



**“Smart, Skilled, and Creative In a Joyful Competition for Excellence”**

## **INFORMATION SHEET**

**16<sup>th</sup> INTERNATIONAL MATHEMATICS AND SCIENCE OLYMPIAD  
IMSO 2019 – HANOI, VIETNAM**



**HANOI PEOPLE'S COMMITTEE**



**HANOI DEPARTMENT OF EDUCATION  
AND TRAINING**



**IEG FOUNDATION FOR EDUCATION  
DEVELOPMENT**

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## 1. Objectives

IMSO 2019 aims to provide opportunities to:

- To allow primary school students from various countries developed the ability in mathematics and science at full potential.
- To create an academic atmosphere, encourages innovation, research development and academic progress.
- To create a network of cooperation in the development of teaching and learning of mathematics and science with international educational organizations.
- To disseminate international cultural exchanges and strengthen the relationship between teachers and students.

## 2. Agenda

Date	Time	Contestants	Officials
<b>Day 1: Tuesday</b> 26/11/2019	All day	Arrival welcome	Arrival welcome
<b>Day 2: Wednesday</b> 27/11/2019	Morning	Opening Ceremony	
	Afternoon	Orientation	Technical meeting
<b>Day 3: Thursday</b> 28/11/2019	Morning	Theory Test 1	City Tour
	Afternoon	Theory Test 2	City Tour
<b>Day 4: Friday</b> 29/11/2019	Morning	Exploration / Experiment Test	Grading Moderation
	Afternoon	Free Time	Grading Moderation
	Night	Cultural Night	
<b>Day 5: Saturday</b> 30/11/2019	Morning	City Tour	
	Afternoon	Awarding Ceremony	
<b>Day 6: Sunday</b> 01/12/2019		Home Sweet Home	

### 3. Participate Countries

Participation in IMSO 2019 is by invitation only. Organizer will send official invitation letter to registered representatives of each member country.

### 4. Contestants, Officials and Accompanying adults

#### a. Contestants

The participants of the Olympiad are grade V, VI, VII and not older than 13 years of age before 26 November 2019. Participants should be chosen through a selection process.

Each country is entitled to send 12 students, 6 students for each subject.

Former host countries and IMSO board members will be able to send a maximum of 12 participants for Math and 12 participants for Science.

#### b. Officials

Each country is entitled to send 3 officials consists of 1 team leader and 2 tutors/trainers.

Team leader should have the ability to communicate in English.

Tutors / Trainers should be master in the substance of primary school Mathematics and Science and have the ability to communicate in English.

#### c. Accompanying Adults

All accompanying adults must be officially registered with local committee.

### 5. Regulations

**5.1.** IMSO 2019 is an individual competition. The questions consist of 2 parts for each subject:

- Theoretical and exploration questions for Mathematics; and
- Theoretical and experimental questions for Science.

**5.2.** The questions are constructed based on Mathematics and Science elementary school curricula, reference books, and other relevant sources, which cover intellectual reasoning and creativity.

**5.3.** Participating teams are required to submit 2 sets of proposed questions with detailed solution in English to the organizing committee: 1 set for Mathematics and 1 set for Science.

- For Mathematics, the set should have 4 questions for Theoretical Test 1 (1 mark each), 4 questions for Theoretical Test 2 (3 marks each), and 2 questions for Exploration (6 marks each).
- For Science, the set should have 4 multiple-choice questions, 4 open-ended questions and 2 problems for the experiment test.
- Proposed questions are to be emailed to the Hanoi Department of Education and Training at [juries@imso.vn](mailto:juries@imso.vn) latest by **1<sup>st</sup> September 2019.**

5.4. Instructions and questions will be in English. All answers must be in English. All other languages will not be considered for marking.

5.5. Participants are not allowed to bring any English dictionaries, books, scientific dictionaries, calculators, and other electronic devices.

5.6. Please refer to **Annex A** for the syllabus.

5.7. Test durations

Test	Mathematics	Science	Duration
Test 1	Short Answer	Theoretical 1	60 minutes
Test 2	Essay	Theoretical 2	90 minutes
Test 3	Exploration	Experiment	120 minutes

## 6. Important Timelines

6.1. Confirmation of the participation: Participating Teams will confirm the participation via email: registration@imso.vn **no later than 15<sup>th</sup> August 2019**.

6.2. Submission of Proposed Problems: Each participating delegation is expected to submit 01 set of proposed problems with solutions for each subject (as per item 5.3 above) **no later than 1<sup>st</sup> September 2019**. The proposed problems and solutions should be encoded in English language and submitted via email: juries@imso.vn.

6.3. Submission of participation details: **No later than 20<sup>th</sup> September 2019**.

6.4. Submission of flight details: **No later than 20<sup>th</sup> October 2019**.

6.5. Payment of additional participants: **No later than 30<sup>th</sup> October 2019**.

## 7. Juries Board

The juries are appointed by organizing committee:

7.1. The central committee of international experts.

7.2. Math and Science experts and professionals appointed by local organizing committee.

## 8. Evaluation

8.1. Participants should answer all the questions in English.

8.2. Juries scores, the answers and the results are turn over to the tutors/trainers of each team for review.

8.3. Tutors/trainers are allowed to respond to the juries' scoring results through moderation.

## 9. Medals and Trophies

- a. Approximately two - thirds of contestants will be awarded gold, silver and bronze medals in the ratio of 1 : 2 : 3. Other contestants will receive a certificate of participation.
- b. Trophies will be awarded to contestants with the highest score in Theoretical and Exploration or Experiment, as well as for the highest overall score in each subject.
- c. Appreciation Certificates will be presented to all members of: IMSO Executive Council, Juries, Teachers/Tutors, Officials that participated in IMSO 2019.

## 10. Cultural Exchange

**10.1** The Cultural Night is the highlighted of the IMSO. It is in this occasion where every participating country is requested to perform on stage a five-minute cultural presentation - a showcase of its rich cultural heritage.

**10.2** The performances vary from instrumental and choral music to power-point presentations of scenery. Through this activity, international friendship, mutual understanding and respect for cultural diversities are advocated.

**10.3** The following awards will also be presented:

- Best Performance
- Best Innovative Performance
- Best Traditional Costume

## 11. Logistics and Expenses

**11.1** The organizer of IMSO 2019 will sponsor accommodation, meals and local transportation for one (1) team leader, two (2) tutors/trainers and a maximum of twelve (12) student participants during the official period of IMSO 2019 (from 26<sup>th</sup> of November 2019 to 1<sup>st</sup> of December 2019)

**11.2** Each additional participant and accompany person will be charged at **US\$650.00**

**11.3** Accommodation will only be provided from 1400 hours, 26<sup>th</sup> of November 2019 to 1200 hours, 1<sup>st</sup> of December 2019 on sharing room basic. A single private room can be provided if available with an additional charge of US\$175.00 per person.

**11.4** Breakfast, lunch, and dinner will be provided everyday starting from the lunch of the 26<sup>th</sup> of November, 2019 and ending by the lunch of the 1<sup>st</sup> of December, 2019.

**11.5** Participating teams will be responsible for organizing and financing their own flights to and from Hanoi - Vietnam, visa, travel insurance and any other possible expenses for entry into Hanoi - Vietnam.

**11.6** Entry Visa into Vietnam: IMSO 2019 participants must have a roundtrip airline ticket. The team leader of each participating team must ensure that their delegation has fulfilled Vietnam's visa requirements before entering and leaving Vietnam. For detailed and updated information, please contact your local Embassy of Vietnam.

## **12. Health care**

**12.1** Participants should bring their own medications if necessary.

**12.2** Participants who are unwell will be directed to the nearest available medical clinic or facilities for medical consultation and attention, at the participating teams' own expense.

**12.3** Participating teams should ensure that all members of their delegation are fully insured before coming to Vietnam.

## **13. Additional Information**

**13.1** If participating teams are to prepare a performance with audio or video elements, please include them in a CD/DVD/USB and pass it to the organizing committee upon your arrival in Vietnam.

**13.2** There will be some time set aside for participants to interact with each other and to exchange gifts before the start of the cultural night.

**13.3** Teams can bring along their country flag (size guide: 1m x 1.5m) for the cultural performance.

## **14. Contact Information**

For information of IMSO 2019, please contact:

IMSO 2019 Coordinator: Mr. Nguyen Chi Trung

- Tel: +84-888-946 878
- Email: [imso2019@imso.vn](mailto:imso2019@imso.vn)

## ANNEX A: IMSO 2019 SYLLABUS

### Mathematics:

#### 1. **Arithmetic**

Whole numbers, Rational numbers and their representations (fraction, decimals and percentages), pattern recognition, Factors and Multiples, Greatest Common Divisor, Least Common Multiples, Ordering of numbers, and Ratio and Proportion

#### 2. **Geometry**

Properties of polygons (Triangle, quadrilateral, parallelogram, trapezium) and circles

- Angle and its measure
- Area and Perimeter of different polygons
- Symmetry, reflection and rotation, similarity and proportion

Properties of solid figures

- Nets of cube and parallelepiped
- Symmetry, reflection and rotation, similarity and proportion

#### 3. **Data and Measurement**

- Data representation and interpretation
- Mean, median and mode of a set of data

### Science

1. **Science skills and methodology:** general health (nutrition, common disease and prevention)

2. **General environmental issues:** deforestation, managing natural resource pollution, water and carbon cycle, etc

3. **Basic ecology:** habitat, interaction, food chain and food web, population, ecosystem, life cycle, etc

4. **Physiology:** photosynthesis and respiration.

5. **Current technological developments:** GMOs, biotech, biofuel, satellites, etc.

cosystem, life cycle, etc

6. **Species names:** Very common or endangered species names.



7. **Human anatomy and functions:** skeleton and movement, olfactory system, auditory system, mouth, eyes, circulatory, digestive system, skin, respiratory system) and its disease and problems.
8. **Classifying organisms:** based on their food, anatomy, systematics, reproduction system and its habitat.
9. **Mechanics:** motion of objects, static fluid and gas
10. **Solar system:** members of solar system, rotation of earth and moon, earth and moon eclipses
11. **Planet Earth:** structure, surface, process of earth formation, water cycle, renewable resources, climate, seasons, gravitation, wind
12. **Electricity and magnetism:** applications, models
13. **Matter:** properties, phase transformation (solid, liquid, gas) physical, chemical, and biological transformation)
14. **Thermal properties:** temperature, thermometer, energy, conduction, convection, radiation
15. **Light:** property, vision, colour
16. **Forces:** change in shape, magnetic, gravitation, frictional forces
17. **Energy and energy changes:** kinetic, potential, heat, sound, renewable, nergy conversion