

Can disease be prevented?

A Cambridge Global Perspectives® Challenge

Skill focus: Research	Stage: 9	Age: 13–14	Topic: Disease and health
------------------------------	-----------------	-------------------	----------------------------------

Learning objectives	Success criteria
Research	
Construct a range of relevant research questions and identify the most appropriate one to follow up	<p>Learners can generate a number of research questions that have a very clear focus and for which data can be collected, analysed, and discussed</p> <p>Learners decide on one question that requires both investigation and evaluation, and which will lead the research to address an idea or area of interest</p>
Identify and accurately reference a wide range of print and multimedia sources and use them to locate relevant information and answer research questions	<p>Learners are focused and engaged in the use of a variety of sources</p> <p>Learners are constantly questioning and debating the relevance and accuracy of their sources amongst themselves, asking for teacher support when necessary</p> <p>Learners demonstrate concise note-taking from their sources and, when prompted, are able to summarise the main points they have gleaned from each source</p> <p>Learners can create their own bibliography to show which sources they have used for research purposes</p>
Collaboration	
The team assign roles and tasks with an appropriate rationale and respond flexibly when required to help each other achieve a shared outcome	<p>Learners can work together effectively and allocate roles and tasks that need to be completed to achieve a shared outcome.</p> <p>Learners can respond to time pressures or unexpected issues by reallocating roles and tasks.</p>

Challenge summary


By the end of this Challenge, learners will have developed their critical research skills, including identifying the most appropriate sources of information for their group research task. Learners will have the opportunity to work as part of a research team. They will assess the success of the team and identify targets for improvement, and create a Top Tips for Teamwork poster.

Activities (sequence)

What human conditions are caused by microorganisms?

Discuss 'micro-' meaning very small (and 'macro-' meaning very big). Identify what learners know about microorganisms from science – in particular that there are many microorganisms and only some of them cause disease.

Learners, in pairs, discuss which human diseases are caused by microorganisms, then feed back. See Teacher Resource – Can disease be prevented T9.1 for background information and suggested websites.




Encourage learners to develop questions to consider for research. Prompt learners to identify questions that are related to infectious disease. This could relate to prevention (e.g. Why do bed nets help stop malaria? How can food poisoning be prevented?), distribution (e.g. Why is Zika virus not found everywhere?), treatment (e.g. Why should antibiotics not be used for sore throats?) or vaccination (e.g. How do governments decide vaccines children should get?)

Record a list of questions centrally for reference.


Lead a group discussion to identify where learners could go to find answers to these questions. What are the advantages and disadvantages of each of these sources? Are they reliable and how do they know? Elicit guidelines for finding reliable sources (this is provided as Teacher Resource – Can disease be prevented T9.2, but learners may have been introduced to this advice in previous stages).

Research on the prevention of disease



Learners work in groups of about four. Introduce the research project and help learners identify a question to research and the audience who would be interested in the outcomes (for example, research into the preventing disease transmission would be of interest to a health authority and public health organisation).

Help groups discuss and review alternative presentation methods and reasons for making a choice such as availability of resources, preferences of group, formality of presentation, audience, or time.



Agree time available for the research, and preparation of the findings. Groups work together to an action plan and identify roles to achieve this task in the time available (Learner Resource – Can disease be prevented L9.3).

Allow time to assess progress during the research phase. Encourage learners to critically appraise their own contribution to the group task, and that of the group dynamics (Learner Resource – Can disease be prevented L9.4). Learners share targets within their groups and agree how these can be incorporated into the rest of the research time.

Learners save their presentations. Allow some time to share their outcomes, for example as class presentations or learners viewing each other's work digitally, as appropriate, and as time allows.

Allow time for a short feedback discussion based on the presentations focusing on the effectiveness of different presentation styles.

Can we create a 'Top Tips for Teamwork' poster to publish in the Online Learning Area and post in school?



Learners review their targets set during the research task and discuss in their groups which targets were realistic, achievable and helpful to the team and conversely which did not work and why.

Facilitate class discussion to agree which targets are generic and could be a part of a transferable Top Tips for Teamwork poster. Make and display the poster.

Challenge resources

Provided by Cambridge

Teacher Resource – Can disease be prevented T9.1
Teacher Resource – Can disease be prevented T9.2

Learner Resource – Can disease be prevented L9.3
Learner Resource – Can disease be prevented L9.4

Other resources

Resources for research, including internet access
Creative materials / software tools for presentations



Personal



Local



Global

This Global Perspectives Challenge has been designed to be flexible and should be adapted to school requirements and the needs of your learners. Further guidance and support for planning is given in the Teacher Guide.

Copyright © UCLES 2018