

## **General Objectives of Mind Lab Curricula from Y5-Y7**

- to further the consolidation and development of concrete operational thought
- to enhance action strategies regulated by the rules of the game and the actions of other players
- to develop the skills to deal with the rules of the games in an operative way
- to help overcome concrete thought limitations
- to develop deductive - hypothetical thought
- to enhance the process of conscious decision making
- to enhance communication skills - gathering, analysis and expression of information
- to promote development of strategies for planning and the orderly execution of action
- to stimulate the recognition and management of available resources
- to understand the interrelations between tactical and strategic plans
- to promote reflections about the complementary characteristics of the 'personal' and the 'collective'
- to develop skills to deal with frustration and satisfaction

## **Specific Objectives of Mind Lab Curricula from Y5-Y7**

### **Year 5 Course 1 Information Analysis**

- to enhance data collection, analysis and transmission skills
- to further effective communication, highlighting different ways of communicating
- to promote the identification of questions leading to precise answers which serve as reference points to logical conclusion
- to reflect on the process of making decisions
- to promote awareness of the importance of teamwork as a strategy to reach a common goal

### **Year 5 Course 2 Resource Management**

- to enhance the systematic gathering of data for preparing a long-term plan
- to promote consideration of planning and management of resources, especially when scarce
- to develop the establishment of secondary objectives as a way of reaching the main objective
- to build deductive and hypothetical thinking from the analysis of data and experiences
- to promote anticipation of possible difficulties and their implications

### **Year Six Course 1 – Advanced Thinking Skills**

- to develop data identification and organisation skills
- to enhance the use of temporal and spatial orientation and perception to learn analyse and understand a situation
- to improve actions based on planning, considering multiple sources of information and managing available resources
- to manage 'action' and 'waiting' as planning strategies
- to promote cooperation and harmonious interaction to join forces for a common goal

### **Year Six Course 2 – Forward Planning**

- to enhance the search for clues in order to locate relevant data in a systematic and organised way, prioritising the goals of the task and correlating varied information
- to build mental images to guide the planning of future actions
- apply strategies and methods for managing resources in the short, medium and long terms
- to formulate and verify hypotheses in unknown situations
- to make planning more flexible, adapting to new conditions determined by the environment or other variables

### **Year 7 Course 1 – Benefits of Collaboration**

- To enhance spatial temporal orientation elements by strategically using board conditions (reality) and movement possibilities (actions) both one's own and those of others
- to internalise and use concepts to predict and control (when possible), understand and resolve situations
- to recognise and value of the rules and worth of every different member of a group, integrating personal and social dimensions to act co-operatively as a team
- to promote awareness of cognitive, emotional, social and ethical processes which pervade the relations with oneself and one another

### **Year 7 Course 2 – Decision Making**

- to enhance selective gathering of information in a systematic way, guided by the pursuit of goals
- to develop planned actions by building, logically analysing, controlling and organising probable hypotheses
- to promote decision-making considering different possible choices, probability calculations and the advantages and difficulties of different parts
- to reflect on personal commitment and responsibility regarding choices made considering personal objectives as well as the needs and rights of others and of the environment

# Critical and Creative capability links

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## Inquiring – identifying, exploring and clarifying information

By the end of Year 6 students:

### *Identifying, exploring and clarifying questions and issues*

- pose questions that identify and describe issues beyond their immediate world (eg Cartagena – issues of pirates, jail-breaks, resource management)
- prioritise ideas and select information to form a considered and/or creative response to an issue (for example giving reasons for placing a barrier or moving a piece in Quoridor. Analyse problems by identifying relevant and irrelevant information, Da Vinci, David and Goliath, Set, Rush Hour, Treasure Island)

### *Gathering, organising and processing information*

- identify and categorise information from multiple sources (the identification of information from a bombardment of data in Red Card)
- sequence, paraphrase, elaborate or condense information from a range of sources (use of the methods to develop a toolkit, short-circuiting and allowing students to transfer between a range of options –metacognition in action)

### *Transferring knowledge into new contexts*

- apply knowledge gained from one context to another unrelated context and apply new meaning (for example considering the relationship between the **Detective Method** employed in Rush Hour and its implications for breaking down a problem into smaller manageable parts – recursion in Maths, planning an essay in English, learning pronunciation in language using Mancala can be an excellent way to illustrate and reinforce the principals of correct move order when teaching students about 'order of operations' in maths.)

## Generating innovative ideas and possibilities

By the end of Year 6 students:

### *Imagining possibilities and considering alternatives*

- create analogies by matching two ideas in context (for example using Mancala to determine and discuss the concept of move order in the game and in life situations)
- use a range of visualisation strategies to challenge and investigate possibilities (for example – **Thinking Tree method**, evaluating a range of options prior to movement in game or actions in problematic social situations)

### *Seeking and creating innovative pathways and solutions*

- recognise there are multiple choices for solving a problem and imagine outcomes of these possibilities (for example generating and building on varied possible solutions in a problem that affects their lives – **stoplight method, detective method, thinking tree method**)
- engage in challenging situations, and persist with generating new approaches when new ideas do not work (eg persisting with an idea when conducting an investigation and seeing 'failures' as challenging – second and third games reflect the persistence in the game, but also within the game)

### *Suspending judgment to visualise possibilities*

- set their judgments to one side to consider alternative ideas and actions (for example taking risks when moving from the private domain to the public domain in Squeeky, waiting your turn in Blokus and Cartagena when you have already identified best fit move – **stoplight method** things may change)

## **Reflecting on thinking, actions and processes**

By the end of Year 6 students:

### *Reflecting on thinking*

- independently reflect on their thinking, consider reasonable criticism and adjust thinking if necessary (for example identifying where methods of investigation and inquiry could be improved – **Mirrors method**, reflective nature of Mind Lab methodology drives this constantly)
- form personal theories, paraphrase and construct analogies or similes to explain their thinking (thinking becomes more and more visible, always engaged in explanation and challenge of thinking)

### *Reflecting on procedures and products*

- explain and justify actions and solutions against identified criteria (for example examining their own and peer responses within the alternative methods of communication game – Kara Kupe )

## **Analysing, evaluating and synthesising information**

By the end of Year 6 students:

### *Applying logical and inventive reasoning*

- identify gaps in knowledge and missing elements in information, seek further information to make improvements and use evidence to test propositions (for example assessing whether there is enough evidence to make a particular claim as in the game Da Vinci Code where analysis of information is constant and ever changing – this is put to the test in each move made)
- choose pertinent information from a range of sources and separate this information into smaller parts or ideas (for example examining sources of evidence to identify similarities and differences – **Detective method**, applied in many games with transferences)

### *Drawing conclusions and designing a course of action*

- draw on prior knowledge and evidence to formulate solutions to a problem (the use of many different games exposes the thinking tools to different applications, building a student's capacity to dip into the toolkit and employ an appropriate solution)
- use concrete, pictorial and digital models to check reasoning and modify actions accordingly (for example using visuals of game situations to check understanding and clarify thinking)

# Personal and social capability links

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## Self awareness

By the end of Year 6 students:

### Recognising emotions

- describe and understand their emotional responses in various situations, including how emotions are linked to behaviour and learning (Plato – ‘You can learn more about a person in an hour of play than in a year of conversation.’ The Mind Lab method is a great vehicle to make these feelings and emotions visible in a non-threatening environment. The fact that most children love playing games affords the game playing experience a head start and games can be used as fabulous protagonists for understanding the role of emotion in behaviour and learning - identify and manage one’s emotions and behaviour - Quoridor)

### Self-knowledge

- describe and assess personal strengths and challenges, learning from success and failure (for example keeping up to date with the Mind Lab reflective journals of their learning, blogging in Y7 describing both positive and negative experiences)

### Self-perception

- recognise a range of external influences that may impact on their sense of identity (for example how they see themselves amongst their peer groups. The multiple intelligence approach of the game playing experience allows enables many students to display their intelligences where previously they may have been hidden)

### Self-worth

- demonstrate awareness of personal habits and behaviour, and factors influencing their successes and mistakes (set goals take into account their challenges and build on their strengths – exemplified and often amplified in the game situation)

### Reflective practice

- reflect on and apply learning to their everyday lives to consolidate strengths and address challenges (The **Mirrors method** brings this to the fore at all times, for example perhaps when working in small groups, build on their strengths in various roles, and set goals to develop specific skills – the Migrating birds actively teaches these very skills,)

## Self management

By the end of Year 6 students:

### Appropriate expression of emotions

- draw and understand complex connections between their emotions and their behaviour, as they relate to learning and relationships (the game playing experience again amplifies and makes accessible such expressions of emotion. What may not normally be visible in a student can rise strongly during games and can give ripe moments for quality social and emotional discussion, including when it is appropriate to share feelings **Self-discipline**)
- show self-discipline in organising their learning (for example identifying and using strategies to manage time and resources effectively – a fundamental premise of the games, Pylos, Blokus, Octi, Quoridor, Olympic Checkers)

## Goal setting and tracking

- set and keep track of personal and academic goals (student reflective journals)

## Working independently and showing initiative

- recognise the value of working independently, taking initiative to do so where appropriate (there are moments of independence and interdependence during Mind Lab lessons and games. Each game situation brings a new opportunity for independence student is frequently presented with opportunities to demonstrate initiative.

## Confidence, resilience and adaptability

- demonstrate confidence in themselves, showing persistence and adaptability in completing challenging tasks (a major tenet of the Mind Lab methodology, flexible thinking and persistence often go hand in hand during the game situation and can be transferred to further life situations.

## Social awareness

By the end of Year 6 students:

### Empathy

- use listening and observational skills to identify and empathise with the feelings and perspectives of others in a range of situations (for example many of the Mind Lab lessons are introduced using historical and comparative data which sets the scene for both the game experience and the transferences to be taken. Identify the perspectives of others through Red Card)

### Appreciating diverse perspectives

- recognise that social cues and means of communication may differ within and between various communities, explaining a point of view that is different from their own (skilful use of game strategies by the teacher can actually set the situation where students are suddenly switched mid-game to play as their opponent. This in turn opens the door for conversation and transference on the importance of appreciating different points of view)

### Contributing to civil society, advocacy for and service to others

- explain and act on personal roles and responsibilities in their homes, schools and communities (for example in Abalone considering how personal and group choices influence the well-being/resilience of an individual)

### Understanding relationships

- identify the differences between positive and negative relationships and ways of managing these (for example the **stoplight method** encourages the student to look at the broader perspective and may point towards the reflective **mirrors method** and the **migrating birds method** of developing team perspective)

## Social management

By the end of Year 6 students:

### Communication

- build verbal and nonverbal communication skills, such as attentive and reflective listening, participation in class discussions, presentation of group reports (for example discussion is fundamental to the Mind Lab methodology where students are encouraged to contribute thus making their thinking visible to all and building on the ideas of others when developing their gameplay and their appreciation of transference to other spheres of life. Kara Kupe)

## Working collaboratively

- work in teams, encouraging others and recognising their contributions, negotiating roles and managing time and tasks (for example working collaboratively to suggest improvements in methods used for group investigations and projects - this is built on through a number of games and with particular reference to the **migrating birds method**)

## Decision making

- identify and explain how factors such as feelings, social and cultural norms, and conflicting points of view influence individual and group decision making (for example through the game of Red Card where the importance of group relations is of paramount importance, Can't Stop,)

## Conflict resolution and negotiation

- identify causes and effects of conflict, and use effective strategies to manage, resolve and negotiate these conflict situations (for example games are a tool which provide a perfect opportunity to discuss how to resolve and negotiate within conflict situations and then to transfer this knowledge into other areas. The essence of allowing students the opportunity to encounter and work with conflict serves to provide them with strategies for identifying issues that cause conflict and exploring how conflict can be resolved – Positive strategies for handling conflict – Pet squares, Wizards, Turtle Race)

## Building and maintaining relationships

- understand the difference between safe and risky behaviours in relationships (for example identifying risks in potentially dangerous situations and strategies for avoiding unsafe behaviours - the use of threats and double threats in a number of games along with games such as Can't Stop where calculated risks are needed leads to experience and dialogue on such situations)

## Leadership

- initiate or help to organise classroom and group activities, identifying and addressing a common need (schools can opt to identify leaders within Mind Lab classes and in reference to the **migrating birds method** students themselves are empowered to choose wisely in negotiating roles. Can't Stop)

# Ethical behaviour capability links

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## Understanding ethical concepts and issues

By the end of Year 6 students:

- explain the ethical concepts associated with achieving a particular outcome (for example discussing a win at all costs attitude - the Mind Lab handshake is a strong foundation on which to build good practice)
- explain what constitutes an ethically better or worse outcome to an issue and how particular outcomes might be accomplished (for example exploring the consequences for individuals of others' actions in the games of Wizards and Cartagena)
- make relative judgments about ethical and unethical behaviours in a range of settings and contexts (these situations will re-occur throughout Mind Lab lessons meaning that such questions of ethical and unethical behaviour are constantly examined)

## Reflecting on personal ethics in experiences and decision making

- apply and test their understanding of ethical concepts such as honesty, fairness and respect in different social contexts (for example the role of individuals group games and their values when considering equal treatment of others, typical example being Red Card, Diamonds, 9 Man Morris and Backgammon)
- test their feelings about and perceptions of ethical and non-ethical behaviours in familiar and hypothetical scenarios (for example What if the rules of a game exclude a student with a disability or a language barrier?)
- demonstrate awareness of a range of thinking strategies in ethical decision making (for example considering alternative perceptions and points of view, distinguishing relative merits of several options - Mind Lab to the fore in this situation, **Detective method, thinking tree method, Mirrors method, Stoplight method**)

## Exploring values, rights and ethical principles

- describe values and ethical principles agreed in local communities (for example instances where equality, respect, fairness, dignity and non-discrimination occur)
- explain the roles that rules play in different communities (for example identifying examples of rules in their own and other communities, suggesting reasons for their creation - all of our games provide multiple opportunities to understand and determine why rules are crucial to any functioning society - examined specifically in Quoridor where one of the rules is purposely not introduced forcing an ethical dilemma for the players).
- ensure consistency between their words and actions associated with rights when interacting in face-to-face and virtual situations (for example role and responsibility of bystanders in bullying situations which can manifest themselves in games)
- identify and explain different possibilities and points of view when thinking about ethical issues (for example diversity and socioeconomic disparity between groups of people in Australia)
- recognise that using values and principles to resolve ethical problems and dilemmas is rarely simple (for example modifying games to be inclusive, applying ethical principles to reach fair and respectful solutions)