1 Activating Classroom Climate

Classroom climate (sometimes called the classroom culture) is made up of a constellation of factors that can sometimes go unnoticed. In laymen's terms, it's how the classroom *feels* or "how we do things around here." It includes everything from the paint on the wall, how many physical objects are in the room, and how the space is organized to the dominant emotions being expressed, the teaching strategies used, and how much students speak or are quiet (Ambrose et al., 2010).

Neuroscience has taught us a lot about how the brain works. And one thing has become clear: the setting in which learning takes place affects the brain. Children are not robots, whose parts function independently of the world around them. The elements of classroom climate will concretely affect children's brains and influence how well they learn.

In this chapter we'll look at the elements of classroom climate and the myriad ways they can affect the learning brain of students, particularly in regard to two common classroom problems: stress and social isolation.

BRAIN RESEARCH AND THE CLASSROOM

Brain research has huge implications for the classroom. Neuroscience can never tell us exactly what to do in the classroom, but its findings can help us determine best approaches to teaching. The term *neuroeducation* or *educational neuroscience* refers to how educators use the findings of neuroscience to shape their educational practices. Neuro-educators like John Geake, a professor and cofounder of the Oxford Cognitive Neuroscience Education Forum, have spoken about the importance of neuro-education as a field:

> Relevant and useful professional and classroom applications of educational neuroscience will increasingly become available as we gradually come to understand more about brain function through neuroscience research, which answers educational questions about learning, memory, motivation and so on. (Geake, 2009, p.10)

In the sections that follow, we'll examine two of the biggest impediments to student learning—stress and social isolation—and explore how classroom climate inhibit or ameliorate these two problems. Each problem has its particular challenges, but the base principle is the same: Learning requires a safe, supportive, nurturing climate in the classroom so that students are able to activate their prefrontal lobes and focus on learning, not just survival.

THE PROBLEM OF STRESS

How Stress Shuts Down Learning

The brain was put in the head for survival, not to go to school. And one of the primary ways it guards survival is by scanning the environment for threats. When a threat appears—whether it's a saber-tooth tiger crouching in the grass, the shake of the ground before an earthquake, or the approach of a threatening-looking person with a weapon—the brain reacts by releasing stress hormones like cortisol and adrenalin. This flood of stress hormones gear up the body to take action.

The amygdala is often called the emotional sentinel of the brain. It is part of the brain's limbic system and it helps deal with incoming data about a person's environment. Under normal conditions the amygdala directs incoming data to the prefrontal cortex (PFC), which is the seat of executive function and long-term memory. The PFC uses the data to formulate a logical response to outward events. In a normal setting a person can monitor their own responses and make a decision to engage or ignore the stimuli.

However, in situations of high stress, where there is a sense of threat or fear, the PFC shuts down and the limbic system takes over. There is no time to carefully consider all the data and options and work out a solution. The brain tells the person to act now, and there are two options for action: fight or flight (Gregory & Parry, 2006; Zull, 2002; Posner & Rothbart, 2007). Stress hormones are released, thought processing and language virtually stop, and the entire brain is geared toward monitoring and dealing with the perceived threat.

So how does stress affect learning in a contemporary classroom? Most classrooms are free of saber-tooth tigers, but not all threats are physical or life-threatening. For children in school, the fear may be of humiliation, ridicule, bullying, embarrassment, failure, or confusion. The stimuli may be a mean classmate, an insensitive teacher, a task that is too hard for the student at his or her current abilities or readiness, or even a stressful home environment. These things put a child in a state of constant alert, ever scanning the environment for danger, and ever reacting with anger, fear, or sadness. These emotions emanate from the primitive brain, and we know that when the primitive limbic brain is in control, the PFC with its higher functioning shuts down (Raz & Buhle, 2006). The person cannot focus on learning because the limbic system is too busy. In this case, it's not that the students aren't paying attention. They just aren't paying attention to learning because they are on high alert in their limbic system. They're in survival mode.

Hattie's meta-analysis research on anxiety shows an impact with effect size of $d = 0.40$ (although most of the research used focused on test anxiety and mathematics). Given the impact of undue stress on the ability of the brain to process new information creating appropriate challenges and offering emotional support to students may be one of the most important strategies for any teacher. Jensen (1998) theorizes that excess stress and threat could be the single highest contributor to inhibiting academic success in schools. So it is crucial that this be recognized and monitored by all teachers so that learning can be activated.

The Goal: Appropriate Stress Levels

Some level of stress is desirable. Stress can help people thrive and survive by contributing a high motivation and engagement with the task at hand; in reasonable amounts and for short time periods, those stress hormones help get the job done. Without any pressure there is little motivation. Neuroscientist Antonio Damasio (2003) defines appropriate stress as that which occurs when a challenge is just beyond the person's current skill level. He calls this *maximal cognitive efficiency.* Likewise, Kirby et al. (2013) found that the onset of stress entices the brain into growing new cells responsible for improved memory.

However, when stress levels become too high or last too long, they become harmful (Goleman, 2006b). Kirby's research found the benefits of stress only accrued when stress was intermittent. As soon as the stress continued into a prolonged state, it began to *suppress* the brain's ability to develop new cells. And for some children, the level of stress that they are under—the amount of cortisol and adrenalin churning through their

bodies on a daily basis—is similar to that of a combat soldier. They simply cannot engage their PFC and learn under a condition of constant stress.

The Strategy: Managing Stress in the Classroom

Teachers cannot eliminate all the stress from children's lives. But they can reduce the stress that children are subject to within the classroom. It's a constant balancing act to create just the right amount of low-level, intermittent stress—the good kind of stress that Kirby and Goleman say aids in achievement—but not so much that it shuts down the PFC.

So how can teachers achieve this optimal balance? Here are just some of the things that teachers can monitor and adjust:

• **The physical climate:** Some students have a hard time staying seated for long periods of time. If a student appears to need more opportunities to move and speak, find ways to make that happen. If a child is constantly told to sit down and be quiet, the continual negative feedback can put his brain in a state of stress. Another aspect of the physical climate can be classroom layout; some children may feel isolated and need to interact with classmates more.

• **The intellectual climate:** Students experience stress when the tasks before them are too far out of their current range of capabilities or when instructions are unclear. They experience boredom when the tasks are too far below their capabilities or the work feels purposeless. Boredom or frustration will inhibit the information flow. In these situations students will either "zone out" or "act out." Their reduced academic success affects their self-confidence and reinforces a fixed mindset of failure and often learned helplessness.

• **The emotional climate:** Students find it stressful when they are isolated from their peers or have no emotional or cognitive support systems and structures. Understanding how to establish and maintain a positive classroom climate is crucial to the quality of learning and time on task. Even basic courtesy and kindness are important. As Hirschy and Braxton (2004) indicate, "Incivilities that are not addressed properly not only negatively impact learning within the course in which it is experienced, but may also negatively influence a student's success at an institution."

Teachers can create a positive classroom environment by keeping the door to the PFC open. They can provide stimulation—without undue stress—by introducing novelty and interesting ideas and items that create curiosity. Exploring novel experiences activates the SEEKING system for

mammals that is important for survival, and engaging it releases dopamine, a great motivator. This sense of engagement and reward helps to "Velcro" information or concepts to the mind and transfer learning to long-term memory. All the attention-getting devices at our disposal, from music, color, stimulating curiosity, discrepant events, anomalies, and questions, not only activate the brain but also allow the brain to pay attention, take in information, and process it if there is an absence of threat (Wang et al., 2005).

Students are intrigued when there are opportunities to explore and connect with new materials and concepts. For example, a teacher may provide students with a variety of tools and utensils borrowed from a pioneer museum. The students can examine them and speculate on how they had been used by pioneers and then brainstorm which tools we use today to do the same functions. The collaboration and speculation in this activity can create high interest and further investigation at the secondary processing conscious level of the SEEKING system.

A classroom that balances appropriate challenge and creates an environment and climate that are supportive and safe allow students to take risks and be themselves. It allows for that state that Damasio calls maximal cognitive efficiency and Caine and Caine (1994, 1997) call *relaxed alertness*, where students are attending to tasks without undue pressure and with full support of peers and teachers, satisfying the brain's innate need to know.

Strategy 1: Routine and the Importance of Clear Expectations

Many students take the unexpected twists and turns of life in stride. But others feel great stress when they experience uncertainty—a reaction to a mostly imagined threat often referred to as "anticipatory anxiety." These students become anxious if they are unsure about what is going to happen, conditions are unclear and expectations of their performance ambiguous.

Students do better in classrooms where they know what to expect. There are consistent, clear, and predictable processes for "how we do things around here." Not to say that surprises and deviations don't or won't happen, and often add novelty that the brain loves and pays attention to, but when they do we can ease students through the unknown with clarity and scaffolding supports. If we provide this environment we will lower stress and reduce distractions and anxiety and produce a more brain-friendly place to learn with more focused attention to learning.

Many of my students would come into class asking, "What are we doing today?" I was glad for their enthusiasm and knew that they were

seeking clarity of purpose and some knowledge of what we were going to be doing and learning and perhaps also to decide if this was going to be an interesting day. Knowing what to expect brings clarity to the day and helps students anticipate what they enjoy as well as prepare them for the challenges they may have.

Providing agendas for the class and/or unit of study will foreshadow what the content, tasks, or activities that students will be exposed to in the classroom (see Figure 1.1). Brains like to know where they are going and it creates curiosity, opens mental files to prior knowledge, and helps with transitions. Posting the materials, books, and resources that students will need to get ready for the learning is helpful too. This can be done by taking a photo of the materials and posting them on a white board so students see what materials they will need for the class without a lot of teacher aural direction and students tuning out. Visuals have much greater clarity and consistency than the teacher repeating and repeating "Take out your . . . " We know the brain pays attention to visuals more of the time than auditory stimulus (Sousa, 2006). Figure 1.1 shows some examples of agendas.

Strategy 2: Standards and Expectations

Along with the agenda students also need to know and be clear about the standards and objectives as well as the tasks and criteria for success. These need to be clear and also presented in student verbiage with perhaps rubrics that help them focus on criteria so that they can monitor their progress (more in Chapter 5). This will also help reduce anticipatory anxiety and lower stress. Having a choice of assessment methods also gives student a sense of control and lowers anxiety. Control over process and progress will give students the autonomy they need to develop as life long and assessment capable learners. Choice is a great activator and motivator.

The use of rubrics and scoring scales help students focus and monitor their own progress toward goals and personal success.

Strategy 3: Routines and Procedures

Setting up routines and establishing procedures will also dissipate "anticipatory anxiety" and help keep the prefrontal lobe rather than the ancient brain centers engaged. This will alleviate stress and unnecessary distraction. Procedures and routines also set up patterns for the brain and facilitate smooth transitions and management of materials, resources, and student interactions that are positive and as a result increase on task behavior.

Figure 1.1 Agenda Samples

Agenda: January 15, 2015

1. Learning intentions for cells
2. Cell Game: Review terminology and structures
3. Write cell analogies to explain cell part functions

Agenda: Thursday, January 15, 2015

NO notebooks needed today

1. POP quiz
2. Review with I have . . . Who has?
3. Jeopardy game on Illinois history

Agenda for Today

Meet with 9:00 partner and review your homework.
Meet in project groups and create a timeline for your project.
Generate a "to-do" list with group member commitment.

Review Columbus's journey with your partner.
Pairs squared: Complete the jigsaw reading and timeline graphic.
Create a group mind map of his accomplishments.

Sign up for the center where you want to start.
Review the directions for the center with the group there.
Work in the center for 20 minutes.
Be ready to report on your work.

Source: Images courtesy of jannoon028/Shutterstock.com.

Establish procedures and behaviors (with student input if possible) for

- Class entry and exit
- Accessing resources and materials
- Options when work is finished
- What to do when you don't know what to do
- Accessing help and support
- Forming groups
- Respectful behavior

Having students discuss these procedures and routines and offer suggestions and ideas is a great way to include them in their reality. It fosters a sense of community as they contribute suggestions. They often have great ideas and are more willing to support them if they have had input and own the decisions. This buys in to their need for a sense of control and autonomy.

These procedures can be posted in the classroom so that students have a reference point and can access them when needed. This saves a lot of time and off task behavior when the teacher doesn't have to keep reiterating them (often falling on the ears of tuned out students). The brain pays attention to what it needs at the moment. Relevancy is a reality. A comfort level and sense of support can help students feel emotionally and psychologically safe and cognitively enabled. These routines and procedures also create a sense of self-efficacy and autonomy that is motivating and self-satisfying to students.

Initially these procedures should be reviewed, perhaps demonstrated and practiced so that they are clear to the students; also this will give students an opportunity to revise them if things aren't working for them or the class. Repetition reinforces the probability that knowledge and skills will become automatic over time, as the neural connections in the cerebellum are strengthened and myelinated (dendrites grow thicker with a fatty coating of myelin that protects and insulates the dendrites and increases their connection speed).
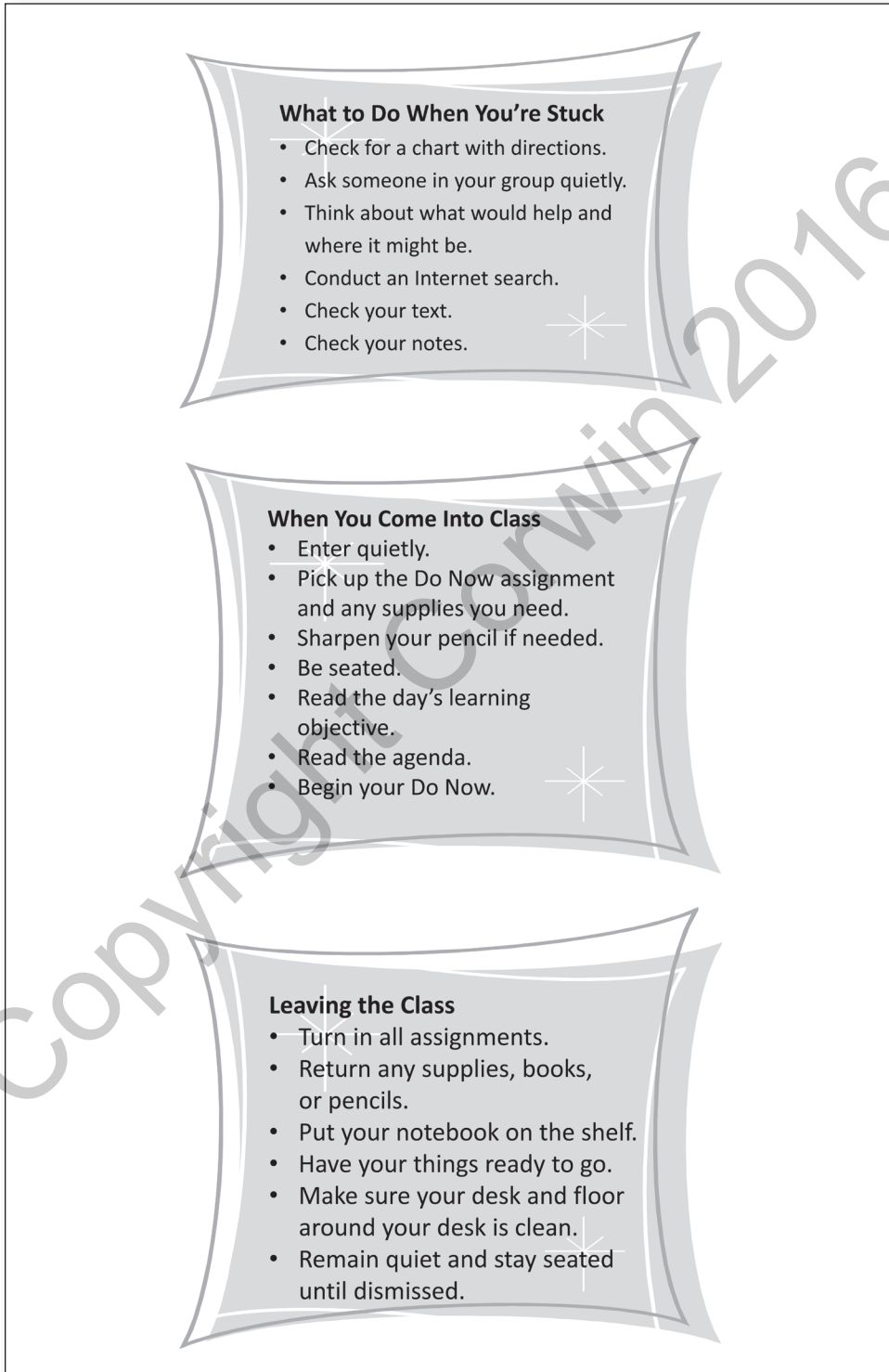
Some routines can be shared visually. The ASCD has examples of visuals for procedures at their website (ASCD, n.d.).

An example of establishing a procedure might be: "What to do when you're stuck." In a whole-class discussion students can offer suggestions for getting help or resources when they are stuck. These can be brainstormed in the whole group or students can work in small groups to generate options. This is also an example of student input and voice that builds trust and consensus.

Sample items might be those shown in Figure 1.2.

Behavior guidelines for how to work alone, in a group, or as a class will greater ensure a stable environment and contribute to organization

Figure 1.2   Student Signboards

What to Do When You're Stuck
- Check for a chart with directions.
- Ask someone in your group quietly.
- Think about what would help and where it might be.
- Conduct an Internet search.
- Check your text.
- Check your notes.

When You Come Into Class
- Enter quietly.
- Pick up the Do Now assignment and any supplies you need.
- Sharpen your pencil if needed.
- Be seated.
- Read the day's learning objective.
- Read the agenda.
- Begin your Do Now.

Leaving the Class
- Turn in all assignments.
- Return any supplies, books, or pencils.
- Put your notebook on the shelf.
- Have your things ready to go.
- Make sure your desk and floor around your desk is clean.
- Remain quiet and stay seated until dismissed.

and orderliness. These guidelines free the self-preservation mode and allow students to engage fully in pursuit of learning. "How we work together" in this classroom is important as it reduces potential conflict that may arise in collaborative work situations and creates an orderly atmosphere of predictability and safety. Establishing classroom norms or behaviors is crucial to positive social interaction. Norms are a good way to go rather than rules. Rules sound more punitive and rigid whereas norms indicate what is normal behavior that we all expect. Students can also create their own norms. *Tribes* and Gibbs provide a program of building classroom community that has a set of fixed norms.

Strategy 4: Movement

Movement is valuable in the classroom and contributes to the overall climate as it creates both a sense of freedom and self control—and it ultimately lowers stress. As we sit it becomes more of a stress on the body to pump oxygenated blood to the brain. The brain needs 20% of the body's glucose and oxygen. It is a small organ comparatively but needs nourishing to keep it working optimally. Moving helps pump the blood to the brain. This creates a wake-up surge. When we move we reduce stress and release endorphins and dopamine, as well as lower the levels of cortisol and adrenaline (the stress hormones). A renewed sense of well-being and comfort is achieved (Ratey, 2008).

In Finland children have 15 minutes of exercise for every hour of instruction. Nations that are eliminating physical education and recess for more seat time are missing the boat. It is counterintuitive to eliminate movement when we know how important it is for the brain and learning. Students moving to form a group or moving tables and chairs to work together is a natural movement. A standing partner dialogue will work as well. A movement song such as "Head, Shoulders, Knees and Toes" or a game of Simon Says would be a stress reliever and energy booster. Brain Gym (Dennison & Dennison, 1986) offers plenty of movements that re-oxygenate the brain and energize the learners.

Physically and psychologically movement helps create a climate that is less stressful and more brain-friendly.

THE PROBLEM OF SOCIAL ISOLATION

How Social Isolation Shuts Down Learning

School is not a comfortable place for all students. They may feel unsafe emotionally, physically, and mentally. Isolation can grow out of

socioeconomic differences, racial issues, bullying, or a student's lack of social skills. Social isolation affects learning in much the same way that stress does: by engaging the brain in activities other than learning. Students may be more concerned with saving face or self-protection than academic quests.

Two cognitive psychologists contributed to our understanding of how people prioritize their attention. The first, Abraham Maslow, in 1968 suggested a hierarchy of human needs. Maslow believed that basic needs must be met before other needs can be addressed, in this order:

- Physiological needs: water, food, air, shelter
- Safety needs: order, security, freedom from fear
- Belongingness and love: family, spouse, children, friends
- Self-esteem: self-respect, reputation, achievement
- Self-actualization: achieving one's potential

The second theorist, William Glasser (1990, 1999), developed his own array of five needs, which are similar to Maslow's in many ways but not hierarchically arranged. The five need categories are as follows:

	The need to survive and procreate: health, relaxation, sex
	The need to belong and love: respect, friendship
	The need to have some power: recognition, success
	The need for freedom: choice, independence
	The need to have fun: enjoyment, laughter

Source: Survival, belonging, freedom, and fun images courtesy of Dynamic Graphics/Liquid Library/ThinkStock; power image courtesy of Medioimages/Photodisc/ThinkStock.

Glasser's choice theory of motivation emphasizes people's abilities to choose which needs they address. For Glasser, the need to belong is the most important; it parallels Maslow's categories of belonging and love.

The Goal: Identifying Social Isolation and Balancing Social and Learning Needs

Although the theories of Maslow and Glasser are slightly different, both theorists demonstrate that needs occur in a context and are often competing with other needs that are just as pressing—or even more pressing. This explains why a problem like social isolation can impede the learning process. For most children, the need to belong will far outweigh the need to learn multiplication tables or the process of creating a PowerPoint presentation. If concern about meeting the need to belong is preoccupying a young mind, learning will take a back seat.

Social isolation can stem from many causes. For example, if a student's primary language is not English, he or she may be shy about engaging in social interactions or may have trouble understanding concepts, leading to frustration and embarrassment. Some students may be migrants or in the country illegally and, if transient, feel like it's not worth connecting with classmates. Sexual orientation may create isolation if students feel they must hide their orientation. Some students of different cultural backgrounds find it challenging to connect with academic material that is outside their prior knowledge or experience. Bullying and racism are other isolating factors that cause students to be traumatized daily.

When students' social needs are not being met, they are too focused on self-preservation (emotional, psychological, and physical) to care about learning.

These situations prevent students from focusing on learning for very real reasons (National Research Council, 2003). Teachers need to manage the classroom and make sure that socializing doesn't take precedence over learning. But they also need to ensure that students have their social needs met so that fears about social isolation don't hobble their ability to concentrate and learn. This balancing act is the goal.

The Strategy: Managing Social Isolation in the Classroom

It's crucial that teachers create a positive, warm climate in the classroom by developing a community of supportive learners and peer-positive

relationships (Charney, 2002; Donohue, Perry, & Weinstein, 2003). This will increase the comfort level of students so that they can then activate the PFC and focus on learning rather than personal or emotional safety. It also promotes learning by avoiding the negative behaviors that can result from social isolation. If a person doesn't feel included, he or she will create his own inclusion by grabbing influence-attracting attention, creating a controversy, demanding power, or withdrawing into passive belligerence (Gibbs, 2006a).

The following sections offer activities that may help build classroom inclusion and a supportive, positive climate for thinking.

Strategy 1: Creating Classroom Norms

Working together on a shared goal is one way to mitigate social isolation. One project students can work on together is developing classroom norms. To do this, the teacher can have students work in groups of three or four. A large piece of newspaper divided into sections (Figures 1.3 and 1.4 on the next page) allows each student to write down what is important to them when they are working in the classroom. After each student writes down his or her ideas, the small group can share and discuss their needs and then come to consensus about one or two statements that they think are most important. These are written in the center box and presented to the class. The statements are refined and/or combined to come up with five or six norms that the whole class agrees to. Everyone has a voice and input into the master list, and often this satisfies the individual that they have been heard and respected. People are much more likely to support norms if they are part of the creation.

Strategy 2: **Tribes**

Jeanne Gibbs was an educator in Santa Rosa in the 1980s who was attempting to implement cooperative group learning in her classroom. Her classroom was made up of African American, Caucasian, and Hispanic children, and Gibbs found that they were not working well together. She developed the program called *Tribes* (2006) in order to build classroom community and collaboration. Students were placed in culturally and ability heterogeneous groups as base groups. She began using team-building activities to forge relationships and find commonalities among students. The more students interacted with everyone in the class as well as their base groups, the more they developed an understanding and tolerance not seen before. They realized they were more similar than different and began
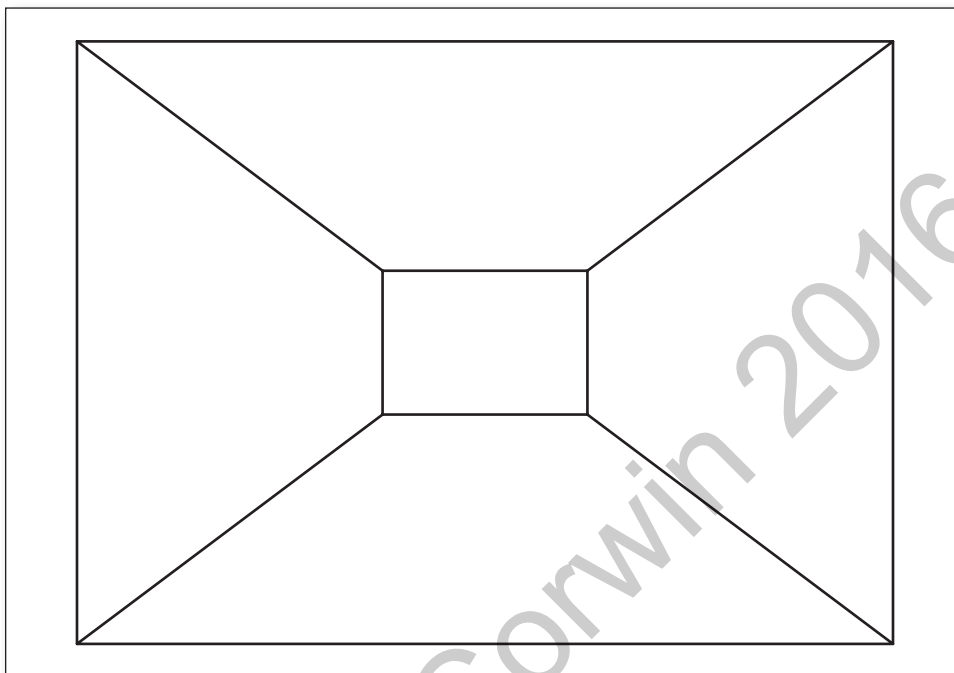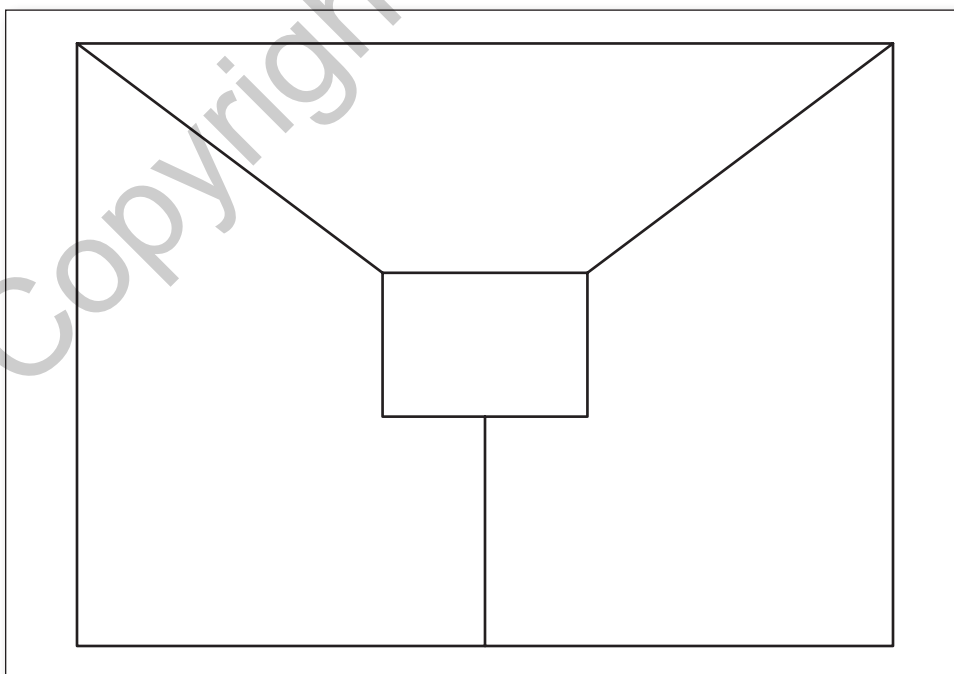
Figure 1.3   Placemat for a Group of Four

Figure 1.4   Placemat for a Group of Three

to appreciate each other's traits and skills and work better together in a respectful, supportive, complementary way. This made a huge difference for the climate of the classroom and the productivity that ensued without resentment and conflict. They became a WE community. The program has become so popular that Gibbs recently published a 30-year anniversary edition of *Tribes*.

Tribes describes four classroom norms that help build inclusion and safety. They are as follows:

1. Attentive listening: giving full attention

2. Showing appreciation/no put-downs

3. Right to pass—right to participate

4. Mutual respect: personal regard

These norms need to be understood and agreed on by all members and monitored by the teacher and each member of the group so that they enhance the learning climate with the sensivity and respect needed to give the brain opportunity to fully activate and learning to take place. Let's take a look at these four norms and how they can be encouraged in the classroom.

1. Attentive Listening

Attentive listening is an important skill that is becoming harder and harder for children to master as their lives are bombarded with media and technology that moves at a rapid pace, and as people are constantly flipping from screen to screen and not giving full attention to anything. These digital natives have brains that are used to "switching screens" and may not give full attention to anything.

Although one might expect to be more efficient by multitasking, one study (Rubinstein, Evans, & Meyer, 2001) showed that people lost large amounts of time as they jumped from task to task. And even more time was lost when the tasks were challenging. Meyer says that productivity may be reduced nearly 40% when people switch tasks.

Contrary to popular thought, the brain is not good at multitasking. Research at Stanford University (Ophir, Nass, & Wagner, 2009) showed that it is better to do one thing at a time and focus without trying to divide your attention. People who are receiving several streams of electronic information cannot recall, pay full attention, or transition from one task to the next as well as those who focus on one task at a time. Multitasking

actually reduces your efficiency and performance. Your brain lacks the capacity to simultaneously perform two tasks well.

Not only does multitasking slow you down, it lowers your IQ. Adults who multitasked during cognitive thinking showed IQ score declines close to those of someone who had stayed up all night or smoked marijuana, sometimes to the average range of an eight year old. Cognitive impairment from multitasking was thought to be temporary, but researchers at the University of Sussex in the UK (Loh & Kanai, 2014) compared the amount of time people spend on multiple devices (such as watching TV and using a tablet) to MRI scans of their brains which showed that high media multitasking is associated with smaller gray-matter density in the anterior cingulate cortex. Surprisingly high multitaskers had less brain density in the anterior cingulate cortex. This area is responsible for cognitive and emotional control and empathy.

Teaching students to listen attentively may take some time but is a critical skill in the classroom whether in large groups, small cooperative groups, or partners. Each person is encouraged to pay close attention to one another's ideas, opinions, and expressions; to let others know they are heard and to check for clarification instead of formulating a rebuttal, or multitasking. This shows a supportive climate for learning. If we began this effort in early elementary we would probably have a lot greater on task behavior from students when working in groups throughout the subsequent years of school. And it's not just important for school; it's a critical life skill as well.

To encourage attentive listening, teachers can use an activity similar to that described in "Creating Classroom Norms." They can also use a T chart, which takes a subject like attentive listening and asks students what the activity "Looks Like" and what it "Sounds Like" (see Figure 1.5).

Figure 1.5 Looks Like/Sounds Like T Chart

Skill: Attentive Listening	
What It Looks Like:	**What It Sounds Like:**

It's important to have students contribute ideas in their own words so that they can "own and adhere" to the behaviors they deem important.

2. *Showing Appreciation/No Put-Downs*

Expressing appreciation of others in concrete terms; using kind words; and avoiding negative remarks, hurtful name-calling, and rude gestures are other ways to promote a climate of safety and inclusion. This may seem like common sense, but these simple rules for positive communication may be foreign to some students, having engaged with the media and TV situation comedies that ridicule and use sarcasm and put-downs as the norm. Some students don't know how to give and receive a compliment.

Using a T chart for put-downs and "put-ups" is a good technique for making students more aware of their communication choices (see Figure 1.6). Students are generally much better at coming up with put-downs and may really have to think about what an alternative put-up might be. Teachers can record student suggestions as they are voiced; it's key to use the students' own language because the language that a first grader may use will be different than what an eighth grader may use. For every put-down, the students should be asked to think of an alternate put-up that is more respectful.

After completing the T chart, students need to develop a system for monitoring the use of put-downs and put-ups. One teacher asked students to create a signal or gesture to use when they heard a put down. The students chose a thumbs-down signal. Then, whenever they heard a put-down, the students gave a thumbs-down signal, and the one who used the put-down had to come up with a put-up instead. This transferred the

Figure 1.6 Turning Put-Downs Into Put-Ups!

Put-Downs	Put-Ups
That's stupid.	I don't agree.
Dumb answer.	I'm not sure that's correct.
DUH!	Oh, are you sure?
Who are you?	Why do you think so?
That's crazy!	That's different.
Never heard of such a thing.	That's new to me.

responsibility of monitoring to the students, and they were better at changing behavior than the teacher could ever be. In a couple of months the put-downs were eradicated from the classroom.

3. Right to Pass—Right to Participate

We all want our students to participate in the classroom. But the truth is that sometimes students are caught off-guard by a question; their mind goes blank, and under pressure they can't think of anything to say. This can be an embarrassing incident for a sensitive student and can increase their sense of social isolation.

In this situation, the teacher should respect the students' "right to pass." This allows the students a break to compose themselves. This is not a "free pass" that excuses them from the requirement of class participation; the teacher or group should return to them later. It's just a recognition that sometimes students need "wait time" (Rowe, 1986) to access the information. Our brain needs at least 5–7 seconds to access information stored in long-term memory, and in a fast-paced classroom there is sometimes split seconds given to respond. Often too, a student may be in a pensive stance and need time to process new ideas or concepts. A pass gives them time to do that and lowers the stress and anxiety that may occur in the learner. Time allows students to activate the long-term memory files and feel more confident in their ability to answer.

4. Mutual Respect

The *Tribes* program emphasizes affirmation and valuing the uniqueness of each individual. This may mean appreciating cultural differences or offering encouraging feedback for growth. This builds caring and support for all learners and allows them to activate the PFC and higher-order thinking.

Affirming mutual respect can come from activities we've already discussed, like put-ups and attentive listening. It can also come through group processing at the end of an activity when the group is talking about how they did that day working together. They can practice the social skills of "disagreeing with ideas, not people" and "disagreeing agreeably," both of which are valuable skills for students to foster mutual respect.

Tribes also describes team-building activities that help students know each other better. These are short exercises that can help students get to know one another and find commonalities and differences that will also facilitate inclusion and mutual respect. They can be tied to subject content for extra effectiveness. Here are some examples of these team-building activities:

- **Shoes:** One of the most moving and useful of these activities that I used was "My Favorite Shoe," and interestingly it was in an eighth grade classroom. Students were asked to bring a shoe that was important to them and be ready to share why this was so. A couple of students brought ballet or tap shoes. One brought a pair of football cleats, another flippers (although not really a shoe, scuba diving was his passion). One young girl brought a tiny pair of well-worn moccasins that she explained her grandfather made for her as a little girl. She said she would always keep them as he had passed recently and they made her feel close to him.

This powerful sharing did a lot to create social bonding for those students. Recognizing others interests and special moments went beyond regular classroom discussions. We all need to know one another at a personal level, sometimes "heart before mind." Some may think this is fluff and a waste of good instructional time; but you actually gain time in the long run as students are more comfortable working with others and fewer conflicts erupt as students have developed respect and tolerance for one another in a brain-safe climate.

- **P.I.T.:** Often when students would get with a new partner, teachers can encourage P.I.T.: Personal, Interpersonal, and Task. Students would have 90 seconds to share something personal and make an interpersonal connection. The brain needs to feel safe and comfortable and these types of exercises forge connections and help prevent isolation.

- **Names:** Another such strategy is "How I got my Name." Here a student would ask their parents or guardian what decisions were made when naming them. Origin? Named after? Why a particular spelling? I modeled this for the students. I was named Gayle because my mother liked the actress Gale Storm, and Gale was not very common. I think she used Gayle with a "y" perhaps to be different (I've had to spell it all my life for clarity on documents) or perhaps the "y" was added for balance with the "tail" letters in Gregory. Gregory would appear to be Anglo-Saxon in origin, but it's actually not. My dad was Ukrainian and the original family name was Gregorky. Removing the "k" made it less foreign. My middle name is Helen after my maternal grandmother. Her maiden name was Duncan (which my cousin got as a middle name). I was glad to be born first and get Helen.

All of these activities allow students to share personal information with class members—and they have students talking at home and learning

to value their heritage. This activity serves to expand students' knowledge of cultures and traditions of their classmates and hopefully continues to help them develop mutual respect.

The *Tribes* program is a wonderful aid in reducing social isolation in classrooms. There are editions of *Tribes* for elementary, middle, and high schools and a Spanish edition as well. I also highly recommend Gibbs' companion volume, *Reaching All by Creating Tribes Learning Communities*, which is a wonderful resource for team-building activities.

Strategy 3: Personal Interest in Students

Each student in our classrooms is a whole human being. Each has a life beyond the classroom, and knowing something about that helps us know him/her better as a learner as well. It helps to know their likes and dislikes, extracurricular activities, talents, and interests. The more we know about the student the more we can relate to them, and relate the classroom experience to their real world. The more we know about them the better we can tap into their areas of interest. We are able to forge connections and create bonds by commenting on things in their real world that interest them (McCombs & Whisler, 1997; Combs, 1982). Invisible students who don't feel noticed or welcomed may act out to receive the recognition they desire in a negative way (Sheets & Gay 1996) or withdraw further as they don't see themselves as part of the classroom community. Exhibiting consideration, patience, and interest in our students make teachers seem more likeable and approachable (Barr, 1958; Good & Brophy, 1995)

Teachers sometimes use interest surveys to get to know students quickly. Figures 1.7 and 1.8 are two samples of ones you might use or adjust.

Showing a personal interest in students is very cost effective and meets with big payoffs in winning them over. Making an effort through some of the following:

- Welcome students as they come into your classroom.
- Use high-fives or elbow or fist bumps to make a connection.
- Engage in conversation before, during, and after class.
- Comment on the extracurricular activities they are involved with.
- Drop by the cafeteria and speak to them informally.
- Ask about the events in their lives such as drama, sports, and music.
- Mention their out-of-school successes such as sports or other achievements.

Figure 1.7 Student Interest Survey

Name: _____ **Date:** _____

Please answer each question so I can get to know you better.

What is your favorite sport to watch or play?	What is the most interesting place you've been?
What is your favorite movie and why?	What is your favorite thing to do?
What clubs or groups do you attend?	What is your favorite meal or snack?
Who would you like to meet in person and why?	What would you say is best about school?
What do you do for fun with your friends?	How much time each day do you spend watching a "screen" of any kind?
What kind of stores do you like to visit?	What is your favorite kind of music?
What is something you are interested in globally?	In the future what would be your choice of career or area of interest where you would like to work?

Figure 1.8 A Few of My Favorite Things . . .

Name: _____ Date: _____

1. My favorite show on TV is _____ .

2. My favorite food is _____ .

3. My favorite sport is _____ .

4. My favorite snack is _____ .

5. My favorite movie is _____ .

6. My favorite book is _____ .

7. My favorite place to go is _____ .

8. My favorite game to play is _____ .

9. My favorite pet is/would be _____ .

10. My BFFs are _____ and _____ .

- Call them by their name and acknowledge them in the hall or schoolyard.
- Call or text if they are absent. When they return to school tell them that they were missed.

Share your attention with everyone and be as equitable as you can with your contacts by considering the following:

- Provide "wait time" for students when questioning.
- The "power zone" (proximity to students) is important to help learners feel connected, so remove physical barriers; move about the room during the class to be close at some time to all students.
- Show appreciation and acknowledge their ideas.
- Make eye contact; look at them when they speak and truly listen to them.
- Respect their opinions and encourage involvement.

Strategy 4: Catching Them Being Good

Students are used to hearing corrections, rules, and criticism in the guise of constructive criticism. However negativity is rarely encouraging. Try finding something that they did each day that might be positive. It is especially important for those students who receive a lot of criticism or are estranged from their peers. It's the premise of "finding their stars before their scars." Even small things can forge a bond.

An easy way to "find their stars" and catch them being good is to display student work on the walls of the classroom. The bulletin boards should be teeming with art and writing samples—and not just with the best samples (or you may end up with the same students' work being displayed all the time). There should be a space for work by students who have shown great improvement and effort as well. Some teachers divide up the bulletin board space in a self-contained classroom or on the class website so that there is a space for everyone.

In a middle or high school classrooms teachers can dedicate a bulletin board for each class they teach. High school teachers often think this is an elementary thing and not appropriate for high school. However it really helps students feel that the classroom is home, that they belong here, this is what they are learning, and this is what they have achieved. Orderliness in helpful in the classroom as well so that students feel comfortable and can access resources easily. I taught elementary school before I was in a high school. In elementary classrooms everyone displayed their students' work. When I went to the high school I naturally used the bulletin boards for charts, student work, interesting articles, and lots of other things unlike most other classrooms.

ASSESSING YOUR OWN CLASSROOM CLIMATE

Marzano (2003) found that the achievement effects of a well-managed classroom was $d = 0.52$ and in terms of engagement $d = 0.62$. Teachers who had the correct mental set and a great influence on the management of the classroom and reducing disruption had an effect of $d = 1.29$. Teachers who could assess and quickly react to prevent behavior problems without emotional investment had an effect size of $d = 1.42$. This trait is also referred to as situational awareness or mindfulness by Langer (1989). Hattie's meta-analysis rated ES 0.68 for classroom behavior and 0.52 for classroom management.

The statistics reaffirm how important classroom climate is. Teachers who know how to create a positive climate make a huge difference in student learning, not because they are acting as an information source but because their classroom climate helps activate students by creating a safe, warm, nurturing environment where brains can flourish.

The checklist in Figure 1.9 can help teachers evaluate their own classroom culture and target areas for improvement for a brain-friendly environment.

SUMMARY

Brains can't learn in hostile environments. It's like setting the stage in the theater: everything must be just right with resources, props, and scenery that will enhance the experience along with appropriate stage directions. When we know that undue stress is detrimental to the learning process, we as educators should do everything we can to provide an appropriate positive climate that will allow students to feel comfortable, meet challenges, and learn in a risk-free, safe environment.

DISCUSSION POINTS

- Discuss how educational neuroscience has or could influence your decisions about classroom tasks and management techniques. What research in this chapter has intrigued you, and what might you do as a result?

- Discuss the notion of classroom climate and its implications for student learning.

- Examine ways to reduce anxiety and create a climate that supports brain safety, including attention to routines and norms.

- Consider the social isolation of students in the classroom that often leads to bullying. How can teachers minimize social isolation and foster student relationships? What do Maslow and Glass consider to be people's basic needs, and how can teachers help meet those needs?

- Do some further investigation of *Tribes*, especially strategies for team-building and the development of social skills.

- How does movement increase the sense of well-being in a classroom? Discuss some strategies to include movement as part of stress-free classroom.

Figure 1.9 Classroom Climate Self-Assessment

Read the statements below. Mark the response that most closely describes the extent that you consider this in your classroom on a regular basis

1 = never   2 = seldom   3 = occasionally   4 = regularly

	Statement	Self-Assessment Response (1–4)
1.	I believe all students can learn.	
2.	I create norms with my students to identify acceptable behaviors.	
3.	I share expectations for procedures and processes.	
4.	I try to understand my students' personal lives if possible.	
5.	I have the students submit an interest survey or self-assessment.	
6.	Students give their input about how the class satisfies their needs.	
7.	I try to treat students fairly and equitably.	
8.	I believe in the potential for success for my students.	
9.	My students know I like them.	
10.	I respect the multiculturalism of my students.	
11.	My students feel safe in my classroom.	
12.	My students feel confident in taking risks and making errors.	
13.	I recognize the uniqueness of each of my students.	
14.	I try to organize the classroom so students can get the resources they need.	
15.	The class decor reflects the students' work and efforts.	
16.	The environment is orderly and comfortable.	
17.	I try to keep the students engaged in interesting and challenging activities.	
18.	I try to be a learner alongside my students.	
19.	I listen to my students, empathize, and respond.	
20.	I do not ridicule or humiliate my students.	
21.	I use a variety of multimodal instructional strategies in my teaching.	
22.	I provide choices in topics, processes, or products to increase motivation.	
23.	I adjust the curriculum topics to fit my students' interests and readiness.	
24.	I am sensitive to my students' physical, emotional, and social needs.	
25.	I remember how it feels to be a student.	

- Discuss the section on student interests. How do you find out what students do beyond school, and how might you tap into their interests to increase their comfort and connectedness?

- Use the Classroom Climate Teacher Self-Assessment, and identify one or two things you want to improve or focus on.