

Chapter review

- 1 Cheaper to use
Easier to use
They enable predictions to be made
Help improve the understanding of our world
Help to see how certain changes in variables will affect the outcomes
Help simplify complex situations

2

| Advantages | Disadvantages |
|---|--|
| They are relatively quick and easy to produce | Simplification of a real-world situation may cause errors as the model is too simplistic |
| They help enable predictions to be made | The model may work only in certain conditions |

- 3 The answer could be, but is not limited to: 'Climate data can sometimes be too large to investigate thoroughly as it can be too time consuming, too expensive and logistically difficult to investigate. As a result, mathematical modelling can be used to simplify the model, but still give meaningful results.'
- 4
 1. Some assumptions need to be made to ensure the model is manageable. These include that birth and death rates.
 2. Plan a mathematical model which will include mathematical models and diagrams
 3. Use this model to predict the population over a period of years
 4. Include and collect new data that match the conditions of the predicted values.