



# SCO INTERNATIONAL OLYMPIAD

## GRADE 1 MENTAL ABILITY

SCO International Olympiad Official Syllabus

- Designed from Class 1 mental-ability syllabus pathways and aligned with SCO assessment flow for guided preparation, practice, reporting, and future-ready academic growth.
- Age-fit reasoning guidance for early primary learners globally with visual, spatial, measurement and pattern-thinking tasks.
- Built for schools, teachers, parents and students to support calm practice, logical thinking and academic enrichment.

Reasoning Patterns	Measuring Units	Geometrical Shapes	Grouping Figures	Odd One Out
Analogy	Ranking Test	Embedded Figures	Olympiad Practice	Visual Logic

## SCO International Mental Ability Olympiad - Class 1 Official Syllabus

Purpose: This syllabus develops age-appropriate reasoning, visual thinking, pattern recognition, spatial awareness and early problem-solving confidence for Class 1 learners. It is designed for global school use and for parent-friendly practice at home.

### Exam Overview

Detail	Description
Exam Name	SCO International Mental Ability Olympiad
Class	Class 1 / Grade 1
Duration	60 minutes
Question Type	Objective type / multiple choice
Recommended Preparation Style	Picture observation, oral reasoning, counting, comparing, matching, pattern continuation, and guided explanation of answers
Pedagogical Focus	Concrete-to-pictorial-to-reasoning progression for young learners

### Global Pedagogy Alignment

The Class 1 Mental Ability pathway is aligned with internationally accepted early-learning directions: children should explore patterns, shapes, measures and problem-solving through visual, concrete and inquiry-oriented tasks. The paper design encourages observation, communication of reasoning and flexible thinking rather than memorisation.

Global reference themes used in framing this syllabus: early mathematics reasoning and proof; geometry and measurement; pattern and spatial reasoning; inquiry-based primary learning; and creative problem-solving in familiar contexts.

### Chapter-wise Syllabus, Notes and Learning Outcomes

No.	Chapter	Small Notes for Learning	Learning Outcomes
1	Reasoning Patterns	Students observe repeating shapes, colours, objects and simple number patterns. Practice should begin with concrete objects and then move to pictures.	Continue, complete and explain simple patterns using shape, colour, size or number clues.
2	Measuring Units	Students compare lengths and sizes using non-standard units such as sticks, stars, blocks or steps before using formal units.	Compare objects as longer/shorter/taller/smaller and count equal units to describe length.
3	Reasoning Geometrical Shapes	Students identify circles, squares, triangles, rectangles, stars and simple rotated shapes.	Recognise basic 2D shapes, compare boundaries and understand that turning a shape does not change its identity.

4	Odd One Out	Students learn to group objects by common properties and identify the item that does not match.	Select the odd item using one clear reason such as shape, colour, size, category or pattern.
5	Spatial Understanding	Students develop position, direction and mental movement skills through simple visual tasks.	Use words such as above, below, inside, outside, near, far, left/right as appropriate and solve simple spatial questions.
6	Grouping of Figures	Students classify figures into groups using shape, colour, size or number of items.	Sort and group figures based on shared attributes and check that each group follows the rule.
7	Analogy and Ranking Test	Students compare pairs such as big/small, same/different, first/last and more/less.	Complete simple analogies and rankings by applying the same relationship to a new object.
8	Embedded Figures	Students find small shapes hidden inside bigger figures and recognise parts within a whole.	Identify a hidden or embedded shape and explain where it appears inside the larger figure.

## Chapter-wise Teaching Guidance

### Reasoning Patterns

- Use beads, blocks, claps or shapes to build AB, ABC and size patterns. Ask students to say the pattern aloud before answering.
- Good practice question: circle, square, circle, square, what comes next?

### Measuring Units

- Use the same unit repeatedly. Students should understand that equal units make comparison fair.
- Good practice question: A book is 5 blocks long and a pencil is 3 blocks long. Which is longer?

### Reasoning Geometrical Shapes

- Compare straight and curved boundaries. Show rotated squares to build flexibility.
- Good practice question: Which shape has only curved boundary?

### Odd One Out

- Start with obvious categories, then gradually use subtle differences such as colour or number.
- Good practice question: circle, square, triangle, apple - which is odd?

### Spatial Understanding

- Use classroom directions and object placement. Keep tasks concrete and visual.
- Good practice question: Which toy is inside the box?

### Grouping of Figures

- Give mixed shapes and ask students to make groups. Discuss the grouping rule.
- Good practice question: Put all triangles together and all circles together.

### Analogy and Ranking Test

- Use paired relationships. Big/small, full/empty, first/last and long/short work well for Class 1.
- Good practice question: Big circle is to small circle as big square is to what?

## Embedded Figures

- Show a large figure with a small shape inside. Ask students to trace or point before choosing.
- Good practice question: Which small triangle is hidden inside the big picture?

## Skill Progression for Schools and Parents

Stage	Expected Student Behaviour	Suggested Support
Observe	Looks carefully at a picture, shape, length or pattern.	Ask: What do you see? What is same? What is different?
Compare	Chooses between options using one visible clue.	Ask students to point to the clue before answering.
Explain	Gives a simple reason for the answer.	Accept short explanations such as “because it repeats” or “because it is longer”.
Extend	Applies the same rule to a new picture or situation.	Give a fresh example after solving one question.

## Assessment Blueprint

Area	Approx. Weight	Question Style
Reasoning patterns and visual sequences	25%	Complete the pattern, identify next item, colour-shape sequence
Measurement and comparison	15%	Longer/shorter, unit counting, simple comparison
Shape reasoning and spatial understanding	25%	Shape recognition, boundary, embedded figure, position
Odd one out and grouping	20%	Classify, group, select different item
Analogy, ranking and achiever reasoning	15%	Big/small analogy, ranking, multi-condition grouping

## Reference Alignment Snapshot

This syllabus is informed by global early-learning directions from sources such as NCTM school mathematics standards, Australian Curriculum mathematics proficiency strands, Cambridge Primary Mathematics progression, IB Primary Years Programme inquiry learning, and OECD creative-thinking/problem-solving framing.