complex my brain is.  
I know my brain is still developing so I must  
carefully think before I act.  
Sometimes my fears are my brain's  
way of protecting me.



## Wrap It Up Thought

Parts of your brain are wired to protect you from danger, failure and embarrassment, and can react quickly without thinking. Many times your brain is right, but often it's an impulsive, worrying machine that gets it wrong. Realize that the thoughts in your head may be true or false. You have the ability to override the fearful, negative thoughts.

Bead #2

**This ancient looking drum bead** is a reminder that the prehistoric, bossy-pants Roxie is alive and well and running your brain, and trying to get you to march to the beat of her drum, especially when you are emotional, scared or stressed.

**Learn to take a moment** to stop, breathe, think and wait to act until you have calmed down and are sure your whole brain is working!



explore, embrace, empower

