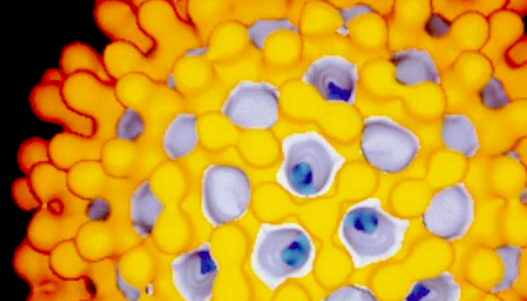




Measles: rash at 4 days

Wikipedia, CDC/NIP/Barbara Rice - Public Domain



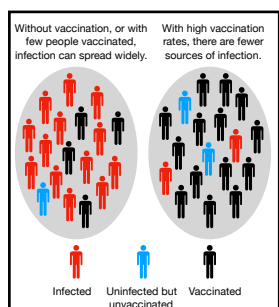
Newspaper article on failure to vaccinate
The Sunday Times: June 8th 2025



Right leg deformity due to Polio
RIIB Image Library (CC BY-SA 2.0)



Diphtheria Immunisation Scheme 1941
Ministry of Information Photo Division - Public Domain



Competition sponsored by:

The Return of Deadly Diseases

Aim of the 39th MiSAC Annual Competition

To increase the understanding among families of the importance of vaccinating children against infectious diseases.

Curriculum area: Health

Closing date: 19th March 2027

Background

Britain prides itself in having developed programmes for combatting childhood diseases such as measles, diphtheria and whooping cough caused by infection from pathogenic microbes. Only a few generations ago, these killed many children before they reached adulthood. Such programmes became possible as doctors began to understand the causes and spread of these diseases.

Our immune systems protect us from infectious diseases but this immunity takes many years to develop *naturally*. Medical researchers developed **vaccines** that provide protection against certain illnesses. These bring about a quicker build-up of resistance to an infection in the community, thus preventing the disease from spreading rapidly and causing an epidemic. Such elevated levels of resistance to a disease, resulting in a high percentage of the population becoming immune, reduces the spread of the pathogen and protects vulnerable individuals. This is referred to as **herd immunity**.

Today, the UK has a vaccination programme to immunise children against several infectious diseases. However, the incidence of diseases such as measles and whooping cough has *increased*, whilst the number of children vaccinated against them has *fallen* - a trend attributed, in part, to vaccine hesitancy.

Object of the competition

Produce a leaflet for a doctor's surgery, with two A4 facing pages, to explain to parents how important it is for their children and the community to utilise the complete vaccine programme offered to them.

In it you should:

- Name the childhood diseases which are increasing in the UK and account for their reduced successful vaccination rate.
- Describe two returning diseases, explaining their possible effects on the individual and the community.
- Explain, in a language everyone can understand, the importance of mass vaccination to both the individual and the community.
- Suggest new ways in which vaccination of children can be made easier and more accessible for parents.
- Use images, graphs and illustrations to enhance your leaflet.

Format of entry

- Your entry must be produced on paper as hard copy on one A3 sheet (or two A4 sheets secured side by side with adhesive tape) using only one side of the paper.
- You may produce your entry either by hand or computer.
- The entry may be submitted by an individual or a group of not more than four students.

How to produce an effective leaflet

Effective leaflets are lively, informative, attractive and well-designed in order to make an immediate and visual impact on their intended audience. This can be achieved by using photographs, diagrams, drawings, in addition to data and sources of further information.

Prizes for UK schools

Schools:	1st £250	2nd £125	3rd £70
Students:	1st £100	2nd £50	3rd £25

A certificate will be awarded to each student submitting an entry of scientific merit. The results, winning entries and a report of the competition will be published on the MiSAC website competition pages at www.misac.org.uk.

Top tips

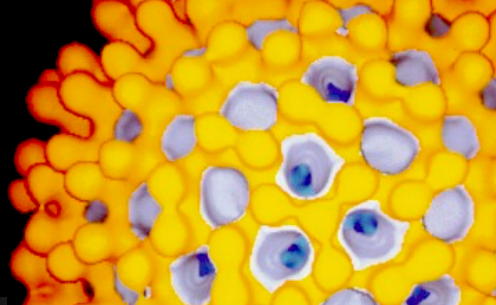
- Always use your own words because plagiarism will be penalised.
- Naming microbes correctly: the first scientific name is the genus name, starting with an upper-case letter, followed by the species name starting with a lower-case letter, eg, *Escherichia coli*. This can be abbreviated to *E. coli* after its first use. Note that the name is written in an *italic* font if printed or underlined if it is hand-written.
- For data and other material used to illustrate your entry, you must provide information about their source.

Use of Artificial Intelligence (AI)

- Your leaflet should demonstrate your own understanding, creativity and communication skills.
- AI tools (such as ChatGPT, Copilot, Gemini or image-generation software) may be used **only to support your research or help you understand scientific concepts**. They must **not** be used to write the text of your leaflet, generate the final design, or create the images that form the main content of your entry.
- Any use of AI must be clearly acknowledged, including the name of the tool(s) and a brief description of how they were used.
- Entries that appear to rely substantially on AI-generated text, images or design, or where the use of AI has not been declared, may be investigated. Entrants may be asked to explain or discuss aspects of their work. If an entrant cannot demonstrate that the work is substantially their own, the entry may be disqualified.
- AI may be used to help you learn about a topic, but it must not produce the content of your entry.

Website articles

<https://vaccineknowledge.org.uk/home>
<https://www.immunology.org/public-information/vaccine-resources/childhood-vaccines/guide-childhood-vaccinations>
<https://www.nhs.uk/vaccinations/>
<https://www.gov.uk/government/publications/routine-childhood-immunisation-schedule/routine-childhood-immunisations-from-1-july-2025-babies-born-from-1-july-2024>
<https://kidshealth.org/en/parents/fact-myth-immunizations.html>
<https://www.sciencedirect.com/science/article/abs/pii/S0749379715003141>
<https://www.nuffieldtrust.org.uk/resource/vaccination-coverage-for-children-and-mothers-1>
<https://bjgp.org/content/73/732/295>
<https://www.nuffieldbioethics.org/news-blog/the-rise-of-vaccine-hesitancy/>
<https://www.theguardian.com/society/2018/jul/18/how-disgraced-anti-vaxxer-andrew-wakefield-was-embraced-by-trumps-america>



Rules

- Only entries that conform to the competition rules and show scientific merit will be considered; note the requirements and consider the suggestions given on the front page.
- Account will be taken of originality, presentation and effectiveness in communicating with the intended audience.
- Evidence of plagiarism, such as downloading text directly from web sites without modification and interpretation, may result in disqualification. (MiSAC recommends only reputable sites for research; see www.open.ac.uk/webguide for tips on using the internet.)
- Judges are looking for students' **own** ideas. They can use AI to help learn about a topic, but it must not produce the content of their entry.
- Where AI tools are used to assist in the production of student work, they must be acknowledged in the topic areas researched.
- Failing to declare the use of AI is considered as malpractice and entries may be penalised.
- It is the responsibility of teachers to ensure that entries submitted to MiSAC comply with the regulations on AI.
- Judging will be based on two entry groups: Key Stage 3 (S1/2; PS4) and Key Stage 4 (S3/4; PS5).
- Each entry must be submitted on paper, on **one A3 sheet** (or two A4 sheets taped together) using one side of the paper only, and may be produced either by hand or by computer.
- Entries may be created either by individuals or groups of no more than 4 students.
- A maximum of 10 entries per school in each entry group is permitted.
- Each entry must be clearly labelled on the back with the name and address of the school, the teacher's name, the full name of each contributing student and the entry group, i.e. Key Stage 3, S1/2 or PS4 and Key Stage 4, S3/4 or PS5.
- Entries cannot be returned and may be used for promotional purposes by MiSAC.

Closing date: 19th March 2027

Entry Form

Separate entry forms for KS3 (S1/2, PS4) and KS4 (S3/4, PS5) may be downloaded from the competition page of the MiSAC website:

www.misac.org.uk/competition.html



The two forms will allow you to **type in** school contact details & students' names, particularly for group entries, and **then** print out one or both for submission with the competition entries.

Check list for teachers

Please tick before submitting entries

- Students' name/s on entry? []
- School name on entry? []
- School address on entry? []
- Teacher's name/Email on entry? []
- Key stage on entry? []
- AI info completed? []
- Entry form completed? []

Sponsor of the 2027 competition



Don't forget to keep a copy of the rules and entry form!

** Personal data for use only by MiSAC in connection with the MiSAC Annual Competition*

Address for entries: MiSAC Competition, c/o NCBE, University of Reading, 2 Earley Gate, Whiteknights Road, Reading RG6 6AU