

## Lesson 1: What is climate change and what impact is it having on our planet?

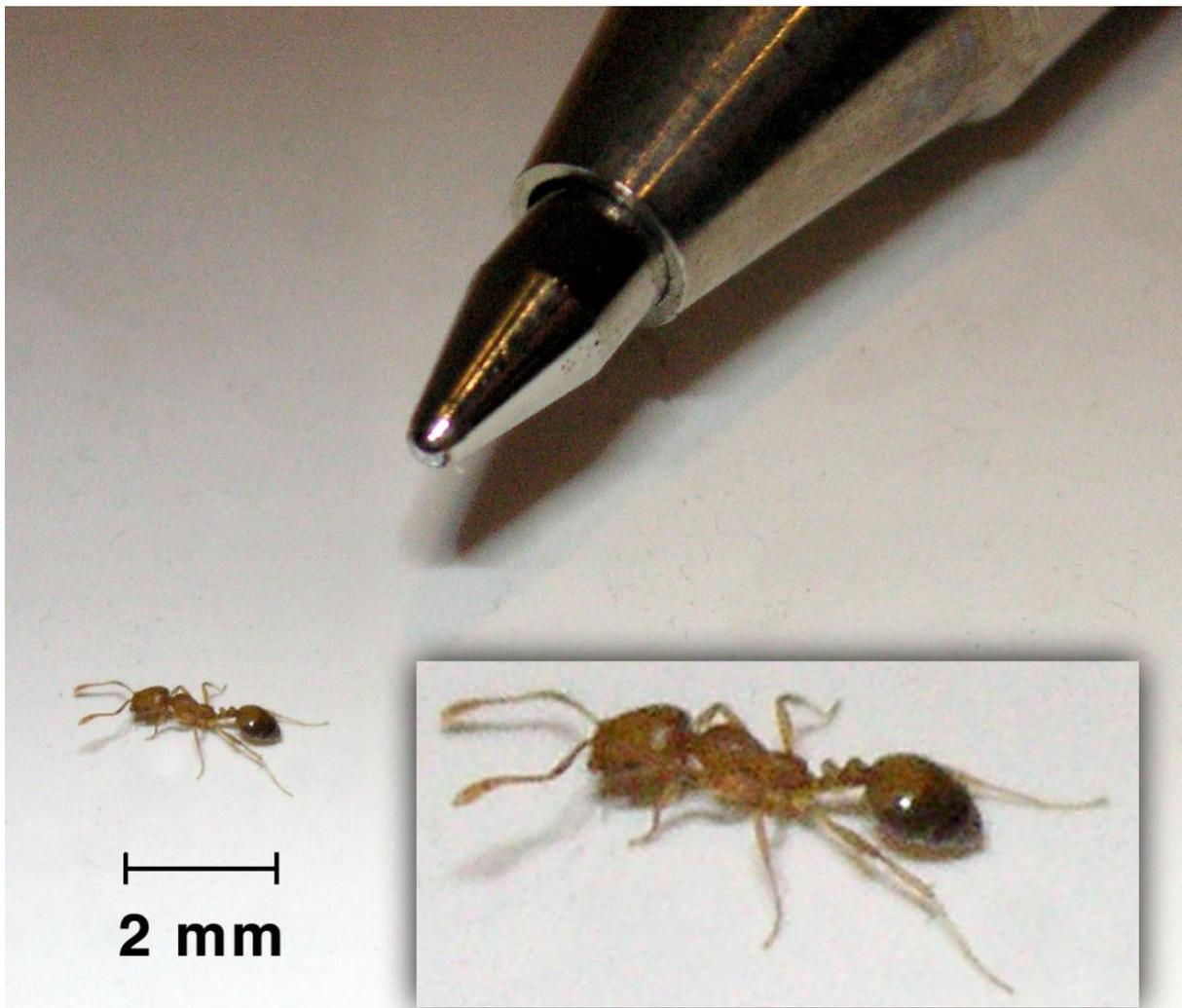
### Exercise 1: Looking after our planet for us and our children

*Teacher notes: 15 minutes*

You may live to be 100 years old but compared to the age of our planet we are only here for a short amount of time. Our planet is millions and millions of years old and everything we see around us has taken all this time to evolve. Our most important role is look after our planet so that our children have a world to live in and can pass the relay baton of caring for the planet on to their children.

Imagine you are standing at the start of a 100m running track. You have command of a colony of ants and have ordered them to line up along the track from head to toe in a single column right up to the finishing line. You will need 50,000 ants to reach the end.

Now imagine that each one of these ants represents a period of years in time. The start line is the beginning of the world and the finish line is where we are now. So, if you stand with your toes on the finish line and look down at the very last ant. The very tip of their antenna in the scale of our example would represent your lifetime.





### What do you know of the United Nations and their work?

The United Nations is a group of countries from all over the world that formed an organisation at the end of World War 2 with the aim of caring better for our planet together. At the beginning, their work was about reducing conflict. It was soon realised that working together as 'global citizens' could help with other challenges faced by the world too.

Six years ago (in 2015), the United Nations launched its 17 Sustainable Development Goals – designed to coordinate work across countries to improve the world for us, our children and their children. Introduce the 17 Goals briefly to them using slide 1 of the UN SDG cards resource.

Our work with The Earth Museum focuses on 4 of these goals particularly: Peace, Justice and Strong Institutions, Reduced Inequalities, Responsible Consumption, Climate Action.

Cut out the cards, shuffle them and lay them face down on the table. Invite 4 learners to take a card in turn and introduce their goal.

Discuss which of these goals might relate to the World War 1 sessions we have undertaken over the last 4 weeks, and why. (Mostly Peace, Justice and Strong Institutions. Also potentially Reduced Inequalities and Responsible Consumption).

### **Exercise 2: What do we know about climate change and its impact on the planet?**

*Teacher notes: 20 minutes*

We will look at in more detail at each of these goals during the course. Over the next 3 weeks we are going to start looking at the Climate Action goal.

Discuss what we already know as a class about climate change and its global impact.

In the summer of 2019-2020, Australia suffered a significant global warming event as low rainfall combined with heat and wind from the interior of its vast continent to spark terrifying forest fires across the south-east of the country.

Using the Climate Change Explorer, search for the Wollemi Pine story and find out what happened. Watch the short film link in the story about the state of climate change on our planet (*it was made in 2015 and already scientific thinking has advanced further, but it is a good introduction*).

New terms from the film to introduce: consumption; exponentially; Anthropocene (impact of humans dominating planet); intergovernmental



### **Exercise 3: Discover more examples of the impact of climate change on the world's environment**

*Teacher notes: 20 minutes*

In groups of 2-3, use the Climate Change Explorer to select an example of how climate change is impacting our planet. Choose from one of:

The Mountain Gorilla

Xerces Blue Butterfly

Penguins (you may need to zoom out to see the whole of Antarctica to find this one!)

Polar bears

Spend a few minutes as a class sharing what you have discovered.

### **Exercise 4: Discover a little of the impact on the world's human population**

*Teacher notes: 20 minutes*

Naturally, people are part of this natural world being affected with devastating social consequences. Lives, homes and livelihoods are being lost. As a class we are going to look at one example: the Solomon Islands in the Pacific Ocean.

Search for the Solomon Islands on the Climate Change Explorer so we can see where they are in the world.

Now watch these two short films about what is happening in this part of the world because of climate change:

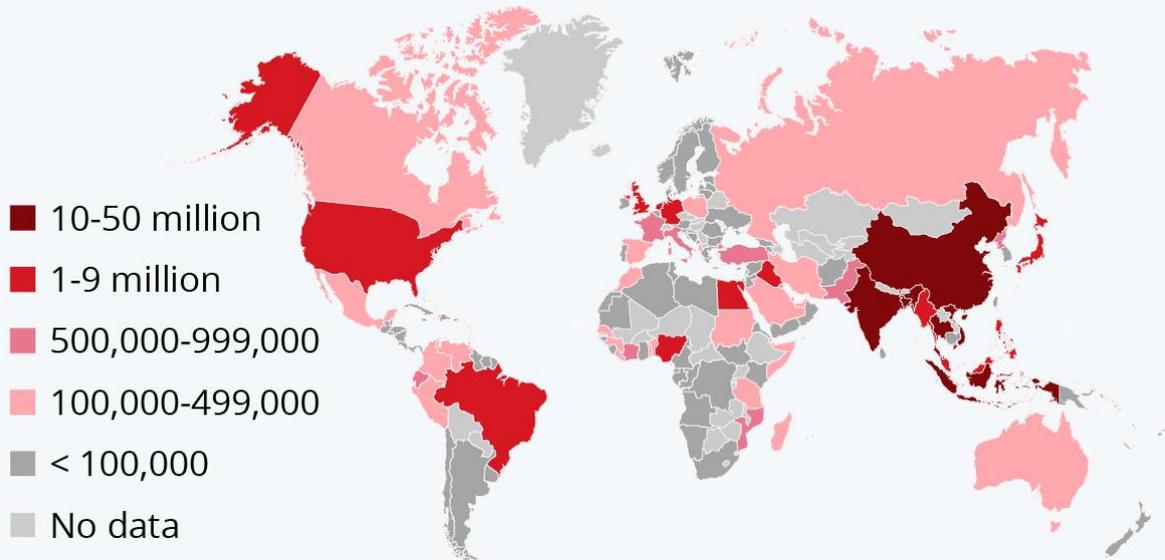
<https://www.youtube.com/watch?v=69fW2bJJzk>

<https://www.youtube.com/watch?v=jL20SXjwEXo>

Now take a look at this map (below) to see where else in the world most people will be affected by rising sea levels. It's not just far away in the Pacific – in the UK up to 9m people may be affected – and don't forget Gosport is a coastal town, so this will affect you too!

# Where Most People Are Affected by Rising Sea Levels

Number of people per country living on land expected to be under sea level by 2100\*



\* assuming a rise in sea levels of 50-70 cm (2° C temperature increase/not taking into account ice sheet instability)

Source: Scott A. Kulp & Benjamin H. Strauss: New elevation data triple estimates of global vulnerability to sea-level rise and coastal flooding, Nature Communications

