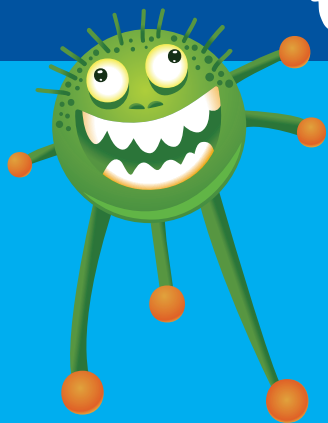


Promoting microbiology in schools and colleges since 1969

How microbes work for us



Microbes are amazing! They are able to survive and grow everywhere from the most extreme environments, including

arctic lakes, to our bodies both inside and out! They are successful because they use diverse ways of benefiting from their surroundings, including interactions with other microbes, and from the occurrence of spontaneous mutations.

However, life for microbes is not always plain-sailing; obstacles often get in the way - such as all sorts of defence mechanisms, inhibitory effects of various substances, competition from other microbes, and having to rely on being spread successfully from place to place.

The activities of microbes influence our everyday life in many ways such as affecting health, disease, food, agriculture and pollution, bringing either benefit or harm.

Objective of the competition

Produce a popular news-story about ways in which microbes work to our advantage. The story should present good science in a lively, fun and entertaining way, along the lines of internet news media sites such as BuzzFeed (www.buzzfeed.com/news). In such sites each news story is introduced in a way that is intended to grab your attention. This is achieved with a headline, a few lines of text and, often, an illustration (drawing or photograph). The reader then clicks on or scrolls down to the full story.

Format of entries

The entry must be submitted on one side only of one A3 sheet (or two A4 sheets attached side-by-side) as hard copy and may be produced either by hand or computer.

On the first half of the sheet, you are required to produce an introduction as outlined previously to each of **four** news stories about ways in which microbes work for us, chosen from the following list:

- food or drink production
- health care
- recycling or waste treatment
- biofuels
- soil fertility
- a topic of your choice or a second aspect of one of the above.

You might consider arranging the four introductions in two rows of two to give the appearance of how they might look on a smart phone, tablet or other computer.

On the other half of the sheet, continue the news-story for **one** of the four chosen topics by focusing on one species of microbe which has an important role in that activity or process.

There are many different ways of writing a news-story depending on its purpose and intended readership. It is up to you to choose an appropriate one. Some ideas to consider are: 'Things you didn't know about this microbe', 'A day in the life of this microbe', and 'Pictures that show how this microbe works for us'. Examples of BuzzFeed science news stories are provided for guidance (page 2). But whatever approach you take, it must include the scientific name of the microbe and what type of microbe it

is (e.g. bacterium, fungus, virus, etc.), and comments on its role. Add any extra information which you think your readers might find interesting such as the significance of the activity or process, the relationship between the microbe and the environment in which it lives, e.g. what the microbe feeds on, problems it might encounter and interactions with other microbes.

News-stories like this need to be lively and entertaining but also must be factual and informative. You will be judged on scientific content so make sure you include plenty! Use photographs, drawings, statistics or other data to enhance the content.

Plagiarism will be penalised, so use your own words. Use only reputable web sites for your research because information available online has not necessarily been checked for accuracy.

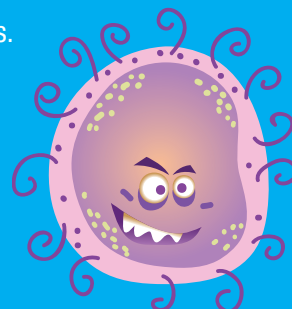
Prizes

School	Student
1st £250	1st £100
2nd £125	2nd £50
3rd £70	3rd £25

A certificate will be awarded to each student submitting an entry of scientific merit. Each school will also receive some microbiological teaching materials.

The results will be published on www.misac.org.uk where winning entries can be viewed.

Closing date:
29 February 2016



Aim of the competition

To improve understanding of how microbes work for us by interacting with their surroundings and, sometimes, with each other.

Rules

1. Judging will be based on two entry groups: Key Stage 3 (S1/2) and Key Stage 4 (S3/4).
2. Each entry must be submitted on paper, on one A3 sheet (or two A4 sheets attached side-by-side), using one side of the paper only, and may be produced either by hand or computer.
3. Entries may be created either by individuals or small groups of no more than 4 students.
4. A maximum of 10 entries per school in each entry group is permitted.
5. Account will be taken of originality, presentation and effectiveness in communicating with the intended audience.
6. Only entries that conform to the competition rules and show scientific merit will be considered; take note of the requirements and suggestions provided.
7. Evidence of plagiarism, such as downloading text, diagrams and photographs directly from web sites without modification and interpretation, will result in disqualification. Recommend only reputable sites for research; for tips see www.open.ac.uk/websiteguide.
8. Each entry must be clearly labelled on the back with the name and address of the school, teacher's name, full name of each contributing student and the entry group Key Stage 3 (S1/2) or Key Stage 4 (S3/4).
9. Entries cannot be returned and may be used for promotional purposes by MiSAC and the competition sponsor.
10. Closing date for entries: 29 February 2016.



Entry form*

Name of teacher:		Name and address of school:	
Tel no:			
Email			
KS3, S1/2 entry group		KS4, S3/4 entry group	
Name(s) of students		Name(s) of students	
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
8		8	
9		9	
10		10	

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

How did you learn of the competition? Please tick ☐ MiSAC web site ☐ Mailing: personal/to school ☐ ASE Conference ☐ Other _____

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

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



Sponsored by the
Society for Applied Microbiology

Examples of Buzzfeed science news stories

<http://www.buzzfeed.com/danvergano/new-human-species>

<http://www.buzzfeed.com/tomchivers/how-come-no-one-mentioned-evolution-by-natural-selection#.uiWRq1N1KE>

<http://www.buzzfeed.com/alexkasprak/shower-thoughts-answered-with-science>