Developing a Brain-Friendly Classroom Parts 1 and 2

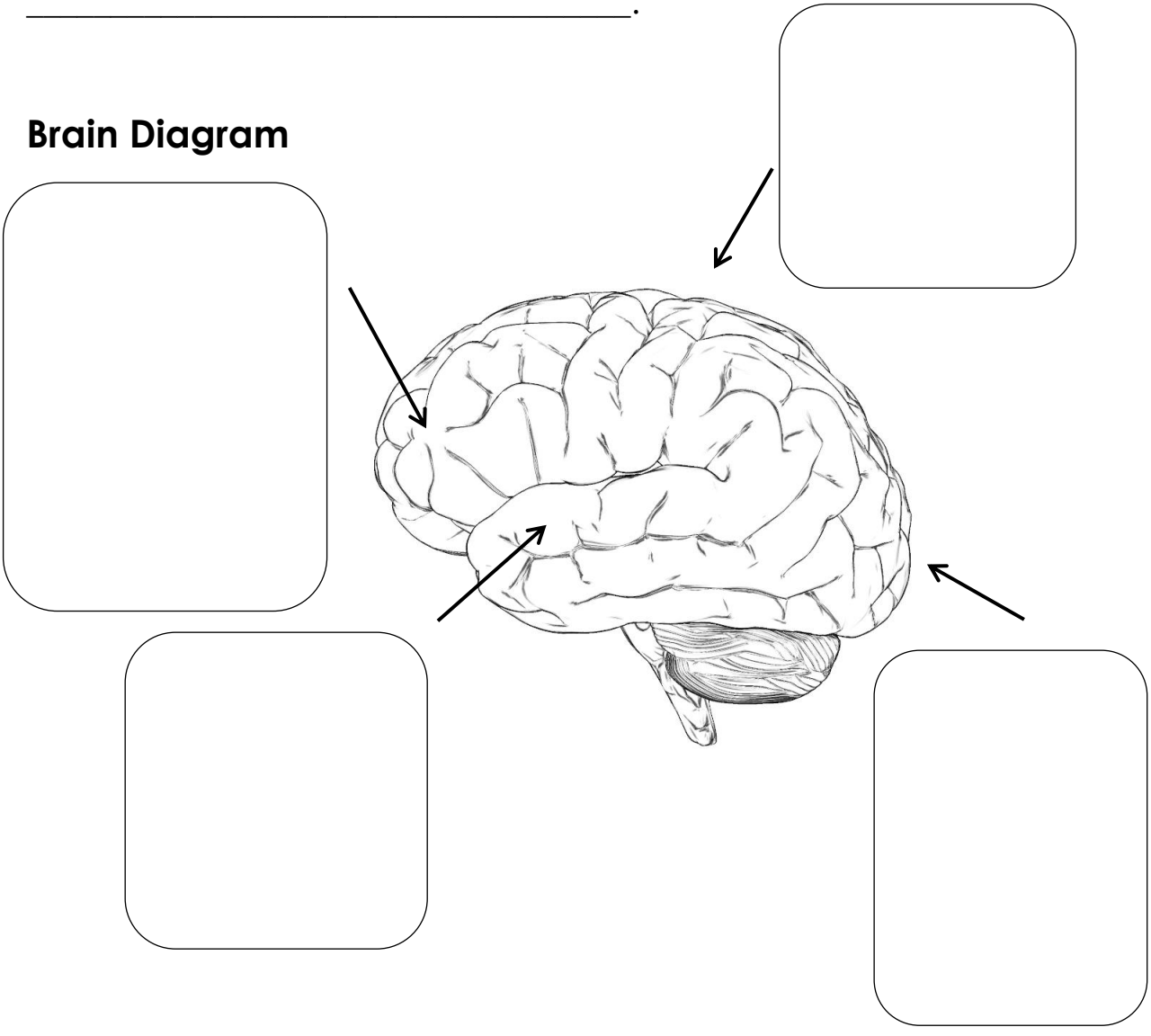
Neuroeducation is an interdisciplinary field that combines

_____, _____

and _____ to create improved

_____.

Brain Diagram



Brain Processes Information:

1.

2.

3.

4.

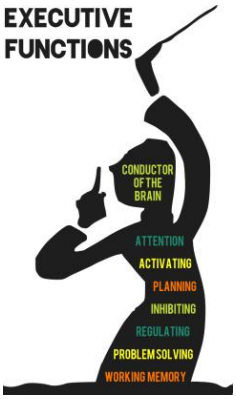
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Brain Research & Effective Cognitive Strategies for Learning:

1. Movement	2. Multi-Senses
3. Emotions	
4. Attention	5. Repetition

20 Tips to Growing Dendrites from Dana Foundation

1. Brainstorming/Discussion
2. Drawing/Artwork
3. Field Trips
4. Games
5. Semantic Maps, Word Webs
6. Humor
7. Manipulatives/Models/ Labs
8. Metaphors/analogies/similes
9. Mnemonic devices
10. Movement
11. Music/Rhythm/Rhyme/Rap
12. Problem/Project-based instruction
13. Reciprocal teaching/Cooperative learning
14. Role Play/Drama/Charades
15. Storytelling
16. Technology
17. Visualization/Guided-Imagery
18. Visuals
19. Work-study, Apprenticeships
20. Writing/Journals



Executive Functions in the Classroom

What are Executive Functions?

Definition: Core skills critical for _____, social, _____, and academic development.

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-
-
-
-

A Few EF Skills

Planning and Organization Working Memory Initiation Task Monitoring Self-Monitoring Inhibition Emotional Control Shifting Perceive Focus/Select Initiate Goal-directed activity Strategy development and execution Emotional self-modulation Self-motivation	Modulate Interrupt/Shift/Flexible Inhibit/Stop Sustain Hold Manipulate Organize Foresee/Plan Store Retrieve Time Pace Gauge Self-Activation

Executive Function Skills

Emotional Control

Behavioral Control
Cognitive Control

EF Skills Develop Over Time

- Don't assume the child has EF Skills and is not using them (i.e. lazy).
- Teach the skill
    1. Identify the weakness.
    2. Set a goal
    3. Teach the child the skill through modeling & practice.
    4. Look for opportunities that allow the child to pursue independence.
    5. Set up opportunities to "catch" them and reinforce their efforts through feedback.
- Keep supports in place until there is mastery.

Skill Development

- EF is learned in day to day activities with real life problems.
- EF is developed by modeling and supported practice.
- Keep an EF mindset when engaging students in tasks.
- Reinforce immediately and consistently.
- Reinforce DOING behaviors.
- Identify weaknesses and set goals with specific students to improve, look for opportunities for them to develop skill.

GOAL: EF Skill Development

Identify one student in your class that struggles with one of the EF skills we discussed. What strategies could be used to help this child develop the skill?

Executive Functioning Skill Strategies Tip Sheet

General strategies

- Take step-by-step approaches to work; rely on visual organizational aids.
- Use tools like time organizers, computers or watches with alarms.
- Prepare visual schedules and review them several times a day.
- Plan and structure transition times and shifts in activities.

Planning and Organization

- Recognize organization as a learned skill
- Model planning process
- Use graphic organizers, check lists
- Post daily plans (agenda)
- Give students opportunity to plan classroom events
- Reinforce efforts

Managing space and materials

- Organize work space.
- Minimize clutter.
- Consider having separate work areas with complete sets of supplies for different activities.
- Schedule a daily time to clean and organize work and play spaces.
- Use visual displays on all material and play containers.

Managing work

- Make a checklist for getting through assignments. For example, a student's checklist could include such items as: get out pencil and paper; put name on paper; read directions; write the due date at the top of the paper, etc.
- Use planners, calendars, organizers.
- Offer verbal progress checks
- Plan explicitly & give advanced notice of routine

Managing time

- Create checklists and "to do" lists, estimating how long tasks will take.
- Break long assignments into chunks and assign time frames for completing each chunk.
- Use visual calendars to keep track of due dates, long term assignments, chores, and activities.
- Display visual clock, timer, hourglass for activities and assignments.
- Verbalize checkpoints "You have 5 minutes left."

Developing Monitoring Skills

- Model desired behavior
- Use language – recognize out loud specific strategies they have used
- Explain what will be done
- Explain while doing task

- Explain what was done and reinforce efforts

Developing Inhibition

- Earn the things they want (save tickets for incentives)
- Delaying gratification
- Have private cues as a reminder to wait
- Give clear expectations and use trigger words (When I say go…)
- Be explicit in how students should answer questions ("Raise your hand when you know, the answer to number 4." "Think in your head…")
- Use covert commands to avoid "shout outs"
- Reinforce efforts (stopping, waiting)

Sustained Attention

- Assess how long it takes to complete a particular task, then use a timing device
- Give students ownership ("Can you work a little longer?" "Can you beat the clock?")
- Catch them being good
- Incentive plans (first, then reward)
- Break down tasks into manageable parts

Developing Shifting Attention/Transitions

- Practice shifting - role playing
- Provide advance notice of what is coming
- Give child a script for handling specific situations
- Reinforce efforts such as transitioning well or returning to task quickly

Developing Emotional Control

- Recognize cues to emotions, such as triggers
- Use active listening and negotiate
- Label emotions
- Role play and model
- Practice control (heart, breathing, mindfulness, stop, think, act)
- Reinforce efforts

Supporting Independence

- Support through giving small tasks to be accomplished
- Used check off system as tasks are completed
- Use gradual release of modeling, guided practice, and independent practice
- Fade support when possible
- Use praise, prompt and leave

Developing Initiation

- Break up the task into pieces
- Offer a bad example

- Provide extrinsic motivation
- Plan an approach
- Reinforce effort (begin independently = bonus points)

Developing Working Memory

- Have child repeat what you have said (Repeat to Remember)
- Develop cues (explicit and natural) such as snapping fingers, mnemonics, hand signals
- Talk/sing your way through it
- Make learning ACTIVE
- Reinforce efforts

Working Collaboratively

- Getting buy in – motivation, use something the child values
- Communication expectation for group work
- Assign individual accountability roles as well as team expectation
- Focusing on team collaboration & benefits of learning from each other
- Praise efforts
- Break tasks into manageable parts