

## Thinking Object: Changing the lens on a primary Science unit



Use the descriptions of the units of work as a discussion point on the transition from 20th century to 21st century learning.

<b>A primary science unit through a C20th Lens</b>	<b>A primary science unit: transitioning to a C21st Lens</b>
<p><b>Topic: Endangered species</b></p> <p>The unit of work begins with the class reading an article or story or watching a video about an endangered species. This is followed by an extended period of mainly independent work. It concludes with the students' work being displayed on the classroom walls.</p> <p>The main task in this unit of work is for the students to produce posters about an endangered species, describing what it looks like, its behaviour, habitat, distribution etc. They explain why it is endangered and what is being done to save it.</p> <p>It is intended that the students will:</p> <ul style="list-style-type: none"><li>• Gain knowledge of some of the world's endangered species of plants and/or animals;</li><li>• Be able to describe some of the impacts humans have on the environment;</li><li>• Retrieve information from a variety of sources;</li><li>• Present information visually.</li></ul>	<p><b>Topic: Inter-connectedness</b></p> <p>The unit of work begins with the class being exposed to a range of text types (including audio visual) about an endangered species. Questions are asked about which texts captured students' interest most and why.</p> <p>This is followed, as in the previous view, by an extended period of time where students find out information about a particular endangered species and why it is endangered. The difference is that this work is complemented with explicit teaching of skills. For example students learn about how they might judge the reliability of information they find. It also differs in that students are asked to choose the method they will use to present the information they find out. They need to be able to justify why they chose one particular text form over another.</p> <p>When the "presentations" are complete, they are then used as a resource for the next step of the unit of work, rather than becoming an end in themselves. The class uses the presentations to construct a table that shows the factors that can endanger different species. (As this is being done there is a brief discussion about the benefits of using tables or charts to summarise data.) The class uses the table to look at similarities and differences between the species.</p> <p>The class is now asked to brainstorm everything that would be affected if any of these species became extinct. (The purpose of this is to promote systems level thinking.)</p> <p>To conclude, the class talks about their own community and brainstorms positive and negative impacts of people in a completely different context from that of endangered species. This could then move into a social studies unit.</p>

<p><b>Commentary:</b></p> <p>In this unit of work, the focus is on developing knowledge about an aspect of science. It is also intended that students develop skills in accessing information but this is largely implicit. The purpose of the initial reading or viewing of a video is to “engage” the students, i.e. capture their interest. There is a large component of independent work but the task is set by the teacher. Although the finished products are displayed on the classroom walls, time is not factored in for students to view and talk about each others’ work.</p>	<p><b>Commentary:</b></p> <p>In this unit of work, the focus is still on endangered species, but as a vehicle for developing a much bigger concept of inter-connectedness. The focus starts with science but the concept is then transferred to a new context. There is also explicit teaching of skills and students are made aware of different text types and asked to evaluate the effectiveness of each before deciding how best to present the information they find out. The intention is to develop students’ ability to think both critically and creatively. The students’ work is used to develop ideas in the latter part of the unit so it has an authentic purpose.</p>
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