



## **COMPETITION GUIDELINE**

### **NATIONAL SCIENCE CHALLENGE (NSC) 2024**

#### **1.0 BACKGROUND**

The National Science Challenge (NSC) competition is a national-level science competition specifically for secondary school students. The main objective of this competition is to cultivate interest among students throughout Malaysia in the fields of Science, Technology, Engineering, and Mathematics (STEM). The NSC competition also aims to foster interest in technology and innovation, as well as train students in the communication of science.

Since 1999, NSC has evolved from a national science quiz program into a premier science competition in Malaysia that provides high-level challenges to secondary school students. Additionally, NSC challenges students' minds in various STEM subjects and provides them with the opportunity to receive direct guidance from young scientists from the Young Scientists Network-ASM (YSN-ASM).

#### **2.0 OBJECTIVE**

The main objectives of the NSC competition are:

- To develop and nurture critical thinking, reasoning, research, collaboration, and creative skills among school students through engagement in Science, Technology, Engineering, and Mathematics (STEM).
- To foster students' interest in pursuing careers in STEM fields to meet the nation's needs.
- To provide students with the opportunity to showcase their scientific knowledge and skills.



### 3.0 NSC 2024 THEME

- English: **Digital Horizons: Pioneering Innovation and Sustainable Solutions in the Era of Digital Transformation**
- Malay: **“Memacu Era Transformasi Digital: Merintis Inovasi dan Penyelesaian Mampan”**

### 4.0 COMPETITION FORMAT

Levels	Date	Details
<b>Registration</b>	1 April – 31 May 2024	Registration for the competition is conducted online through the website <a href="http://www.nsc.my">www.nsc.my</a> , where each team consists of <b>three (3) students aged between 13-16 years old (Form 1 - Form 4) and one (1) Mentor teacher.</b>
<b>Preliminary</b>	18 – 30 June 2024	The individual quiz will be conducted online at <a href="http://www.nsc.my">www.nsc.my</a> according to zones that will be determined later. This quiz will be conducted bilingually (in Malay and English), and the questions will cover the syllabus from Form 1 to Form 4.
<b>State</b>	22 – 25 July 2024	Involving the <b>top 80 teams</b> selected from 13 states and 3 Federal Territories [ <b>five (5) teams from each state or Federal Territory</b> ] to compete at the State Level. Each team will be tested with a "Science Paradigm Pitch" which assesses students' knowledge of science and communication skills.
<b>Semi-final</b>	17 – 21 September 2024	The <b>top 20 teams</b> from the state level will compete at this level, where students will participate in a <b>week-long physical STEM CAMP activity</b> . This camp will include science workshops, various practical activities, as well as industry lectures based on the theme of NSC for this year.
<b>Final</b>	24 September 2024	The <b>top 5 teams</b> will compete for the YAB Prime Minister's Round Trophy and will be tested through <b>two (2) main components: the Science Quiz and the Prototype Presentation</b> related to the NSC 2024 theme.



## 1) REGISTRATION

- i. Participation in NSC is open to **Malaysian citizens (holders of MYKAD ONLY) from Form 1 to Form 4 (aged between 13 to 16 years old in the year of participation)** from national, private, and international secondary schools.
- ii. Registration for NSC 2024 is open from **1 April 2024 to 31 May 2024**.
- iii. Mentors Teachers need to register their teams on the website [www.nsc.my](http://www.nsc.my).
- iv. Mentors Teachers are required to enter all participant and school details into the system.
  - a. If the school is not listed in the system, the mentor teacher must enter the full name of the school.
- v. **Each team must consist of 3 students and 1 Mentor teacher.**
  - a. 1 Mentor teacher can register more than 1 team with no limit on the number of teams per Mentor teacher.
  - b. Mentor teachers and Students must be from the same school. Registration through tuition teachers is not allowed unless the teacher and students are from the same school.
  - c. There is no limit on the number of teams per school.
  - d. No registration fee is charged.
- vi. For each completed team registration, each participant will be given an individual ID for the Preliminary Level.
- vii. All information can be accessed by Mentor teachers through their respective NSC accounts. Students can connect with their Mentor teachers to obtain all information such as individual ID, Group ID, Password, certificates, etc.

## 2) PRELIMINARY LEVEL- ONLINE QUIZ

The Preliminary Level will be held from **18 June 2024 to 30 Jun 2024** (conducted online according to zones to be announced later). A trial session will be conducted a few days before the actual date of the Preliminary Level for participants to familiarize themselves with the quiz platform. All participants will be given a participation certificate. The certificate can be downloaded from [www.nsc.my](http://www.nsc.my) after the conclusion of the Preliminary level.

### A. QUESTION FORMAT

- i. The quiz consists of random questions covering topics such as Biology, Chemistry, Physics, and Mathematics.
- ii. All participants are given only **one (1) hour** to answer all questions.
- iii. Participants may choose to answer the quiz in either Malay or English only.
- iv. All easy-level questions are based on the syllabus from Form 1 to Form 4, while Higher Order Thinking Skills (HOTS) questions are based on the syllabus from Form 3 and Form.

### B. COMPETITION PROCEDURE

#### i. Before the competition:

- a. The Mentor teacher must provide each participant with their individual ID and password (available in the Manage Teams section of the Mentor teacher portal). This information is advised to be shared privately to prevent participants from logging into other accounts.



## ii. During the competition:

- a. All participants must log in to the NSC website ([www.nsc.my](http://www.nsc.my)) using their individual ID and password to answer the quiz.
- b. The Online Quiz should be taken at a suitable location with Internet access during the designated time from **7 a.m. to 7 p.m.** on the allocated day according to the zone distribution.
- c. It is advisable for all participants not to answer questions at the last minute to avoid any system errors during that period.
- d. All participants must answer the quiz individually.

## C. SELECTION CRITERIA

- a. The overall score of each participant is calculated cumulatively within one team.
- b. The time taken during the quiz will be considered in the event of two teams having the same overall score.
- c. 80 teams will be selected from **13 states and 3 Federal Territories (five teams from each state/Federal Territory)** to compete at the State Level.
- d. The states and Federal Territories mentioned are Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Perlis, Pulau Pinang, Sabah, Sarawak, Selangor, Terengganu, WP Kuala Lumpur, WP Labuan, and WP Putrajaya.
- e. The top five (5) teams with the highest overall scores from each state will advance to the next stage, the State Level.

## D. PARTICIPATION CERTIFICATE

- a. All participants will be awarded a participation certificate after completing the quiz. The certificate can be downloaded from the main page of the Mentor teacher at [www.nsc.my](http://www.nsc.my).
- b. Teachers and students are advised to check the names and identification numbers listed on the certificate.
- c. Only students who complete the quiz will receive a participation certificate. Students who do not complete the quiz will not receive a participation certificate and will be considered as not participating in the competition.

## 3) STATE LEVEL

- i. The State Level of NSC 2024 will be held on **22 July 2024 to 25 July 2024**. Each team will be tested with a "Science Paradigm Pitch" that assesses students' scientific knowledge and communication skills (conducted online according to sessions to be announced later).
  - a. The "Science Paradigm Pitch" refers to a pitch where each team presents an idea or concept to explain a question/scenario (Each team will receive different questions/scenarios) and it will be presented to a panel of judges for assessment.
  - b. Each team will be evaluated based on their understanding of the pitch content, basic STEM knowledge, and opinions on relevant STI issues related to the given question/scenario.
  - c. Each team will be given a time of 3-5 minutes (subject to change) where each student is required to participate in giving their pitch.



- d. The judges will select the **top 20 teams** (1 from each state and 4 "wildcard" teams) to compete in the Semi-Final Level.
- ii. Further briefing on the guidelines for this level will be conducted for all participants via the Zoom platform, and details will be provided in an email to the designated Mentor teachers. Therefore, Mentor teachers are advised to stay alert to their respective emails.
- iii. All participants will be given participation certificates after the session ends. The certificates can be downloaded from the main page of the Mentor teacher on [www.nsc.my](http://www.nsc.my).

#### **4) SEMI-FINAL LEVEL**

- i. The Semi-Final Level of NSC 2024 will be held on **17 September 2024 to 21 September 2024**.
- ii. In this stage, students will participate in a week-long physical STEMCAMP activity comprising science workshops, various practical activities, and industry lectures based on the theme of NSC for this year.
- iii. Each team will receive guidance from members of the Young Scientists Network - ASM (YSN-ASM) as academic mentors in the development of their prototypes.
- iv. The judges will select **five (5) teams** with the highest scores to advance to the **Grand Final Level**.
- v. Further briefing on the guidelines for this level will be conducted for all participants via the Zoom platform, and details will be provided in an email to the involved Mentor teachers. Therefore, Mentor teachers are advised to stay alert to their respective emails.
- vi. All participants will be given participation certificates after the session ends.

#### **5) GRAND FINAL LEVEL**

- i. **Five (5) teams** will compete in the Grand Final Level **physically** for the Prime Minister's Round Trophy. The Grand Final Level will take place on **24 September 2024** (Date subject to change).
- ii. The Grand Final Level competition comprises:
  - a. **Science Quiz**  
Consists of multiple categories answered individually and as a group.
  - b. **Prototype Presentation**  
Each team is required to present their project to the judges during this session. Teams will have time for presentation and a question-and-answer session.
- iii. All participants will be awarded achievement certificates based on their rankings and will be sent to the participants competing at this level.

*Note: Instructions and guidelines for each level are subject to change. Any changes will be communicated to all participants and mentor teachers via official email, Telegram channels, and NSC social media. Please visit the website <http://www.nsc.my> for further information.*

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