

Kernels of Change:

*evidence-based behaviour interventions
for classroom teachers*

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What is a Kernel?

- Is the smallest unit of scientifically proven behavioral influence and are the active ingredients of evidence based programs.
- *Is indivisible like a seed; that is, removing any part makes it inactive.
- * Reliably produces quick easily measured change in specific behaviours that can grow much bigger over time.
- Can be used alone OR combined with other kernels to create new programs, strategies, or policies.



Adapted from www.impactgifts.com

Kernels

- Metaphor of kernels used because they are capable of great change and growth
- Powerful Potential



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Why important?



- Simple, practical, cheap
- Based on the fact that behaviour can be changed
- Time tested strategies that have been proven to work.
- Studying kernels can
 - Improve knowledge and use of effective prevention and treatment practices
 - Clarify the basic factors that are creating change
 - Contribute to the development of more efficient and effective interventions
 - <http://www.thefuntheory.com/>

Leo

- student in Grade 5,
- living in a very deprived home
- defiant, completes no work,
- aggressive towards staff and students
- swears, steals, attendance problems
- on a daily basis he knocks down girls on the school yard and “humps” them
- standard interventions do not work (supervised recesses, in school suspensions, out of school suspensions)



A-B-C's of Behaviour

Antecedents \longrightarrow **Behaviour** \rightleftharpoons Consequences

Change the Consequences of Behaviour

- Consequences that increase ↑ or decrease ↓ behaviour.
- For example, these kernel increase ↑ behaviour:



Bribes vs. Rewards

- Bribes are something that is offered to induce a person do something that is wrong; rewards are an inducement to encourage positive behaviour.
- Rewards make the benefits of a particular behaviour more obvious and immediate.
 - Diploma
 - paycheque



Change the Consequences of Behaviour

- These kernel decrease ↓ behaviour:



- The relationship between consequence and behaviour **MUST** be clear.

Changing behaviour through antecedents



- No talk transition cues

-  Danger signs

- Cooperative, structured peer play



Self-Monitoring Interval Card													
Student Name:		Target Behaviour (s):											
Behaviours	Interval 1		Interval 2		Interval 3		Interval 4		Interval 5		Interval 6		Teacher Match (bonus points)
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
My Totals	+	+	+	+	+	+	+	+	+	+	+	+	
													My Total

Self-monitoring

Relational Frame Kernels

- Influences frame of mind

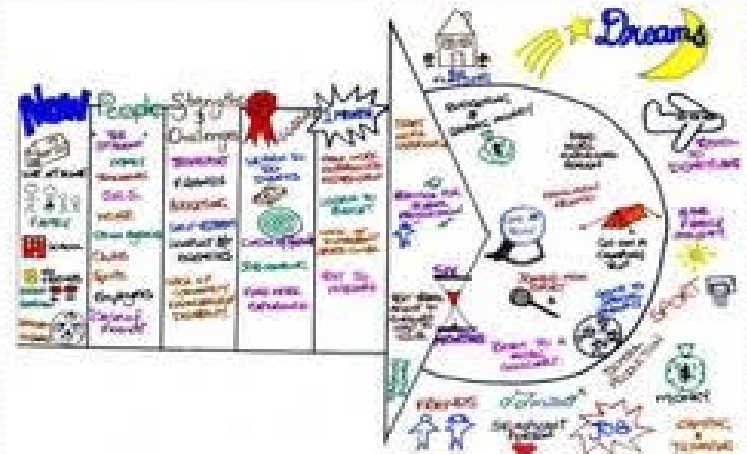
- Public commitment



- “Us” vs. “Them”



- Graphic Organizers guided by status individuals



Physiological Kernels

- Changes in biological state that increases or decreases targeted behaviour.
- Examples



Kernels used with Leo

- Altered the consequences of his behaviour
 - Self-chosen reward – lunch
 - Verbal Praise
 - Self-monitoring
 - Response Cost
- Relational frame kernels
 - Lunch with Dr. Pain
 - New experience
 - Food
 - Relationship – attention from a valued person



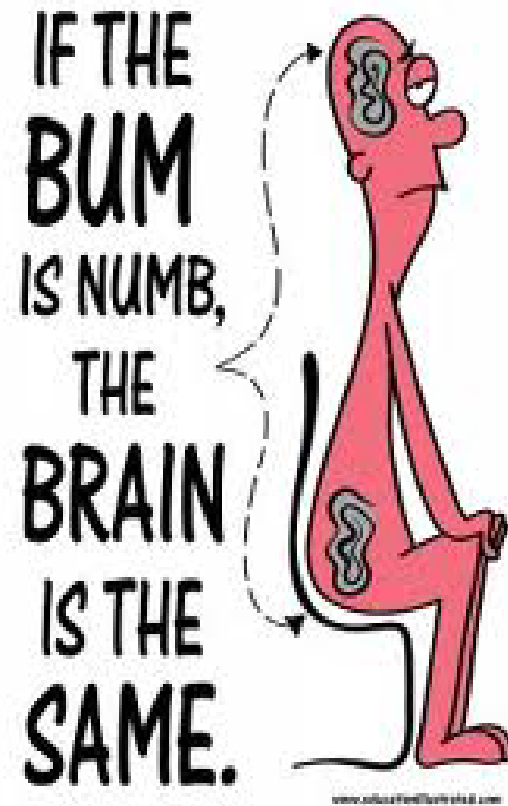
Using Kernels in the Classroom

- <http://www.youtube.com/watch?v=cH-jgdoSxto>



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- <http://www.johnratey.com/newsite/index.html>

PAX GOOD BEHAVIOR GAME

- Province wide pilot for Grade One – 200 schools
- Research-based success: Seine River School Division trial 2010-2011 found an immediate 45% decrease in the number of interruptions in the classroom.
- Helps students develop social, emotional and self-discipline skills.
- Developed by D. Embry and based on Kernels!



Things to get; things to do!

- Popcorn and a movie
- Throw paper airplanes through a hula hoop
- Blow bubbles
- Dance the Chicken Dance
- Play Crazy Eights
- Indoor snowball fight with wadded up paper
- Walk backwards down the hall
- Pop bubble wrap
- Do the wave
- Marshmallow dodge ball
- “Ice skate” down the hall in your socks
- Cotton Ball War

Resources

- Embry, D. D. & Biglan, A. (2008). Evidence-based Kernels: Fundamental Units of Behavioral Influence. *Clinical Child and Family Psychological Review*. 11:75 – 113.
- This article can be downloaded at this link
 - <http://evolution.binghamton.edu/evos/wp-content/uploads/2008/11/EmbryKernels.pdf>
 - Or <http://bit.ly/akALxf>