STEM WITH ARTS
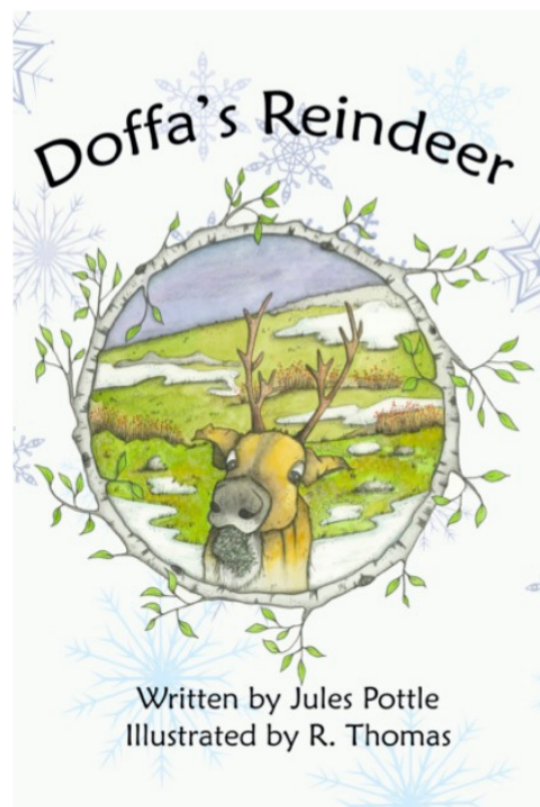
projects combining STEM with other disciplines,
i.e. arts, music, sports, history, etc.

Jules Pottle, Cumnor Primary School, Oxford, UK

Factual Science Through Fictional Stories
Doffa's Reindeer - an **air pollution** story

Doffa's Reindeer is a story for use in primary schools with children aged 5-11. It tells the story of a reindeer herder and his granddaughter. When Doffa gets old, his granddaughter, Ibba, comes to care for him and his reindeer. In the neighbouring town, a new power station is bringing much needed work and electricity to the people. But it also brings something else – air pollution. This affects the lichens upon which the reindeer feed. The story follows the life of Ibba as she learns to adapt in a changing world.

Doffa's Reindeer is the third science picture book published by Jules Pottle and R. Thomas. See also, 'The Molliebird – an evolution story – ' Winner of ASE Book of the Year 2019 and 'Jasper the Spider', which is about classification.

Doffa's Reindeer
Written by Jules Pottle
Illustrated by R. Thomas

This project aims to help children to understand the nature of air pollution – something which they cannot see or touch.

Children are introduced to the topic by way of a story. Research shows that stories with emotional content engage the human brain more deeply than non-fiction texts. Our brains our hard-wired to learn through stories. The story itself involves science and provides moments in which the science can be discovered by the character and thus the reader learns about the science too. The story does not end by solving the problem, but reflects real life, by minimising the air pollution whilst still allowing a comfortable existence for the characters.

This is followed by demonstrations of how particulate matter is formed and how hot gases rise. Finally, the children create particulate matter traps and compare the particulate matter in the air in different places around their school.

**Stories engage children.
The story makes the science memorable:
it is the peg on which we can hang science learning.**