This case study has been provided courtesy of St Thomas’ Primary School, Stockport and was prepared while the school was involved in the ‘Tinker Tailor Robot Pi’ project 2014-2016. Please acknowledge the school if you use this material.

Website: http://www.st-thomas.stockport.sch.uk/
Case Study E: St Thomas C E Primary School, Stockport

Themes: Principle 3 - Signature pedagogy (tinkering), narrative immersion, drama, literacy, science, local community links

St Thomas’s adopted a ‘narrative immersion’ approach and applied this to the development of tinkering and EHoM. ‘Narrative immersion’ focuses on teaching concepts and skills within a story and uses drama to ‘pull’ children into the learning process.

The school incorporated tinkering and EHoM across the curriculum in two Key Stage 2 classes. Teachers selected a text that was rooted in a human context (i.e. relationships, roles, situations, encounters etc.) stimulated by the engineers who had inspired them in TTRP. They sought a narrative that offered the children challenges and dilemmas that embodied the nature of engineering-in-practice which led to the selection of ‘Rosie Revere Engineer’ by Andrea Beaty.

The classroom became the engineering workshop where tinkering tables and lab coats (large white shirts) created visible images to inspire the children. The learning experiences were designed to include different dramatic conventions to encourage the children to connect with the roles, characters, and situations within the text. The theme lasted for six weeks with literacy lessons offering writing, reading, speaking and listening objectives. The science focus was on forces and flight as Rosie struggled to make a flying machine. Key learning opportunities included each child keeping a Tinkering Journal to plan and record their inventing journey.

Children were posed the same problems as Rosie in their Tinkering sessions. Teachers provided resources (junk materials, masking tape, wires, etc.) and children used their tinkering skills to plan, design, build and adapt their designs in order to come up with a solution for Rosie. Following a local community bicycle upcycling workshop that modelled how scrap could be used to produce useful creations, the children held an Invention Fair to present their final inventions to parents, staff and representatives from the upcycling workshop, who then judged their efforts and inventions.

Outcomes for the children’s EHoM included improved team-working, resilience, perseverance, creativity, adapting and self-confidence. They also demonstrated increased ability to apply scientific knowledge to real life experiences.

The teachers found that they put more trust in the children, becoming facilitators of learning rather than demonstrators. Planning became less time consuming and they used more child-led activities that resulted in more impromptu or ‘in the moment’ planning following the children’s interests and enquiries, but with clear curriculum objectives in mind. Teaching became more creative and they enjoyed collaborating with colleagues to take risks and try out new approaches.