**For teachers / educators**

**Lead-in**

* Depending on your learners, use the text below to create an information share gap-fill, a running dictation or a reading comprehension activity:

*Insects have been around far longer than Homo sapiens yet their importance is often overlooked because they are so miniscule and easy to forget about. However, their significance is huge and they are vital for supporting life, on land as well as below water.*

*Insects have diversified through 400 million years of the Earth’s changeable climate, but insects are responding to recent climate changes in temperature and precipitation in ways that should be of concern, for example, many species are facing extinction. Investigations indicate that climate change impacts on insects have the potential to be considerable - perhaps we should consider them the ‘canary in the coal mine’. What could this mean for Homo sapiens?*

*But why are insects so important? Insects are the most diverse lineage of multicellular organisms on the planet. Their jobs in maintaining ecosystems are extensive and involve: soil engineers, pollinators, pest controllers, decomposers and providers. It is often said that, without insects, our species would not be able to survive.*

* Discuss with your learners how insects might be relevant in the following Sustainable Development Goals (SDGs) that were adopted by all United Nations Member States in 2015. These goals are to be actioned by 2030 so let’s get learning, understanding and acting!

*“How do you think insects play a role in these Global Goals for Sustainable development (SDG)?”*

* *SDG 6: Ensure availability and sustainable management of water and sanitation for all.*
* *SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.*
* *SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss*
* Watch some clips of ‘David Attenborough life in the undergrowth BBC Earth’ on YouTube to get your learners interested and excited about insects.

The Fire Warriors this month will learn about insects found in different habitats. They will practice skills in data gathering and presentation.

Page 2 is for making notes and page 3, when complete, is to be uploaded to [www.stemgingereducation.com](http://www.stemgingereducation.com) or emailed to [info@stemgingereducation.com](mailto:info@stemgingereducation.com)

**For learners**

The Fire Warriors this month will look at insects in different habitats. You will gather interesting data, interpret them and present them in graphs and tables. The final presentation can be a mini book, a poster or a spoken presentation to the group.

* Choose a habitat (grassland / desert / mountain / temperate forest / freshwater / ocean / rainforest / urban): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Learn about different habitats here: <https://kids.nationalgeographic.com/nature/habitats>.)

* Find out this information:
* What insects live in your chosen habitat?
* How prolific are they? (You will gather this information qualitatively, i.e. by conducting surveys, questionnaires or looking online, and responses are expressed in words).

**Gathering and recording data**

Decide how you are going to gather your data about numbers of insects in your chosen habitat (this can be your home or it can be one of the habitats as described by the *National Geographic*), and you can gather data by speaking to people or by looking at trustworthy websites.

Think about who you are going to ask questions to and what you are going to ask, e.g. *What insects do you see? How often do you see insects? Where do you see them?*

An example way of recording your qualitative data:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Flies** | **Spiders** | **Ants** |
| **Indoors** | Every day | Regularly | Rarely |
| **Outdoors** | Every day | Rarely | Every day |

Then write a summary and draw conclusions from your findings.

**Final project to be emailed to:**[***info@stemgingereducation.com***](mailto:info@stemgingereducation.com)

Group name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The habitat we looked at is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The insects we found there are: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Data gathered:**

**Conclusions:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_