Metacognition Is A Human Super Power

To Promote Focus and Attention

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Based in Part on the Council for Exceptional Children's 2014 CEC Convention in Philadelphia, PA

Presentation: Brain-Based Metacognition to Promote Reading Across the Common Core

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Abstract

Metacognition is a stable and distinct capacity that is like a Human Super Power. Metacognition allows children to "Drive Their Own Thinking Bus" and be in charge of calming, focus, attention, learning, emotions, and behavior.

High tech imaging shows the areas of the brain that are involved with Metacognition.

Use Metacognition to Super Charge parenting skills and promote your child's focus and attention.

(Borkowski, 1992; Fleming et al., 2010; Song et al., 2010; Vo et al., 2014; Yang, 2011)

Visit Secret Page On Orchard's Website to Download References & Brief White Paper on Metacognition

Participants Will Explore

1. What is Metacognition?
2. How Children Can "Drive Their Own Thinking Bus"
3. How Metacognition is a Human Super Power
4. Metacognition for Focus & Attention
5. Metacognition Is Brain-Based
6. How To Parent For Metacognition
7. Parenting Strategies

1. What Is Metacognition

What is Metacognition?

Meta = from Greek for after or beyond; can also mean self-referencing

Cognition = thinking

Meta + Cognition = thinking about one's own thinking
(referencing thinking of the self)

Metacognition Allows Humans To Know What They Know & Strategize How to Learn & Do More

Metacognition Can Help Grow Better Brains

2. How Children Can Learn To Drive Their Own Thinking Bus

Tell Your Children
That You Are
The Thinker Within

Teach Your Children

That You Are In Charge

Of What You Think

How You Feel

And How You Act

Avoid

"You Made Me …"

Type comments

Show & Tell Your Children
How You Figure Out
How To Do New Things

Narrate Out Loud
How You Solved A Problem
Or Worked Through A
Challenge

Teach Your Children
That They Are The Thinker Within

Teach Your Children To Go Within
To Solve Problems & Do New Things

Encourage Your Children To Be The

"Driver Of Your Own Thinking Bus"

3. How Metacognition Is A Human Super Power

Metacognition Supports

Focus and Attention

Emotion Processing

Academic Learning

Impulse Control

Self-Evaluation

Regulation

Behavior

Metacognition & Mindfulness Can Promote
Self-Soothing & Emotional Regulation

Positive Metacognition Can Help Children Do Almost Everything Better

Metacognition Is A Real Life
Human Super Power

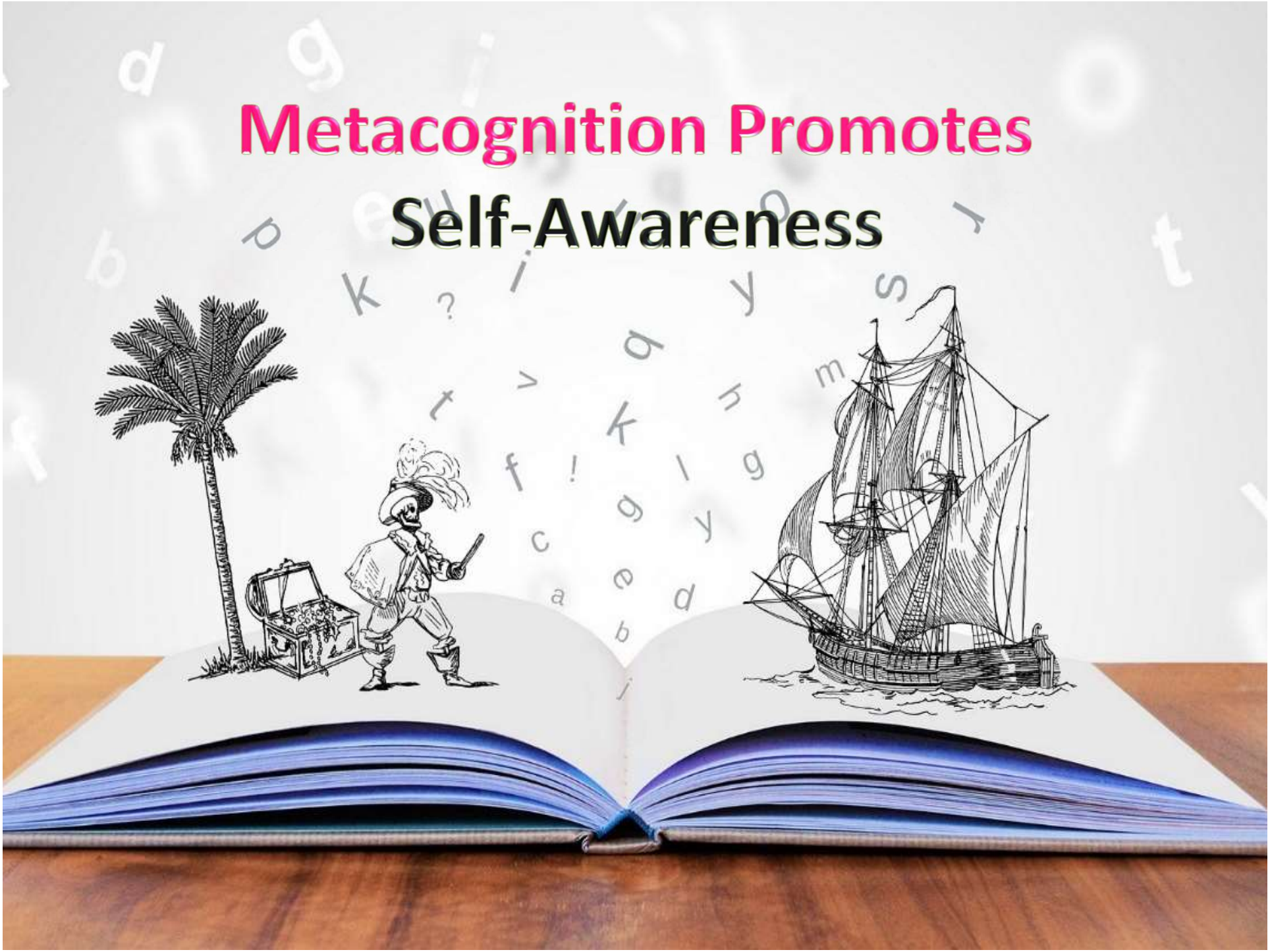
4. Metacognition For Focus & Attention

Metacognition
Helps Children
Know What
They Feel

Metacognition
Helps Children
Know What
They Know

Metacognition Promotes
Mindfulness

Metacognition Promotes Self-Awareness



Self-Awareness, Mindfulness & Metacognition Allow Children To Perform Critical Tasks

Process Feelings

Direct Thinking

Solve Problems

Strategize Solutions

Self-Evaluate Performance

Be The Conscious Thinker Within

These Critical Tasks Associated With Metacognition & Mindfulness

Allow The Child To Direct Focus & Attention

How Metacognition & Mindfulness Support

Focus & Attention

Children can learn to be mindful of what they are focusing on

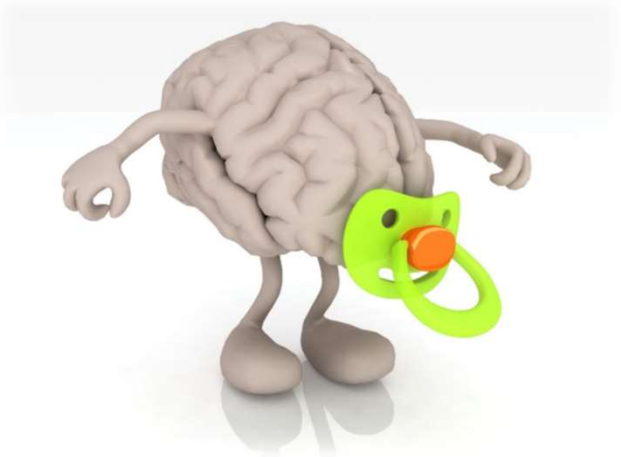
They can learn to direct attention with purpose

They can determine new ways to improve their focus and attention

Positive Metacognition Helps Grow Better Brains

5. Metacognition Is Brain-Based

Brain-Based is Better



The brain is not fully developed at birth.

The brain is neuroplastic (changes itself).

Brain Basics

The brain is infinitely neuroplastic.

Neuroplastic – elastic ability of the brain to change itself; tendency of the brain to reform itself much like molding softened plastic.

The more engaged the thinker, the more engaged the brain. Engaging the child's brain stimulates neuroplastic development.

Metacognition

Is Associated With Changes In The Prefrontal Cortex & Hippocampus

The Hippocampus, located in the temporal lobe, is part of the network for emotional processing and helps with processing of emotions.

(Allen et al., 2017; Shekhar & Rahnev, 2018; Zhu et al., 2018)

Metacognition

Is Associated With Changes In The Prefrontal Cortex & Hippocampus

The Prefrontal Cortex or PFC is located in the front of the brain just behind the eyes and is responsible for higher order thinking.

(Allen et al., 2017; Shekhar & Rahnev, 2018; Vaccaro & Fleming, 2018)

Metacognitive Training

Creates Permanent Changes In Your Child's Prefrontal Cortex & Hippocampus

Brain areas that work together to promote emotional regulation

Why Promote Metacognition?

Metacognition promotes self-regulation, self-awareness, and self-reflection which can further support focus and attention.

Positive Metacognition Helps Grow Better Brains

6. How To Parent For Metacognition

Self-Awareness & Self-Reflection

Allow children to gradually learn that they have a separate identity, feelings, and will from others.

Self-Awareness & Self-Reflection

begin with awareness of being separate from their parents. The process can begin with the simple act of noticing the facial expressions of others.

Supporting Awareness of Children's Unique Identity is an Early Step Towards Metacognition

How To Parent For Metacognition

Teach Children To

“Drive My Own Thinking Bus”

and by ask questions that stimulate Metacognition

Questions To Stimulate Metacognition

What do you think?

How can you work things out?

What do you know about this?

How can you solve this problem?

How did you solve this kind of problem before?

What is the best way to make it happen?

How can you be successful again?

Promote the Child's Migration To Independence and Autonomy

- Acknowledge preferences
- Use language that affirms the child's unique perspective
- Encourage the child to be aware of having ideas, preferences, feelings, desires

Infants and Toddlers Can Become Aware of Personal Preference and Separate Identity

"I wonder" statements stimulate awareness of a *separate self.*

"I wonder … Peter, what you notice about the playground?"

"I wonder … Julie, what is your favorite plant in the garden?"

This reinforces awareness of personal preference and distinct identity.

Toddlers and Preschoolers Can Become Aware of Their *Thinking Selves*

Use "I wonder" statements to stimulate awareness of the *thinking self*.

"I wonder … Joey, how can you use your thinking self to figure out how to put the puzzle together?"

This introduces the concept of thinking about thinking, or metacognition.

Adjust Communication with Young Children to Stimulate Their Awareness

Adjust Communication with Young Children to Stimulate Their Awareness

Metacognition Promotes Processing of Emotions

Children who begin to develop an awareness of their own thinking and feeling selves are more likely to identify and process emotions.

Begin to Promote Metacognition

Early in Childhood

Young children who develop these abilities are more likely to become

mindful

self-aware

self-reflective

This Type of Self-Awareness

Promotes Metacognition

And Expands The Child's Capacity to Purposefully Self-Direct

Focus &

Attention

7. Parenting Strategies To Promote Metacognition

Preschool and Primary Students

Introduce Concept of Inner Thinker

Teach Children To Drive Their Own Thinking Bus

Metacognitive Toolbox

- Remembering
- Exploring
- Connecting
- Noticing
- Wondering
- Planning
- Reflecting
- Celebrating

Talk About

Think About

Metacognitive Toolbox

Kindergarten and Older

Self-Awareness

Mindfulness

Self-Checks

Questioning

Stop & Think

Think-Alouds

Brain Storming

Charts & Visual Maps

Role-Playing Solutions

Positive Metacognition Helps Grow Better Brains That Are Able to Focus & Purposefully Direct Attention

REVIEW

Metacognition Allows Humans To Know What They Know & Plan How to Learn and Do More

Metacognition Supports

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