



BRING HOME THE AWESOME
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TOPIC - Initiating the planning & design process

TITLE - Let the Mission Begin

KEY STAGES - 1 to 2 ages 6 -11

AIMS:

To:

- **enable** pupils to create a range of approaches to the rocket-building task.
- **build** on the team-work culture within the class.
- **provide opportunities** for pupils to further develop their Speaking & Listening skills.

EQUIPMENT

- PowerPoint.
- Pupil Activity Sheet to support Lesson Plan.
- Teacher guide.

STARTER (TEACHER-LED/WHOLE-CLASS)

- Pupils asked to share outcomes of further research/homework with whole class.



LESSON 2



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FIRST PHASE (TEACHER-LED WHOLE-CLASS)

- **Teacher:**
 - divides class into 4 or 5 working groups.
 - distributes Rocket-building pupil activity sheets to each group.
 - reminds pupils of the key principles of the rocket-building challenge including use of recyclable materials & pupils' own LEGO® sets.

SECOND PHASE (PAIR WORK)

- **Teacher** launches mission.
 - Pupils begin work on rocket-building design.
 - Each pupil within group has opportunity to take on specific role within team e.g. pupil 1 produces overall sketch, pupils 2 designs propulsion method etc.
 - Teacher tours classroom, offering support/advice & timings.

THIRD PHASE: (PLENARY)

- Each group presents their design concept to the whole class with explanation as to thinking behind design/costings/likelihood of a successful rocket launch.
- Teacher/class vote for top design or for two top designs.
- Alternatively, teacher may prefer all designs to reach the rocket-building stage to generate a stronger competitive element within the class.

FOURTH PHASE:

Homework (optional)

- Where practical, pupils carry out further work on their rocket design.





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CURRICULUM LINKS

Science DFE National Curriculum:

All pupils:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific enquiries about the world around them.
- Are equipped with the scientific knowledge to help them understand the uses and implications of science, today and for the future.

Maths DFE National Curriculum:

- Solve problems by applying their mathematics to a variety of routine and non-routine problems, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Art and Design DFE National Curriculum:

- Pupils should be taught to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.

Design Technology DFE National Curriculum:

Evaluate:

- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- Understand how key events and individuals in design and technology have helped shape the world.

English DFE National Curriculum:

- Use discussion in order to learn: they should be able to elaborate and explain clearly their understanding and ideas.
- Are competent in the arts of speaking and listening, making formal presentations, demonstrating to others and participating in debate.

