



Micro-Workshop 2

Brain Research

Safe and Caring Schools—Havens for the Mind

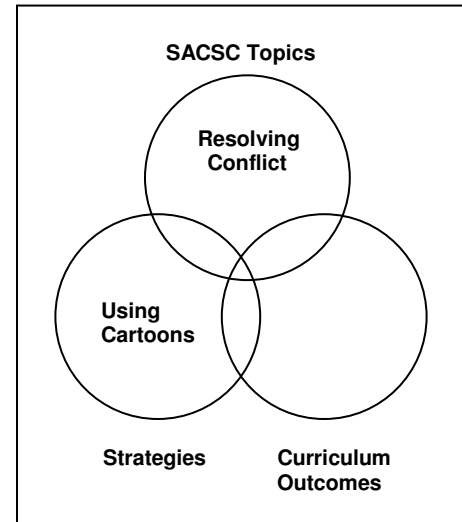
If you have ever wondered if violence can actually affect the way we think and learn, wonder no more. Cognitive and neuroscientists agree—there is a link between threat and other forms of violence and impaired brain functioning.

*Safe and Caring Schools:
Havens for the Mind*

There are no simple answers as to why people behave the way they do. Many factors influence our physical, psychological and social development. Because the brain is regulator of thinking and feeling, it is crucial to understand the effects that stress and violence can have on these functions. This micro-workshop will assist teachers in gaining greater understanding of the complexities of violent behaviour.

This micro-workshop **examines the impact of stress and violence on the development of the brain**. It helps teachers understand the relationship between violence and learning so that they can work more effectively with students who have been affected by violence. This workshop provides some strategies to assist in implementation.

Some evidence suggests that the way neuron pathways in the brain are formed, is influenced by one's experiences, especially during formative years. If we are constantly exposed to violence, pathways are formed that are based on fight-or-flight instincts rather than rational thinking. In other words, the way we react to stress can be the result of brain functioning that has little to do with rational thinking processes and more to do with gut emotion. Brain research points out the need for decreasing negative or violent messages and actions. It also can help teachers create ways to help students find alternative ways to manage their anger by overcoming impulsive reactions to stress. Because the brain continues to develop well into adolescence, it is important for secondary teachers to know that it is not too late to take action even in junior and senior high school.



Pre-reading

Safe and Caring Schools: Havens for the Mind

Prior to this micro-workshop, ask teachers and other interested staff to read the SACSC Project booklet titled *Safe and Caring Schools: Havens for the Mind* (2000). The booklet is available through the Learning Resources Centre, 12360 142 Street, Edmonton, AB, T5L 4X9, (phone) 780 427 5775 or (fax) 780 422 9750. The booklet can be photocopied with permission.

Safe and Caring Schools: Havens for the Mind outlines research findings that link exposure to violence and the threat of violence to the chemistry and anatomy of the brain. These findings support the belief that safe and caring relationships foster stable brain development and ultimately help children deal more appropriately with conflict and stress. It is crucial that learning environments are free of threat, fear and anxiety for students to think critically and apply new knowledge and skills.

In-School Experts

Ask the school counsellor, biology, special education teachers or other experts to provide further insights relating to the psychology, science or social science of the brain. These experts can be of great assistance in helping to facilitate the micro-workshop or they can be available for questions.

1. Start the session by asking for general reactions to the information in *Safe and Caring Schools: Havens for the Mind*. Ask school personnel if they have any **new insights or particular questions** about the information in the booklet. Record these on flip chart paper.
1. Provide an opportunity for the school staff to **discuss the key points** listed below. Make a handout or an overhead of the key points if the group is large.

Key points

- Contrary to folklore, emotion and reason are intrinsically linked and do not operate independent of each other.
- The brain's reaction to threat or intimidation is to revert to fight-or-flight responses—these are primal instincts.
- The brain requires physical as well as emotional nourishment to develop.
- Even reminders of traumatic or stressful events can trigger irrational reactions.
- The brain rewires over time and can be in a constant state of alarm, rendering the individual incapable of empathy and increasing violent behaviors.
- Achievement, success and self-worth act as triggers to produce natural substances (serotonin) in the brain that regulate mood. The level of serotonin in the brain affects the ability to concentrate and make rational decisions.

Questions that can stimulate focused discussion on these points

1. What evidence, in your experience, supports the theory that violence affects actual brain development?
2. Knowing the effects of violence on the brain, how can school staff affect appropriate change in the school?
2. Do you know any on-site experts who have experiences and knowledge in dealing with students who have been negatively affected by extreme stress or violence?
2. What can teachers do to prevent violence? Review the ideas on page 7 of the booklet. What other strategies have worked in your school setting? Brainstorm ideas and actions that can be taken?
2. Teaching the skills of anger management and conflict resolution can reduce stress and provide healthy alternatives for dealing with negative emotions. Many strategies are available. See SACSC resources. These are also available through the Learning Resources Centre.

Extending Learning

- * Consider making a presentation to your School Council or the rest of the school staff on this topic.
- * Think about specific ways that you can integrate this information into course content. Look for the curricular connections.
- * Continue to think about ways you can implement strategies to decrease the presence of threats and violence in your teaching.

Support Resources

Bullying and Harassment in Secondary Schools booklets

- ▶ *Bullying is everybody's problem—Do you have the courage to stop it?*
- ▶ *Bullying and Harassment—Everybody's Problem*
- ▶ *Beyond Bullying—A booklet for junior high students*
- ▶ *Beyond bullying—What you can do to help: A handbook for parents and teachers of junior high students*

Other booklets and resources ▶ *Media Violence: The children are watching—A guide for parents and teachers*

- ▶ *Volunteer Mentorship Programs—K-12 plus video and manual*
- ▶ *Expecting Respect—The Peer Education Project: A school-based learning model*
- ▶ *Project Ploughshares Anti Bullying Curriculum Materials—Social Studies 10, 11, 12 (Brown 1999)*

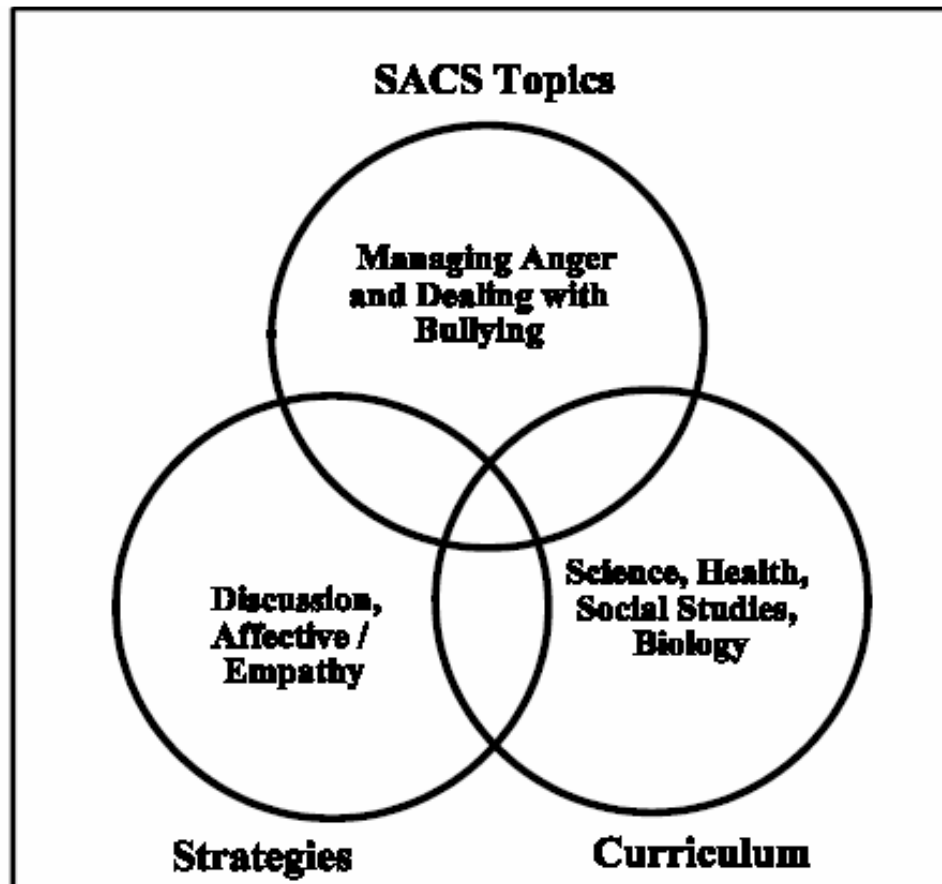
The ATA's Professional Development Program area has also developed a workshop on brain research.

Brain Research: Applications for Teaching and Learning

this workshop is an introduction to the science of learning. Participants learn about recent discoveries and discuss how this information can be applied to the classroom. The workshop models strategies and processes of brain-based learning. To book this workshop contact Janey Kemp at: 1800 232 7208 (in Alberta) or 447 9485 (in Edmonton).

Micro-Workshop # 2
Toward a Safe and Caring Curriculum
Approaches to Integration

Brain Research
Safe and Caring Schools—Havens for the Mind



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