



*Pathways to Success for All Learners*

# A Parent Guide to Executive Function: Facts and Solutions

Kalyani Krishnan, M.A.

E-mail: [kalyani@ildlex.org](mailto:kalyani@ildlex.org)

Weston MA

11/30/10



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Pathways to Success for all Learners

# Institute for Learning and Development

125 Hartwell Ave. Lexington MA, 02421  
Tel #: (781) 861-3711 Fax: (781) 861-3701

*Welcome!*

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The Institute for Learning and Development (ILD) is dedicated to improving the lives of all learners. We help children, adolescents, and adults with learning, attentional and behavioral difficulties as well as gifted individuals who need educational enrichment. We build partnerships to help students become strategic learners and find their unique pathway to success.

Psychological and Educational Services for Students of  
all Ages: Elementary, Middle and High School, College  
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Pathways to Success for All Learners

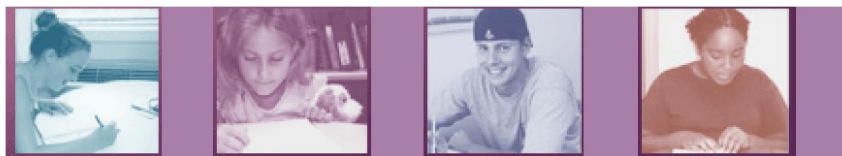
# ResearchILD

*Helping ALL students to become successful learners by empowering them to learn how to learn*

*Welcome!*

Welcome to the Research Institute  
for Learning and Development.

Our mission at Research ILD is to create pathways to success for all learners by leveraging research and technology to develop and disseminate research-based multi-media educational materials. Our goal is to help children, adolescents, and adults with learning and attention differences to develop persistence and resilience and to attain success in school and in life.



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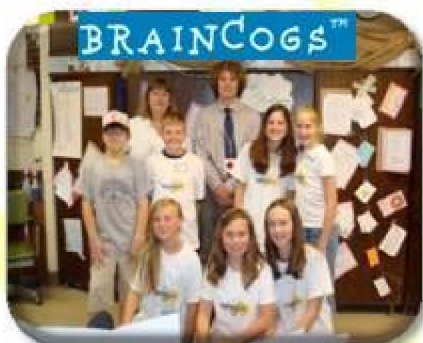
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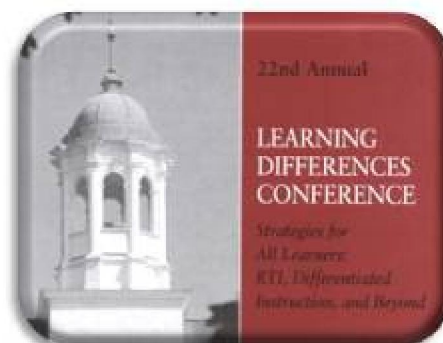
RESEARCH  
INSTITUTE FOR  
LEARNING AND  
DEVELOPMENT

*—"What a joy and a privilege to learn from the best in the field. I come away validated for the work I am doing, informed and 'armed' with new ideas, inspired and energized to teach, mentor and foster the growth of resilient children."(Carol van Doren, Gulliver Schools)*





**BrainCogs Squad**



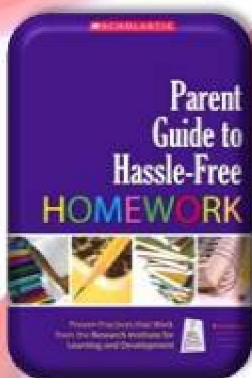
**Annual LD Conference**



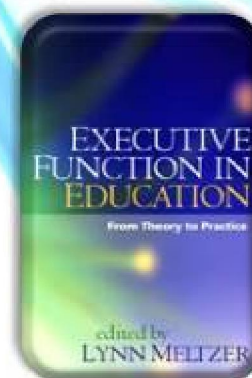
**SMARTS**



**Drive To Thrive**

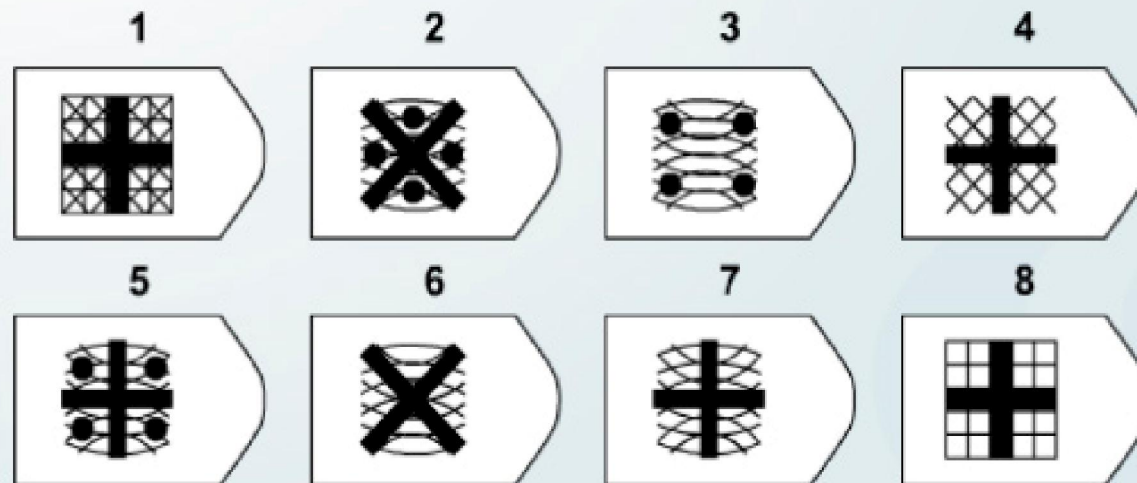
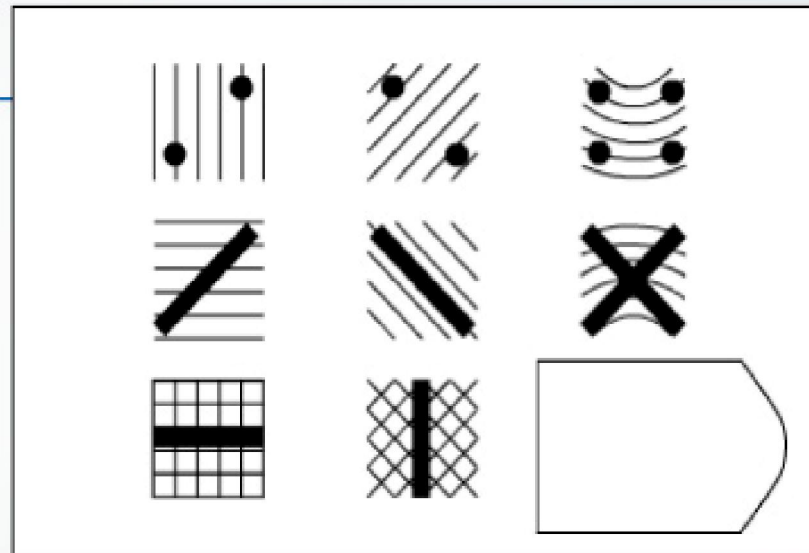


**Internationally Recognized**



# TASK

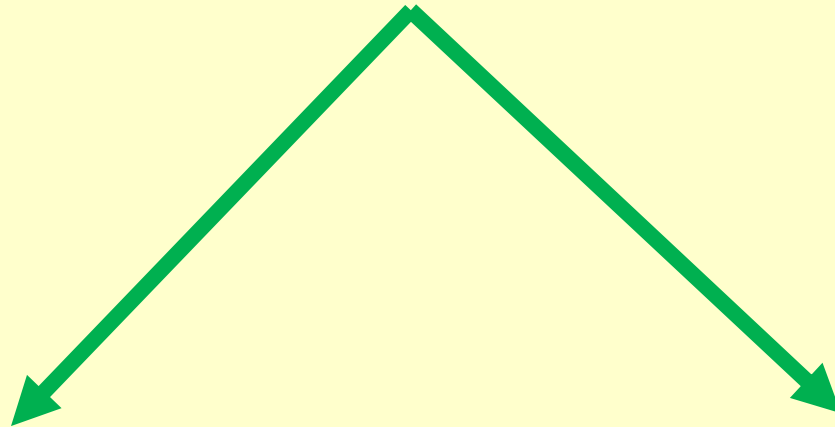
APM: Practice Item 3



# What you had to do....

- Set goals
- Inhibit anxiety and distraction
- Get started
- Prioritize – what should you do first?
- Organize
- Work flexibly – what if you run into obstacles?
- Self-monitor – are you on track?
- Manage time and competing demands, multitask
- Manage frustration excitement, motivation

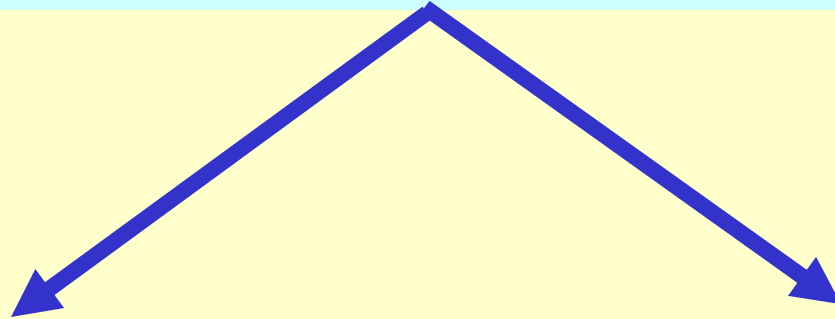
# What you had to do.....



Tap  
METACOGNITION

Recruit  
EXECUTIVE  
FUNCTION  
PROCESSES

# METACOGNITION



SELF  
AWARENESS

SELF  
REGULATION



# Self-Awareness

- What are my strengths?
- Where do I struggle?
- How do I learn?
- What helps me to get motivated?
- Do I know the types of mistakes I make?
- What helps me to do my best?
- What is important to me?

# Self-Regulation

- self-observation:
  - I can keep track how I am doing on a job.
  - I know when I have made a mistake.
  - I can catch my own mistakes
- self-judgment
  - I know whether or not I am doing a good job.
  - I know whether I am following directions correctly.
  - I know whether or not I am doing my best work.
- self-reactions
  - I can change how I am working so I meet my goals.
  - I can correct my own mistakes.
  - I can choose how I will respond to my work

# Recruit executive function process....



# Goal Setting





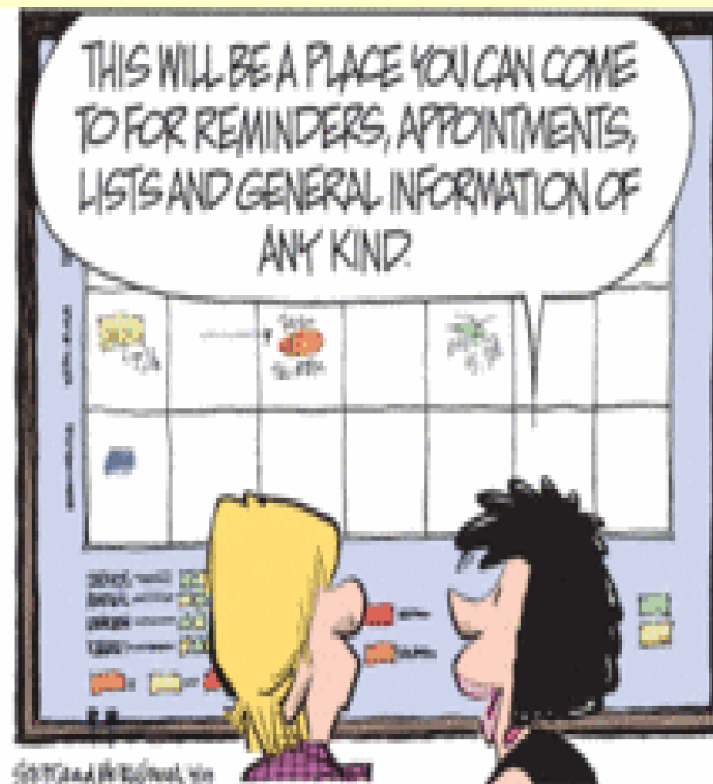
# Prioritizing







# Planning



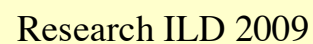


# Planning



# Working Memory







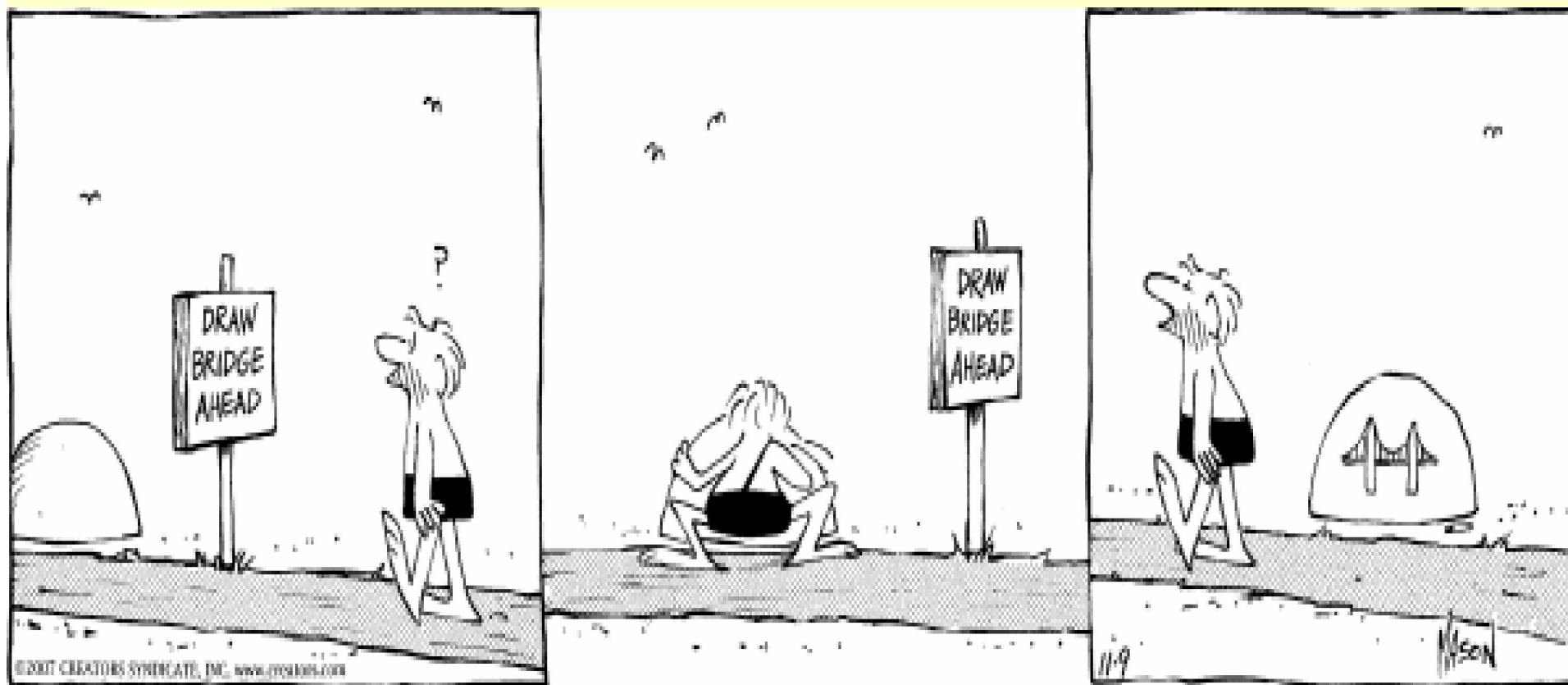
# Flexible Thinking





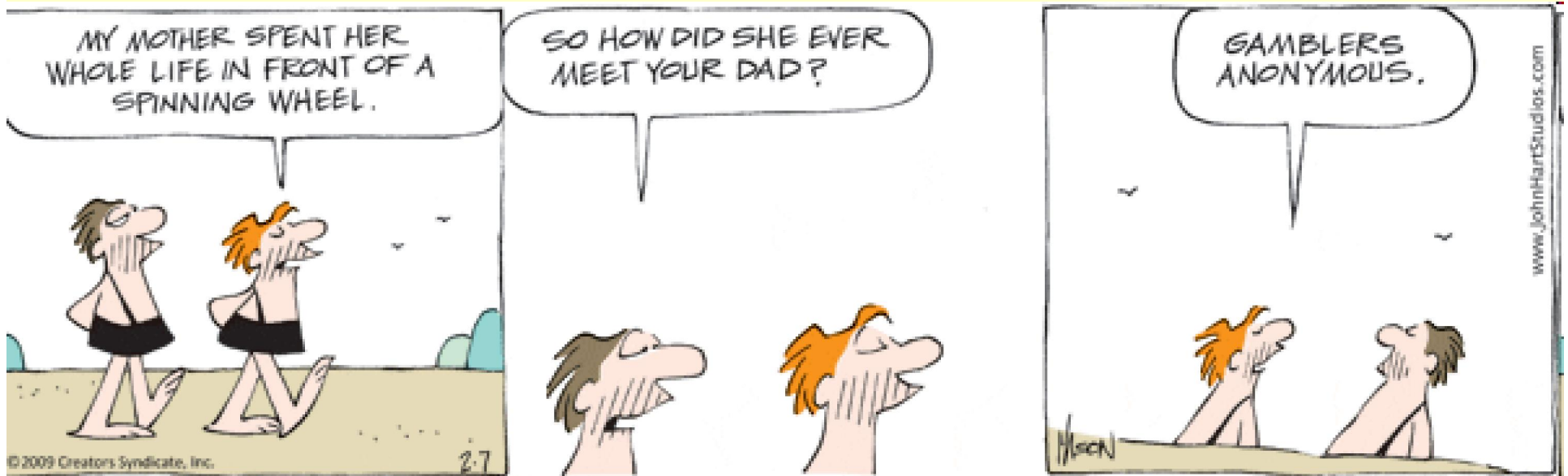


# Flexible Thinking





# Flexible Thinking





# Predicting



# Executive Function Processes: What are they?

- Planning
- Organizing
- Prioritizing
- Initiating tasks
- Flexible thinking
- Working memory
- Self-monitoring
- Emotional control

Why are we talking about this?



# Early Elementary

## 3<sup>rd</sup> Grade Monthly Book Report

### **Given:**

- Child knows how to read
- Some instruction in comprehension

### **Assignment:**

Select a book and read it over the course of a month. Write a summary that fits inside a whimsical shape.

# Middle School

## 7<sup>th</sup> Grade Social Studies Test

### **Given:**

- Vocabulary and definitions from chapter
- Reading packets with questions on each topic
- Worksheets on each topic

### **Test Essay:**

Explain the connection between the technological advancements made in the late 1800s and the business atmosphere of robber barons/monopolies with the increase in immigration.

# High School Midterm Study Guide for English

## **Given:**

Review sheet one week prior to exam that contains literary terms and lists works of literature read during the semester

## **Assignment:**

Study for midterm exam containing material from September through January

# College Sociology Term Paper

## **Given:**

- 3 hours of class time per week
- Syllabus
- Assigned text and readings

## **Assignment:**

- 15-page research paper on topic of your choice due at the end of the semester

# Adulthood

## Managing a Budget

### **Given:**

- Fixed income
- Demands on income (necessary vs. negotiable expenses)

### **Assignment:**

- Live within means and save money to provide a cushion



# 3<sup>rd</sup> Grade Book Report

EF Process	Requirement of Assignment
Organizing	<b>Remember</b> to bring home materials each day to work, <b>organize</b> a plot summary, <b>organize</b> work on the page, turn in work when done
Planning	<b>Break down project</b> into smaller parts, <b>manage time</b> over the course of 4 weeks to finish reading book and finish project
Prioritizing	<b>Select</b> book from an array of choices, identify favorite part of the story, <b>differentiate key plot</b> elements from details
Shifting	<b>Transition</b> between different parts of the project, <b>shift</b> from main ideas to details while reading & writing, <b>shift from overall goal</b> to parts of project
Working Memory	<b>Hold directions in mind</b> while working, <b>sort &amp; evaluate information</b> while reading, hold in memory what has been done & what is left to do
Checking/Self-monitoring	<b>Monitor understanding</b> of the book, keep track of reading pace, edit/proofread written work, <b>check finished</b> product against directions
Emotional control	<b>Sustain effort</b> and interest over a long time period, <b>manage frustration, anxiety, &amp; perfectionism</b>

Administrative Assistant 2, Operations (2707)  
posted 01/19/2010 Philadelphia, PA

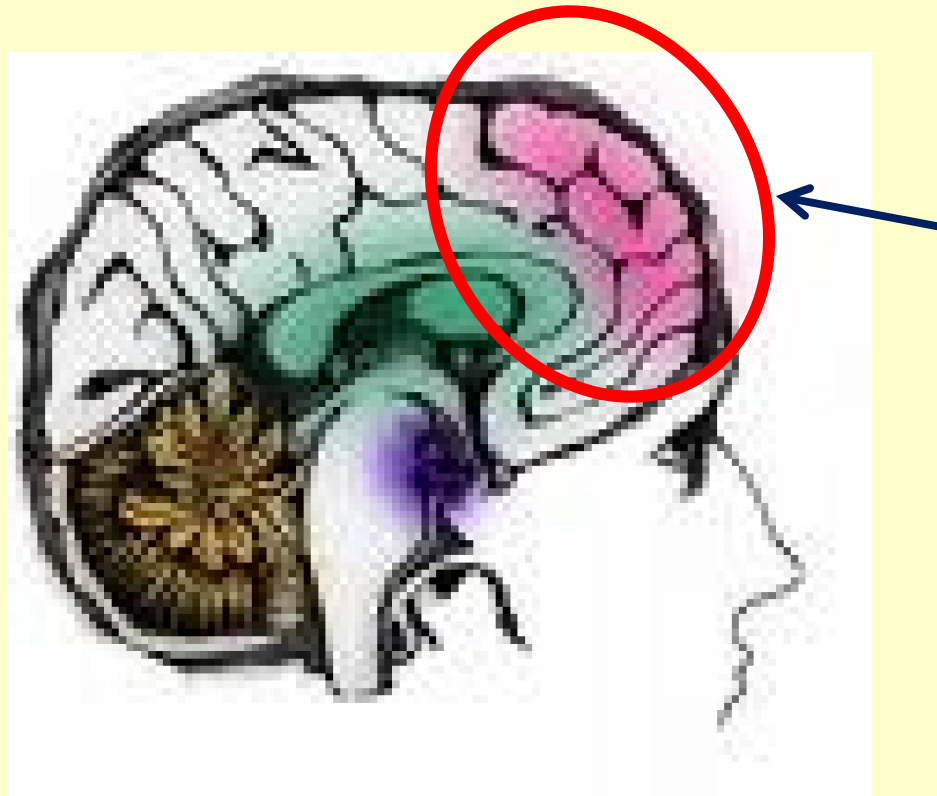
Flexible team player

What do we know about it?



Executive function is the ability to integrate a present awareness with future anticipation and past experience to develop a reasonable plan (accounting for space, time and people) for present action.

**Sarah Ward, M.S., CCC/SLP**



# State of the Research?

- EF evolves through out childhood and early adulthood.
- Much of adolescent ‘risk taking’ can be linked to the re-organization of the pre-frontal cortex and EF processes.
- EF and IQ have nothing to do with each other.
- Good teaching can have a significant impact on weak EF.



# EF Capacities can vary based on...

- Developmental factors
- Cultural factors
- Individual differences and learning style

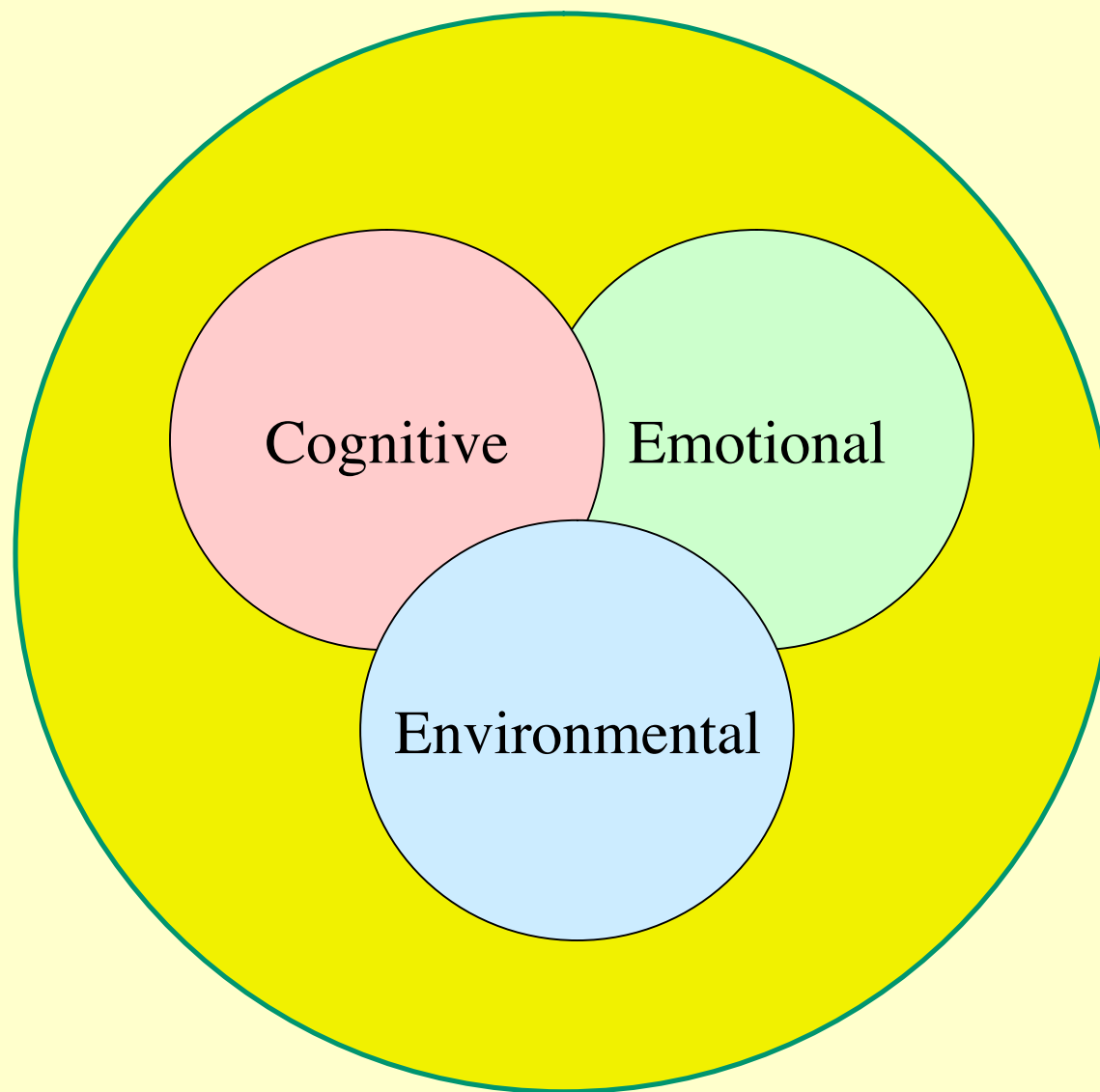


# What causes weak EF processing?

- Neurobiology of the pre-frontal cortex
- Difficulties with learning, attention and emotional regulation (e.g. LD, ADHD, anxiety, depression)
- Developmentally accelerated tasks



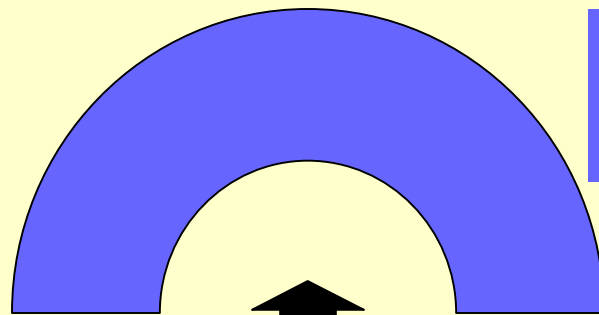
# Executive Function Processes



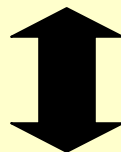
Research ILD 2008

# Cortical and Subcortical Processes

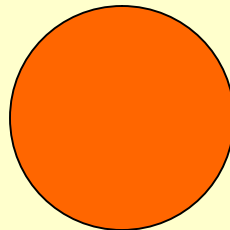
Cortical  
functions



Memory, concepts,  
integrating information



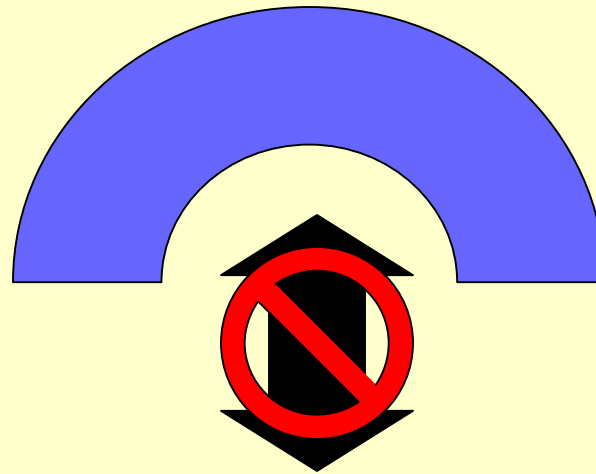
Subcortical  
functions



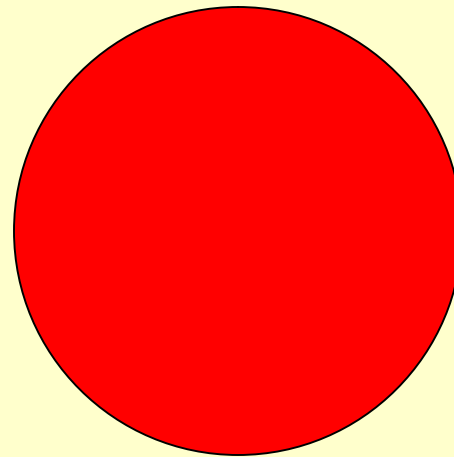
Self-regulation and  
emotions

# The Cortical-Subcortical Tug-of-War

Cortical  
functions



Subcortical →  
functions

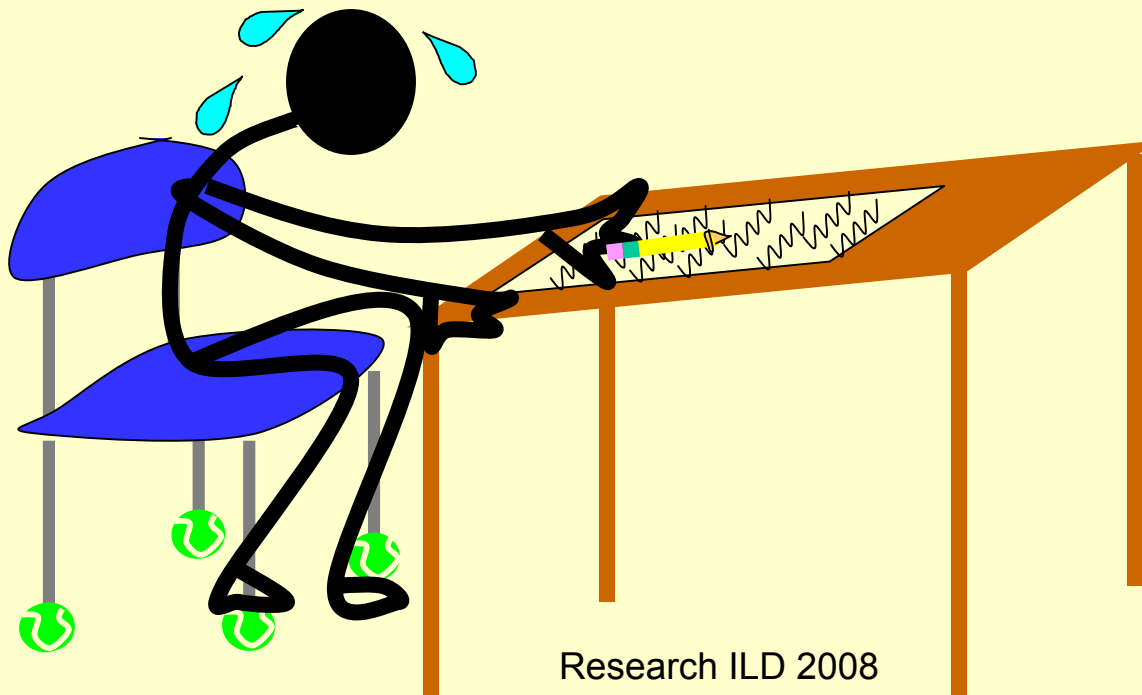
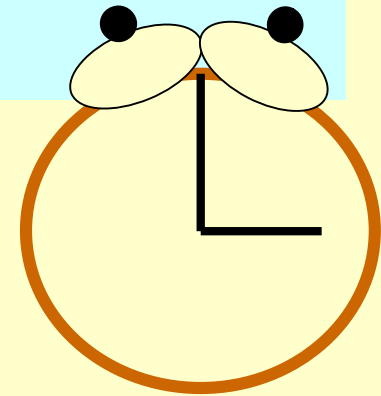




# Relationship to Learning

- Weak EF processes affect areas that require the **integration and coordination of multiple elements**
- Weak EF processes affect areas that require **independence and time management**

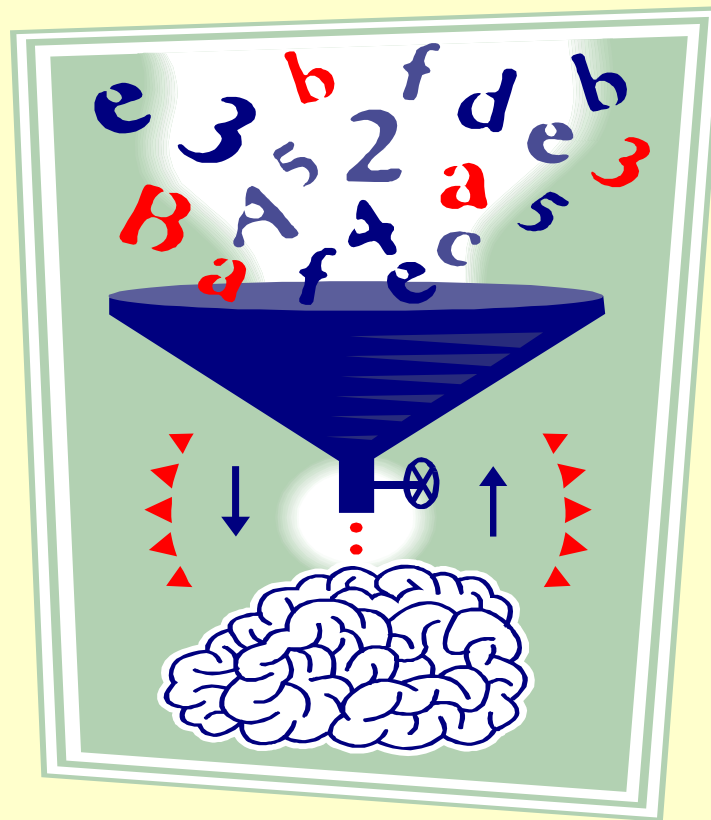
# How does it feel?



Research ILD 2008



# How does it feel?



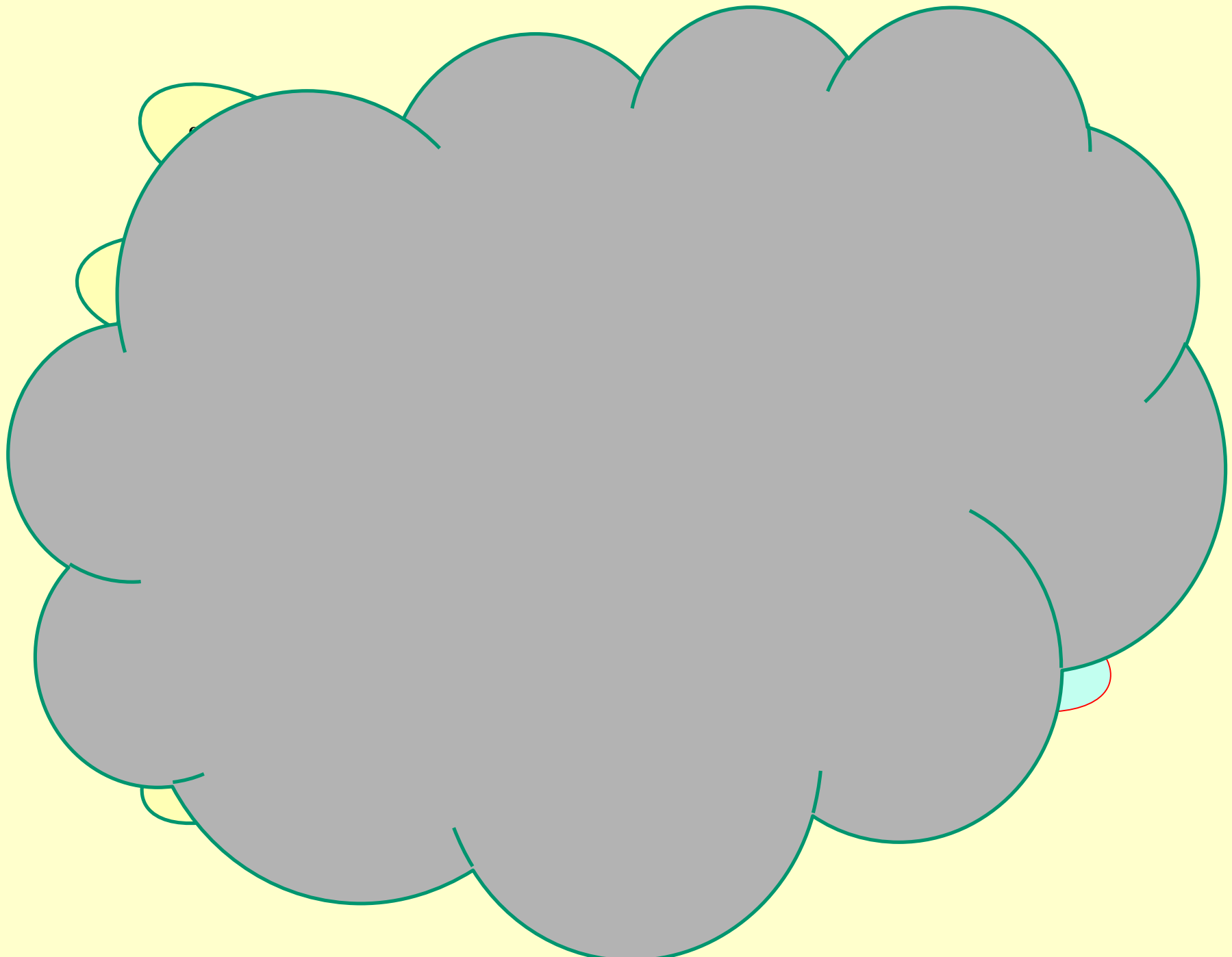
Research ILD 2008

# OVERLOAD

Research ILD 2008

# How does it look?

- inefficient
- inactive, passive
- not strategic
- unable to get started with tasks
- inflexible
- unable to predict outcomes and to self-monitor

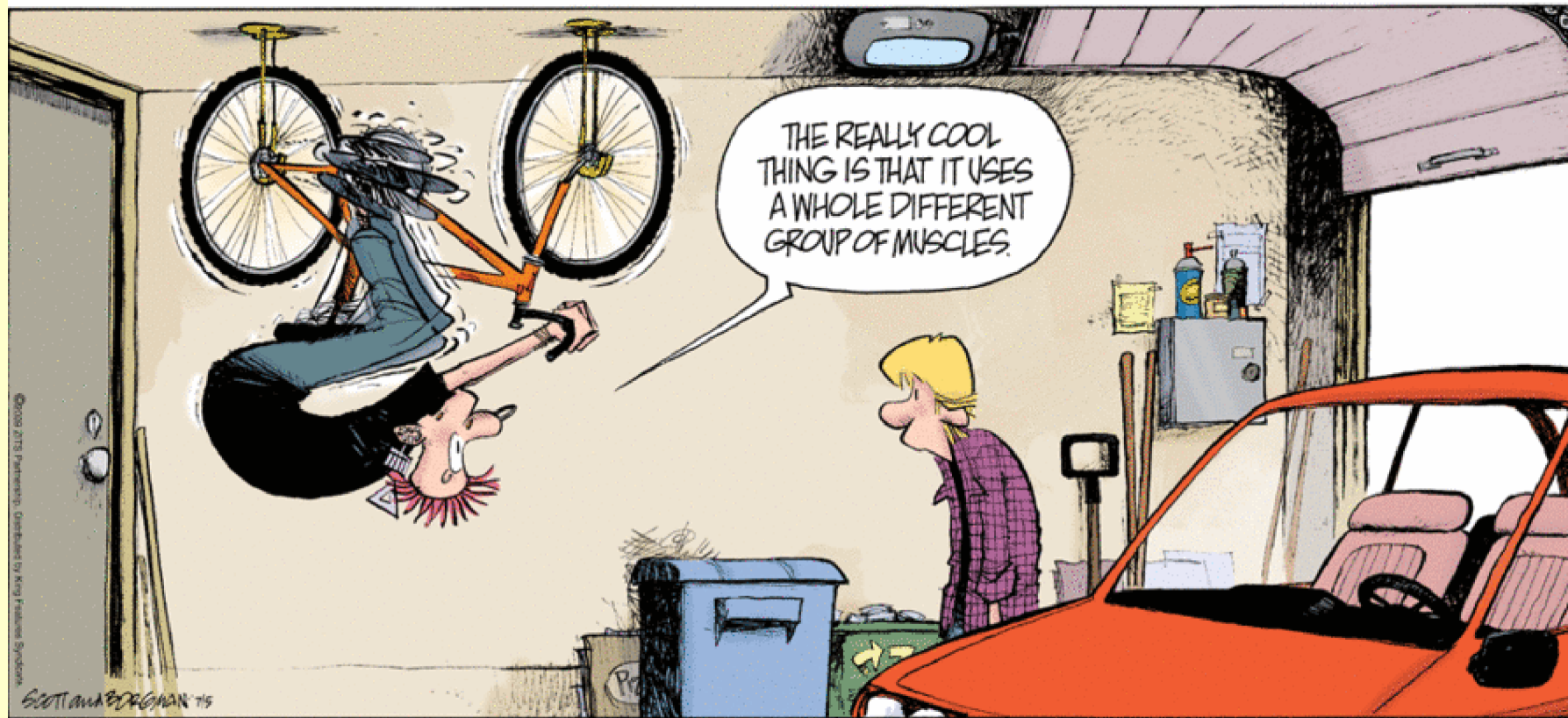


# Some Solutions



ZITS

BY JERRY SCOTT AND JIM BORGMAN





Recognize strengths,  
Understand and accept weaknesses,  
  
your child's and your own...



# Understand the impact of your own style

- We teach and parent the way we learn
- Ask yourself:
  - which kids do you reach and whom do you struggle to reach?
  - Are the ‘difficult’ ones just different from you?
  - Do you and your child share the same interests, likes and dislikes?
  - Do you prefer to teach in one particular way or can you change your style?

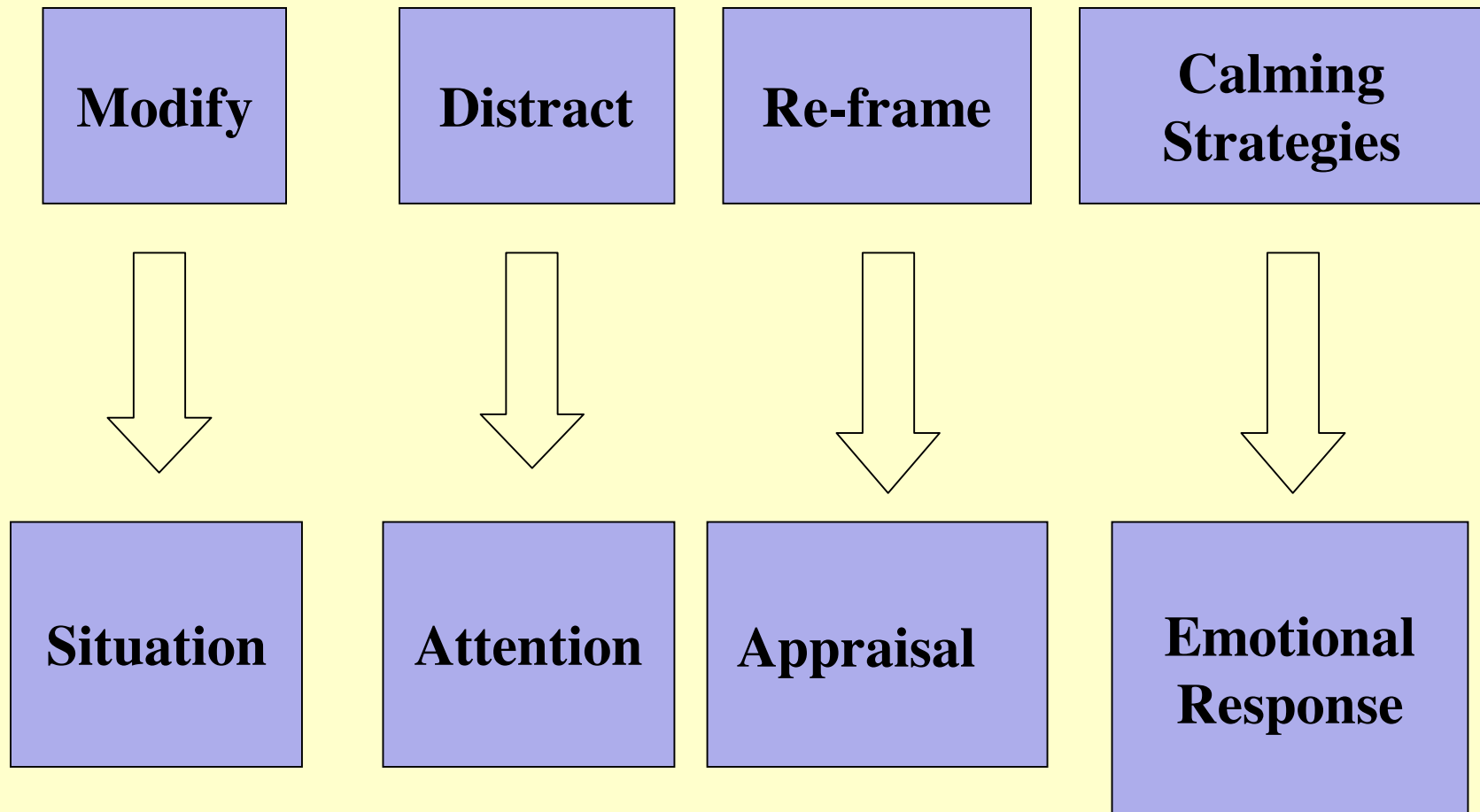


# Promote Self-understanding and Self-Acceptance

# Manage Emotions

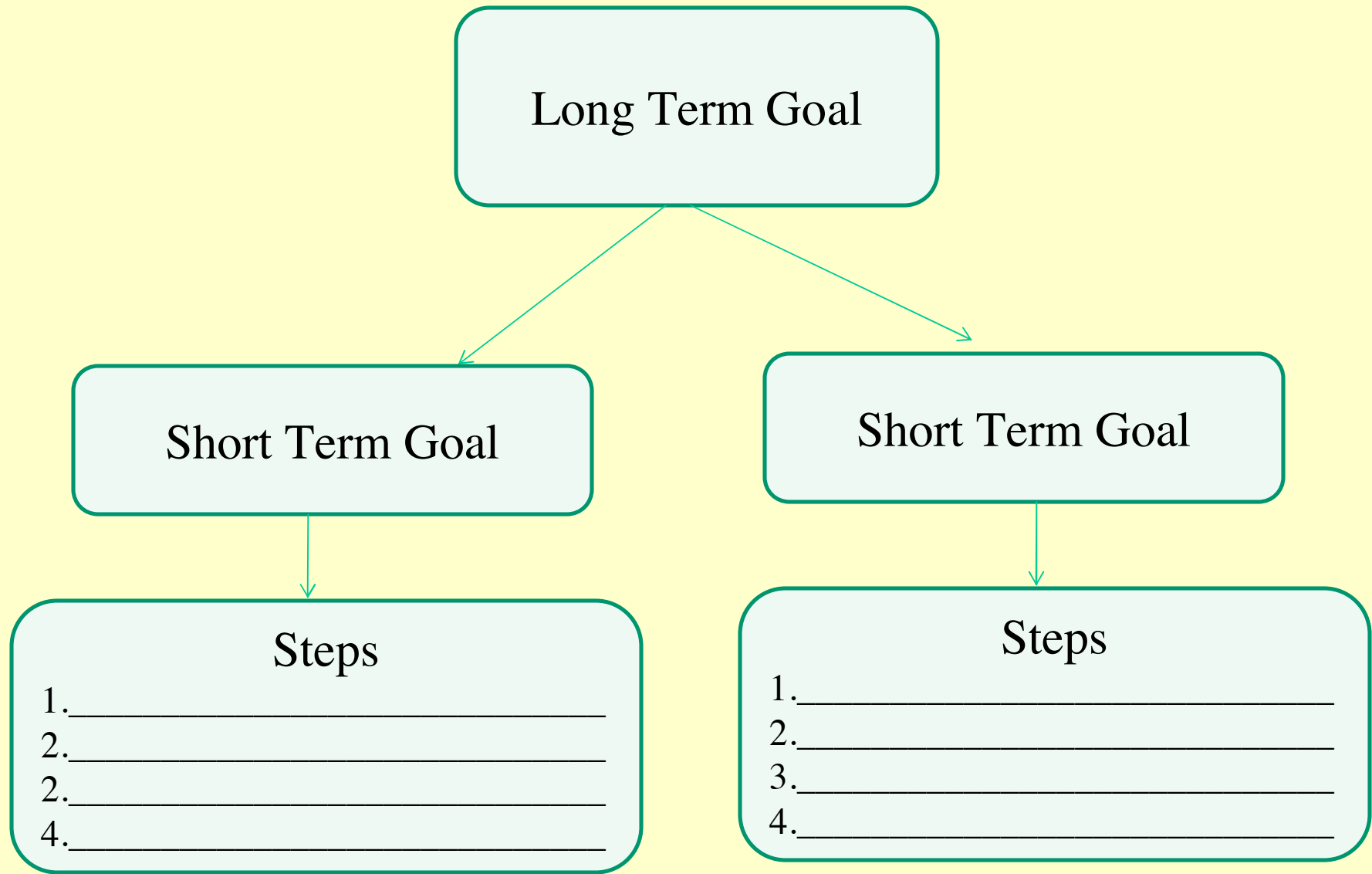
- Identify and anticipate **triggers**
- **Empathize** with your child and normalize their feelings : “Anyone would be upset as you are! It’s normal to feel a bit anxious at a time like this.”
- Remind your child of **past success** and the reason why they will succeed now:  
“You’ve really studied hard. I’m sure you will do well”

# Model for Self-Regulation



# Establish Shared Goals

# G o a l S e t t i n g W o r k s h e e t



Model the process you desire, be a  
good role-model



# Establish structure and routines

- Make things **predictable**
- Be **transparent** about schedules and expectations
- Use **family meeting** to anchor the week
- **Prioritize** activities and be sensitive to individual needs for “down time”
- **Anticipate** and build in time for transitions
- Consider ‘**dry run**’ or preparatory conversations before new or stressful events



# Language and Self-Regulation

- **Reduce language** overload for the child:  
focus on pictures
- Encourage active thinking, metacognition, self-regulation, focus and attention in your child: encourage the development of **internal language or self-talk.**



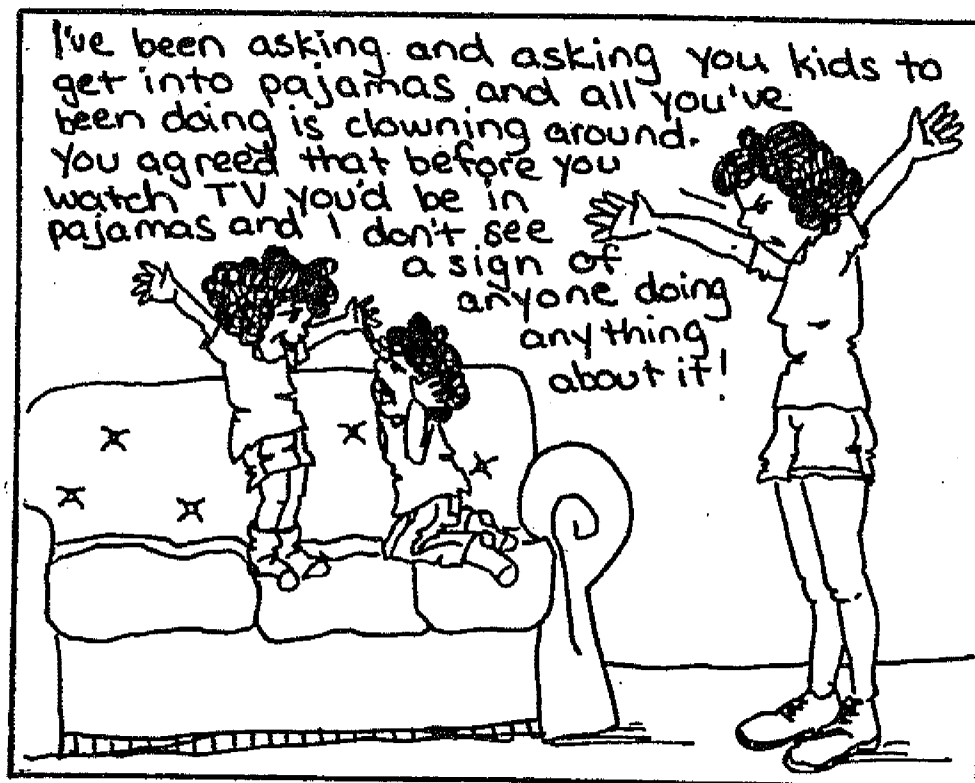




### III. SAY IT WITH A WORD.

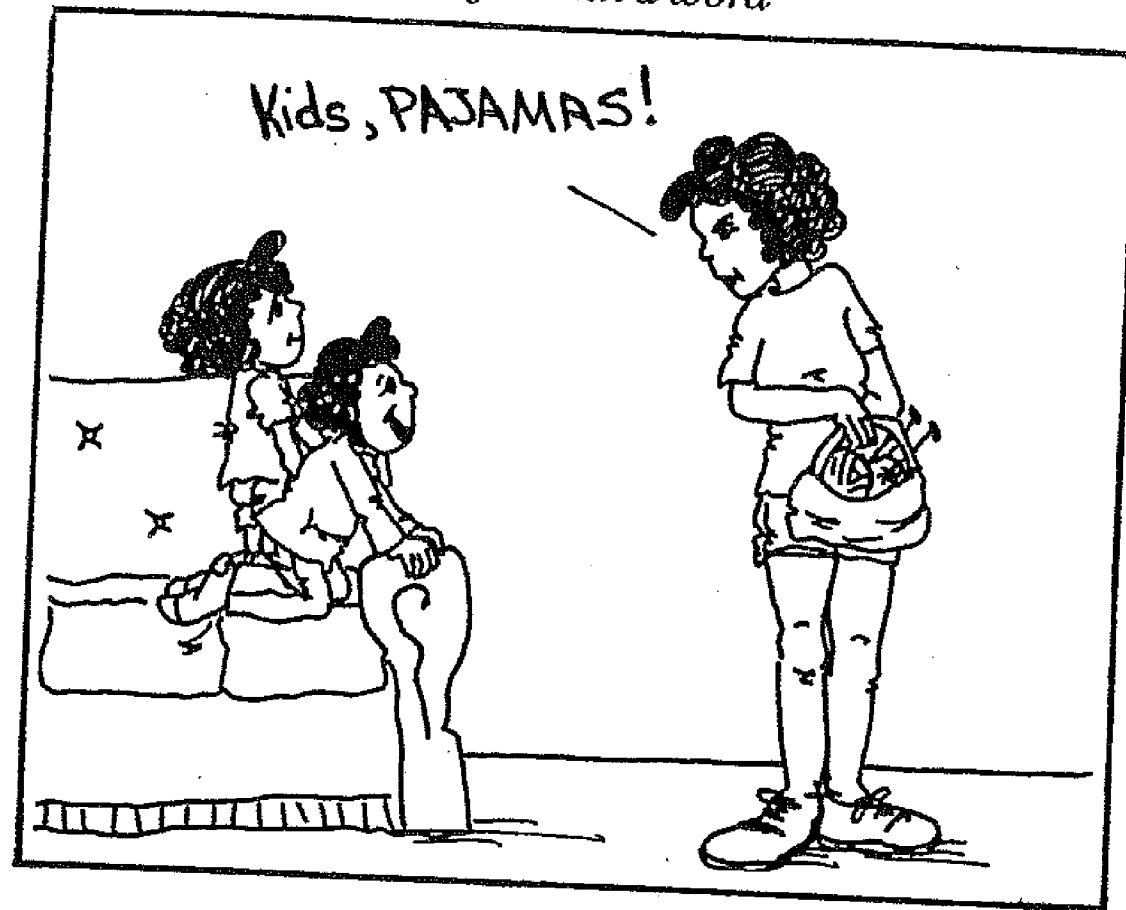
Look at the contrast between the effect of the long paragraph and the effect of a single word.

*Instead of*



From Faber & Mazlish

*Say it with a word*



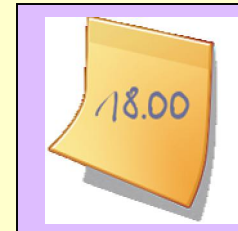
In this case "less is more."

From Faber and Mazlish



## Emily's Math Checklist

Check for decimals



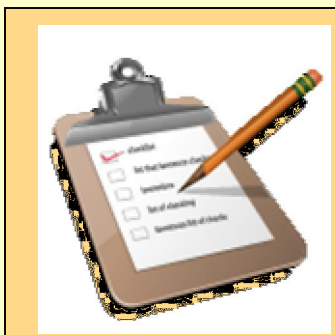
Are any missing?

Check addition and subtraction

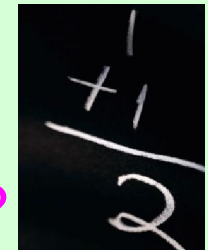
Estimate- does my answer make sense?

Try the problem backwards to check

Look over work



Did I follow directions for all problems?



# Emily's Planner

ASSIGNMENT- WHAT DO I HAVE TO DO?	ABOUT HOW LONG WILL IT TAKE?	ORDER TO COMPLETE

WHEN WILL I START MY WORK? (WHAT TIME?)

---

HOW LONG WILL I WORK FOR?

---

IS THERE ANYTHING I NEED BEFORE I GET STARTED?

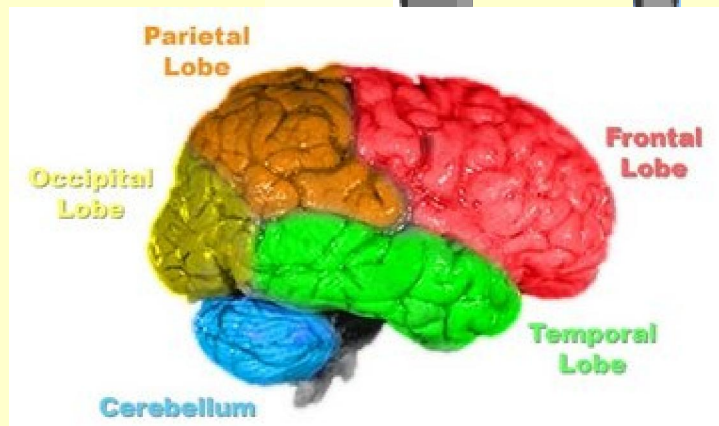
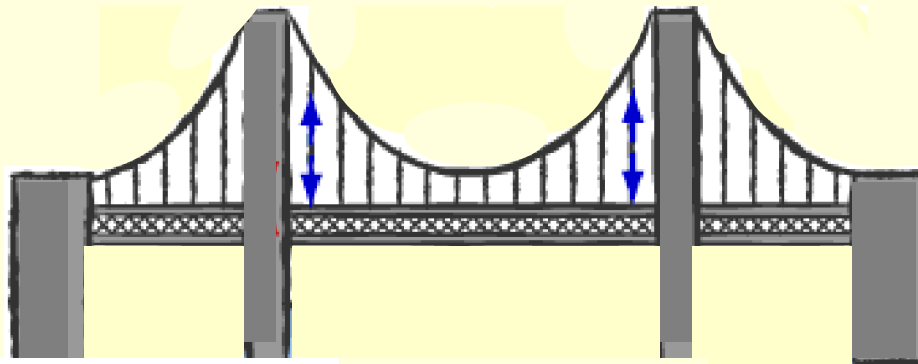
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WHAT'S MY GOAL? WHAT WOULD I LIKE TO ACCOMPLISH?

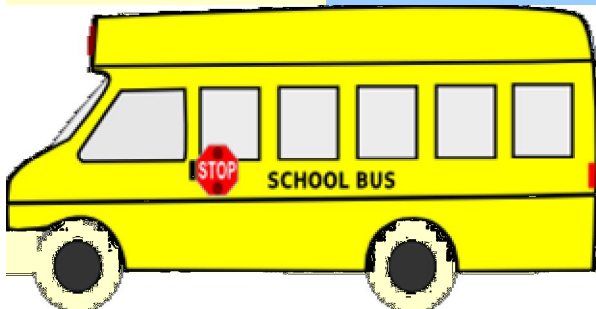
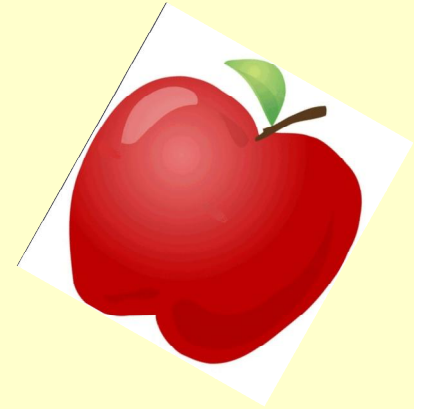
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Support children strategically!

# What is a **STRATEGY**?



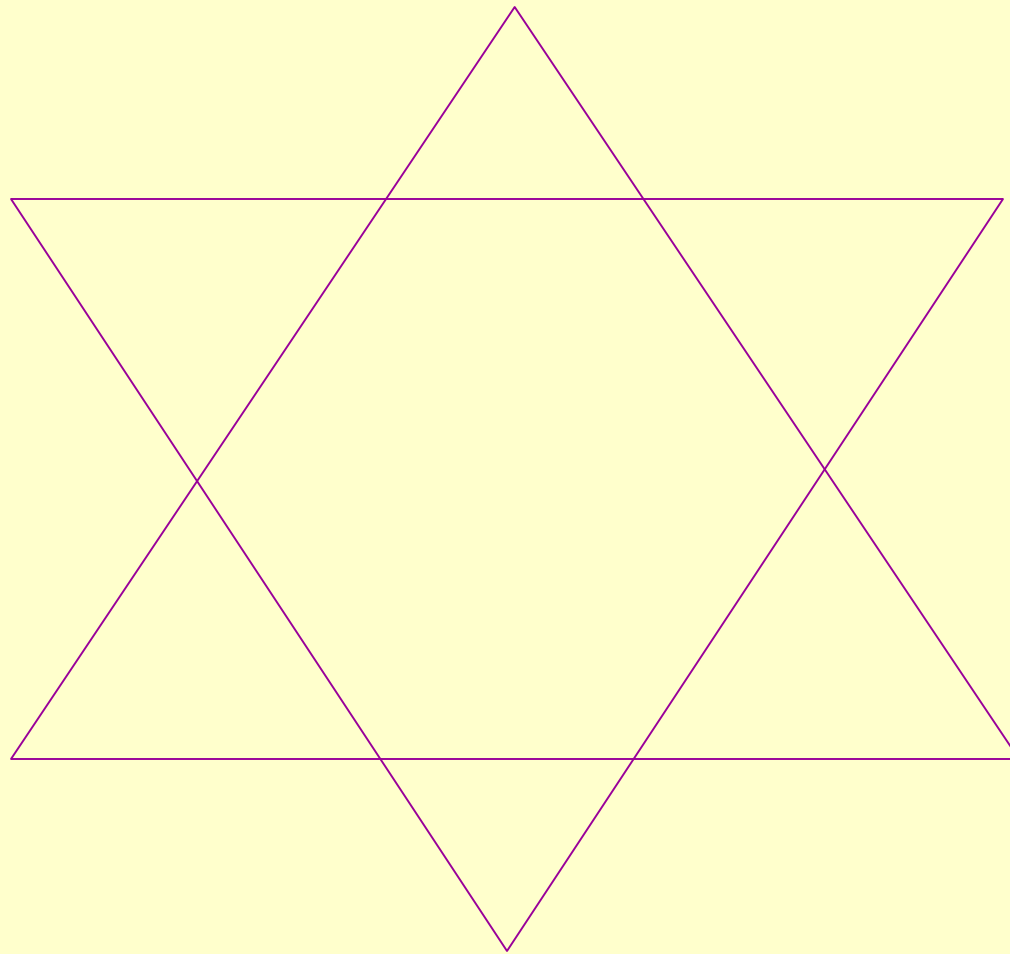










Start early! Transfer responsibility!

When should you seek expert help?

## Seek help when...

- Your child's self esteem appears compromised
- Frustration is frequent and tears are many
- Your child's teacher appears concerned
- You feel that there is a pattern to the problems
- Problems have persisted for more than a few months



A human being should be able to change a diaper, plan an invasion, butcher a hog, con a ship, design a building, write a sonnet, balance accounts, build a wall, set a bone, comfort the dying, take orders, give orders, cooperate, act alone, solve equations, analyze a new problem, pitch manure, program a computer, cook a tasty meal, fight efficiently, die gallantly.

Specialization is for insects.

-Robert Heinlein