

Year Group: 2 Term: Summer

Challenge pack

Up Up and Away

Learning Challenge

How can we make something fly?



Class texts—whole class reading, extracts, thematic books

Main texts for planning:



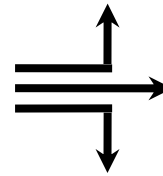
Additional books from book web:

[Violet the Pilot](#), [Rosie Engineer Revineer](#), [Mariella Queen of the Skies](#)
[Ocean Meets the Sky](#), [Science Comics: Flying Machines](#)

Cognitive skills / Meta-learning— specific teaching ex-



C & S: What was the consequence of the Wright Brothers inventing the first airplane? How did the



PMI: How does the suitability of different materials impact on our flying objects?

Hooks or memorable experiences

East Midlands Airport—Children will visit an airport to have real experience of boarding a plane. They will then experience what its like to be on a plane through a full size role play.



Challenge outcome—what will the outcome look like to demonstrate learning?

Children will design and produce actual flying machines, having discussed and evaluated the best product to achievably make fly.

Killer Questions—those asked to measure understanding of pupils

- What are the different machines / items that can fly and what are they made of?
- When in the past did the first human fly in the air ? What were the planes like?
- What were the events that followed this first flight—what happened next?
- Can you describe a significant historical event associated with flight?

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|------------------------------------|--|------|--|----------------|---|--|
| SUBJECT FOCUS (delete as required) | Children will learn about / will know <i>WHAT? (Declarative knowledge)</i> | | Children will know HOW TO...? <i>(Procedural knowledge)</i> | | Prior learning (<i>Schemata</i>) | Vocabulary |
| Geography | <ul style="list-style-type: none"> Name and locate the world's seven continents and five oceans—where do planes travel over on different flight paths? Identify the location of hot and cold areas of the world in relation to the Equator and the North and South Poles | | <ul style="list-style-type: none"> G1.1a Name and locate the world's seven continents and five oceans G1.2b identify the location of hot and cold areas of the world in relation to the Equator and the North and South Poles | | <ul style="list-style-type: none"> Locational language, compass directions, following routes on map. Name and locate the capital cities of the UK (Autumn) Use aerial photographs, plan perspectives and devise simple maps (Autumn) | Continent, Country, Sea, Ocean Europe, Africa, North America, South America, Asia, Australasia/Oceania Antarctica Pacific, Atlantic, Indian, Southern, Arctic Oceans Equator, North pole, South pole |
| History | <ul style="list-style-type: none"> Changes in living memory – the changes of flying machines over time. (created by people and therefore achieved in a time when people could capture these things) Changes over time—what was flying like in the past compared to now? What has changed in my own life time related to flying? What happened before my lifetime? What were planes originally made from? Key people and individuals involved e.g. The Wright Brothers, Amelia Earhart Events beyond living memory that are significant nationally or globally – the first flight in air and travel in to space | | <ul style="list-style-type: none"> H1.2a Ask questions about what has happened in my own lifetime H1.2b Ask questions about what has happened in a time period beyond our lifetime H1.2c Start to ask how and why things might have happened in the past H1.2d Ask questions of sources (such as 'which are old?' 'which are new?' 'what might this be used for?') H1.2e Use evidence from written and visual sources to understand the past H1.2f Identify similarities and differences between the past and the present Ask questions about religions Give a good reason for the views | | Events beyond living memory that are significant nationally or globally – the Great Fire of London (Autumn term) - children should be able to sequence events in relation to this time period learnt. | Historical, individuals, achievements Changes over time Living memory Lifetime Sequence Old New Questions Similarities Differences |
| RE | <ul style="list-style-type: none"> Puzzling Questions Ask questions of sources What is the Good news Christians believe? List twelve people you know who were important leaders or changed the world. Pupils give reasons for their choices. | | | | <ul style="list-style-type: none"> Y1– Easter and Holy Week Y1– Stories and parables | Leonardo da Vinci's Last Supper, Vincent Van Gogh, Salvador Dali Islam, Sikhism, Christianity, Maker, Jesus and the Ten Lepers Leaders, disciples, Matthew the Tax Collector (Matt 9 v 9-13) , forgiveness, confessions, peace, food banks,homeless, charities |
| Art | <ul style="list-style-type: none"> Modelling materials—using malleable materials such as clay or fimo which could be used to either: create a figure of a person associated with flying (link to History). Look at clay sculptures that represent different people as examples or linked to Science to consider if an item made of clay would have the right properties to actually fly. | | <ul style="list-style-type: none"> A2.4a Know that clay or modelling materials can be manipulated by rolling, squeezing and using tools. Choose the best techniques for their model. A2.5a Demonstrate a growing art vocabulary to enable them to talk about their work and share it with others. A2.5b Listen to the views of others and respond to ideas to improve their work | | <ul style="list-style-type: none"> Sculpture (natural and manmade) – Work of Andy Goldsworthy using natural materials How natural materials can be used to create sculpture and design / make products | Clay Modelling materials Rolling pin Cutters Roll, squeeze, twist, stretch, join Critique, Improve Artists Sculpture, Model |
| Design Technology | <ul style="list-style-type: none"> Flying product – rocket, kite. Children to consider appropriate materials (linked to Science—Everyday materials) Children to work through design process to plan, cut, join and make flying product. | | <ul style="list-style-type: none"> D1.3b Explain my choice of materials and tools D1.3c Cut out a range of materials D1.4b Answer questions about my product and how the process of making took place D1.4d Evaluate my outcome against my | | <ul style="list-style-type: none"> Building of items using joining materials such as birdbox, bug hotel or sculpture work | Materials—wood, fabric, glue, nails Join Cut, scissors, saw Design, purpose, process Evaluate—effectiveness, strengths, improvements |

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| ICT and Computing (including apps and digital pencil case) | <ul style="list-style-type: none"> • Uses of ICT beyond school—how do computers and iPads help us in our everyday life? How do they help people that fly planes or spaceships? Would these things be possible now without ICT? • Programming— learning how to complete basic coding | <ul style="list-style-type: none"> • C1.1a Recognise common uses of information technology beyond school • C1.3a Understand what algorithms are • C1.3b Understand how algorithms run as programs on digital devices • C1.3c Create and debug simple programs • C1.3d Use logical reasoning to predict the behaviour of simple programs | <ul style="list-style-type: none"> • Online safety • Research – retrieve – content | Technology. Computer, iPad, phone Maps, Weather apps, tracking information Algorithm, instruction, code Sequence Bug, debug—fixing instructions Reasoning, following instructions, prediction | |
| PSHE | <ul style="list-style-type: none"> • Mental wellbeing of pupils—how do we deal with change and emotions? | <ul style="list-style-type: none"> • PSHE A1.9 I can recognise when someone has a different opinion to me and recognise that this is ok. • PSHE B1.1 I can identify times when there has been change in my life • PSHE B1.2 can identify ways that I could get help if I was in need • PSHE B1.5 I can explain who to go to if I am worried about myself or someone else | Relationships | Events, changes, life experiences Help, support, listening, sharing, talking Emotions Feelings Concern, worry | |
| Relationships to Core subjects | <ul style="list-style-type: none"> • Uses of Everyday materials—link to DT, Art | | | | |