



You will have had the experience of having a jab and it isn't a lot of fun is it? But that shot in the arm has saved the lives of millions of people and prevented far more than that from suffering serious illnesses and life changing infections. Along with antibiotics it is probably the most important medical development humans have ever made. Vaccines are so powerful they could help to eradicate some diseases all together. Supporting people in the developing world so that they can benefit from this medical miracle will transform lives and bring hope to millions. Can you make a difference?

VITAL VACCINATIONS!

Research project

Have you ever wondered...how vaccines work to keep you safe from infection?

Imagine you are a writer preparing to write an article for a medical journal. You need to research the history of vaccines and how they work. You also need to find out about the diseases vaccines can be used to protect against here and in the more remote parts of the developing world. There are also serious diseases that vaccines cannot help with. You need to use your research skills to find out:

- The history of the discovery of vaccines
- How they are used to fight diseases all over the world

Some things to think about...

- Where they were first used and who thought of the idea?
- How scientists tested their ideas out?
- Which diseases can be protected against with vaccines
- How do vaccines work?
- What vaccinations you have had
- Why some important diseases, like malaria, cannot be vaccinated against
- What is being done to protect people from diseases that cannot be vaccinated against?

VACCINES ARE COOL!

Practical project

Have you ever wondered...how to keep things cold without using any electricity?

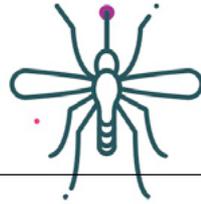
Vaccines need to be kept cool all the time to keep them fresh. Where there is electricity and a fridge that isn't a problem, but in remote parts of the world where electricity isn't available that isn't always the case.

Imagine you are a doctor or nurse working in a vaccination programme in a developing country and you need to find an alternative solution. You need to undertake a practical experiment to:

- Design a cool box that uses ice to keep vaccines below a certain temperature for as long as possible and uses no power
- Decide how you will test it and compare it to other designs to see which is best

Some things you might like to think about...

- The temperature you want to keep the box below
- The insulation you might use
- The amount of ice you can you pack into it
- What conditions your box will need to stand up to
- The volume of 'vaccine' you need to store
- If you use high tech materials or materials that can be more easily sourced in a developing country



SPREAD THE WORD

Communication project

Have you ever wondered...how messages about health and disease reach people who live in remote parts of the world?

The best place to start with health education is with the young. Young people can carry important health messages to friends, families and into their own adult life.

Imagine you are Education Officer working for a charity in a developing country and it is your responsibility to educate the population about illness, disease and vaccination. Bear in mind literacy levels can be quite low in some developing countries. Use your communication skills to:

- Design suitable materials to teach young people about disease transmission
- Include why vaccines are an important thing they need to know about
- Include how to prevent the spread of other diseases, like malaria, that cannot be vaccinated against

Some things to think about...

- A variety of techniques can be used to make key messages clear, simple to remember and accessible
- Sometimes songs, poems plays or cartoons can work better than written materials
- Think big and think small, you want reach as many people as possible
- Fun things are easy to remember even if the messages are serious
- You could try to find out about literacy levels in different parts of the world to judge how to make your materials accessible to everyone

Useful Links

You may find some of the links below useful for your project:

www.unicef.org/wash/index_wes_related.html

Information about common water and sanitation-related diseases

www.un.org/sustainabledevelopment/health/
Information on Global Goal 3 'Health and Well-being'

www.nhs.uk/conditions/vaccinations/pages/the-history-of-vaccination.aspx

The history of vaccines

Health and safety

If you carry out any experiments or practical activities then you will need to put together a risk assessment. To do this you will need to:

1. Find out if any of the substances, equipment or procedures you plan to use are hazardous
2. Assess the risk to yourself and others (which means what could go wrong and how serious that could be, low medium or high)
3. Decide what you need to do to reduce that risk e.g. wearing goggles or other protective equipment and knowing how to deal with any potential accidents

You will need to show your risk assessment to your teacher and get his/her approval before doing any practical activities.



Remember! Judges will be looking for projects that demonstrate good communication skills, show innovation and creativity and that address a real-world problem.

Use the Student Profile form to help structure your project www.crestawards.org