



Parasites: Battle for Survival

National Museum of Scotland: 6 Dec 2019–19 Apr 2020 • Exhibition Gallery 2, Level 3 • Free

Contents

| | |
|---------------------------|---|
| • Introduction | 1 |
| • Visiting the exhibition | 1 |
| • Exhibition content | 2 |
| • Curriculum links | 3 |
| • Follow up resources | 3 |
| • Questions and feedback | 3 |

1. Introduction

Join the battle against five tropical diseases and the parasites that cause them and discover how scientific research taking place in Scotland is leading the way in this field.

Through current research, cutting edge technologies and interactive exhibits, learn more about sneaky parasites. Discover how they are transmitted to humans, how the diseases they cause were discovered, and the ways in which these deadly parasites are fighting back against modern medicine.

Presented in partnership with the University of Dundee, the University of Edinburgh and the University of Glasgow.

2. Visiting the exhibition

(Please ensure each teacher/adult accompanying the group reads this information before entering the exhibition)

- Food and drink is not permitted
- Photography is allowed but no flash photography.
- The exhibition is in Special Exhibition Gallery 2 (SEG2). You will enter and exit via the same door.
- The time slots for visiting the exhibition are on your confirmation email. Please stick to your time slot.
- Parts of the exhibition are quite dimly lit. Please remind pupils to take their time when moving around the space and be mindful of other visitors.
- The exhibition has background music, sound, and moving images throughout.
- Classes of over 20 pupils should be split into smaller groups and, after exploring the first section together, stagger smaller groups across the different sections.

If you or your pupils are unsure of any terms in the exhibition, there is a glossary online at nms.ac.uk/parasitesglossary

3. Exhibition content

The exhibition is split into four different sections. Each section has its own logo and colour.

For each section we have suggested some ‘Don’t miss’ activities for school groups, and have provided you with some general starter questions to ask pupils.

Build a Parasite

In the first section of the exhibition pupils should pick up a *Build a Parasite* card.

In each of the four sections there is a stamp station, where pupils can choose characteristics that will build their parasite. In the final part of the exhibition pupils can find out which parasite they have chosen. You can also do this activity online after your visit nms.ac.uk/buildaparasite

Section 1: Meet our Parasites



This section introduces the topic. Pupils are introduced to the five different parasites featured in this exhibition.

These five parasites cause:

- Malaria
- Schistosomiasis
- Guinea worm disease
- Leishmaniasis
- Sleeping sickness

Don’t miss:

- Pick up a *Build a Parasite* card and find the first stamp.
- Try out the *Symptom Checker* interactive.

Ask your pupils:

- What do we mean by the terms ‘parasite’ and ‘vector’?
- Have you heard of any of our parasites before?

Section 2: Discovered!



This section touches on the history of the diseases and explains why they have often been neglected. Pupils can hear from scientists, primarily from Scotland, that are leading the fight against each of our highlighted parasites.

The second part of this section looks at how the body’s immune system responds to these parasites and how the parasites fight back.

Don’t miss:

- The gorilla poo that helped to make a discovery.
- Try the *Under attack* game to see if you can survive as a malaria parasite.

Ask your pupils:

- Looking at the public health examples in the exhibition, what is the best way to get the message across?
- What public health campaigns have you seen elsewhere? How do they compare?

Section 3: In the Lab



This section looks at the process of designing drugs to tackle these parasites. Pupils discover the rules of working in a lab, and some of the equipment that is used.

This section also looks at the drug discovery programme for tropical diseases. Pupils can explore how to design drugs to tackle these diseases.

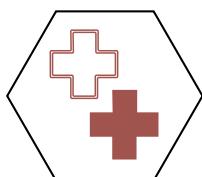
Don’t miss:

- Test out your skills at the microscope table.
- Explore some of the equipment that is used in a lab.

Ask your pupils:

- Why do you think these rules exist in the lab?
- What did you see down the microscope? Why would scientists be interested in looking at what you found?

Section 4: Battle for Survival



This section looks at the fight against these diseases in the field.

Pupils can explore how diseases are detected, treated and avoided by local people, and will find out about public health campaigns.

There is a final *Build a Parasite* station in this section where pupils find out which parasite they have created. However, for groups, we recommend that you do this after your visit online at nms.ac.uk/buildaparasite

Don't miss:

- Seeing the most useful straw in the world!
- A bright blue trap for tsetse flies!

Ask your pupils:

- What dose of medicine would you need to treat schistosomiasis if you had it? Try out the dosage pole.
- Can you find out how school children are tested for schistosomiasis?

4. Curriculum links

The exhibition has many links for pupils of different ages. For full details visit nms.ac.uk/SchoolsParasites. In particular pupils may want to look at lab equipment, find out about the immune system, and learn about topical science being carried out by Scottish researchers. Information is given through hands on experiences, such as using microscopes, games, objects and text panels.

5. Follow up resources

A range of resources, including images and films, on the exhibition are available online at nms.ac.uk/fiveparasites

Visit our *Enquire* gallery on Level 5 to see more examples of microscopes, and objects about the ebola outbreak in Africa.

We have a range of sessions for schools addressing some of the issues raised in this exhibition including a number of teachers' events. More information is available online at nms.ac.uk/SchoolsParasites

6. Questions and feedback

If you have any questions, comments or feedback, please get in touch with us. We'd also love to see any work your class produces after visiting the exhibition.

E-mail: schools@nms.ac.uk

Facebook: /NationalMuseumsScotland

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#ParasitesExhibition