# The Mind Lab Method

Mind Lab

*Education is child's play*

# Table of Contents

# The Mind Lab Group

Mind Lab was founded in 1994. Its activities are centered on the Mind Lab Method, a unique approach for the development and training of thinking abilities and life skills through thinking games. During our first decade's intense growth and widespread activity, the Mind Lab Method has been adopted by thousands of educational institutions worldwide, and over 1,000,000 students have used the Mind Lab Method to improve their thinking skills. This has been largely due to Mind Lab's exceptional training program and its broad range of innovative products, benefiting schools, community centers, educators, children, and families.

Mind Lab's unique concept is established upon the notion that thinking games serve as a high-powered educational tool. Thinking games contribute to the improvement of cognitive skills and to creating an awareness of thinking processes, as well as helping the learner to better cope with emotional and social situations. The game-playing experience, which stands at the heart of our program, is at once enjoyable, captivating, and exciting – thus kindling great motivation and enthusiasm among children and serving as the foundation for a deep learning process. Mind Lab's cumulative experience, backed by extensive research conducted by Yale University, endorses that the Mind Lab Method significantly improves math and verbal test scores along with other important thinking abilities and life skills.

The Mind Lab Group is an innovative and dynamic organization, and a world leader in the field of thinking development. The Mind Lab Method has been operating with resounding success in thousands of educational institutions and has enriched the lives of more than one million students in over 40 countries around the world, including the USA, UK, Singapore, Korea, Spain, Hungary, Israel, Mexico, Chile, and more. Mind Lab carries out training seminars and teacher workshops in schools and pedagogic centers. It also operates programs for kindergartens, elementary and middle schools as well as extracurricular activities. In addition, it organizes exciting parent-child workshops as well as special events like thinking games competitions and tournaments. On the academic front, we conduct joint educational research projects with several leading universities including Yale University in the USA and Northumbria in England.

## The Mind Lab Vision

Since the dawn of civilization, thinking games have played an important role in human culture. Teachers would draw lines in the sand upon which their students would place the game pieces, as part of an engrossing, mind-sharpening activity. Family members of all generations would sit together and enjoy the challenges inherent in thinking games.

Much knowledge has since been forgotten and lifestyles have changed. The fast pace of our lives has given rise to other types of games. Violent, action-packed computer games, intense video clips, and a plethora of television programs have replaced the traditional activity of sitting together around the game board, an activity requiring deep thought, patience, perseverance, and social cooperation.

Mind Lab has reinstated the thinking game to its rightful and natural place and has transformed it once again into a powerful educational tool that appeals to children's hearts and minds alike. Thanks to a tested and proven methodology, Mind Lab is engaged in one of the greatest educational challenges of our day.

Our goal is to impart to the next generation thinking abilities as well as life skills, that will assist them in maximizing their own potential and help them to become more cognizant, successful, and happy individuals, who act honorably towards their peers and achieve optimal realization of their innate talents.

## The Mind Lab Method Rationale

The Mind Lab Method is a system for the development and training of thinking abilities and life skills.

At the heart of the Mind Lab Method is the notion that the most effective way to learn is through an immediate and authentic experience that leaves one wanting more. Game playing is the perfect example of such an experience – it is entertaining, engaging, and exciting, and therefore stimulates eager involvement. No less important is the fact that the game-playing experience provides fertile ground for the training and application of thinking abilities and life skills. The philosopher Plato best articulated the Mind Lab's educational philosophy with his saying:

*"Not by force shall the children learn, but through play."*

# The Mind Lab Method Objectives

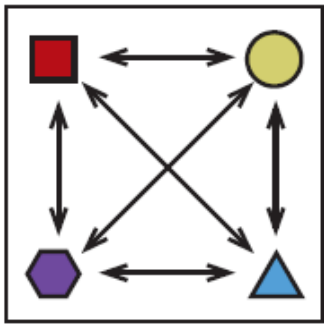
The Mind Lab Method is an educational method for developing thinking abilities and life skills by means of thinking games. The goals of the Mind Lab Method can be divided into four groups:

**Developing Awareness:** An awareness of thinking processes is essential for personal growth in all areas of life. The Mind Lab Method emphasizes the need for a reflective, cognizant manner of thinking. By examining their thinking processes, students are able to constantly progress. This awareness of thinking processes enhances their ability to develop for themselves new ways of thinking.

**Imparting thinking skills:** In today's Age of Information, an ever-increasing emphasis is placed on fundamental thinking skills. The Mind Lab Method imparts a broad range of these skills:
strategies for problem-solving, techniques for making decisions, investigative processes and information management frameworks, logical and mathematical thinking, verbal and communication skills, and more.

**Strengthening life skills:** The game-playing experience serves as an extraordinary simulative tool for strengthening the skills we call social and emotional intelligence. Game-playing obliges us to deal with situations involving cooperation and competition, winning and losing, failure and success. It reinforces our ability to manage and control our emotions, to defer gratification, and to tap into our resources of willpower, perseverance, and self-discipline. Thus a fertile ground is cultivated for discussion and a deepened understanding of emotional and social processes.

**Interdisciplinary transference:** The ability to perform transference between fields is considered by many researchers to be one of the most important in the learning process. The Mind Lab Method's unique approach to learning establishes an organizing base for many aspects of our lives. By means of the Method, students develop their abilities in finding the connections between different and varied fields of thinking and human endeavor, and carrying out the transference between these fields.



# The Mind Lab Methodology

The conceptual structure underlying the Mind Lab Method, along with the description of how it actually functions in practice, are divided into three components: learning a thinking game – learning the related thinking methods – application to real life:
The process begins with the children playing games, ultimately leading to their gaining skills and insights helpful in real life situations, with the Mind Lab Method bridging between them.


First Stage: Learning Thinking Game

Thinking games create a stimulating learning environment for students, in which they deal with cognitive, emotional, and social challenges. The Mind Lab Method provides students with tools for coping with these challenges. It helps them gain familiarity with game strategies and learning important concepts in thinking games such as strategic key points for control, resource management, deferred gratification, the use of tactics and stratagems, methodical thinking, cooperation, harmony, and more.

The students apply these strategies, improve their level of play, and internalize the new concepts they've learned in the process. These strategies and their underlying concepts form the basis for the next stage in the method.

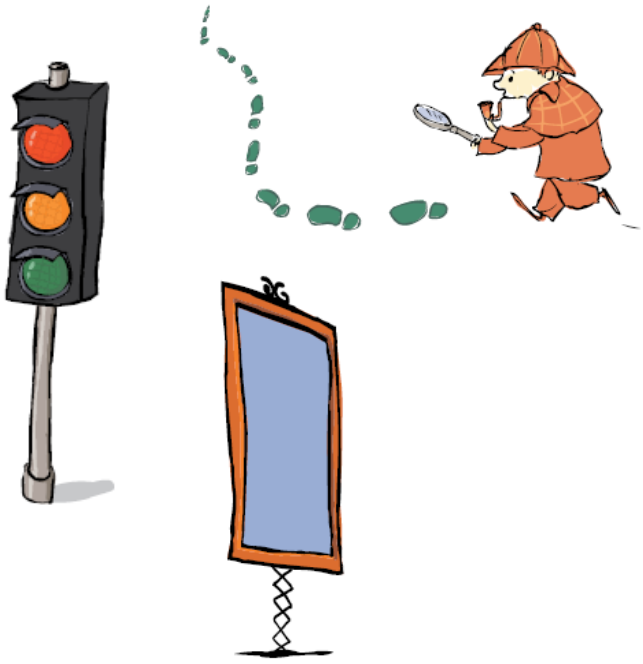
Second Stage – Learning a Metacognitive Method

In this stage, the students learn methods drawn from the strategies and concepts they learned while playing the game. These methods, designed and developed by Mind Lab over the past decade, deal with the improvement of cognitive skills, social skills, and emotional skills. With each of these skills, a number of related topics are taught, for example:

*Emotional Skills*
Managing emotions
Deferred gratification
Learning from one's mistakes
Self-discipline

*Cognitive Skills*
Problem-solving
Making decisions
Drawing conclusions
Mathematics and logic
Verbal abilities

*Social Skills*
Cooperation
Rules and structure
Verbal communication
Teamwork
Competitive environment



Third Stage: Transference to Real-Life Applications

The parent or teacher serving as the Mind Lab Method's facilitator presents the students with examples of how the above methods are applied in various fields in our lives. The understanding is thus extended beyond the boundaries of the realm of game-playing and takes on wider significances. This process, "transference," is the psychological basis enabling what's learned from thinking games to be applied more broadly to life situations.

# Academic Research about the Mind Lab Method

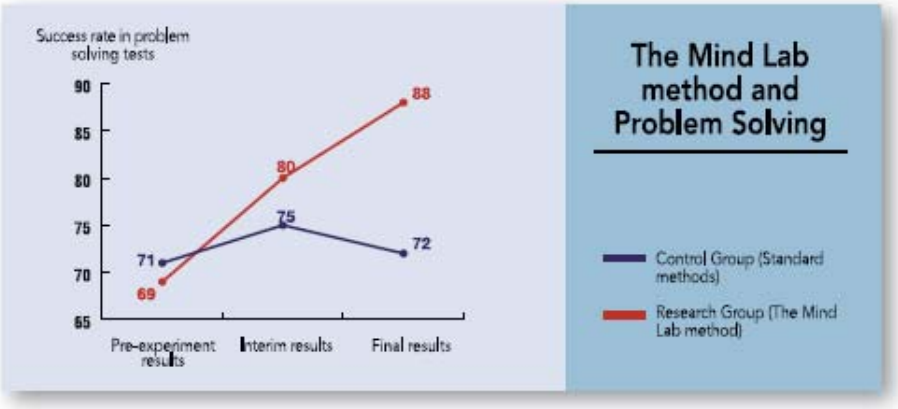
The efficacy of the Mind Lab Method has been put to the test in a number of comparative research projects carried out in conjunction with senior researchers, most notably with Professor **Donald Green** of Yale University. The research verifies that the Mind Lab Method significantly improves students' thinking abilities and life skills.

In one of these research projects, the following hypothesis was tested: Children can be taught abstract strategic thinking by learning metacognitive models and by being exposed to the application of these models in thinking games and in real life situations.

In order to test this assumption, a field study was conducted in 2003 in which students aged 8-12, from diverse socio-economic backgrounds, took part.

- In the first stage, all the students were presented with the computerized version of the game "Rush Hour." This advanced version monitors the student's performance and progress and then collates it all into a database.
- In the second stage, the students in the research group were taught abstract models for problem-solving, and their analogies to real-life situations. Subsequently they were shown how these models could be applied directly in the games. The students in the control group simply participated freely in game-playing sessions.
- In the third stage, all the students were taught a new game, "Lunar Lockout." Both groups received identical instruction.

The results show that the students in the research group significantly improved their performance levels in relation to their counterparts in the control group, even though the latter was allocated more time in their game-playing sessions. The remarkable fact is that even in Stage Three, the research group achieved notably higher results. In fact, the disparity between the two groups actually increased between Stages Two and Three.

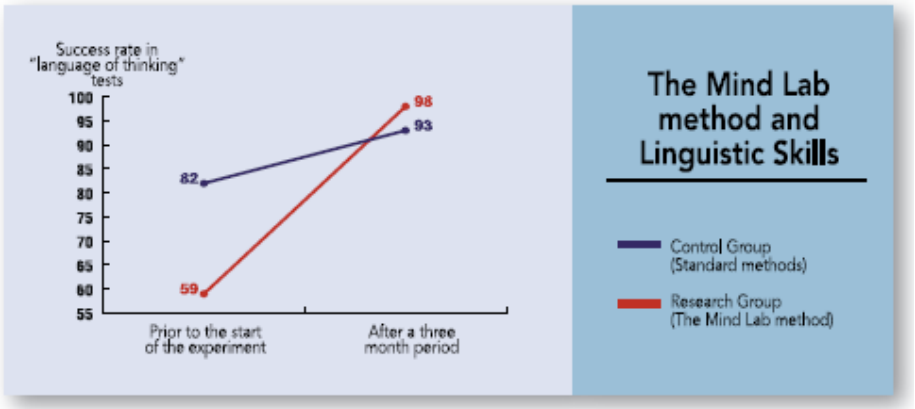



The conclusions drawn from these results are:

1. The learning of Mind Lab problem-solving models significantly improves students' strategic thinking skills.
2. The students who learned Mind Lab abstract models succeeded in transferring the knowledge acquired to new fields, and the improvement in these new fields was even greater than in the original game.

As part of a joint research project carried out in 2004 between the Mind Lab Group and Yale University, the following hypothesis was tested: The study of Mind Lab strategies and thinking concepts improves students' "language of thinking".

At the start of the process, the students' language of thinking was measured by using a list of conceptual terminology. The students were required to choose the most suitable definition for concepts such as: decision, goal, planning, problem, process. The research group -- deliberately composed of students whose learning ability level had been described as weak -- took part in a weekly lesson of the Mind Lab Method for a three-month period. For an identical period, the control group was exposed to the same thinking games but did not participate in a reflective post-game discussion, which is an essential part of the Mind Lab Method.



At the end of the three-month period, the thinking language of the students in both groups was measured again using the list of thinking concepts employed in the first test. The results astounded the headmistress of the school in which the research was conducted. “As a result of these findings, I have decided to include the Mind Lab lessons in the curriculum of all the classes in my school.”

The three main conclusions of this research project are:

1. The learning of Mind Lab strategic and thinking concepts enriches and elaborates the students’ language of thinking and considerably enhances their language and articulation skills.
2. The control-group students, whose participation was limited to the playing of thinking games, tended to improve their language of thinking although to a lesser extent than those children who took part in the Mind Lab post-game reflective discussion.
3. The Mind Lab method is especially effective among those students whose learning abilities are described as weak. Professor Don Green of Yale University metaphorically referred to the Mind Lab Method as one that uncovers “diamonds in the rough” and then polishes them.

## Mind Lab in Practice

Mind Lab offers a special learning environment within the kindergarten, school, community center or extra-curricular facility. Set up in either a classroom or a designated workspace, Mind Lab offers an all-encompassing modular learning program for the imparting of thinking skills to all students in an independent and curriculum-compliant way.


Once there is a workspace that is designated by the school (a classroom, a library, Mind Lab classroom, etc.) Mind Lab provides all the necessary means in order to apply the program in school.

The Mind Lab product includes four categories and each of them has a few elements. The school can create its own pack by combining its chosen elements.

## Pedagogical Materials

Mind Lab Curricula


Assessment Kits


Educational Software

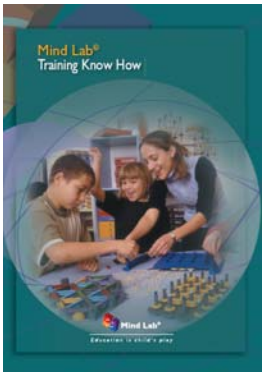

Game Sets

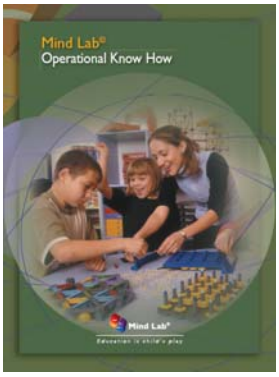
Pedagogical Aids

## Training and support

Training Courses

Training Literature & Software





Training Videos

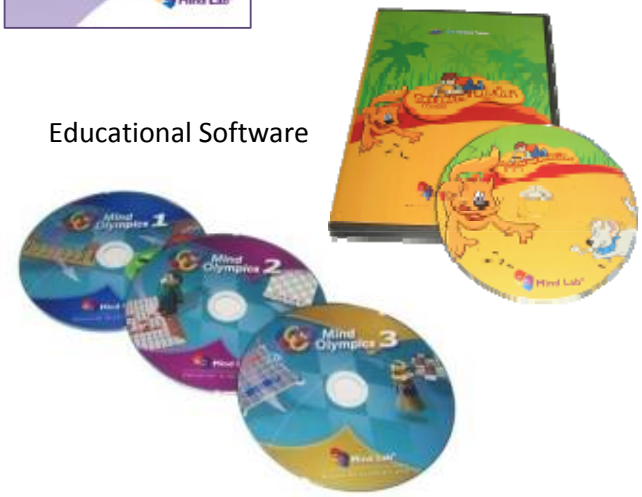
## Educational Projects

## Students' Personal Kits

Work Books


Game Sets

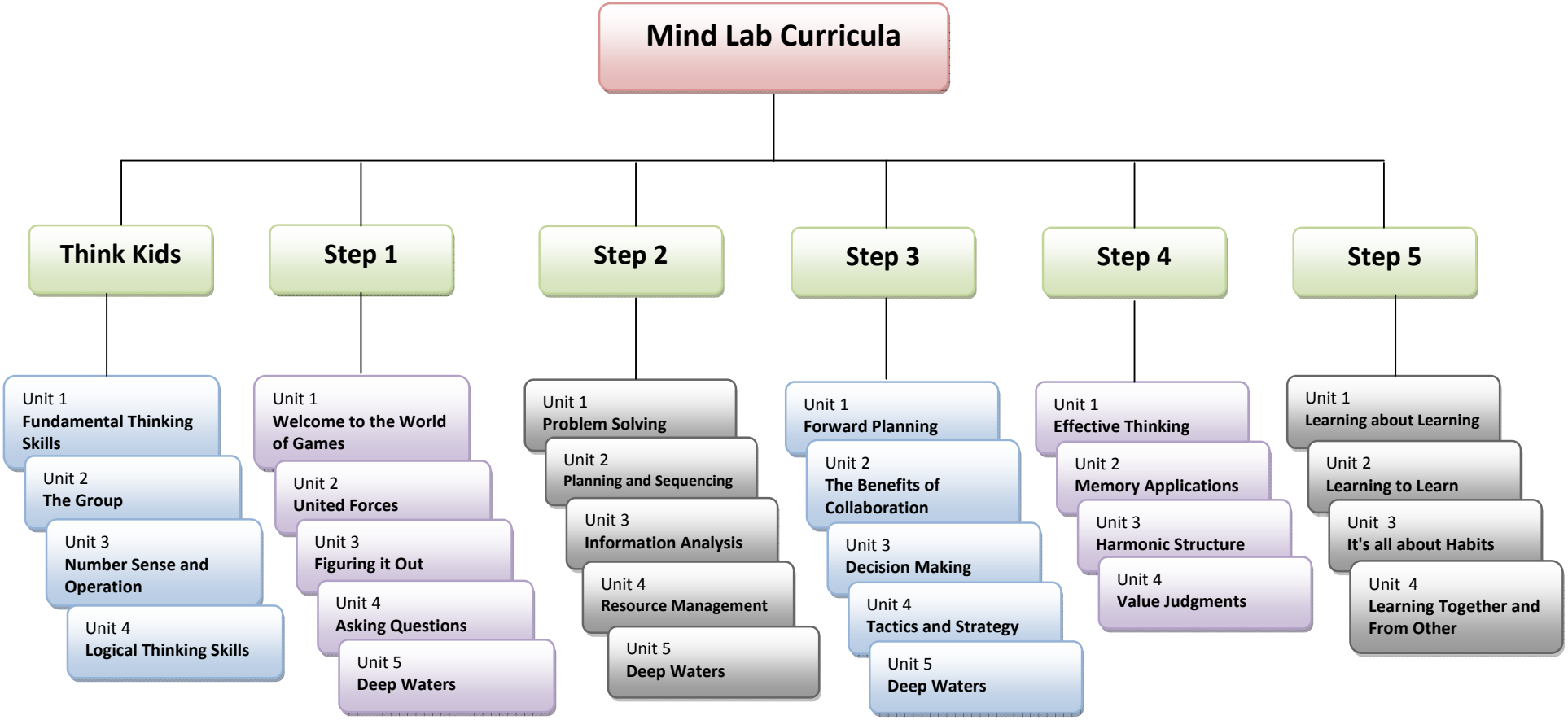
Educational Software




Mind Lab Accessories


## The Curriculum Structure

The Mind Lab curriculum basically takes the method and structures it within units, which are called "steps". Each step is divided into units and lessons, as follows:



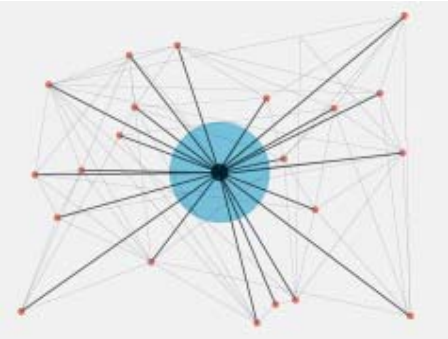
# The Curriculum Conceptual Structure

The structure of the curricula is based on two main theoretical concepts; Cross Referencing and Spiral Structure.

Cross Referencing

When we look at the illustration that describes the Mind Lab methodology (page 5) we can point out on three components in the Mind Lab learning process:

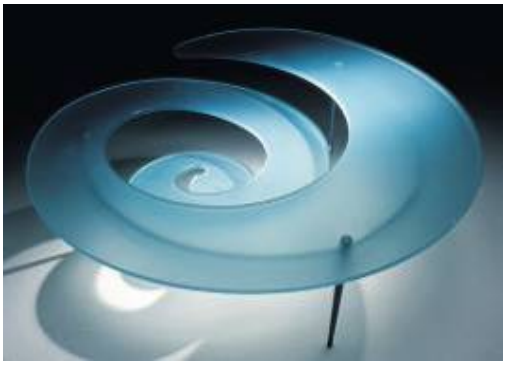
- Games
- Thought concepts (terms, strategies, models)
- Application in Life



The Mind Lab lessons constantly include cross-referencing between these three concepts, in order to broaden the learner's understanding. This cross referencing creates a situation in which the learner can relate to a particular game in terms of a wide range of concepts, and relate to a concept in terms of a wide range of games.

The learner thereby formulates a **network of links** between lesson subjects, game strategies and real life applications. This acts as a real simulation for forging new ties throughout the learning process.

Spiral Structure



Another building block of the curricula structure is the spiral structure. Throughout the Mind Lab program, the learner goes through a spiral path that enables him/her to deepen in the material and gain more and more insights and knowledge.
The spiral staircase analogy is most apt since the learner is constantly ascending to a higher level.

S/he may be at exactly the same vertical point but higher up in the staircase, so that greater insight is achieved and a deeper perspective is gained.

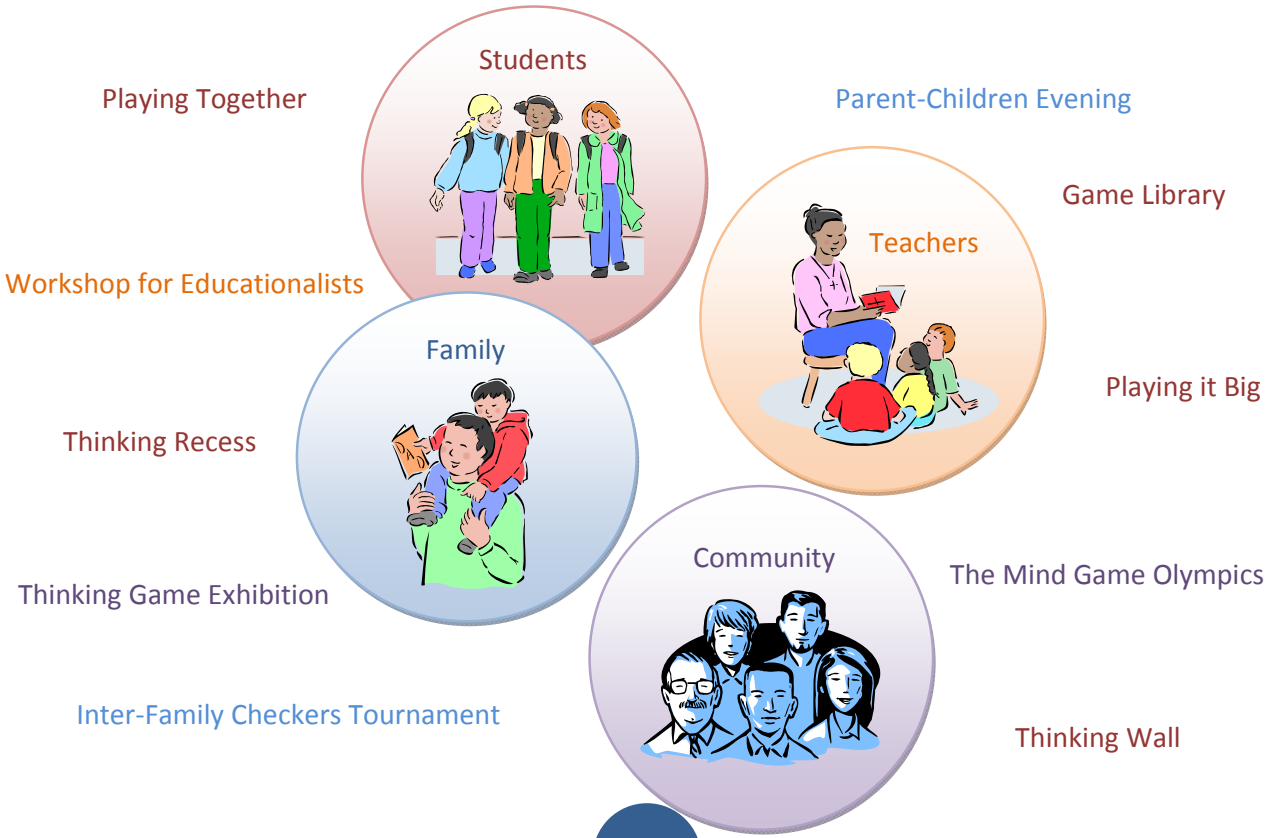
# The Mind Lab Thought Projects

One of the goals of Mind Lab is to promote the school thinking culture. It aspires to contribute to the assimilation of the thinking language and the team playing culture among students, parents, teachers and the whole community. In order to promote these goals, the Mind Lab program offers an abundance of Thought projects.

The Mind Lab project collection is very diverse and colorful and the projects can beautifully be integrated in the school routine. They have a wonderful added value to the educational doing in school, while stressing the following aspects:

- Creating a young leadership.
- Creating a common language between students, parents and teachers.
- Empowering the doing, the giving and the feelings of belonging among the students.
- Developing creativity and providing a stage and an opportunity for different and diverse ways of expression.
- Referring to the unique and specific needs of each and every one of the students.

The schools that learn the Mind Lab Program can choose a project (or projects) from the wide collection, and the Mind Lab staff assists the school with executing the project and with providing relation services among the parents and the community.




Based on the Mind Lab Method, which places the child at the center of the learning process, most of the school projects are initiated, planned and executed by representatives of the students, whom we call "Thought Leaders" and "Thought Trustees".
The "Thought Leaders" are the leadership team that leads the projects, and the "Thought Trustees" are teams that take charge of specific projects.

## "Dressing Up"

Children throughout the world and of every age love to dress up, and even adults sometimes enjoy wearing another face and feeling like someone else.
Therefore, it is only natural to incorporate into the learning program, a series of activities that deal with role play, play acting and imaginative pursuits. These activities provide a clear added value to the learning program as a whole. The ideal time to organize such a fancy dress contest would be around the Halloween period or on any other festive public holiday.

Ahead of the dressing up contest, each of the groups on the Mind Lab learning program chooses a subject connected to the thinking games. In accordance with the subject or theme chosen, the children make and prepare a group disguise or costume. The designated day of the event features a special thinking games happening which includes a free games playing session and a fancy dress competition with many prizes.

## "Playing it Big"

In the "Playing it Big" project the students create a colorful playground, which can host some quality experiential recess activities.

In this project the students paint a few boards of thinking games on the ground of the schoolyard. Besides the esthetic experience, this project enables the children to play thinking games in a big scale during their recesses.

## Thinking Wall

During the course of the school year, the students learning the Mind Lab program are exposed to a wide range of games and learn many thinking models and thinking concepts.

Toward the end of the year, a design and décor project is staged which enables the students to apply the thinking skills they have acquired. At first they design and produce educational accessories related to the subject of thinking development through games, for example: models of games learnt, visual conceptualizations of thinking methods and game strategies and even ideas for new games. Afterwards each group designs and embellishes its own learning environment with the accessories designed by the respective group members. This is followed by an inter-group competition in which all the works and designs are exhibited and in which the winner is the group with the most ornate and creative decorations.

## Game Library

In every school there are neglected games with damaged packing, lost or broken pieces, no instructions, etc. The job of the "Thinking Trustees" is to collect all these games and renovate them. They can download the rules and laminate them, fix the broken/torn parts, organize a campaign for game contribution, create a folder for registration and follow up, etc.

As part of their job, the "Thinking Trustees" teach their peers how to play the games, and lend them the games so they can play at home with their family members.

The Game Library is a wonderful project, which benefits everyone involved in it; the school gets rid of all the junk and gains a set of ready-to-use games, the "Thinking Trustees" participate in a personal-growth experience, the students have a chance to teach and support each other as well as to be influential among their families.

## "Thinking Recess"


The "Thinking Breaks" are active recesses dealing with the subject of thinking games and they are intended for the school as a whole. During these recesses children of all ages can engage in free game playing sessions; several game playing stations are opened and made available for and operated by the children themselves. Inter-class or teacher versus children thinking game tournaments can be arranged during these periods.

## Playing Together"

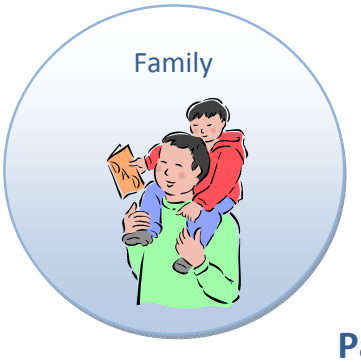
In the "Playing Together" Project the children on the Mind Lab learning program play some exciting social thinking games with children who are not on the learning program.

The "Thought Trustees" are the ones who deliver these social thinking games lessons; they start by explaining the rules of the game, divide the class into groups, let the children begin playing and are on hand to answer all their questions. During the session the "Thought Trustees" point out the principles and strategies of the games, based on the Mind Lab Method.


## The Game as an Educational Tool

Workshop for Educationalists

An introductory workshop, in which the participants are exposed to the Mind Lab Method and the rationale behind it. The participants will engage in a discussion about the importance of the game as a high-powered educational tool and will practice two of the games. A discussion will be initiated about the strategies connected with these games, about basic concepts related to thinking, and about those fields that can be nurtured as a result of these games (cognitive, social, emotional and ethical/value). In conclusion, the participants will learn the Stoplight Method, a basic model that helps to develop the awareness to the intentions of one's peers and guides us in the decision making process.




## Parent-Children Evening


The Parent-Children Evenings are thrilling cross-generational events which combine thinking with game playing. In the first part of the evening, the instructor presents the rationale behind the learning program and demonstrates how one is able to improve thinking skills through the use of a simple game. Three attractive games which were learned during the course of the year are then presented in terms of their aims and rules.
After the frontal session comes the main part: the parents and children are divided into groups and play amongst themselves.

## Inter-family Checkers Tournament

The game of Checkers is one of the best known and universally popular of all the thinking games.

One of the highlights of the learning program is the inter-family Checkers tournament. Each family plays against other families in a Swiss style tournament pairing system. At each round, a parent and a child play against another parent and child.

The tournament is concluded with a grand prize-giving ceremony in which the winning family is declared.


## Thinking Games Exhibition

The Thinking Games exhibition is a concluding activity to the thinking development lessons, intended for those children learning the Mind Lab program. Each grade is assigned a different game and the children make their own game sets. In addition to the actual games, each class designs its own accessories which include the game rules, thinking models related to the respective game, and a short historical account of the game.

## The Mind Game Olympics

All schoolchildren who learn the Mind Lab method for the development of thinking through games, can take part in this spectacular and long-standing educational festival – The Mind Game Olympics.

The Mind Game Olympics serve as a dramatic concluding event to the wide range of subjects taught in the Mind Lab lessons during the course of the year: understanding the strategic environment, planning and execution, problem solving and creative thinking and more. In addition, emotional and social related subjects are covered such as: cooperation and the ability to work as a team, deferring gratification, fair play and sportsmanship.

The Olympic activities are carried out in four stages:

- The 1/8 final stage – school and classroom tournaments organized as part of the Mind Lab lessons in which four representatives from each class are chosen to represent the class at four games in the next stage of the competition.
- The Quarter final stage – The school championships phase which takes place in the school and at the end of which the four member school team is chosen to represent the school at the Semi final stage.


- The Semi final stage – The regional events held at pre-assigned locations around the country. The first two teams at each regional event qualify for the Olympic finals.
- The Olympic finals – a national event in which all the qualifying teams compete against each other in a bid to become national champion.


Mind Lab

*Education is child's play*