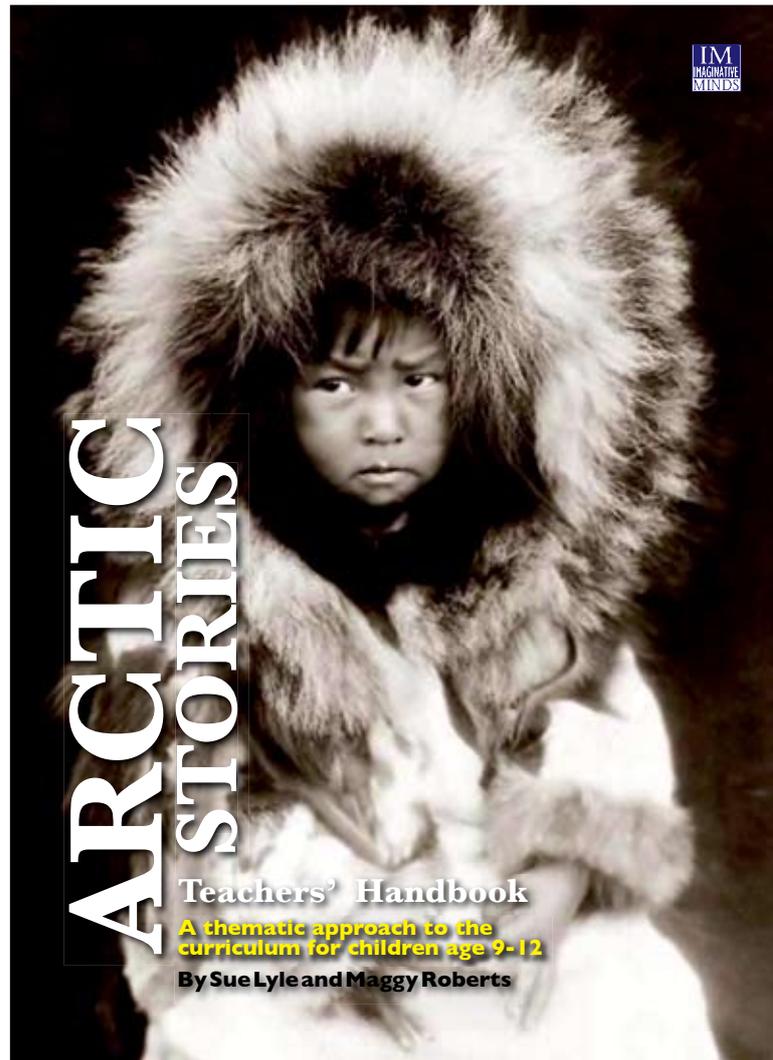


**Sue Lyle** discusses the principles that she argues underpin the successful development of critical thinking skills for children. Using an example from her teaching pack, 'Arctic Stories' (2008), she illustrates how to apply these principles during the planning process. Her cross-curriculum project plan 'Ocean Environments' featured in this edition also uses these principles.



## Planning classroom activities for **Critical Thinking**

**C**ritical thinking is now widely regarded as essential if we are to prepare children for their adult lives. Over almost four decades of involvement in education I have identified some key principles that I believe underpin the successful development of critical thinking. In this article I will list these principles and illustrate how I use them when planning classroom activities.

1. Critical thinking is best achieved when learners have knowledge and understanding of a topic.
2. Critical thinking is best developed in relation with others – it is a collaborative process.
3. Critical thinking is motivated when there is a strong affective response to the content of the curriculum. Emotion is essential to reasoning.
4. Critical thinking skills are promoted through collaborative exploration of controversial issues.
5. Reasoning is best developed through consideration of matters of moral and social importance so learners can apply critical thinking to real-life issues.
6. Critical thinking should help learners develop self-understanding. This means our pupils must be asked to consider what they believe and explore why they believe it.
7. Critical thinking is developed in relation with others

through hearing, thinking, and talking about issues that are critical to our lives or the lives of other human beings.

- 8.** The best critical thinking comes from the things children are interested in, or even better, passionate about.

### Principles in Practice

To illustrate these principles I am using a case study of Whaling taken from the teaching pack, 'Arctic Stories'.

An important consideration when planning teaching to promote critical thinking is principle 1:

**1. Critical thinking is best achieved when learners have knowledge and understanding of a topic.**

We, therefore, have to consider what will be the content around which we want our students to develop critical thinking. The story of whaling begins by taking the children back in time to the 19th century where I introduce them to a family of Inuit whose lives are completely dependent on whales. The substantial concepts of interdependence and self-sufficiency are explored as children find out about the way of life of the Inuit and their relationship to whales. In parallel to this the children learn about the life of a 19th century Victorian sailor who went to the Arctic on a whaling ship. The two narratives help the children to see the world through the eyes of the Inuit and the Victorian whaler. Through imaginative role-play the children are invited to speculate on what might have happened if the two groups met. Knowledge and understanding of the Arctic way of life and problems facing the poor in Victorian Britain is thus developed through story and imaginative engagement.

Having established the content, the next concern is the pedagogical tools used to present the content to the children. I ensure that all the activities are designed to promote collaborative learning in line with principle 2:

**2. Critical thinking is best developed in relation with others – it is a collaborative process.**

Initial activities are designed to help the children develop a principled understanding of the lives of the 19th century Inuit people who depended on the whale for their very existence. Working in small groups, children are asked to examine a set of illustrations depicting scenes from the lives of the people; they are invited to work out what they can about their way of life from the pictures. In addition, generate questions they would like to ask to further increase their knowledge and understanding of the topic. In this way their prior knowledge is activated and gaps in their understanding is identified as areas for investigation. Following this, the teacher shares a story with the children. This provides information that can be linked to the illustrations and may also give answers to some of the questions the children have raised. They are encouraged to use the internet to research their unanswered questions.

In order to make the knowledge their own, the children work with the illustrations and the story to create a storybook about the Inuit whaling people for younger children. This process is designed to support the development of higher order literacy skills as an integral part of the learning process.

The next activity is designed to give the children an understanding of why men in Victorian times joined the whaling ships, and to find out what life was like aboard. Through listening to a CD of the oral diary of a Victorian seaman, the children learn of the circumstances that drove him to take his job – to save his wife and children from the workhouse. The diary tells the dramatic story of the voyage to the Arctic and documents a whale hunt to give the children a good understanding of what life was like for the sailors on board the whaling ships. This focus on developing knowledge of the Inuit and the whaling ships through dramatic narrative is designed to fulfill principle 3:

**3. Critical thinking is best inspired when there is a strong affective response to the content of the curriculum. Emotion is essential to reasoning.**

Having set the scene by establishing the perspectives of the two main protagonists in the coming conflict, the children are asked to imagine the whaling ship has been stranded in the Arctic over the winter (this often happened) and that the sailor who wrote the diary meets an Inuit. Together the children develop role-plays of the conversations they think the two groups would have. The children are invited to consider what they would do if they had been a Victorian



man facing the prospect of separation from his wife and family, and was forced to choose between whaling and the workhouse. Children role-playing the Inuit try to use reason to make him change his mind and see that commercial whaling is destroying the indigenous peoples' way of life and threatening the whales. Role-play allows the learners to listen and respond to the different voices that express contrasting attitudes and values towards whaling. We have thus established whaling as a controversial issue (principle 4). Reflection afterwards allows them to consider the following questions:

- What arguments did the Victorian whalers advance for whaling?
- What arguments did the Inuit people put forward against whaling?
- Whose arguments were the most convincing?

The creation of a strong argument is the fundamental purpose of critical thinking. What motivates and engages the children to do the hard work involved in critical thinking are the emotions engendered by the stories they have heard to fulfil principle 4:

**4. Critical thinking skills are promoted through collaborative exploration of controversial issues.**

The real-life stories provide the affective connection for the children, which in turn promotes the emotional engagement necessary for strong arguments to emerge. This is essential, as in my experience the skills of reasoning are impossible without engaging the affective as well as the cognitive.

Having established the sources of conflict in the 19th century, a new voice is introduced in the form of a Time Traveller. The 'Time Traveller's Story' brings a 21st century voice to the discussion. This voice gives historical information about the trade in whales and the impact this had on the people and animals from the 19th century to the present day, and provides further information about the relationship between the whalers and the Inuit. The children undertake further role-play to simulate the conversations they believe would have taken place between the Victorian whalers, the Inuit peoples and the Time Traveller. Children are asked to consider what moral arguments would be put forward against whaling today. Their critical thinking skills are thus applied to current, real-life issues in fulfillment of principle 5:

**5. Reasoning is best developed through consideration of matters of moral and social importance so children can apply critical thinking to real-life issues.**

Reflection on the arguments developed by the children 'in role' are then extended as children are asked to consider their own position and that of those who might disagree with them:



- Are the arguments of the Time Traveller strong enough to change current attitudes and behavior towards whales?
- Should we boycott products that contain ingredients from whales?
- Should we support a ban on whaling?
- What arguments could be put forward in favour of whaling?

By exploring such questions we promote children's self-understanding through critical thinking. Socrates asserted that 'the unexamined life is not worth living'; these questions are designed to help children examine their own beliefs and that of others, both now and in the past, as a precursor for forming their own principled opinions. In this way, our learners can increase self-understanding, which I believe should be an essential aspect of education today and essential to moral development. This meets principle 6:

**6. Critical thinking should help our students develop self-understanding. This means our pupils must be asked to consider what they believe and explore why they believe it.**

To culminate this case study of whaling in the Arctic, the teacher facilitates a community of enquiry with the children. This is essential for the children to fulfil principle 7:

**7. Critical thinking is developed in relation with others through hearing, thinking, and talking about issues that are critical to our lives or the lives of other human beings.**

All the activities described thus far draw on collaborative learning approaches in small groups; in the community of enquiry we seek to promote dialogue between the children working as a whole class.

A community of enquiry begins by providing time for all the children to consider what question they would like the class to discuss on the controversial issue of whaling. Each child reflects on what question they would like to discuss before forming pairs to share their thoughts. Following discussion between the pairs they are asked to agree on one question that they would like to discuss in the enquiry. These pairs join another pair to make groups of four. They share their questions and agree on one question between them, which they bring to the whole class. Each group presents their question to the class, before conducting a secret ballot to choose one question for enquiry. Having chosen a question, the children whose question has been selected begin the enquiry, which takes place in a circle.

When planning all the activities for this case study, I have in mind the final enquiry that will bring the work to a conclusion. Careful planning as discussed above, has ensured that all the principles shown to promote critical thinking have been properly taken account of. In my experience the resulting enquiry produces high quality critical thinking from the children. This is because the subject matter chosen for the topic and the manner of its presentation has stimulated the children's interest and emotional engagement. We can therefore meet principle 8:

**8. The best critical thinking comes from the things children are interested in, or even better, passionate about.**

**Critical Thinking +**

A study of the controversial issue of hunting whales started with exploration of the history of whaling, before introducing current questions for the children to explore. Planning, framing and teaching curriculum around controversial issues are an exciting way to promote critical thinking skills. It is a sharp contrast to the kind of decontextualized critical thinking exercises so often recommended in the critical thinking literature. For me, critical thinking is not a set of processes that can be described and taught; it is not just another lesson to be added to an overcrowded curriculum. Critical thinking cannot be taught directly as a set of exercises, for we can not think critically about something we know little about. We have to plan for critical thinking in all curriculum areas, not consider it as a 'bolt on' extra; not a condiment to the main curriculum meal, but the driver of planning.

Critical thinking is the skillful use of reason that can be developed through a consideration of controversial issues. However, it can provide much more than this. When curriculum encourages passionate, personal engagement, it can lead children to bring reason to bear on matters of moral importance that affect their own beliefs and decision making, and in the process they

learn how to develop and assess arguments – the heart of critical thinking.

This approach also delivers on the need for children to learn and remember the content of the curriculum. A curriculum designed using the principles of critical thinking outlined above, will generate genuine interest on the part of students and when they are interested they will learn and remember. It is well documented that much of what our children currently learn in school is promptly forgotten. I have gone back to schools one to four years after they have followed this critical thinking approach to curriculum and found strong memories remaining, not just for facts and information, but deep understanding of the controversies and issues considered. The learners have made connections to things that interest them – in this case the fundamental human condition of conflict over access to and use of the planet's resources, and consideration of how to resolve such conflict and the impact on the people and animals of the planet if such differences are not resolved. I have also learned that nothing is more powerful in laying down memory than experiential learning through dramatic role-play and enquiry, and through structuring understanding by planning meaningful literacy tasks linked to real-life issues. And most of all, remembering is improved when there is a strong affective response to the material being studied.

It follows from this that we should not ask our students to



think critically on issues they know little or nothing about. They will not be able to reason well without adequate information. That is why we must build critical thinking into the content of our curriculum. We need to find or create powerful narratives to harness the affective to the cognitive, and create the conflict between opposing positions on issues that are of interest to all. We need to ensure the tasks we give our pupils are based around collaborative learning; through enquiry give them the chance to explore their own beliefs and subject those beliefs to scrutiny and interrogation.

Any teacher using these activities should be aware that critical thinking is just one type of thinking being developed. The key pedagogical tool used is collaborative learning designed to promote collaborative thinking. All the activities in 'Arctic Stories' are collaborative; they depend on students working together to complete them. The activities they engage in and the artefacts they produce require creative thinking. From the production of a story for younger children and imaginative engagement in listening to story and carrying out role-play, through to the dialogue that takes place during the community of enquiry, the children are engaged in creative thinking. Finally, and underpinning all the other types of thinking, is caring thinking. The consideration of the lives of people and whales asks the children to take a caring approach to decision making – this promotes their moral development. Caring thinking is more than this; children are encouraged to care about the quality of their thinking, to explore their own thoughts and listen to the thoughts of others, to be prepared to change their minds when hearing what others think, and to justify their own ideas with reasons. When we are the recipients of caring thinking, when others listen carefully to our ideas and respond to them, whether they agree or disagree, we grow as individuals. Caring thinking is therefore a moral approach to the classroom and, by extension, to life.

However, critical thinking is not enough. We also need to promote collaborative, creative and caring thinking – the 4Cs necessary to the holistic development of the learners in our care. All four types of thinking have been incorporated in the planning process and are essential to the development of critical thinking.



**Arctic Stories is available from Imaginative Minds. There are three case studies of Arctic life – the first is the historical story of the Inuit who lived interdependently with the reindeer and their encounters with the Hudson Bay Company, the life of the Whaling Inuit as discussed here and the story of the Polar bear as it faces the consequences of global warming.**

**See also 'A River Child' the life of Mohammed of Gashaka in Nigeria and the problems caused by ecological degradation and how this has been overcome.**

### MUST SEE ARTICLES

#### Critical and Creative Thinking

<http://library.teachingtimes.com/articles/in-pursuit-of-meaning.htm>

#### Critical Thinking and Climate Change

<http://library.teachingtimes.com/articles/climate-change.htm>

#### Problems and Solutions: Critical Thinking

[http://eps.schoolspecialty.com/downloads/articles/critical\\_thinking-schneider.pdf](http://eps.schoolspecialty.com/downloads/articles/critical_thinking-schneider.pdf)

#### Role-play and thinking skills

<http://library.teachingtimes.com/articles/puttingthepassionintothink.htm>

#### Social Effects of Collaborative Learning

<http://eprints.ioe.ac.uk/424/1/Tolmie2009Socialeffects.pdf>