

**Overall outcome**  
To present a story about a young girl with a 'good imagination and a pile of junk' to the school community.

**Texts**  
Wendel's Workshop – Chris Riddell   Rosie Revere Engineer – Andrea Beaty  
William Kamkwamba – Zoe Clarke   Energy Island – Allan Drummond  
TurboChaser – David Baddiel   Operation Gadgetman – Malorie Blackman

**Key subjects**  
Science, Computing, Music, History, English, DT

**Narrative hook**  
**People:** Rosie Revere Engineer  
**Place:** Alone in her bedroom hideaway with her engineer's stash  
**Problem:** Her first inventions failed. Does that matter?  
**Possibilities:** Appreciating that what is seen as a failure and a flop is a learning opportunity. The failure is the first step on the journey where designs are adapted to improve them.

**Key vocabulary**  
Genius, prototype, design, devise, concoct, curious, imaginative, explore, experiment, accomplish, triumph, achieve, success, perseverance, determination, dedication, creation, inspiration, Eureka!

**Transformative diverse individuals**  
**Promoting under-represented groups/individuals**  
Thomas Edison – invented the Light bulb  
Lewis Latimer – Invented the light bulb filament.  
Lonnie Johnson – invented the super soaker  
Alexander Graham Bell – invented the telephone  
Alan Turing – inventor of the Enigma Machine  
Stephanie Kwolek – Inventor of Kevlar fabric  
William Kamkwamba – Malawian Inventor.

**Year 4, Term 5 – Inventors and Inventions**  
**(1% Innovation, 99% perspiration)**  
Can mistakes and 'failures' still lead us to success?

**Content:** What will we learn?

**Creativity:** How will we show we understand in multiple ways?

**Coherence:** How does this link to other year groups and core subjects?

**Compassion:** What opportunities are there to show compassion for the environment and each other?

**Community:** Where are the links to local expertise and resources? Visits and visitors

- Have some inventions been world changing?
- What is it like to be an inventor?
- How is electricity generated?
- How can we sort different energy sources?
- The Itaipu Dam – good or bad?
- What are the components of an electrical circuit?
- How do you make a working circuit?
- How can we use sound and light sensors to move the Edison robots?
- What type of code is EdBlock?

- We will enter the Dragons' Den.
- We will explore and investigate electricity and circuits.
- We will find out about inspirational inventors and their inventions.
- We will program Edison robots to follow simple instructions.
- We will consider the pros and cons of a range of inventions.
- We will produce our own advert and compose our own jingle.
- We will be inventors who can explain how things work.

Year 2 – Women who changed the world.  
Year 3 – Victorians and Isambard Kingdom Brunel.  
Year 4 – We will build on previous learning on rainforests and waterfalls in South America by exploring the impact of building hydro-electric power schemes.  
Year 5 – Romans as pioneers.  
Year 6 – Light and Electricity.

We will learn what it takes to follow an idea through to fruition and the qualities needed to be successful.  
We will appreciate the technology we are surrounded by and the positive (or negative) affect these have on our quality of life.  
We will be inspired by the achievements of others and know that EVERYONE has the ability to innovate.  
Through problem solving and teamwork, we will learn about self-belief, perseverance and resilience - you CAN do it!  
We will explore the difference between growth and fixed mindsets and we will support each other on our journeys.

Invite parents in the engineering field to take part in an inspiration session with the children.  
Connect with local, innovative manufacturing companies (Dyson, Mini) for inspiration.