



SCHEME OF WORK

Week 1 - The Wheel

This term, we're going to travel through time, meeting amazing ideas and clever creations that have changed the way we live. Some of these inventions are huge... some are tiny... but every single one has made life better, easier, or more exciting. Now, to start our journey, I've chosen something so simple that you probably see it every single day... but it's also so powerful that it helped humans build cities, explore new lands, and even reach space. Can you guess what it is? That's right, the wheel!



About five and a half thousand years ago, in a place called Mesopotamia, people had a problem... carrying heavy things took forever... Then someone had a brilliant idea: make a round disc that could turn — and suddenly, you could move loads more, loads faster! ...At first, wheels weren't even for transport — they were used to shape clay pots! Later, they were attached to carts, chariots, and wagons, and life was never the same again.

Since those very first stone wheels, people have been getting more and more creative... In ancient times, wheels carried warriors into battle on speedy chariots. In the Middle Ages, they powered giant water wheels to grind grain into flour... Then came the age of steam — wheels racing along railway tracks, bringing people and goods to places they'd never been before. After that, cars, buses, and bikes made wheels part of everyday life... And wheels didn't stop there! Today, they roll across deserts, climb rocky mountains... and even explore other planets!



Fun fact — the earliest known wheel is called the 'Lubjana Marshes Wheel' from Slovenia. And guess what? It's over 5,000 years old... and still in one piece!"... "Now it's your turn, inventors! Your challenge this week is to build something with wheels... It could be a cart, a carriage, a futuristic vehicle... or even a crazy rolling invention that's never been seen before!

**THIS WEEK'S BUILD IS
ANYTHING WITH WHEELS!!**

Week 2 - Telephone

This week we're dialing up something that changed the way people talk forever... Imagine living in a world with no phone calls, no quick chats, no 'I'll be five minutes late!' — only letters that took days. Then one day... ring ring! .. Voices could travel through wires. Magic? Nope — the telephone! Let's call back in time and see how it happened!



Back only a few decades ago..not every home had a phone! and so, the classic red phonebox was born — a true British icon! ...Back in the day, these bright red booths stood proudly on street corners, in villages, and by quiet country roads... If you needed to make a call, you'd step inside, drop in your coins, and hope the person you were calling was home!.. And just imagine — no texting, no social media... you had to actually talk to people!

In the 1870s, lots of inventors were racing to make a working telephone. One of them was Alexander Graham Bell. ...The famous story goes that on March 10th, 1876, Bell spoke into his device: 'Mr. Watson — come here — I want to see you!' And his assistant, Mr. Watson, heard it in the next room — through the wire! Soon, switchboards connected whole towns, then cities, then countries. People could talk across oceans. Later came rotary dials, push-button phones, and eventually mobile phones with no wires at all.



Fun fact!.. Early phone calls were connected by real people called operators who sat at giant switchboards, plugging in cables to join one caller to another. It was like a telephone traffic control room! Your build challenge this week: Make a telephone! Go retro with a chunky rotary phone and curly cord, build a red phone box, or design a future communicator with lights and moving parts.

THIS WEEK'S BUILD IS A TELEPHONE!

Week 3 - Lightbulb

Hello inventors!..and welcome back to our club... "Before the lightbulb, people relied on candles, oil lamps, or just... stumbling around in the dark! ... Candles flickered, oil lamps smoked, and both could be dangerous... The world needed a safer, brighter, and longer-lasting way to light the night — and inventors were determined to make it happen.



Many inventors were working on electric light in the 1800s, but Thomas Edison became the most famous... He didn't invent light itself — obviously — but he made the first long-lasting, practical lightbulb that people could actually use in their homes. ...His design could glow for over 1,200 hours without burning out. That's a lot of bedtime reading

Once the lightbulb took off, the world changed forever... Streets became safer at night, factories could run 24 hours a day, and cities started glowing after sunset... People could enjoy evening events without worrying about carrying a candle in the wind... or setting their hat on fire.



Your challenge this week: build your own glowing invention! ...It could be a giant lightbulb, a funky lamp, or a robot with a head that lights up. Make it shine bright! As usual, don't forget to take part in our inter school competition and I'll see you next week.

THIS WEEK'S BUILD IS A LIGHTBULB!

Week 4 - Flying Machine

Hi inventors, Fabretta here and welcome back to our club!... Have you ever wished you could soar through the clouds like a bird? ... Well, humans have dreamed of flying for thousands of years! ...From ancient legends of winged heroes to sketches by Leonardo da Vinci, the idea of taking to the skies has always sparked imagination. But it wasn't until the early 1900s that someone finally made it happen.



In 1903, in a place called Kitty Hawk in America, two brothers named Orville and Wilbur Wright built and flew the first powered airplane... It was made of wood, fabric, and a small engine — and it stayed in the air for just 12 seconds! Not bad for a first flight, right? That little moment changed the world forever. Later on the brothers actually made a lot of money demonstrating their early flying machine at events around the world.



Did you know the fastest plane ever, the Lockheed SR-71 Blackbird, could fly at over 3 times the speed of sound? That's so fast, you could travel from London to New York in under 2 hours!... This week, your mission is to build your own futuristic flying machine!

THIS WEEK'S BUILD IS A FLYING MACHINE!

Week 5 - Footwear

Hey inventors! Today we're lacing up for a journey through time — all about shoes! ... We're starting way back in the days of the ancient Egyptians, Greeks, and Romans, when footwear was pretty basic... Sandals made from leather or plant fibres kept feet cool, but they weren't exactly cushy... Some were just flat bits of leather tied on with straps!



As centuries passed, shoemaking became a real craft... In medieval Europe, shoes and boots were made by cobblers and could show off your social status. Some styles were... well... a little weird — like the super long, pointy toes in the 1400s! ... But the big game-changer came with the invention of the sewing machine in the 1800s — suddenly, shoes could be made faster, stronger, and for everyone



**THIS WEEK'S BUILD IS
FOOTWEAR!**

And now? Shoes are getting seriously smart! We've got self-lacing trainers, shoes made from recycled ocean plastic, and even 3D-printed designs... Scientists are even working on shoes that can charge your phone as you walk. The invention of footwear just keeps stepping up.

What sort of futuristic footwear can you build this week?!

Week 6 - Steam Train

Hello, inventors! Quick question: how do you move something really heavy when you don't have a team of horses? ...For thousands of years people pushed, pulled, and puffed... until someone discovered a secret superpower hiding in a kettle — steam! Today we're jumping into the age of hissing pipes, whirring pistons, and clanking wheels: the steam engine.



Once engines got wheels, the world sped up! Steam trains thundered across the countryside, pulling people and goods faster than ever... Steam ships crossed oceans without needing wind. Towns grew into cities, factories buzzed, and inventors dreamed even bigger... Imagine seeing a train for the very first time — smoke puffing, whistle screaming, the ground rumbling under your feet.

The steam engine didn't just make machines move — it changed how people lived... Food and clothes got cheaper because factories could make more... Families could travel to new places. News and ideas spread faster.



THIS WEEK'S BUILD IS A TRAIN!

Fun Fact!... Back in the steam era, a train going 100 kilometres per hour was considered lightning fast! But today, Japan's famous bullet trains zoom along at over 300 kilometres per hour — that's like travelling the length of 3 football pitches every second! ... Imagine showing one of those to a steam train driver from the past — their jaw would drop faster than a pile of coal down the chute! This week Create a steam train with a tender and puffing chimney (cotton wool 'steam' allowed!), a factory machine with moving pistons and gears, or a steam boat!

Week 7 - Camera

Hey there builders! Today we're snapping into action with the story of... the camera!... Our journey begins almost 200 years ago with the very first photographs. These early cameras were huge wooden boxes, and taking just one picture could take several minutes! That's why people in old photos look so serious – they had to keep completely still, or they'd end up as a blur!



As technology improved, cameras could take lots of pictures very quickly. Inventors realised that if you showed these images one after the other, it looked like the pictures were moving. And so, the very first films and movie projectors were born!... The 1900s brought black-and-white movies, then sound, and eventually glorious technicolour. Cameras were no longer just capturing moments – they were telling stories.

Fast forward to today, and cameras are everywhere – in our pockets, on drones, even in space! We can capture moments instantly, edit them, and share them with the world in seconds... Professional cameras still produce stunning photographs, but our everyday snaps are now part of a huge digital photo album we all share online.



Fun fact! The oldest surviving photograph was taken in 1826 by Joseph Nicéphore Niépce. It took eight hours to capture, and it was of the view from his window! I guess that's one way to make sure your subject doesn't move. Now it's your turn, inventors! This week, I'd like you to build a camera. It could be a chunky old-fashioned one, a sleek modern camera, or even your idea of what a futuristic camera might look like

**THIS WEEK'S BUILD IS A
CAMERA!**