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| **Ocean’s Deep** Year: 8  | Lesson Sequence: G |
| Lesson Title: **March of the Polar bears.** | Suggested number of lessons:2 |
| Learning Objective: * To appreciate and describe the impact of climate change on sea ice and the consequence this has for wildlife.

Which can I reach?All - will analyse maps and time data to decide if any changes have happened.Most – will understand the effect of global warming on a particular species.Some – will be able to consider the impact of human activity on the environment. |
| Key Words: Longitude Latitude Greenhouse gases Trend Climate |
| **Learning Activities** | **Resources:** |  |
| **Starter:** All students need to discuss the pictures. What do they think the lesson might be about and why? Students should then write the key words into their glossary with definitions | Powerpoint slide 2 | Differentiation:Data available for different abilities/ time allowances. |
| **Main Activity part 1**: Students will need to access computers in order to complete a fact sheet or powerpoint presentation on polar bears. The task has been differentiated for time as the power point will take longer to complete. **Main Activity part 2**:Students then need to look at why Polar bears are endangered. They will complete two task which look at real satellite data about the artic region and track individual bears. The first task is differentiated so that students working towards/at level only complete the colour maps not temperature line graphs.Students should work in groups to analyse the data sets and make conclusions about whether there is evidence for climate change happening in the region.Students then need to go back to the computers to track an individual polar bear. They need to make a note of the distance it walks every month for at least a year and the condition of the sea ice at the time. Higher groups may want to look at a couple of bears to see if there is any correlation. Again groups should discuss their behaviour and how it is closely link to climate i.e. hibernation length. | Polar bear fact file **OR** powerpointCOMPUTERSHard copies of the relevant lesson powerpoint slides which provide instructionsCOMPUTERS |  |
| **Plenary:** Students share facts they have learnt |  |

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