

Concept maps are a way to help pupils make sense of complexity and marshal their ideas. They emphasise connections between concepts and encourage deeper thinking. They help pupils to give more coherent explanations of geographical patterns and processes. They are visual organizers of the information which some pupils find easier to understand. Concept maps provide a higher level of challenge for pupils than spider diagrams because they focus on the *relationships* between the ideas, and require explanations.

The approach usually followed in the classroom is for pupils to work in groups. They are given cards with the ideas or “concepts” on each. The groups discussed these and agree how they should be laid out on sugar paper with links drawn between them. It is important that they label each link showing why it was made.

Concept maps can be used at the start of a topic to tease out existing knowledge or in the later stages to synthesise what is understood. They can be used at all levels, including A Level. Concept mapping is a particularly useful tool for essay planning. They can be a powerful tool for diagnostic assessment because the teacher can interpret their level of understanding through the quantity and quality of the links that are drawn.

Reading for trainee teacher

Lambert, D. and Balderstone, D. (2010) *Learning to teach geography in the secondary school: A Companion to School Experience*. 2nd edition. London: Routledge ([GA shop](#)) pp 47-51

Roberts, M. (2003) *Learning through enquiry: Making sense of geography in the key stage 3 classroom*. Sheffield: Geographical Association ([GA shop](#)) pp 71-2

These articles give good examples of how concept maps were used in contexts such as National Parks and ecosystems.

[Using concept mapping in geography teaching](#) Teaching Geography July 1996. This was written when the strategy was new to geography and gives lots of practical advice for use in the classroom. It also contains a particularly helpful list of instructions for pupils.

[Concept mapping in geography](#) Teaching Geography July 2002 also has practical advice, but extends the activity to pupils’ extending writing.

Discussion with your trainee teacher

Look at Activity 2.3 *Conceptual learning in geography* on page 51 of Lambert and Balderstone (2010). Carry out parts B and C of this activity, to explore concept maps and plan an activity to use in a lesson.

Consider these hints on managing concept mapping (Source: based on Nicholls, A. and Kinninment, D (2001)

- A good introduction is important to launch the activity and ensure that pupils understand the meanings of the concepts on the cards.

- Demonstrate how the links should be made with one pair of concepts and the link explained
- You need to watch for pupils who say there is a link, but do not explain it.
- Some groups make all the links and when they have a web, try to write in the explanations. This can get very complicated.
- Sometimes they put in a link and then cannot work out why – get them to start with the most obvious ones first.
- Some pupils do not realize that a concept can be used more than once.
- A blank card is helpful if they think of another concept to include.
- A good question for the debriefing is how the use of a concept map can help them give better explanations.
- A good starting sentence for follow-up writing can be “The reasons why xx happened are not as simple as they appear because
- The number of links does not always relate to “importance” – qualitative differences must be considered too.

Pupils need to use this technique several times before they really begin to use it effectively to analyse links between concepts. Ruth Ward notes,

‘when the Concept mapping activity was repeated for the economic geography topic on ‘Factors affecting farming types’ the resulting work was much more detailed because students had a better idea of how to set out and develop the work.’ [Teaching Geography October 2004]

References

Nicholls A and Kinniment D, (2001) *More Thinking through Geography*. Cambridge: Chris Kington Publishing

Roberts, M. (2013) *Geography through Enquiry: An approach to teaching and learning in the secondary school*. Geographical Association. Sheffield: Geographical Association. Chapter 16 explains how concept maps are relevant to geographical enquiry.

[Developing Holistic Thinking](#) Teaching Geography Autumn 2007 which outlines how mind maps were used with A Level pupils to help them to see connectivity in geography.

[Mind friendly learning in geography](#) Teaching Geography October 2004

Case studies of concept mapping

Nicholls’ examples are: earthquakes, coal mining

[Teaching Geography Autumn 2007](#) page 141 in studying sustainability pupils draw concept maps of ‘environment’ ‘social’ and ‘economic’

[Teaching Geography Autumn 2007](#) page 114 mind maps on coasts and for “geography”. (NB referred to as a ‘mind map’ but it is a concept map.)

[Concept mapping in geography](#) (2002) page 127 Case study National Parks Y10, Tropical rainforests Y9