



**12<sup>th</sup> International Mathematics and Science Olympiad  
for Primary School 2015 (IMSO 2015)  
1-7 November 2015, Thailand**

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**"Smart, Skilled and Creative in a Joyful Competition for Excellence".**

### **1. Rationale**

It has been generally acknowledged that education determines the quality of human resources. Primary schools, as a part of basic education, provide students with skills of reading, writing, arithmetic, and basic science among others. A program which could stimulate creativity, develop critical and analytical thinking is important to be provided to students at the primary school level as they are in the "golden period of education".

To implement this program, Office of The Basic Education Commission, Ministry of Education of Thailand is organizing the 12<sup>th</sup> International Mathematics and Science Olympiad for Primary School (IMSO 2015). Participation in 12<sup>th</sup> IMSO 2015 is by invitation.

### **2. Theme**

"Smart, Skilled and Creative in a Joyful Competition for Excellence".

### **3. Objectives**

- 3.1) To allow primary school students from various countries develop the ability in mathematics and science at full potential
- 3.2) To create an academic atmosphere and to encourage innovation, research development and academic progress
- 3.3) To create a network of cooperation in the development of teaching and learning of mathematics and science with international educational organizations
- 3.4) To disseminate international cultural exchanges and strengthen the relationship between Thai and international teachers and students

## 4. Guidelines and Regulations

### 4.1 Schedule

- 1) The 12<sup>th</sup> IMSO 2015 will be held in Pathum Thani, Thailand from 1 to 7 November 2015.
- 2) Contestants and officials will arrive in Pathum Thani, Thailand on 1 November 2015.
- 3) Tutors will discuss, select and translate the problems on 2 November 2015.
- 4) Tests will be held on 3 and 4 November 2015.

### 4.2. Itinerary

DATE	ACTIVITIES	
	STUDENTS	TUTORS
1 November 2015 (Sunday)	*Arrival at Suvarnabhumi airport or Don Mueang airport * Transfer to hotel and registration	*Arrival at Suvarnabhumi airport or Don Mueang airport * Transfer to hotel and registration
2 November 2015 (Monday)	* Opening Ceremony * Welcoming Party	* Opening Ceremony * Technical meeting * Welcoming Dinner
3 November 2015 (Tuesday)	* Theoretical Examination I and II * Sightseeing	* International academic conference * Sightseeing
4 November 2015 (Wednesday)	* Exploration with Math * Science Experiments * Sightseeing	* International academic conference * Moderation and Marking of Theoretical Examination I and II
5 November 2015 (Thursday)	* Sightseeing * Cultural Night	* Moderation and Marking of Exploration with Math * Moderation and Marking of Science Experiments * Sightseeing
6 November 2015 (Friday)	* Free time  * Announcement of winners and closing ceremony	
7 November 2015 (Saturday)	Departure (Home Sweet Home)	

### 4.3. Types of problems and test regulations

4.3.1 IMSSO 2015 is an individual competition. The problems consist of 2 parts for each subject:

- a) Theoretical and exploration problems for Mathematics
- b) Theoretical and experimental problems for Science

4.3.2 The constructed problems are based on Mathematics and Science primary school curriculums, reference books and other relevant sources, which cover intellectual, reasoning and creativity.

#### 4.3.3 Syllabus

##### a) Math

###### Arithmetic:

integers, rational numbers and their representations (fraction, decimal, and percentage), factoring numbers, greatest common divisor, least common multiples, number ordering, and ratio and proportion.

###### Geometry:

angle and its measure, area and perimeter, triangle, quadrangle, parallelogram, trapezoid, circles, cube, parallelepiped nets, symmetry, reflection and rotation, and similarity and proportion.

###### Data and measurement:

data representation, mean (average), median, and modus.

##### b) Science

###### Science skill and methodology:

general health (nutrition, common disease and how to prevent it).

###### General environmental issue:

deforestation, managing natural resource pollution, water and carbon cycle, etc).

###### Basic ecology:

habitat, interaction, food chain and food web, population,

ecosystem, life cycle etc.

**Physiology:**

photosynthesis and respiration.

**Current technology development:**

such as (GMO, biotech, biofuel, satellite, etc.)

**Human anatomy and function:**

skeleton and movement, olfactory system, auditory system, mouth, eyes, circulatory, digestive system, skin, respiratory system) and its disease and problems.

**Classifying organism:**

based on their food, anatomy, systematics, reproduction system and its habitat.

Very common or endangered species names.

**Mechanics** (motion of objects, static fluid and gas)

**Solar system** (member of solar system, rotation of earth and moon, earth and moon eclipses)

**The Planet Earth** (structure, surface, process of earth formation, water cycle, renewable resources, climate, seasons, gravitation, wind)

**Electric and magnetic** (application, models)

**Matter** (properties, phase transformation (solid, liquid, gas) physical, chemical, and biological transformation)

**Thermal properties** (temperature, thermometer, energy, conduction, convection, radiation)

**Light** (property, vision, color)

**Force** (change shape of material, magnetic, gravitation, frictional forces)

**Energy and energy change** (kinetic, potential, heat, sound, renewable, Energy conversion)

4.3.4 Participating countries are welcome to send 2 sets of proposed problems for each subject to the organizing committee. Five (5) problems for theoretical questions and five (5) problems for exploratory and/or experimental questions. Proposed problems must be e-mailed before 15<sup>th</sup> July 2015.

4.3.5 Instructions and problems will be in English. Theoretical questions must also be answered in English. Contestants are allowed to use an English dictionary during competition.

4.3.6 Contestants are not allowed to bring books, scientific dictionary, calculators, and other electronic devices except English dictionary to the competition hall.

## 4.4 Contestants and Officials

### 4.4.1 Contestants

- a) The contestants of the Olympiad are grade 5 or 6 students, less than 13 years old by 31 December 2015.
- b) Each country is entitled to send 12 students: 6 students for each subject
- c) Each country is permitted to have more than 12 contestants in their delegation. Your organization will be responsible for the expense of these persons.

### 4.4.2 Officials

Each country is entitled to send 4 officials consisting of 1 team leader, 1 deputy leader and 2 tutors.

- a) **It is required that the team leader and deputy leader** be able to communicate in English.
- b) **It is required that the tutors** master the substance of primary school Mathematics and Science and be able to communicate in English.

Tutors will work with the jury in selecting and editing problems, marking and moderating on student's paper and determining winners.

## 4.5 Letter of participation and registration forms

Interested countries in joining this competition should confirm their participation by:

- Sending a letter of participation before 15 July 2015
- Sending the name lists of students, team leader, deputy leader and tutors before 15 July 2015.
- Notifying the details of travel scheduled flights before 1 September 2015.
- Confirming itinerary before 1 October 2015.

To the address below:

**Contact office.**

Bureau of Education Innovation Development

Office of The Basic Education Commission

Ministry of Education, Thailand

Phone: 662-288-5881, 662-288-5884, 668-7322-4270.

Website: [www.imso.go.th](http://www.imso.go.th)

E-mail: [imso.thailand@gmail.com](mailto:imso.thailand@gmail.com), [imso.thailand@yahoo.com](mailto:imso.thailand@yahoo.com)

**4.6 Juries**

4.6. The juries appointed by the organizing committees are as follows:

- a) The central committee of international experts
- b) Math and Science professionals from countries that participate in the competition.
- c) Math and Science experts and professionals from  
Ministry of Education, Thailand.

**4.7 Evaluation**

4.7.1 The contestants should answer all the questions.

4.7.2 The juries score the answers and the results are submitted to the tutors of each country.

4.7.3 A student's score will be determined through moderation involving tutors and juries. Three arbiters will be selected from among the tutors to settle any unresolved disagreement between the juries and the tutors from a particular country.

4.7.4 The juries will announce the winners based on the scoring results. The winners are decided by the percentage of correct answers.

**4.8. Awards and Medals**

Approximately two-thirds of contestants will be awarded gold, silver and bronze in the ratio 1: 2: 3

4.8.1 Contestant who has the highest score of the competition will receive theoretical and practical trophy.

4.8.2 Every contestant who attended the event will receive a certificate of participation.

#### **4.9 Expenses**

4.9.1 Participants will be responsible for the cost of travel from their country to the airport (Suvarnabhumi or Don Mueang) Thailand, including Visa and Fees charges to travel in and out of Thailand.

4.9.2 The organizers of **IMSO 2015** will provide free hotel accommodation including meals and local transportation within the duration of the contest schedule for 16 persons ( 12 student contestants, 1 team leader, 1 deputy leader and 2 tutors)

4.9.3 Each additional contestant, official and accompanying person will be charged US\$ 650 for accommodation, meals and sightseeing during the official schedule.

#### **5. Insurance (Medical care for participants)**

Organized insurance for participants will cover from 1-7November 2015. The insurance does not cover the personal illness of participants.

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