My Child's Amazing Mind

A Parent Guide to Developing Thinking Skills **by Dr. Jeanne Zehr**

Growing My Child's Amazing Mind!

One cognitive function at a time…

I am thrilled to be your guide on the journey of growing your child's mind. I mean that literally! When your child learns, from within the womb and throughout their lifetime, their brain is growing neural networks and you are the main source of that growth! So let's start at the beginning! How does the brain learn? First there has to be information put into the system, we can call this *input*. Professor Reuven Feuerstein, a famous Israeli child development expert, has given us a detailed list of skills or thinking actions to consider as we guide our children through life. They are organized into phases - *input, elaboration,* and *output*. Each one is listed below with suggested activities and mediation questions that a parent can do in everyday family life to ensure these critically important skills are developed. This will help your child learn HOW to learn! This is not only for school work but also to help them to be ready to conquer any challenge that life may throw their way!

Everything suggested here comes from research, my lifetime in education, and particularly, from the last 20 years of learning personally from a master teacher, Professor Reuven Feuerstein. As a Christian and educator, I like to say that my life has been dramatically impacted by ***two*** Jewish guys! When I met Reuven I knew I had found what I had longed for in education: a way to define thinking and learning in terms parents and teachers could use daily. I hope you will discover with me a new way to appreciate Romans 12:2, and "be transformed by the renewing of your mind" - and your child's!

Each cognitive function is a thinking action and they happen very quickly when our brain is busy thinking. We may use 3 or 6 or 10 of them as we work on a cognitive task. They are not used in any specific order. But to use them efficiently, they have to be developed first! That's our job as a parent, your child's first and most important teacher! A single page chart of all 28 cognitive functions is at the end of the guide on page 34.

Activities for each cognitive function are just a launch pad of ideas for you. Actually EVERY activity you engage your child in is growing their capacity as learners, thinkers, and leaders. Feuerstein used the word "mediate" to indicate how we place ourselves between the world and our child to help them understand it. By interacting face-to-face, communicating with our body language, and, very importantly, by asking questions, we develop our child's ability to understand the world.

I pray this guide will help you on your journey with your child, whether he or she is developing quite well or has unique challenges. Parenting can be a tough job! May God give you strength and wisdom!

1. Focusing and Perceiving

The more info that we receive via our senses, the more the brain can learn from it.

Activities to Develop Focus

1. **Teach your child the word "focus"** Use the word "focus" when you want your child to truly listen to you explain something or to watch you demonstrating a new thing – like how to break open an egg!

2. **Limit screen time** … to no more than one hour a day. This gives the brain time to learn how to focus on activities that are more engaging and will help your child's brain to grow. Digital devices can actually do the opposite and cause a young child's mind to be rewired for ADHD. Use the American Association of Pediatrics website to calculate time spent on daily activities for your child: https://www.healthychildren.org/English/media/Pages/default.aspx#home

3. **Play strategy games** Family game night with popcorn can be an opportunity for your child to make wonderful memories of childhood, provides valuable bonding and communication time, and grows new dendrites! Laughter is a great family stress reliever! See the appendix at the end of this guide for a list of games and the cognitive functions they can develop. Just have fun and focus on the process more than winning or losing. This is an opportunity to teach graceful winning and losing!

Questions to Mediate Focusing

- Are your brain and eyes working together to focus?
- What do you hear right now? (or see, or smell, or feel or taste?)
- Are you looking carefully to focus?
- Is your brain focused?
- Look again carefully, take your time.

2. Systematic Searching

Slowly and carefully approach or look for things (objects or words in text). Having a method for searching.

Activities to Develop Systematic Search

1. **Teach searching skills** Mothers, this one is for you! Many families I know depend on Mom to know where everything is in the house – every sock, toy, book, or coat. I

challenge all mothers out there to teach your young and older children how to systematically search for a lost item by slowly and carefully looking for it, one room at a time. Starting on one wall and methodically looking left to right or top to bottom on shelves, will teach them how to find things for themselves. Look how much time that will gain you in the long run!

2. **Play *Find It!*** This game can be played in the house or yard with a common object (a small ball or toy). Set a timer and see how much time it takes for individual children to find the object or have a free-for-all with everyone looking. The goal is to guide the child toward using a systematic way to search for the object.

3. **Play *Word Search*** Once children are reading, you can find this game via books or the internet on appropriate levels for all members of the family. Again, using a system to do the search develops an important skill.

Questions to Mediate Systematic Search

- What were the steps you used to find ____?
- What helped you find it?
- How else can you look for it?

3. Labeling (Receptive Vocabulary)

Without a name for something, we can't think about it. Building vocabulary.

Activities to Develop Labeling

1. **Read and Talk a Lot!** By the time children enter first grade, they should have a vocabulary of 10,000 to 20,000 words. To develop this extensive language bank requires that they hear these words at home; so it is important for parents to actually talk a lot about lots of topics! TV will NOT build extensive vocabularies, but being read to with many, many kinds of books will! One thing I know some parents do is stop the bedtime reading ritual once their children begin to read themselves. This is a HUGE mistake! By reading chapter books, even to younger children, you are developing critical listening skills, which in turn develop reading comprehension skills. This happens because your child is learning how to visualize the story in their minds, the crucial part of reading comprehension. With all the visual digital screens given to children (that rob imagination), this important skill can lack development.

2. **Five a Day!** Not only should we eat five servings of vegetables each day, children between the ages of 2 to 6 should learn 5 new words a day! Just keep this going throughout the elementary years and ask your 3rd grader, for instance, what new words he learned at school. Take an interest in their textbooks, perhaps even reading them

yourself! Shocking idea, I know! When they begin reading intermediate fiction, you read the book as well and you now have another topic to discuss.

3. **College Ready** When high school teens get ready for the college entrance exams, (the ACT or SAT) vocabulary will be crucial. This is one time I advocate for digital learning devices. Download one of the many SAT Vocabulary learning apps.

4. **Books and Dictionaries** One of the best investments for a family is to buy many books as well as own a library card and make a lot of visits! Picture and junior dictionaries are also a necessary purchase for raising children. Explore and look up new words together. Make learning new words part of your family culture. Yes, I know you can also "google that," but don't rob them of the joy of turning pages and seeing richly illustrated books.

Questions to Mediate Labels

- How do labels help you?
- What is the best name for that?
- What is another name for that?
- What else do you see?
- Can labels hurt someone?

4. Sensing Space

It all begins with internalizing my right, left, front, and back as critical concepts, then moving on to understanding how home, neighborhood, city, state, country, world are organized.

Activities to Build Spatial Awareness

1. **Determine dominance** Watch your baby and toddler's preference for right hand or left, then begin teaching about "sidedness" by asking them to put their right arm into their coat sleeve, or their left foot into their shoe.

2. **Teach left and right** If you use these concepts in your own daily routine, children will begin to understand how important it is to know their right from their left. This develops laterality, which is an important self-awareness of the left and right side of our body, separated by what is known as our midline.

3. **Play games** Look for games that use left and right, like *LCR* for younger kids and *Left Turn, Right Turn* for older children. Adults like both of these games as well!

4. **Where are we** Ask your child to tell you where to turn next when on the way to a familiar destination. Are they spatially aware of your neighborhood, countryside, or city?

Questions to Mediate Spatial Awareness

- What is in front of you/behind you?
- What is behind you?
- Come find your personal space.
- Where is your space?
- How much space will that need?
- Where are you right now?
- How do you know that?
- If you had to point to _____ with your eyes closed, where would you point?
- Who is to your right (or left or in front or behind you)?

5. Awareness of TIME

Gaining a sense of how time passes, how old, how often, or a sequence of events. How much time will it take to do something.

Activities to Develop A Sense of Time

1. **Use clocks** Talking about time is where it all begins. Discussing what time we get up, when we eat lunch and go to bed establishes important routines, provides a sense of stability, as well as awareness of time. Be sure your child has his or her own clock in their room. Use a kitchen or sand timer and discuss how much time a minute takes (especially helpful if you use time-outs in your house).

2. **Sequencing** This skill is SO important to life! Learning what comes first, second, and third with stories, getting dressed, a cartoon strip, or building a snowman are all fun and brain building!

3. **Counting and numbers** Being aware of how numbers are used to measure time, count birthdays, or for playing games, help build an important skill. Learning to count down is an exciting addition to hide and seek! 10, 9, 8, 7…

Questions to Mediate a Sense of Time

- When it is morning time, what do we usually do then?
- What things take a long time?

6. Conserving Constancies

Decide what characteristics stay the same even when changes happen. What attributes must remain the same for an object to keep its identity.

Activities to Develop Conserving Constancies

1. **What makes a square a square?** It has to have four equal sides and four (4) right angles. Does it matter what size it is? No, it doesn't, it's still a square. How about color, if its purple, is it still a square? Yes, it is! If I make two (2) sides a lot longer, is it still a square? No, now it's a rectangle! This conversation can happen concerning a tree, or a truck, or a star. Anyone who has survived the incessant questioning of a 3 year old can relate to this cognitive function! It is an extremely important concept to help your child develop. Someday it will help them in algebra, science, and life in general! For example, do you want your child to be aware when someone is leading them astray by changing the rules just a little bit? This could happen in our faith walk, at the work place, or in finances.

2. **Clay and water** Children who have a lot of time to explore the attributes of clay or to play with pouring water will gain valuable working knowledge of volume and quantity. Allow ample time for these activities in your home. This can expand into sand boxes, gardening, and great times at the beach!

3. **Letter and word changes** Show children how letters and words have many similarities. The letters A, a, 𝒜, 𝒶, 𝔄, and 𝔸 are all the same letter, but using different font styles. You can understand the word play in "playful, playing, and plays." We can run, rerun, or enjoy running. Pointing out similarities and differences in objects, pictures, and eventually words, develop a little critical thinker and the world needs more of those!

Questions to Mediate Conservation of Constancies

- How are these things similar?
- How are they different?
- What changed?
- What stayed the same?
- Is it still a _____ or is it something different now?
- How do you know something is changing?

7. Collecting precise and accurate data

Having the right info or things to get the job done or to get the right answer. It could be physically or mentally.

Activities to Develop Collecting Precise and Accurate Data

1. **Cooking** Working in the kitchen is one of the most amazing ways to build little minds into good thinkers. Show even young children, age 2 and up, how you use a recipe and collect all the right ingredients for cooking or baking. Can they help you find them all? Can they help you measure and pour and even crack open eggs? Why not? It may take a little longer to bake the cake or create a masterpiece casserole, but so what? You just spent valuable time teaching your child vocabulary, fine motor control, and precision in having just the right amount of vanilla or salt!

2. **Life skills** Not having the right tools to accomplish a task is a huge lesson in life. Be willing to share your thinking aloud when you are preparing to build something, pay the bills, or clean the house. What do you need to get the job done? Let your child hear you problem solve the first steps by collecting what you need.

3. **Homework** Eventually this will translate into doing homework and having the right textbooks, resources, and tools to finish successfully. Be a team player with your child and provide a quiet place and the tools he or she needs to get the job done. Celebrate the successes! Help problem solve and strategize the failures. We learn from our mistakes, so don't be afraid of them!

Questions to Mediate Collecting Precise and Accurate Data

- What will you need to do this?
- Gather your materials you need to…
- Why do you feel that _____ is important to use?
- How can you tell if you are measuring precisely?
- Why is it important to be precise?
- When do you need to be precise?

8. Hold two sources of information

Keeping two thoughts (pictures of object or ideas) in the mind at the same time, assists in comparing and higher order thinking

Activities to Develop Holding Two Sources of Information

1. **Use Art** Children love to paint and draw. Ask him/her to draw a big circle or a red apple. Apply two attributes to any task beginning with 2 and 3 year olds, so they develop the ability to hold two (2) sources of information in their mind long enough to find it or do it.

2. **Go find for me** Children love to be a helper. Involve them in any task you are trying to accomplish by asking them to go get you 2-3 things. Just be specific. Can you find for Mommy the biggest blue and purple markers in the drawer? Can you find for Daddy my brown and white slippers?

3. **Strategy games** Playing chess, checkers or *Pente* can help children learn how to hold onto their defensive moves as well as offensive moves in order to win. Teach strategies to your children when playing any board or card games. As they mature, you will then be learning from them! Trust me on this one! And don't let them always win – that is just not how life works! But be a gracious winner! Teach them how to lose and learn from it!

Questions to Mediate Holding Two Sources of Information

- I have two things for you to remember, let's practice by saying them out loud.
- Think about _____. Now think about _____. Can you compare them?
- How do you know you are remembering something?
- Can you go upstairs and bring to me the _____ and the _____?

Elaboration Skills

Professor Feuerstein provides for parents a way to organize thinking actions into three (3) phases. We just finished the ***input*** phase. The second phase is called ***elaboration***. This simply means using the input in ways that are constructive to life. It is important for school learning. However, these skills can and should be developed at home first! This section will provide you, the parent, with lots of activities and good questions to help your child become an amazing thinker!

9. Defining the problem

Recognizing and identifying that there is a challenge or problem to solve. What am I to do? Problem, what problem?

Activities for Defining a Problem

1. **What seems to be the problem?** This question is actually a pretty good one if it is used with children in a genuinely honest way, not with a sarcastic intonation. Feuerstein's method for helping children learn how to learn is called mediation. It implies that parents position themselves between a learning task and the child, and help mediate the learning by asking good questions that challenge the child to think for him/herself.

2. **Doing Homework** Use a page of homework as a catalyst for growing this cognitive skill. Sometimes parents jump in and begin telling the child how to do the task or the opposite happens. Parents panic because they have no idea what the task is asking, especially in math and science. So the best way to approach homework for either scenario is to mediate the situation! Ask questions like, "Hmmm…, I wonder what you are supposed to do here?" See the list of questions below.

Questions to Mediate Defining a Problem

- What do you see here?
- What do you think the challenge (or problem, or task) is?
- Tell me what is happening here.
- What else do you see? (to help your child collect more accurate information)
- Is there a strategy that you could use here?
- Have you ever done anything before that looked something like this?

10. Searching for relevant cues

What is relevant or irrelevant to the solving this problem?

Activities for Searching for Relevant versus Irrelevant Cues

1. **What is relevant?** This is a big word but an important one. Children and adults often get sidetracked in life because they chase what is not relevant. Of course, making decisions about relevancy is cultural and faith-based. What your family values will trickle down to your children, so walk your talk and be a wise parent with your choices in life!
2. **The right cues** To solve a problem we have to decide what information is needed and what is just extra stuff that we can ignore. This becomes a huge factor in math problem solving in the future, so begin at home with making choices of puzzle parts, toys, foods, clothing to wear, etc., that help solve a problem.
3. **Puzzles** - Set up a puzzle with extra materials that are not needed. Can they decide what is necessary?

Questions to Mediate Searching for relevant vs. Irrelevant Cues

- What do you need?
- What is important?
- How do you decide what isn't important?
- What things do you need to help you do this?
- What do you need?
- Is that a relevant part of the solution or is it irrelevant?

11. Comparing

Discovering similarities and differences without prompting to do so. Critical to all higher order thinking skills

Activites for Comparing

1. **Choices!** Help your child from a very young age to make their own choices. You as the parent set the parameters, then give them freedom to make decisions about what to wear, what game to play, which friend to invite over. If you over rule every decision they attempt to make, they will never develop efficacy, the sense that "I make a difference in this world."

2. **Shopping** Comparing is about finding similarities and differences and making decisions. Grocery, clothing, or shoe shopping is a perfect adventure for learning how to apply criteria to comparing. Use price, color, value, preferences, etc. to compare products and make choices. All higher order thinking skills begin with comparing, so this one is very important!

3. **Use the language** Use the words related to this thinking such as "compare, similarities, differences, choices, and decisions."

4. **Compare real things** Show your child a variety of fruits and ask how they are similar and how they are different. Help them explore ALL the ways you can possibly identify.

Questions to Mediate Comparing

- What does it mean to compare?
- How do you know it is a good choice?
- How do you make choices?
- Why is it important to make wise choices?
- How are they similar?
- How are they different?

12. Working memory

Recall and use several pieces of information

Activities to Develop Working Memory

1. **Match Game** Use this commercially produced game with young children and begin with only two (2) or three (3) pairs of pictures. As they grow and mature, add more pairs that are turned upside down. They must remember where they are to make the matches.
2. **Read Aloud** Develop memory skills by reading chapter books to your child. By the age of 5 or 6 you can develop their ability to focus on a story by listening and using minimal pictures. Ask questions as you finish a section or chapter. Are they holding the information in their mind? Begin this with picture books with 2 and 3 year olds. Ask questions!
3. **Building Things** Having a plan and sticking to it involves working memory. Help your child create small goals and plans to achieve them, even if it's just for building a Lego house.
4. Memory Tips For older students try this list of 21 methods: https://www.developinghumanbrain.org/memorization-techniques-for-students/

Questions to Mediate Working Memory

- Can you make a picture in your mind while I read to you?
- Tell me two (2) things about the passage I just read to you.
- Let's both shut our eyes and imagine we are at the beach. What do you see there?

13. Understanding cause and effect

Making important connections between things and events. Finding relationships

Activities for Understanding Cause and Effect

1. **Connect the dots** Help your child make connections between events. As an adult, you are well aware of why events are happening to your family, but your child may not be. Help them connect the dots between moving to a new apartment and Dad losing his job, or between selling a favorite car and the fact that it wouldn't run anymore or between the family dog disappearing and the fact that he died unexpectedly. Each parent has to make their own decisions on how much to share with children and obviously they do not need to know everything. This is when we need wisdom to help our children understand life, yet not be overwhelmed by it!

2. **Teach cause and effect** Use simple examples in life to demonstrate causes and their effects such as why we launder our clothes, why we eat food, and why a car needs gasoline. Every day is full of ways to help our children grow their amazing minds.

3. **Story Books** Find literature that has cause and effect themes, such as *If You Give a Mouse a Cookie.*

Questions to Mediate Understanding Cause and Effect

- Why do you think Daddy mows our lawn every week?
- I wonder why the grass doesn't grow much in the winter?
- What happened that made Emma so upset today?
- When the dog comes in the house with muddy paws, what happens next?

14. Providing logical evidence

Does it make sense?

Activities to Develop Logical Thinking

1. **Using logic** Help your child see when things don't make sense. If he wants to make his tower of blocks go higher, ask him to think first before he stacks. Is there a better way? Does that make sense? These questions should even be overheard by your children from you, the parent, when you are problem solving. Model the use of reasoning out loud when things are going good and not so good, too!

2. **Don't take away opportunities to learn from failure** Some parents never allow their child to fail. This can actually backfire later in life when your young man or

woman faces challenges. They need to grow up learning from their mistakes and understanding that failure happens to everyone!

3. **Play strategy games** You will see this activity in several places in this guide. That is because playing strategy games with your child is the sneakiest way ever to help them become smarter, and they love every minute!

Questions to Mediate Logical Thinking

- Does this make sense? Why or why not?
- I wonder why this worked so well?
- So tell me why you chose this method?
- How did you know to do it this way?

15. Visualizing

Internalizing events, objects, concepts

Activities for Visualizing

1. **Mind pictures** This skill is necessary for abstract thinking and reading comprehension. Talk with your child from a young age about imagination, making pictures in our mind, thinking about an object and describing it, etc. When young children participate in imaginary play by dressing up, taking on different voices and personas, this is developing an important skill for future learning.

2. **Read out loud** Reading to your children, even as they approach intermediate grades, is so vital to their ability to visualize. As you read a chapter book, they will create scenes in their mind. This is totally opposite of watching TV, which robs our young minds from developing this skill. I will never forget reading *Trouble River* to my big 4th grade boy every night before bedtime. We both loved it! Don't hesitate to include chapter books with picture books for 6 year olds and up.

3. **Drawing** Encourage lots of artistic drawing. Have your child draw pictures to go with a chapter book you are reading. You will truly discover what they were imagining while you were reading aloud.

Questions to Mediate Visualizing

- Can you draw for me what you think this character looks like (or scenery, or any other detail from a read aloud)?
- Can you draw a simple symbol for a sun, tree, house, chair? (etc.)
- What are you seeing in your mind right now?
- Tell me what you see in your head.

16. Using hypothetical thinking

If this is true, then what else must or might be true?

Activities to Develop Hypothetical Thinking

1. **What do you already know?** When helping your child solve life's problems, begin with a simple, "What do you already know about this?"

2. **Model hypothetical thinking** If your children hear you use this kind of thinking aloud, they will enjoy copying you. Expect to hear even 4 and 5 year olds attempting to say "hypothetically speaking." It is so enjoyable to observe little ones emulating their parents and talking in a big way!

Questions to Mediate Hypothetical Thinking

- If _____ happens, what is the result?
- What do you think it is going to look like?
- If you do this, what will happen?
- What do you predict will happen next?
- How do you know if something is true?
- If you can do _____ correctly, can you do more?

17. Testing the hypothesis

Strategies for problem solving, how can I see if I am right? Is this correct?

Activities to Develop Testing a Hypothesis

Science experiments These can begin very young with a sink and float game. Collect a lot of toys and kitchen items and fill the kitchen sink with water. Do you think this will sink in the water or float?

Just ask Keep a questioning culture going in your home. A great resource to read how children are born to ask questions is the book, *The More Beautiful Question* by Warren Berger. By mid elementary they dramatically stop asking questions. Yet we know that inquisitive and curious minds are the ones that grow up to be entrepreneurs and leaders! So keep asking your child questions and patiently answer theirs! And yes, I know a 3 year old can drive a parent crazy doing this!

Questions to Mediate for Hypothesis Testing

- How do you think we can check this out?
- What strategies do you have?
- How can you see or prove that this is true?
- Hmmm….I wonder how you could find out? (The use of “Hmmm…” is one of my favorite ways to mediate. It invites the child to participate, is non-threatening, and provides think time.)

18. Summing up: Count the details

How many things are there? Why do I need to know?

Activities to Develop Summation

1. **A need to count** There seems to be an innate need for people to count things. It is an important task that many successful outcomes depend upon. Do not hesitate to help your child grasp the number of things involved in any task, sport, or game.

When we know “how many,” we are often on our way to solving small as well as big problems in life.

2. **Catch the main idea** This skill is related to counting, in that it is summing up the main idea of a story, or catching the theme of a party or a book. It is an attempt to answer the question, “What is this all about?” To do so, we need to hold all the details in our mind.

Questions to Mediate Summation

- What steps do you need to do this?
- Are there enough?
- Will there be any extra?
- How many are there?
- What do you need to do first, second, next, last…?
- Let’s count the billboards as they go by.
- How many eggs are in the carton?
- Do we have enough plates on the table?
- What were the big ideas in the story? How many were there?

19. Planning – think forward!

Know the the steps and the reasons, prediction, goal setting

Activities to Develop Planning

1. **Simple plans** Even very young children can make plans about what they want to do during playtime, where they want to go after nap, or what they can make for snack.

2. **Model planning** Many kinds of plans can be made collectively by all the members of a family. Perhaps each person gets a turn for making plans for family game night or where to eat or even where the next vacation will be - complete with budget planning!

Questions to Mediate Planning

- So what’s your plan at this point?
- Tell me, what do you think is a good plan for this problem?
- What’s the first thing you might need to do?

20. Forming categories

Understanding relationships to categorize objects, apply labels

Activities for Developing Categorical Labels

1. **Categorizing** Assigning objects to a category helps us to be more efficient thinkers. Allow your child to understand how to find relationships among objects and then assign them to a category. Apples, pears, bananas, and strawberries are all fruit.

2. **Organizing** Putting things in a sensible kind of order, like toys, books, clothes, tools, or groceries helps children see the value of categorizing objects to be able to find them in the future. It will help parents, too!

3. **Shopping** Look for how the hardware store, grocery store, department store, toy store all categorize their products. Discuss why with your child.

Questions for Mediating Categorical Labels

- What is one thing all of these things have in common?
- Let's see if you can tell me the category label for _____?
- Examples:
  - blue, orange, purple, green are all _____? (colors)
  - circle, square, oval, octagon are all _____? (shapes)
  - chair, table, bed, bookcase, stool are all _____? (furniture)
  - 27, 153, 6, 0, 1378 are all _____? (numbers)
  - June, April, December, March are all _____ ? (months)
- What category do all these things belong to?
- Why should we care how we organize the _____?

Output Skills

The ultimate way that we communicate with others determines how we function socially, academically and professionally in life. Feuerstein identified eight thinking actions in the ***output*** phase that help us express our great ideas, our knowledge, our caring thoughts. Let's explore each one and some ways to develop them in our children and yes, even ourselves!

21. Considering another viewpoint

What is like from another viewpoint? Another person's viewpoint?

Activities to Develop Considering Another's Viewpoint

1. **Socializing** The sooner children can gain experience with the ability to consider another person's point of view, the better their world will be, as well as for parents and teachers or anyone else, for that matter. Encourage your child and model for them how to see the world from someone else's eyes. The American Native saying is about walking a mile in another man's moccasins. Reading books about other cultures helps children with this capacity, too.

2. **Feelings** Help your child to learn the names and meanings of emotions. If they have labels for how they are feeling they can express what is going on in their head much better. With this knowledge, you now have a platform to talk about how our actions impact other people's emotions (like big sisters who get annoyed with little brothers).

3. **Bible Stories** Scripture gives us many examples to discuss this topic, such as:

    a. What would it have been like to be Jonah in the belly of the whale?

    b. How did Adam come up with all those names for animals?

    c. What was Paul feeling when he was in the prison, and then the chains fell off and the doors swung open?

Questions to Mediate Considering Another's Viewpoint

- What do you think Grandpa would say about this?
- OK, guess what I am thinking right now!
- Why is it important to consider another person's point of view?

22. Make connections

Finding connections that may not be obvious at first, 4 dots can be a square, 2 women can be cousins, or learning how analogies work.

Activities to Develop Making Connections

1. **Making connections** Children always amaze us when they recognize connections between two different situations. After driving to a youth conference for 16 hours in a hot van, our 3 year old son asked, "Is Jesus here yet?" Since it had taken us so long to arrive, in his mind it might have taken Jesus a long time as well! This is the beginning of recognizing virtual relationships that are not obvious at first. Children learn that their cousins also call the same person Grandmother; or that dog is to cat as man is to chicken, if you are using the number of legs to draw the analogy. Help your child seek and recognize relationships and how they transfer to other places.

2. **Bridging** Help your child to bridge skills from one place to another. For example, subtraction is a useful real-life skill when getting change back at the store. Minding our manners at the dinner table at home is something we do at our auntie's house or a restaurant.

3. **Cause and Effect** This is very closely related to the activities we reviewed for developing cause and effect.

Questions to Develop Making Connections

- Can we solve this by thinking about other times we faced a problem like this?
- Can we compare this to another time?
- Have you ever seen anything like this before?
- How are these two things (or people or events) related?

23. Perseverance - sticking to it! Grit!

Don't give up! Overcoming blocking!

Activities to Develop Perseverance

1. **Growing patience** Children have a pretty tough time being patient. Parents provide a lifelong skill when they help children learn how to persevere and discover solutions to puzzles, daily little problems, and how to recoup form failures. One of the biggest mistakes a parent can make is to buffer their children from ever experiencing any type of failure. This does not help them to develop perseverance.

2. **Not giving up** Your child may exhibit what Feuerstein called “blocking” when he or she refuses to even attempt some task that you believe is reasonable and appropriate for them to try. Help them ease into it by reassuring them you are right there with them. Perhaps break it down into steps that are not so overwhelming. You walk a fine line with a child, not wanting to make them even more fearful of doing something and yet finding ways to help them overcome the fear. Wisdom on your part as a teacher or parent is important.

3. **Explore Inspirational music** For example: Zootopia’s theme song, “Never Give Up, Never Give In, Try Everything!”

Questions to Mediate for Perseverance

- I know you are frustrated right now, but if you try one more time, you might just get it!
- I will help you, let’s not give up!
- Hurray, you got the first step done!! Do you want to try it again or are you ready to try the next part?
- How can you break this task down?
- How does it feel to do something difficult/easy?
- Remember when you learned how to _____? Let’s plan on that sense of accomplishment happening again!
- How else can you try this?
- What could you do differently?

24. Just a moment…Let me think!

Overcome the urge to use trial-and-error or random attempts. Use just a few seconds to consider the best options

Activities to Overcoming Trial-and-Error Answers

Teach a Growth Mindset Google "growth mindset resources" and use those that will help you develop in your child a comfort level with mistakes and errors as a source of learning. This may require you to also make a shift from a fixed to a growth mindset.

Use teachable moments When your child takes his time to thoughtfully complete a task, help him compare it to a time when he hurried or did a lot of trial-and-error or guessing. Hopefully, the more thoughtful response will be the better one!!

Model this approach As the adult in the house, talk out loud occasionally when you are problem solving. Let your child hear you talk through your strategies to discover that you are not all-knowing or all-powerful (only God is that) but that you actually have to do a lot of thinking!

Questions to Mediate Thinking First!

- Did you take a moment and think about it?
- No? OK, let's have another minute to think about that!
- I'll give you some time to consider what you want to do. (At least one minute)

25. Give a thoughtful answer

Communicate clearly with careful thought and language.

Activities for Thoughtful Answers

1. **Putting words in order** Children learn language in a very intuitive experiential way. It does not happen by parents using flash cards. Besides who would have time to do that? So the best way to help children express their thoughts is to provide them a very enriched environment where people are talking and sharing ideas. Children can pick up anywhere from 2 to 14 words a day as they mature, but they need to see,

hear, and experience the words in context through books, conversation, and movement. Do NOT depend on screen time to teach your toddler vocabulary and the complicated workings of language. Talk with them, narrate what you are doing, and ask them questions. The kicker is giving them time to answer without jumping in and finishing their sentences for them. Let them work it out! Make it a goal for you to expose them to 5 new words a day, which will add up to 10,000 words by kindergarten. *5 a day, 10,000 by K!*

2. **Just a moment...Let me think!** This is the motto for Feuerstein's program Instrumental Enrichment. Research as early as the 1970's indicated that teachers who allowed their students to ponder their answer for just a few more seconds before calling on them, responded with a much higher quality answer. Makes sense, doesn't it? Model thoughtful responses to your child. If they are struggling with getting their thoughts out, instead of telling them to slow down, YOU slow YOUR speech down to model for them. Our family did this for one of the grandchildren and within three weeks he was articulating his thoughts 100% better (thanks to a great speech and language therapist friend for how to do this!).

Questions to Mediate Thoughtful Answers

- Just a moment...let's think! How could we say (or do) that?
- Hmmmm...please think first before you answer me!
- No rush, think about what you want to tell me. I will wait!

26. Use precision and accuracy

Do it right, take your time, say iota complete it with accuracy the first time.

Activities for Developing Precision and Accuracy in Responses

1. **Getting it right** - Most parents want their children to be smart, to shine at everything they do, and to succeed in school. School academics and life in general demand that we do many things with precision. For example, we don't want a surgeon conducting our operation who is just a little bit imprecise. That would not be acceptable. Yet as I share ideas on how to develop this capacity in our children, it is with great apprehension. There is a balance between helping our children develop precision and going too far by making them feel we are demanding they be perfect,

which can instill fearfulness and insecurity. Please seek ways to help your child want to do things well without undo pressure.

2. **Contingent self-worth** Research by Carol Dweck discovered that children as young as 3 years old all the way to college could exhibit evidence of contingent self-worth. This means a person does not feel they have intrinsic self-worth. They have to act, look, or succeed in a certain way to have a sense of well-being and feel worthy. This is not a good way to live, always trying to measure up. I mention it here because of my fear that discussing precision and accuracy as a cognitive skill to develop in our children could backfire into undue pressure for perfection. Parents, teachers, and mentors need wisdom as they work with young children. Feuerstein offers us an amazing set of cognitive functions as a guide to help each child develop more fully. The cognitive functions are a gift and a guide, not a recipe.

Questions to Mediate for Precision and Accuracy

- I can see how hard you are working on that. Compare it to the model, is there anything you want to change?
- Would you like to try that one more time? (but don't demand it)
- WOW! Do you see how much better you are doing that now? I can tell you have been working hard at improving.

27. Visually carry or transport

Copy accurately from the board or other source, hold in memory a picture or shape then draw or find it elsewhere.

Activities for Developing Visual Tranport

1. **Looking and remembering carefully** Did Mom ask me to find a dog in the picture or a cat? Send your child on real errands and ask them to remember things to fetch for you. They love doing this of course and it helps them feel so important. But in reality, you are building cognitive capacity for memory.

2. **Make it a game** Begin playing the memory game at 2-3 years of age, using the sets of picture cards, but only use four to six at a time. Drawing shapes from memory

can be played as a game by the age of 4-5. Once they have become familiar with holding a pencil and drawing simple shapes, you can play a simple memory game by drawing a circle, square, or triangle. Let them see it, then hide it and ask them to draw it. Let them compare with the original and help them to determine how well they did. Developing their self-evaluation skills will bode well for them as an academic student in the future. If children depend only on adults to know how they have performed they will become teacher-dependent and will often lack intrinsic motivation to be an active learner. All board and card games will increase strategic thinking, cognitive functions, sharing behavior as well as visual transport. I can't encourage families enough to spend time and resources on collecting and playing good games (see a suggested list at the end of this guide).

3. ***Practice copying*** *This is a good kind of copy cat to begin at the age of four. Place emoticons, letters or words on a white board and ask your child to copy them. See if they can visually copy them or remake them by choosing from magnet letters. Don't panic if they cannot do it right for awhile, just practice 1-2 times a week and look for progress.*

Questions to Mediate for Visually Carry

- Let's compare... look here...now look here...are they the same or different?
- Look at the shape, tell yourself to remember what it is, do you see it in your mind? Now find it on the table.
- Can you look carefully and describe the picture to me before I hide it?
- Look carefully before I hide it. Can you draw it now?
- Look at this word and write it on your paper. (2-3 letter words for 4-5 year olds)

28. Showing self-control

Thinking before acting. Controlling impulsivity.

Activities for Developing Self-Control

1. **Is it ADD? -** Our American culture leads the world in prescribing medicines for children who supposedly have attention problems. But there are many, and I am one of them, who believe in reality we are encouraging children to be inattentive with an overexposure to screen time and lack of mediation for impulse control. It is also apparent that environmentally we have tampered with our food sources which could also be neurologically impacting generations of children. If you believe your child is

ADD or ADHD, please seek much counsel before relying on drugs to control behavior. There may be cases that medicine is the only solution, but be certain!

2. **Mediating for self-control** - This cognitive function can be caught as well as taught. Parents and adults need to model self-control for children to see how it works. Not losing one's temper, talking about being patient, and by modeling self-control when tough times come will help develop this extremely important cognitive function. Also provide young children opportunities for quiet time during the day where screens and/or other loud environmental sounds are absent. It is difficult for children to develop inner speech in their mind when they are bombarded by external sounds. Private inner speech helps to develop self-control. "I need to wait because Mommy said we would leave for the park in five minutes."

3. **Sand Timers** Teach your child how time works by using sand timers.

4. **Delay gratification** Research has indicated this very capacity to exhibit self-control is more important for success in life than overall IQ. It is interesting that we save this cognitive function for last and it may be one of the most important. Help your child to delay gratification whenever possible. They do not need a piece of candy every day or money for grades or a new toy for being good. Develop intrinsic motivation as much as possible. This simply means we want to do well at a task because it makes us feel proud, not because of a potential reward.

Questions to Mediate Self-Control

- I know it's hard to wait, but how can you help yourself to be patient?
- Look what a great job you did on that, you should feel really proud!
- Why does it pay to wait?

This guide was written with you in mind, whether you are a parent, a teacher, or a mentor to children. Whether your child is developing normally or you are concerned about apparent challenges, this guide to developing cognitive functions comes to you as a beginning point. As you determine which cognitive functions are in need of strengthening for your child, you have these ideas as a launching pad. You will seek and find even more activities to develop your child's potential as a thinker and a learner. Even children who appear to be quite gifted often have gaps in their skills that surprise them when they face a challenge that they have no strategy to conquer.

I welcome your feedback and your new ideas for each cognitive function. Please let me hear about them at jeanne@mind-cap.org

Now let's explore another important method for developing your child's thinking abilities: **mediated learning experience**.

Improving Interactions with Your Child by Mediating their World

Feuerstein recognized three powerful parameters of human interaction by watching mothers and infants, parents and children, and teachers and students. They are simplistic yet profound.

Intentionality and Reciprocity

The first one is the most important and is two-fold, intentionality and reciprocity. As a parent you intentionality interact with your child to develop his or her ability to reciprocate back. This is what will develop their ability to think and play and learn to their highest possible potential. It begins before birth when an infant in the womb hears human voices. Then as a six week old the smiling exchange begins. Parents love this phase when their little one responds to loving gazes and smiles. Then speech develops with cooing and babbling and eventually lots and lots of words come spilling out as parent and toddler learn to communicate - a truly beautiful time. Older children may sometimes feel like there is a lot of intentionality from a parent but no listening when they attempt to reciprocate. Finding time to actually listen to your child will pay off during the teen years when parents are often desperate for intentionality and reciprocity.

Meaning

The second important parameter parents mediate for is meaning. This is the emotional and energetic part of our interaction with children. We engage with our child so they can socialize politely with other children and adults. Parents normally want the very best possible future for their child so almost everything a parent mediates has a meaningful reason behind it, from learning to brush teeth to doing chores to hearing Bible stories. When we gather around a table and hear stories from Grandpa, decorate a Christmas tree, or travel to Aunt Shirley's house, the culture of a family is mediated to a child. Explaining to children why we do these things is very helpful and meaningful. The Judeo-Christian beliefs have been handed down for generations via mediation of meaning.This is who we are and why we do the things we do. Without a culture, children exist in a vacuum and intelligence will struggle to develop. Help your child know the *why* of learning something. Be enthusiastic and positive when interacting with your child.

Transcendence

Parents and teachers strive to help children generalize their learning. Can a child learn how to do this task today and also tomorrow? Can she transfer the learning to a new similar situation? An important goal for parents is to work themselves out of a job and have an independent young adult someday who can think for themselves. Everyone must learn to be adaptable to whatever life challenges come their way. Mediating for transcendence is having this overarching goal for our interactions with our children. Am I helping my son or daughter be ready to be a successful adult who loves God and serves Christ in his or her

life and in many different situations? In the Christian faith we mediate for generations to come behind us, not just for today!

More Parameters of Mediated Learning Experience

There are nine more ways to mediate that are used depending upon the needs of your child. You probably already mediate very well. However, the goal here is to help you be more aware of these additional parameters of mediation, the need to use them, and how they can help your child develop cognitive abilities. The list below provides you with a few ideas to consider for each of the nine. You use them situationally, depending upon the needs of your child.

I could mediate my child for:

Feeling of Competence
___highlight successful attempts
___help analyze mistakes in a positive way
___plan competence building activities
___compare success now to the past (keep examples of work)

Sharing Behavior
___model sharing things and ideas consistently and often
___set up purposeful situations for sharing
___provide time for verbal sharing ideas, thoughts

Accepting a Challenge
___encourage increasingly difficult problem-solving
___make accepting a challenge a good thing
___encourage learning for the sake of learning
___model accepting challenges as opportunities

Self-Regulation and Control of Behavior
___coach to stop, think, plan
___demand well-articulated communication
___develop listening skills
___practice quiet sitting routines

Individuation
___truly respect a child's individuality
___encourage divergent thinking
___honor each person as someone of value with contributions

Goal Oriented Behavior
___guide the consideration of goals
___help define steps to achieve goals
___practice seeking goals
___celebrate the attainment of small goals

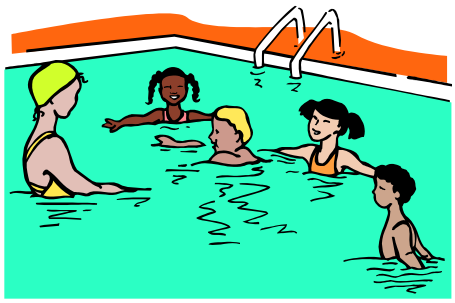
Ability to Change
___enhance awareness of ability to change
___help learn strategies for change
___recognize self-change when it happens

Optimistic Alternatives
___instill hope
___**H**old **O**n to **P**ositive **E**xpectation
___help your child develop new strategies
___encourage, encourage, encourage

Belonging
___discuss the need for belonging to a family
___find others who need a friend
___help your child know they are an important part of this family

The Adult as <u>Mediator</u> Instead of Enabler

When your child becomes old enough to begin learning tasks and then starting academics, there are some ways to consider how much we should or should not help our child. Generally, parents tend to do too much for their child, especially if the child has cognitive challenges or we are in a hurry. It's always easier to do it ourselves. The following section shares levels of assistance and how to give feedback to your child, especially helpful when doing homework. If possible, begin with simply asking the child to identify what the problem is and stop there if he or she can take it from there. Move through the levels of assistance slowly and don't skip steps. By allowing them to do the work, we are developing their capacity to think and learn!



Can the swim coach teach you to swim by talking about how good a swimmer she is?

How can children learn to think without given an opportunity?

Consider the following ideas:

- Do not over-assist
- Do not take away a learning opportunity
- Provide no more assistance than is necessary for successful participation
- Less is more!

Levels of Assistance (always start low)

1. **Encourage child to identify problem**
    a. What do you see?
    b. What do you think you are supposed to do?
    c. Can you tell me about this problem?
2. **Help child determine his/her own approach to the task**
    a. What do you think you could do to solve this?
    b. What will you do first?
    c. Do you have any ideas of how to start?
    d. What strategy do you think might work?
3. **Suggest an approach/strategy**
    a. I wonder if it would work if you….
    b. What about trying to ….
    c. I have an idea, but you might think of a better one.
    d. Let's try this…
4. **Lead child to a response**
    a. Look at the example, now let's try that method.
    b. In what ways does your work match the model?
    c. Show me what part you can do.
    d. Let's start here and see if you can do it.
5. **Provide part of a response.**
    a. What if we put _____ here, then do you see what comes next?
    b. I'll do this part, then you finish.
    c. What part do you want help with?
6. **Model the response and provide another opportunity.**
    a. Watch carefully while I do this. You think about why I am doing it this way and explain what parts you can when I finish.
    b. Are you ready to do this on your own?
    c. What part can I help you with?

Cognitive Feedback

1. Give COGNITIVE feedback – what thinking skills did they use?
2. Relate comments to the task – not the child – "That was a good choice, Darcy, because you drew a picture to show how to do it."
3. Praise without cognitive feedback teaches nothing.
4. If they can discover how and why it is correct, they can then generalize their learning to other situations.

Good Questions to Ask

As children grow and develop you will be able to ask them more and more questions. Even a four month old infant can detect the change in your voice as it goes up at the end. Provide children the time to consider answers to your questions. Give them WAIT TIME before asking the question again, rewording it, or rescuing by providing an answer. You may be surprised at what you hear! When parents come to MindCAP workshops, we often discuss how rushed and busy most days feel. It seems parents spend most of their time giving directions and hurrying children along. There are certainly many situations when we just need our children to obey and there is not time to hold a discussion. If, however, you want to develop your child's ability to be a better thinker, then consider finding a few moments every day to use questions like the ones listed below and give them time to think.

Try using the first three questions as much as possible.

1. **What do you see?**
2. **What is the problem?**
3. **What is your plan?**
4. When have you done something like this before?
5. Yes, that's right, but how did you know it was right?
6. When is another time you needed to….?
7. Can you think of another way we could do this?
8. Why is this one better than that one?
9. How can you find out?
10. How is….. different (like)…..?

Our goal at The MindCAP Center is to help as many families as possible by unleashing their unlimited potential as thinkers and learners. With the new science of neuroplasticity, there is great promise for young minds (and mature minds) to grow new networks and their capacity as learners.

A heartfelt thank you goes to the teachers at Lutheran Life Children's Village in Fort Wayne and Lenawee Christian School in Adrian, Michigan for their invaluable contribution of questions to mediate cognitive functions!

However you came to hold this guide in your hands, our prayer is that it brought you fresh insight and most of all, that it brought you HOPE!

Romans 12:2 in Action,
Sincerely,
Dr. Jeanne Zehr
Founder and Director
The MIND**CAP** Center

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Resources and References

Beyond Smarter Reuven Feuerstein and Lou Falik

What Learning Looks Like by Reuven Feuerstein and Ann Lewin-Benham

Mindset: The New Psychology of Success by Carol Dweck

Magic Trees of the Mind by Marian Diamond

Jeanne's Favorite Games

Game	Maker	Cognitive functions/operations
For Young Children		
Blink	Out of the Box games	Comparing at a high rate of speed, conserving constancies
Toot and Otto	Thinkfun	Planning, Hypothetical thinking, sequencing
Barnyard Critters	Rio Grande Games	Logic, Hypothetical thinking
LCR	George and Co. LLC	Spatial Sense for left and right
Open Sesame	Ravensburger	Memory, spatial sense
Walk the Dogs	Simply Fun	Planning, visual transport
The Storybook Game	Fundex	Memory, vocabulary, sequencing, forming relationships
Camelot Jr.	Smart Games	Hypothetical thinking, logical evidence, planning, spatial sense
Feed the Kitty	Gamewright	Visual representation, spatial orientation
Tenzi	PlayThings Aplenty, LLC	Summation, Number sense, systematic search
Older Children - Adult		
Skribble	TDC Games	Visualizing, planning, predicting
Linkity	Simply Fun	Forming relationships,
Squint Junior	Out of the Box games	Visualizing, analyzing-integrating,
Khet (originally Deflexion)	www.khet.com (the laser game)	Spatial sense, right angles, planning
Ricochet Robots	Rio Grande Games	Spatial sense, right angles, planning
Apples to Apples	Mattel	Compare, Labels, language and vocabulary
Dread Pirate	Front Porch Classics	Planning, spatial sense
Boggle	A Parker Word Game	Systematic search, word building
Worst-Case Scenario Survival Game	Universal Games	Hypothetical thinking, point of view, relevant cues
Right turn, Left turn	Playroom Entertainment	Spatial Sense, precision and accuracy, conserving constancies
Pente	Winning Moves Games	Spatial sense, planning, using more than 1 source info.
Logic Links	MindWare	Logical reasoning, hypothetical thinking
Noodlers	MindWare	Hypothetical thinking, planning, precision,
Air Traffic Control Tower	Educational Insights	Spatial sense, hypothetical thinking, precision,
Quarto (my all-time favorite)	Gigamic	Spatial sense, planning, using more than 1 source info.
Gobblet	Blue Orange Games Co.	Memory, spatial sense, planning
Rush Hour (Original, Safari, Railroad)	Thinkfun	Spatial sense, planning, sequencing, planning, hypothetical thinking
Safari Undercover	Educational Insights	Spatial sense, planning
Pentago	Mindtwister USA	Conserving Constancies, point of view, spatial sense
Quadrago	Mindtwister USA	Spatial relationships on steroids

Cognitive Strategies for Life

Input

1. FOCUS the Senses
2. Systematic SEARCH
3. Using LABELS
4. Sensing SPACE
5. Sensing TIME
6. Consider CHANGES
7. GATHER data carefully!
8. HOLD 2 things in your mind

Elaboration

1. DEFINE the problem
2. Search for RELEVANT CUES
3. COMPARE
4. Working MEMORY
5. See CAUSE & EFFECT
6. Use LOGIC
7. VISUALIZE
8. HYPOTHETICAL THINKING
9. TEST the Hypothesis
10. COUNT the details
11. Make a PLAN
12. Use CATEGORY labels

Output

1. Consider POINT of VIEW
2. Make CONNECTIONS
3. PERSEVERE – don't give up!
4. Just a moment…Let me think!
5. Give THOUGHTFUL Answers
6. Use PRECISION and ACCURACY
7. VISUALLY Carry & Copy
8. Show SELF-CONTROL

by Reuven Feuerstein, format by Jeanne Zehr, MindCAP 2016