Year 2/3 Woodpeckers | Science: Topic Study (physics) | How did Neil Armstrong get to the moon and back? S1(B)

What Should I Already Know? Pupils have studied forces in year 2. They have looked at 'pushes and pulls; using magnets and how a shadow can change size. Children have previously studied everyday materials and their uses.

## Enquiry Questions:

Who was Neil Armtrong and why is he famous?

Can we investigate the uses of materials in a space suit?

Which materials would insulate an astronaut effectively?

**Neil Armstrong**


## Key Vocabulary:

**Action:** Something that you do.
**Astronaut:**A person who is trained to travel in a spacecraft.
**Float:** Move or hover slowly and lightly in the air or in water.
**Force**: A push or a pull
**Friction**: The resistance that one surface encounters when it moves over another surface.
**Glass:** *A* hard brittle and usually transparent substance commonly formed by melting a mixture of sands and chemicals and cooling to a hardness
**Gravitation**: Movement or a tendency to move toward a center of gravity
**Gravitational field**:the region of space surrounding a body in which another body experiences a force of gravitational attraction.
**Gravitational forces**: A forceful attraction towards something.
Hard: solid, firm, and rigid; not easily broken
**Insulate**: Holds heat in.
**Malleable:** Bendy/ flexible
**Materials:** Materials are what objects are made from.
**Metal:** Various substances such as iron, steel, gold or lead and which have a more or less shiny appearance, are good conductors of electricity and heat, can be melted and are usually capable of being shaped
**Motion**: Movement
**Non-Reflective:**Not capable of reflecting light
**Not waterproof:** Absorbs water.
**Observation:**the action or process of observing something or someone carefully or in order to gain information.
**Opaque**: You cannot see through the object.
**Orbit**: The curved path of a celestial object or spacecraft around a star, planet, or moon
**Paper**: A thin sheet made usually from rags, wood, straw or bark and used to write on, to wrap things in or to cover walls.

## National Curriculum:

Working scientifically:

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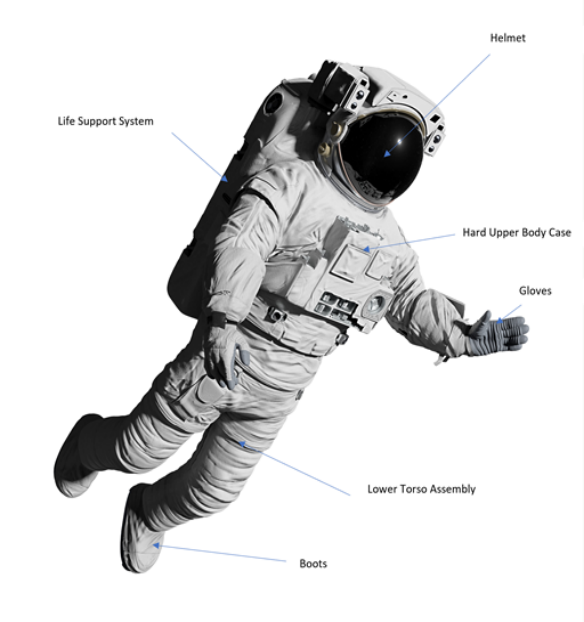
**KS1:**
Ask simple questions, and recognise that they can be answered in different ways.
Observe closely, using simple equipment.
Perform simple tests
Identify and classify
Use observations and ideas to suggest answers to questions.
Gather and record data to help answer questions.

**Lower KS2:**
Ask relevant questions and use different types of scientific enquiries to answer them.
Use straight forward scientific evidence to answer questions or to support them.
Make systematic and careful observations and where appropriate take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.
Identify differences, similarities or changes related to simple scientific ideas and processes
Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Record findings using simple scientific language,drawings, labeled diagrams, keys, bar charts and tables.
Gather, record, classify and present data in a variety of ways to help answer questions.
Report on findings from enquiries, including

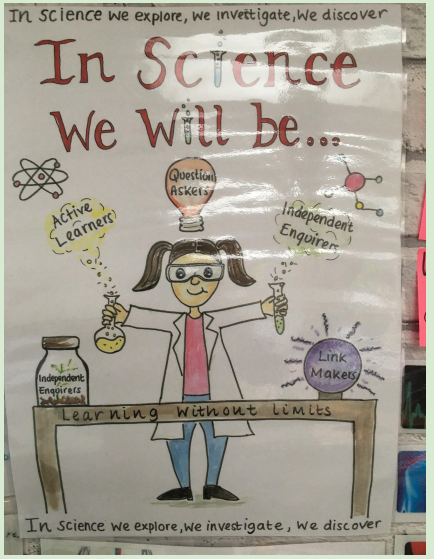
**Space Suit:**




**Astronaut:**

**Planets:**a celestial body moving in an elliptical orbit around a star.
**Plastic**: A material which is light in weight and does not break easily
**Prediction**: Making an informed guess about what is going to happen.
**Propellant**: A substance that propels something.
**Properties**:This is what a material is like and how it behaves (soft, stretchy, waterproof).
**Reaction:** Something that happens as a consequence of something else.
**Recycle**: convert into reusable material.
**Reflective:** Capable of reflecting light
**Rigid**: Not flexible
**Rock:** The hard substance which the Earth is made of
**Rocket engine**: A spacecraft
**Rocket ship**: A spacecraft
**Rough:** A surface which is not smooth and is jagged/ has lumps or bumps.
**Shiny:** (of a smooth surface) reflecting light, typically because very clean or polished.: "shiny hair" "shiny black shoes"
**Smooth:** Having an even and regular surface with no lumps or bumps.
**Soft:** Something which is easy to mold, cut, compress, or fold; not hard or firm to the touch
**Suitability**: How appropriate something is for its purpose
**Thrust**: The propulsive force of a jet or a rocket engine.
**Translucent:** Partly see through.
**Transparent:** You can see through it clearly.
**Twist:** Manipulate the shape using fingers into a bent, curling or distorted shape.
**Useful**: Able to be used for a practical purpose or in several ways.
**Waterproof:** Does not absorb water- fluid will run off the object and the inside will remain dry.
**Weak:** Likely to break or give way under pressure; easily damaged.
**Wood:** A material prepared for some use (e.g building)

oral and written explanations, displays or presentations of results and conclusions.




**The Moon**

Cross Curriculum Links: History: Neil Armstrong. Literacy:Man on the moon. Thinking starters. Science: Everyday materials