



Name of Ellie Story:	Ellie Experiments with Forces
Target Year Groups:	Key stage 1 (Years 1 & 2), lower Key stage 2 (Years 3 & 4)
Length of Story:	15 pages (1014 words) – Video Length: 6min37s
Key Themes:	Gravity, magnets, setting up experiments
Story Outline:	Mr Tyler teaches Ellie and her friends about forces, designing experiments to test the effects of magnetism and gravity. The story focuses on using the key points of working scientifically (Key stage 1) to understand forces and magnets.
National Curriculum Science Themes Covered:	
• Working Scientifically (Key Stage 1) • Forces and Magnets (Year 3) • Forces (Year 5)	
Specific Objectives Covered (Statutory and Non-Statutory):	
• Key Stage 1 - Asking simple questions and recognising that they can be answered in different ways. • Key Stage 1 - Observing closely, using simple equipment. • Key Stage 1 - Performing simple tests. • Key Stage 1 - Identifying and classifying. • Key Stage 1 - Using their observations and ideas to suggest answers to questions. • Key Stage 1 - Gathering and recording data to help in answering questions. • Year 3 - Notice that some forces need contact between two objects, but magnetic forces can act at a distance. • Year 3 - Describe magnets as having two poles. • Year 3 - Predict whether two magnets will attract or repel each other, depending on which poles are facing. • Year 3 - Pupils should explore the behaviour and everyday uses of different magnets (for example, bar, ring, button and horseshoe). • Year 5 - Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	

Linked ABPI Resources:		
Solids, Liquids and Gases	Format:	Online; Videos; Quiz
	Length:	25 – 30 minutes



	Themes and Objectives Covered:
	• States of Matter (Year 4) ○ Compare and group materials together, according to whether they are solids, liquids or gases. ○ Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). ○ Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. • Properties and Changes of Materials (Year 5) ○ Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. ○ Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. ○ Demonstrate that dissolving, mixing and changes of state are reversible changes. ○ Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible.

Other Complementing Resources:
• BBC Bitesize – Forces (KS2 Science) - https://www.bbc.co.uk/bitesize/topics/znmmn39 • NFU Education – Farm Machine 2040 - https://www.stem.org.uk/resources/library/resource/464888/farm-machine-2040-english