



NATIONAL SCIENCE CHALLENGE

THEME: CARING FOR NATURE THROUGH SCIENCE

1.0 NATIONAL SCIENCE CHALLENGE (NSC)

The National Science Challenge (NSC) is one of the nation's premier science competitions for high school students. This one-of-a-kind competition has sparked interest in Science, Technology, Engineering & Mathematics (STEM), innovation and science communication among students across Malaysia. For the past 39 years, NSC has evolved from merely a science quiz to becoming one of the premier science competitions in the nation, providing rigorous, standards-based challenges to high school students. NSC challenges participants in all STEM subjects and exposes them to first-hand mentoring by members of the Young Scientists Network-ASM (YSN-ASM). In 2020, the competition recorded 1,031 teams of three students each from all over the country.

2.0 OBJECTIVES

The NSC competition aims to **nurture, promote, and enhance** interest in science, technology, engineering, and mathematics (STEM) subjects among school students. The competition also instils the younger generation's interest in pursuing STEM-related careers.

3.0 COMPETITION FORMAT

Level	Date	Info
Preliminary Level	16 - 18 July 2021	Online quiz at www.nsc.my
State Level	24 July - 22 August 2021	The top five (5) teams from all states and federal territories will compete in a video competition.
Semi Final	1 – 25 September 2021	The top 20 Semi-finalists will compete in a virtual Semi-Final competition.
Grand Finale	9 October 2021	The five (5) Grand finalists will compete to win the Prime Minister Challenge's trophy.

Note: Please go to www.nsc.my for the latest 2021 NSC Timeline.

I. REGISTRATION

- a. One team consists of **three (3) students and one (1) Mentor teacher**.
- b. All NSC participants must be Malaysian citizens, 13 to 16 years old at the year of application (Form 1 – 4) from public (MOE or MARA), private or international schools. Home-schooled students are also welcomed to apply.
- c. Registration to the 2021 NSC will be open from **24 May to 10 July 2021**.
- d. Mentor teachers will register their participating teams at www.nsc.my.
- e. Mentor teachers are required to key in the participant's and school's information into the system. If their school is not listed in the system, mentor teachers may key in the **full name** of their school. For home-schooled teams, the mentor should type in "Home School" followed by the mentor's name (e.g. Home School_Ali) and choose their respective state.
- f. **Mentor teachers may register as many teams as they want to.**
- g. There is **no limit to how many teams a school can register for the 2021 NSC**.
- h. Each team will be imposed a registration fee of **RM 50.00**, to be paid directly to ASM's Bank Account. Details of ASM's Bank Account are as follows:

Bank's name : Bank Islam Malaysia Berhad
Account's name : Akademi Sains Malaysia
Account's number : 14014010114792

- i. Upon successful completion of the registration, each participant will be given an ID for the Preliminary Round. The IDs can be accessed by mentor teachers in their respective NSC accounts. All participants are required to create their password upon logging in for the first time.

- j. Mentor teachers are required to upload the proof of payment in the system. The receipts will be available for download from the system once the organiser has verified the payment.

II. PRELIMINARY ROUND - ONLINE QUIZ

- a. The easiest questions are based on Form 1 to Form 4 syllabi, while the High Order Thinking Skills (HOTS) questions will be based on Form 3 and Form 4 syllabi.
- b. The organiser will contact the Mentor teachers regarding the rules and regulations of the online quiz.
- c. During the competition:
 - i. Mentor teachers will be given a link to access the Sasbadi Online Quiz Platform one hour before the competition starts.
 - ii. Mentor teachers are required to gather their participants in a computer lab **after school hours** (as instructed by MOE) to answer the online quiz. All students are to answer the quiz **individually**. Mentor teachers must ensure the conduct of students in the session to avoid cheating.
 - iii. Participants are required to log in using their individual ID and password to answer the quiz. Questions in the quiz are arranged randomly.
- d. **Eighty teams** will be selected from **16 states and federal territories** (comprising five teams per state/federal territory) to compete in the State Level competition.
- e. The states and federal territories are: Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Perlis, Pulau Pinang, Sabah, Sarawak, Selangor, Terengganu, WP Kuala Lumpur, WP Labuan, and WP Putrajaya.
- f. The five teams from each state/federal territory with the highest overall score during the online quiz will also be declared state/territory winners.
- g. The winning teams will be selected based on the following criteria:
 - i. The total score of each member in the team.
 - ii. Total time spent for the team to complete the quiz. This criterion will also act as a tie-breaker if two or more team has the same score.
- h. All participants will be provided with a certificate of participation. The certificate can be downloaded at www.nsc.my after the Preliminary Round.

III. STATE LEVEL

NOTE: More detailed instructions and guidelines will be given in an attachment with MOE's letter, which will also be available at www.nsc.my. The guidelines below serve as general instruction, subject to the final version.

The theme for **NSC 2021** is **"Caring for Nature Through Science"**. The teams need to create a video presentation based on the given topic.

a) Video Competition

- a. A briefing on the State Level guidelines will be given via Zoom.
- b. Teams will be given a topic with which they will prepare a video presentation. They will be given two weeks to complete and submit the video.

- c. Teams may use any software to produce the video. Teams are required to submit the video in .MP4 format to nsc@akademisains.gov.my.
- d. The submitted videos will be uploaded to ASM's YouTube channel.
- e. The judges will evaluate videos according to their scoring rubric.
- f. All participants will be provided with a certificate of participation. The certificate can be downloaded at www.nsc.my after the State Level round.

b) Interview Session

- a. Once the videos have been evaluated, all 80 teams will undergo an interview with the judges via Zoom meeting.
- b. The judges will evaluate the team's comprehension based on the video they have submitted, basic STEM knowledge, and their opinions on STI issues.
- g. The teams will be reviewed according to video content and presentation (50%) and performance during the interview session (50%).
- h. The judges will finalise the top 20 teams that will enter the Semi-Final round.
- i. Below is the division of stated by region for the interview:

Region	States
Northern Region	Perlis, Kedah, Pulau Pinang, Perak
East Coast Region	Kelantan, Terengganu, Pahang
Central Region	Selangor, WP Kuala Lumpur, WP Putrajaya
Southern Region	Negeri Sembilan, Melaka, Johor
East Malaysia Region	Sabah, Sarawak, WP Labuan

IV. SEMI-FINAL

NOTE: More detailed instructions and guidelines will be given in an attachment with MOE's letter, which will also be available at www.nsc.my. The guidelines below serve as general instruction, subject to the final version.

- a. A briefing will be given on the Semi-Final guidelines via Zoom.
- b. A Virtual Semi-Final will be participated by **20 teams**.
- c. The online modules will be conducted via Zoom meeting.
- d. The Judges will select the **top five (5) teams** for the **Grand Finale**, which will be endorsed by ASM's NSC Steering Committee.
- e. Each Grand Finalist will be mentored by the YSN-ASM, who will act as consultants and assist them in preparing their prototypes.
- f. The National level certificate of participation will be emailed to all participants.

V. GRAND FINALE

NOTE: More detailed instructions and guidelines will be given in an attachment with MOE's letter, which will also be available at www.nsc.my. The guidelines below serve as general instruction, subject to the final version.

- a. The Grand Finale competition will be participated by the top five (5) teams.
- b. The format of the Grand Finale of 2021 NSC will be virtual.
- c. The elements of the Virtual Grand Finale are as follows:
 - i. **Quiz**
 - ii. **Prototype Presentation**
- d. The National level certificate of Achievement will be emailed to all participants.

Note: Please go to www.nsc.my for the latest 2021 NSC guidelines.