

Cambridge Global Perspectives™ Challenge – Stage 9

Skills focus: Research: Can disease be prevented?

Topic: Health and wellbeing

By the end of this Challenge, learners will develop their critical research skills, including identifying the most appropriate sources of information for their group research task. Learners will work as part of a research team and at the start of the Challenge they will create a poster of the ten characteristics of good teamwork (top tips). At the end of the Challenge, learners will revisit their top tips and assess the success of the team and identify targets for improvement.

Learning objectives
Research
9Rs.01 Construct a range of relevant research questions and identify the most appropriate one to follow up.
9Rs.02 Identify and accurately reference a wide range of print and multimedia sources and use them to locate relevant information and answer research questions.
Collaboration
9CI.01 Work positively and sensitively within a team to achieve a shared outcome and improve teamwork, for example by contributing useful ideas, offering solutions to problems, supporting and encouraging other team members to participate and being open to others' ideas.
9CI.02 The team assigns roles and tasks with an appropriate rationale, responding flexibly when required to make adjustments to achieve a shared outcome, and constructively resolves disagreements.
Evaluation
9E.01 Evaluate a range of sources, considering credibility in terms of factors such as the author, purpose, bias and how well they are supported by other sources.
Reflection
9Rf.01 Explain personal contribution to teamwork and relate to own strengths and areas for improvement.
9Rf.02 Relate benefits and challenges of teamwork to personal experience of working together to achieve a shared outcome and identify targets for improvement.

Success criteria

Success criteria help you and your learners know when a learning objective has been achieved. You can find guidance about using success criteria in the Cambridge Lower Secondary Global Perspectives Teacher Guide.

Here are some examples of success criteria:

- Learners generate a number of research questions that have a clear focus and for which data can be collected, analysed and discussed.
- Learners select and justify their choice of one question that requires both investigation and evaluation, and which will lead the research to address an idea or area of interest.
- Learners demonstrate how they are considering the relevance and accuracy of their sources, asking for teacher support when necessary.
- Learners demonstrate concise notetaking from their sources and, when prompted, are able to summarise the main points they have gleaned from each source.
- Learners create their own bibliography to show which sources they have used for research purposes.
- Learners demonstrate how and why they have allocated roles and tasks that need to be completed to achieve a shared outcome.
- Learners respond to time pressures or unexpected issues by reallocating roles and tasks.



Personal



Local



Global

Activities (sequence)

What is teamwork?



Explain to learners that in this Challenge they will research:

- common diseases in their country
- human conditions that are caused by microorganisms
- how diseases can be prevented.

They will also develop the skill of collaboration including how to work together and be an effective team.

Working in groups, ask learners to make a list of benefits and challenges (problems) of working in a team on this research project (e.g. the task can be divided between the team members, team members do not complete their tasks on time). As part of this activity, learners can also identify benefits and problems related to research (e.g. they don't know where to find information).

Groups then identify possible solutions to challenges. For example, what will they do if a team member does not contribute?

Collate all the benefits and challenges of working in a team. The class selects the most important benefits to use as a reference when completing the team research project. At the end of the Challenge learners reflect as a team and as an individual on how well they collaborated on their research project and identify strengths and areas for improvement.

What diseases are most common in your country?



The COVID-19 pandemic and the impact on your country could be a starting point for this activity. COVID-19 has affected the world population. Explain what public health issues are. One example definition is 'a medical issue that affects a significant portion of a specific population'. The World Health Organization and national government websites are a source of information and data.

Allocate groups of learners an age-appropriate source for finding out what diseases and health problems affect their country now or in the past. Alternatively, you can allocate them another country or a specific disease to research.

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 e.g. there are many microorganisms and only some of them cause disease.

In pairs, learners discuss which human diseases are caused by microorganisms, then share their feedback. Examples of causes of diseases that are not infectious include: congenital conditions, inherited conditions, trauma, toxins, degenerative diseases, nutritional deficiencies, auto-immune diseases (including allergies), most cancers, hormone imbalances, and psychogenic diseases (which start with a psychological condition).

Activities (sequence)

Examples of infectious diseases (caused by viruses, bacteria, fungi, parasites and prions) can be found online. Many countries will have their own national websites e.g. in the UK there is the Microbiology Society and the National Institute of Allergy and Infectious Diseases.

Encourage learners to construct a range of relevant research questions. Prompt them to identify questions that are related to infectious disease. They 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?)
- 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? T9.1, but learners may have been introduced to this advice in previous stages).

Can disease be prevented?



Learners work in groups of about four. Help learners identify a question to research and the audience who would be interested in the outcomes (for example, research into 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 the group, formality of presentation, audience, or time.

Agree the time available for the research and preparation of the findings. Learners work together to an action plan and identify roles to achieve this task in the time available (Learner Resource – Can disease be prevented? L9.2).

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? L9.3). 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.

What have we learned?



Learners review their targets set during the research task and discuss in their groups.

- Which targets were realistic, achievable and helpful to the team?
- Which targets did not work and why?

Learners reflect on the benefits and challenges of teamwork and identify targets for improvement.

- What did they do well?
- What would they do differently next time?

Activities (sequence)

- What problems did they have? What did they do?

Learners reflect on their personal contribution to teamwork and identify strengths and areas for improvement.

Challenge resources
Provided by Cambridge
Teacher Resource – Can disease be prevented? T9.1 Learner Resource – Can disease be prevented? L9.2 Learner Resource – Can disease be prevented? L9.3
Other resources
Access to online or printed resources for research Creative materials for presentations

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