

# Improve Metacognition

Metacognition involves the processes of self-monitoring and observation. It is an opportunity for children to check on their efforts and assess their successes and failures. Simply put, metacognition is thinking about one's thinking. It is a particularly important function for helping children to gain some perspective on their decision-making and skill development. Metacognition facilitates reflecting on the impact of one's actions on others by checking on how one has done. To improve metacognition involves asking oneself questions that facilitate defining problems, developing solutions, and assessing successes.

## Home and School Situations Requiring Metacognition

- Understanding personal strengths and weaknesses in academic subjects, athletics, or other extracurricular activities
- Achieving an awareness of how one's behavior can impact others
- Being able to evaluate preparedness for a quiz or performance on a test
- Following household or classroom rules
- Articulating feelings when dealing with peers or siblings
- Checking homework or in-class assignments for mistakes
- Identifying the steps needed to successfully write a paper or complete a household chore

- Recognizing consequences for decisions in advance, such as misbehaving at recess or not finishing one's homework

## **Hints and Strategies to Improve Metacognition**

1. Help your child to self-evaluate using checklists. Before your child begins a chore or task, discuss how you both will determine successful completion of the task and develop a checklist together, to determine how effectively the task has been completed. For example, a checklist for evaluating a successfully cleaned bedroom might include items such as: I made my bed; I put my dirty clothes in the laundry basket; I put my toys in the bin; I put my papers in my desk drawer. You and your child should both complete this checklist after having finished the task and discuss why you each rated the items as you did. Be sure to praise your child for accurate self-evaluations and brainstorm ideas for improving accuracy in the future.

2. Ask your child to try and predict the outcome of a situation. Teach them to think about the different factors and obstacles affecting successful completion of tasks, such as an upcoming science project, a soccer game, or a musical performance. Keep track of these predictions in a journal to serve as a direct reminder for your child, and to be used for later comparisons. After the activity has been completed, discuss your child's predictions and identify possible reasons for any inaccuracies.

3. Model self-verbalization skills by expressing your thoughts and problem-solving strategies aloud. This will allow your child to identify otherwise hidden metacognitive strategies. For example, verbalize statements such as the following: "This reminds me of the time when we tried to do this" or "I need to think about what worked and what didn't work the last time we did this." Encourage your child to use

similar self-instructional strategies to aid in problem-solving tasks, such as the following: putting a puzzle together, solving a math problem, or brainstorming for an art project.

4. Provide cues to help your child identify and acknowledge their own strengths and weaknesses. This can be done by making a list, collage, or voice recording of his/her strengths and weaknesses. It is important for your child to recognize that although they may have weaknesses in some areas, they has strengths in others. Being able to identify those strengths and weaknesses is important in developing accurate self-perceptions, as well as positive self-esteem.

5. Have your child explain to you how to succeed at one of his/her favorite videogames or board games. This will allow your child the opportunity to practice reporting how he/she thinks about their step-by-step problem-solving strategies in a game. In many games it is important for players to be able to recognize their current score and how it reflects their performance and capacity within the game. When your child can identify errors of omission and commission in game play, this will allow them to practice identifying strengths and weaknesses.

6. Use your child's video game playing as an opportunity to help them reflect on their strategic thinking. A good opportunity would be when your child talks about having "beaten a level." When this occurs, ask your child to think about how they figured out what to do. Ask your child to also identify the mistakes he/she previously made and to then reflect upon how your child has learned from them. The concept of metacognition revolves around an individual being able to step back and think about their thinking. Help your child to understand that this same type of stepping back and trying to find a new way to "beat a level" is something they can try in many situations at home and at school.

7. Next time your child asks for something outrageous or asks to do something that is out of the ordinary, do not say “no.” Instead, say “Let’s think about that” and encourage your child to step back, consider what he/she is asking for, and point out the pros and cons of this activity or acquisition. If you determine this request to be unfeasible, encourage your child to formulate an understanding of what your thoughts are and how he/she might be able to otherwise accomplish what he/she is looking to do or have.

## **Games and Activities That Can Practice Metacognition**

*“Big Brain Academy” and “Brain Age”* – These games offer your child the opportunity to test his/her “brain” abilities and calls for the player to make accurate self-assessments in order to succeed.

*“Rock Band”* – Games, such as “Rock Band”, which have distinct roles (i.e. drummer, guitarist, singer) will allow for your child to begin to recognize the strengths and weaknesses of themselves and others.

*Athletics* – Have your child predict how fast he/she can swim a lap of the pool, how high he/she can jump, or how far he/she can kick a soccer ball to practice achieving accurate predictions.

*“Chess,” “Checkers,” and “Connect Four”* - These types of strategy games allow for a discussion with your child which includes evaluating what kind of approaches were successful and what new approaches you might try when you next play this game.

*Programming a cell phone* – Have your child help you set different ring tones and/or pictures for people in your phonebook and discuss how this could be useful in

identification of a caller.

*Observe people interacting at the grocery store or in the mall* – While observing strangers, have your child describe her perceptions of these people and then discuss how your child formed this impression (i.e. facial expressions, body language, verbal cues).

## **Websites and Articles on Metacognition**

[LearningWorks for Kids](#): The premier resource for executive function information, offering a detailed explanation of metacognition, tips for parents, and activities to improve this skill.

[US Department of Education](#): A site which offers additional strategies for developing metacognition, tips for creating a metacognitive environment, and a list of additional resources to consult on this topic.

[University of Buffalo](#): A more technical overview of metacognition that addresses many areas of metacognitive research.

## **Books on Metacognition**

[Executive Functioning Workbook for Kids: 40 Fun Activities to Build Memory, Flexible Thinking, and Self-Control Skills at Home, in School, and Beyond](#) by Sharon Grand, PhD, BCN. (Ch. 3-5) “Help kids grow their executive functioning skills with activities for ages 6 to 9!”- Amazon

[Fighting Invisible Tigers: Stress Management for Teens](#) by Earl Hipp. (Ch. 4,6) “Fresh edition of a popular title offers teens straightforward advice on stress management, anxiety reduction, and digital well-being.”- Amazon

[How Children Succeed: Grit, Curiosity, and the Hidden Power of Character](#) by Paul Tough (Ch. 3) “A persuasive wake-up call.”–People Magazine

[Just As You Are: A Teen’s Guide To Self-Acceptance & Lasting Self-Esteem](#) by Michelle Skeen, PsyD, Kelly Skeen.(Ch. 1,2) “Stop comparing yourself to others–you’re special just as you are! In this fun, practical guide, you’ll learn how to silence your nit-picky inner critic, cultivate self-compassion, and discover what really matters to you.” – Amazon

[Knowing Yourself, Knowing Others: A Workbook for Children with Asperger’s Disorder, Nonverbal Learning Disorder, and Other Social-Skill Problems](#) by Barbara Cooper, MPS, Nancy Widdows, MS. (activity 12,39) “Knowing Yourself, Knowing Others includes activities that will help kids with Asperger’s disorder and related conditions learn how to read social cues, avoid meltdowns, understand others’ needs and intentions, resolve conflicts with friends, build basic nonverbal skills, and more.”- Amazon

[Raising Independent, Self-Confident Kids: Nine Essential Skills to Teach Your Child or Your Teen](#) by Wendy L. Moss, PhD, and Donald A. Moses, MD. (Ch. 6) “In this book, child development experts Wendy L. Moss, PhD, and Donald A. Moses, MD, examine the key skills parents need to help their kids emerge as confident, and capable adults.”- Amazon

[Scattered to Focused: Smart Strategies to Improve Your Child’s Executive Functioning Skills](#) by Zac Grisham (Ch. 10) “Set your child up for success with simple strategies to develop executive function in kids 4 to 12”- Amazon

[Smart but Scattered: The Revolutionary “Executive Skills” Approach to Helping Kids Reach Their Potential](#) by Peg Dawson, EdD, and Richard Guare, PhD (Ch. 21) “Small changes can add up to big improvements–this empowering book shows how.”- Amazon

[The Everything Parent's Guide to Children with Executive Functioning Disorder: Strategies to help your child achieve the time-management skills, ... needed to succeed in school and life](#) by Rebecca Branstetter, PhD. (Ch. 11) “The vital skills children need to achieve their full potential!” – Amazon

[The Conscious Parent's Guide To Executive Functioning Disorder](#) by Rebecca Branstetter, PhD (Ch. 11) “With the strategies and advice in this guide, you and your child will build sustainable bonds, develop positive behaviors, and improve executive functioning skills for life.” – Amazon

[Too Stressed to Think: A Teen Guide to Staying Sane When Life Makes You Crazy](#) by Annie Fox, M.Ed., and Ruth Kirschner. (Ch. 1) “Quotes from real teens remind readers that they're not alone—that stress affects everyone, but it doesn't have to ruin your life. Includes resources.” – Amazon

[Train Your Brain for Success: A Teenager's Guide to Executive Functions](#) by Randy Kulman, Ph.D. (Ch. 10) “Beginning with a test to determine executive-functioning strengths and weaknesses, the book then explores in detail eight distinct sets of skills, including planning, organization, focus, time management, self-control, , memory, and self-awareness.”- Amazon

[Tween You & Me: A Preeteen Guide to Becoming Your Best Self](#) by Deb Dunham. (Ch. 1) “In this positive and empowering book, Deb Dunham, tween self-esteem expert and mentor, provides the tools you need to feel really good about yourself.” – Amazon