



climateprediction.net results so far

Introduction

This activity introduces students to the results of a more complex model of the climate, one that is used to produce day-to-day weather forecasts as well as climate forecasts. It explains briefly how the model is tested in three stages and used to predict climate sensitivity. Students could work through the sheet, discussing the answers in pairs before a class discussion of the main points covered.

This activity is available from the climateprediction.net web site in the sections offering resources for Science for Public Understanding:

<http://climateprediction.net/content/science-public-understanding>

Two files are available: teachers' notes (pdf) and a worksheet for students (pdf).



How Science Works

Da A dynamic model is a set of proposed inter-relationships between key variables in a situation. Dynamic models can be constructed and implemented on a computer. They are widely used in science to make predictions and to test explanations in complex situations.

Db A dynamic model incorporates hypotheses about the important variables in a situation, and the way they inter-relate. The outputs from the model will depend on the assumptions built into it and the data used to set the initial conditions. Data derived from a computer model are therefore less trustworthy than data that have been measured directly.

De Dynamic models also differ in their sensitivity to small changes in the nature of the inter-relationships proposed. So we cannot ever be entirely certain of the initial conditions, predictions from a sensitive model should be treated with more caution than those from a more stable model.

Df One way to test a dynamic model that predicts the future behaviour of a system is to see how accurately it would have predicted the current state of the system, if provided with past data on it.

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