



### D&T Curriculum Offer

Stage 1 - Quality First Teaching. Every child receives at least

\*Whole class D&T lessons: 3 Units per year for each Year group (5-10 lessons per unit) with cross curricular and carichment apportunities.

Enrichment opportunities include:

- Dragon's Don-
- The Sound Man.
- Opal-play

#### Sago 2 - Additional Support

- \*In class focus group with adult giving additional feedback on learning.
- \*Kagan-graup
- \*Talking: Time to facilitate and reheareal
- \*Facus for children working below an Key Pafarmance Indicators in learning.
- \*Input resources used to support vocabulary.
- \*Word mate for key vecabulary

#### Stage 3 - Intervention

During pupil progress reviews, children who are still struggling to progress are identified and appropriate targeted intervention is put into place, includings

H support with adding of annotations as RRI

Stage 4 - Further Support

It summative assessment does not show sufficient progress being-made despite intervention, liaise with SENDCO.

### Intent





Design and Technology is an inspiring, rigorous and practical subject. It encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. At Alexandra Park Junior School, we encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art and where possible (without compromising the essence of the D&T principles), the D&T project links to the broad topic for the term. The children are also given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness and are encouraged to become innovators and risk-takers.

### Intent – Long Term Plan





Early Key Stage 2			
Y3	Food Healthy and varied diet (including cooking and nutrition requirements for KS2) Great Gruel	Structures Shell structures (including computer-aided design) Disposable Lunch Box	Mechanical Systems Levers and linkages Pneumatic Puppet
Y4	Food Healthy and varied diet (including cooking and nutrition requirements for	Textiles 2-D shape to 3-D product	Electrical Systems Simple circuits and switches (including programming and control)
	KS2) Healthy snack bar	Anglo Saxon coin purse	Mindfulness Timer
Late Key Stage 2			
Y5	Mechanical Systems Pulleys or gears	Food Celebrating culture and seasonality (including cooking and nutrition requirements for KS2)	Textiles Combining different fabric shapes (including computer-aided design)
	Moon buggy	Seasonal British Snack	Insulated cap
Y6	Electrical Systems More complex switches and circuits (including programming, monitoring	Structures Frame structures	Food Celebrating culture and seasonality (including cooking and

Flood proof house

nutrition requirements for

Silk Road Snack

and control)

Christmas decoration

### Progression

- At Alexandra Park our curriculum has been adopted from the D&T Associations and personalised to both meet the needs of our children and link to the broader topics we teach each term. All of our units provide optimal opportunities for the children to experience the fundamental aspects of D&T: the 3 S's
- "designing 'Something' for 'Somebody' for 'Some purpose."



### Intent – Retrieval





Teacher planning will use the KS1 progression points for Designing, Making, Evaluating, Technical Knowledge and Cooking and Nutrition to create a retrieval slide for each lesson in a unit.



### Implementation





D&T at Alex Park is currently undergoing a transformation. Where before there were many units of D&T that were indistinguishable from Art in both their intent and implementation, we have now replaced or adapted those units to ensure that all children are taught the 6 interrelated principles of this subject: user: purpose; functionality; design decisions; innovation and authenticity. In real terms, this means designing and making SOMETHING, for SOMEONE, for SOME PURPOSE. The concept of the 3 Ss has also been covered in staff inset to ensure teachers have greater clarity on the intent of this subject and its differences with Art.

## **Implementation:** diversity, inclusion, SMSC and British Values opportunities





- Year 3: Great Gruel social history of Victorians.
   Recyclable lunch box social responsibility.
   Pneumatic Puppets cultural representation of puppets as a source of entertainment.
- Year 4: Anglo Saxon coin purse human social development timeline
   Healthy sandwich varied ethnic representations of 'sandwiches'.
   Mindfulness timer importance of mental health and self care
- Year 5 Moon buggy timeline of human development in terms of science and technology
   Seasonal British snack social history of British Empire and importance/sustainability of using seasonal foods.

Insulated cap for a viking – social/cultural history of Vikings and their colonisation of Britain

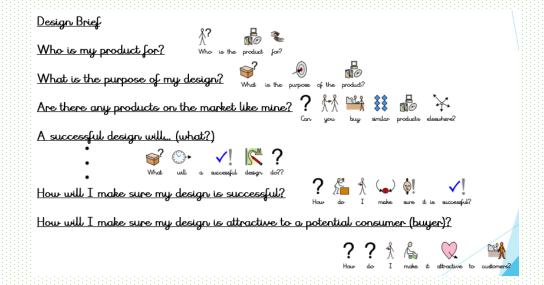
 Year 6 Christmas decoration – alternate cultural customs
 Flood proof House – impacts of global warming and how innovation can help
 Silk Road snack– ancient cultural influences on spices and food flavours

### Intervention





- Inprint facilitating task instruction and evaluation tasks
- Kagan groups peer support
- Modelling providing clarity where needed
- 1:1 editing for written evaluations, or video recording of evaluations
- Scaffolding



### Sequence of teaching





In each planning sequence there must be:

> Vocabulary development – introduction of new and technical vocabulary relating to the unit

This is discussed prior to commencing the teaching as part of the discussion around the Knowledge Organiser. Each lesson also contains 3 'Word aware' words that revisit this vocabulary and other words relating to the unit at the start of each lesson.

- > Scope for the children to 'solve a problem' using design.
- > Opportunities to research and evaluate existing products
- > Identification of purpose and requirements for the user and how these can be met, using what materials.
- > Recap of previous skills and teaching of required skills for the unit.
- > Opportunities for aesthetic design using labelled diagrams, exploded diagrams or CAD (depending on the year group).
- ➤ IEA's (Investigative and Evaluative Activities)
- ➤ An FT (Focused Task) and a DMEA (Design, Make and Evaluate Assignment).

### **Impact**





- Units being taught in their entirety
- Greater clarity in planning with a cohesive format across school following a design and make process that includes prototype development – informing design modification.
- Children's books reflect clarity of planning and show a more cohesive approach to the teaching of the units within year groups.
- Active learn books reflect the opportunities for inclusive learning and examples of pupil voice comments therein show progression
- Use of Target Tracker on iPads making assessment easier and more consistent across school
- Teacher Inset on D&T reflected in less prescriptive planning that allows greater scope for children to explore their design ideas



Junior School Achieve Our Best



### Enrichment: Dragon's Den



pitches

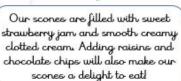
**Product** 

Unique selling point,



The shape of our irresistible scones is perfectly round and circular.

The texture of our mouthwatering scones is light, fluffy and



Our buttery scones are golden brown, which makes it more appealing to our target audience.

Welcome to Year 5's Dragon's Den Presentation
Butterfly Bakes ... Baked to Perfection!





Our challenge was to design and produce a Christmas decoration that would be an appealing product to sell

We began by researching products that were available and used these ideas to create our design brief and design our own decorations.

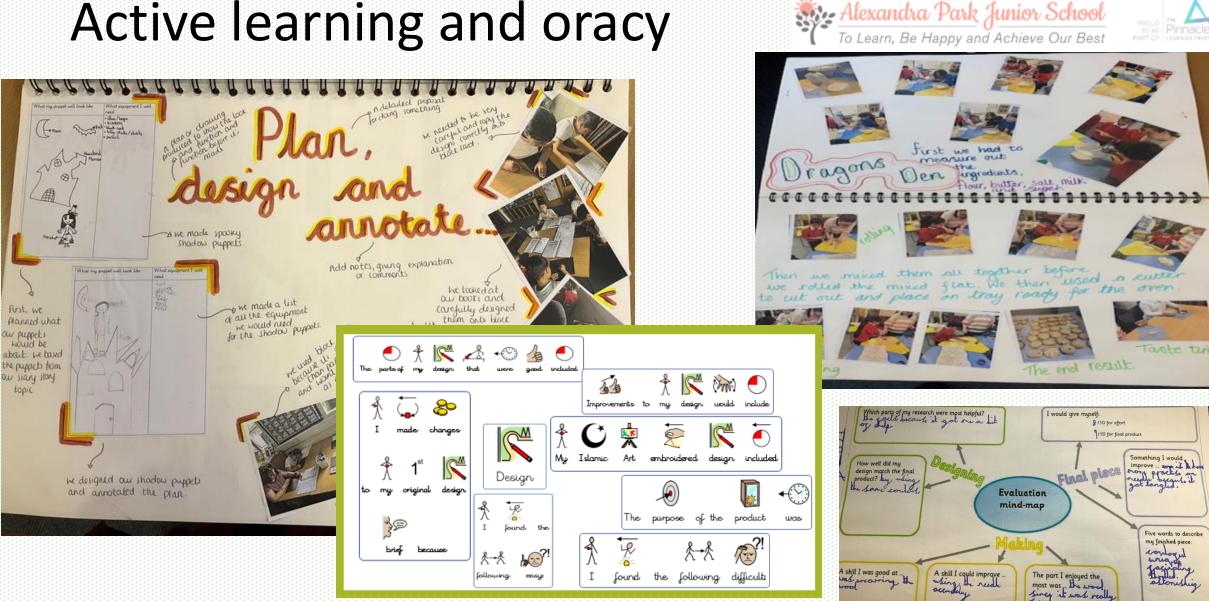


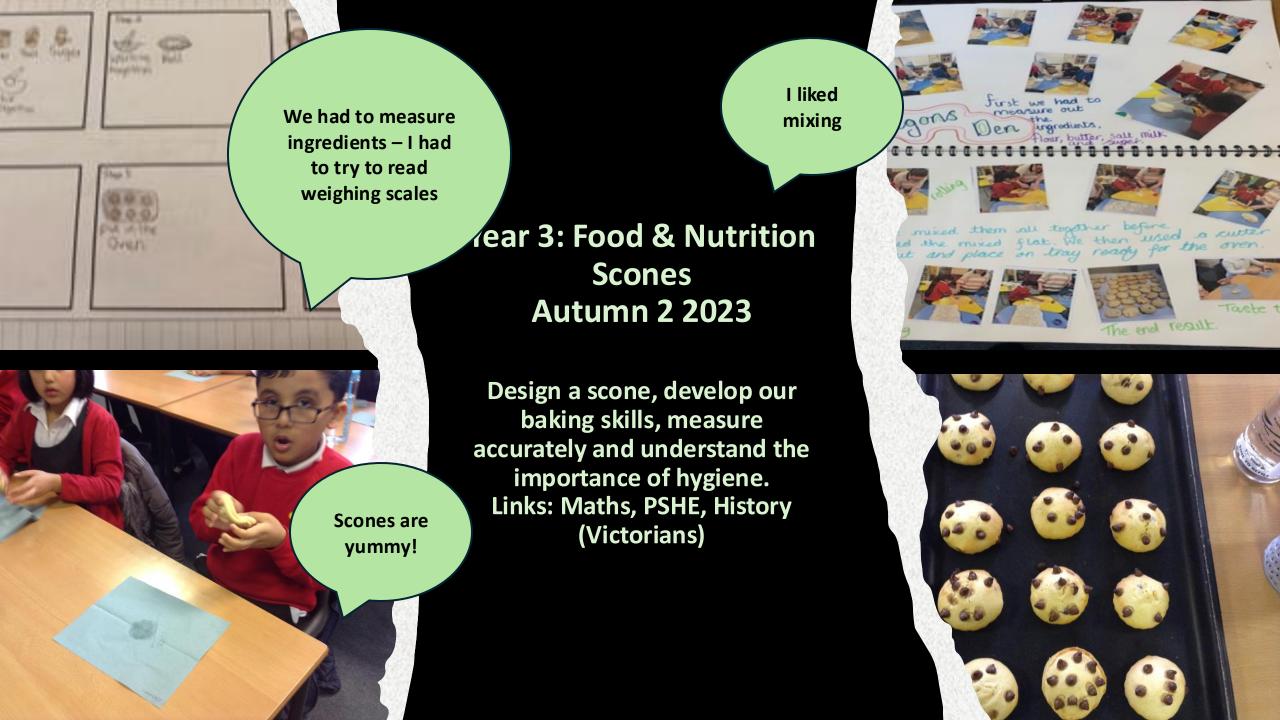






## Active learning and oracy







Stick your picture here.

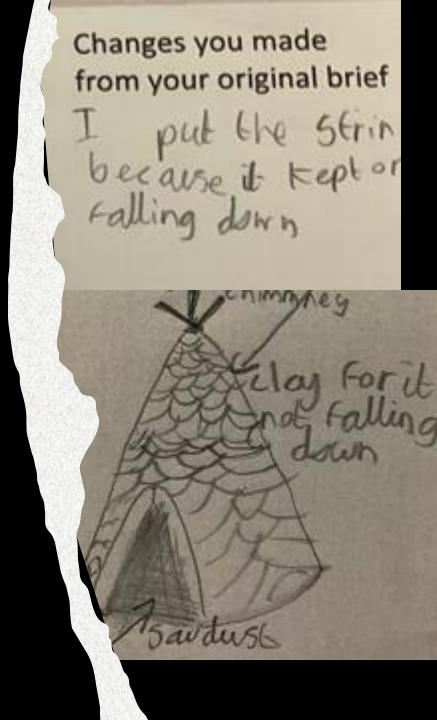
What you found difficult

Year 3: Structures
Stone Age Dwellings
Summer 1 2024

Design a dwelling to meet the requirements of the user, use tools and materials fit for purpose and join materials to create a stable structure.

Links: Maths, History

A design element that could be improved was the lolly stick, it didn't stick to the clay well.





I found cutting difficult

Year 3
Shadow Puppets:
Mechanisms
Summer 2 2023

Create a way to entertain young children during the summer holidays.

Join materials and design a setting.

Links: Maths, Science

I think if I practised my cutting skills it would have been better It was fun – we could make puppets to tell any story.





Researching bath bombs we found so many different kinds

Year 4
Bath Bombs
Autumn 2 2023
Research and design a bath bomb for a target audience (adults: relaxing, Kids: fun etc.)
Links: Science, Maths.

We used equipment such as moulds – to make sure we got the shape right every time.



It was hard trying to think what an Anglo Saxon would wear

Year 4: Textiles Weaving
Autumn 2 2023
Research and design a weave
suitable for a defined Anglo
Saxon user.

I found weaving easy but tying knots difficult

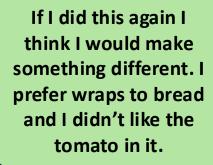






Sandwiches are easy to make but we tried to think about what was healthy – not just jam or something sweet

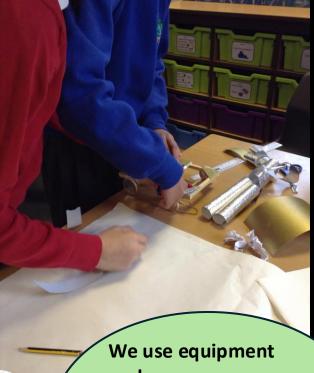
I did well on spreading the cheese to get some dairy on the sandwich





Year 4: Food & Nutrition Healthy sandwich
Summer 2 2024

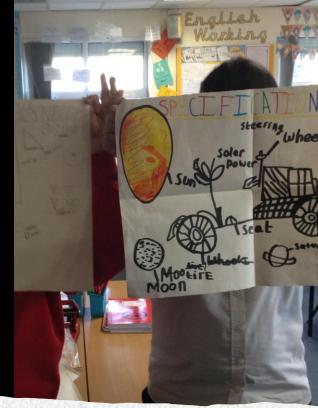
Design a healthy sandwich or transportable savoury snack food, taking into account user preferences or allergies.



We use equipment such as saws (carefully) to create our chassis before attaching our working circuit.







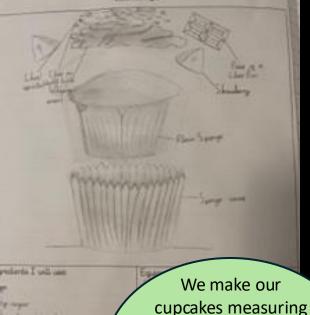
We then test our mechanism and see if it works properly before evaluating it.

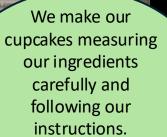
## Year 5: Mechanisms - Moon buggies Autumn 1 2023

Design a model controllable vehicle, incorporating a motor, which you can control the speed and direction of movement. Links: Science









We design our cupcakes as an appealing snack that could be adapted according to preferences. We have to choose our ingredients carefully to meet our design criteria.

It was tricky drawing an exploded diagram but it made it easier to see the different parts

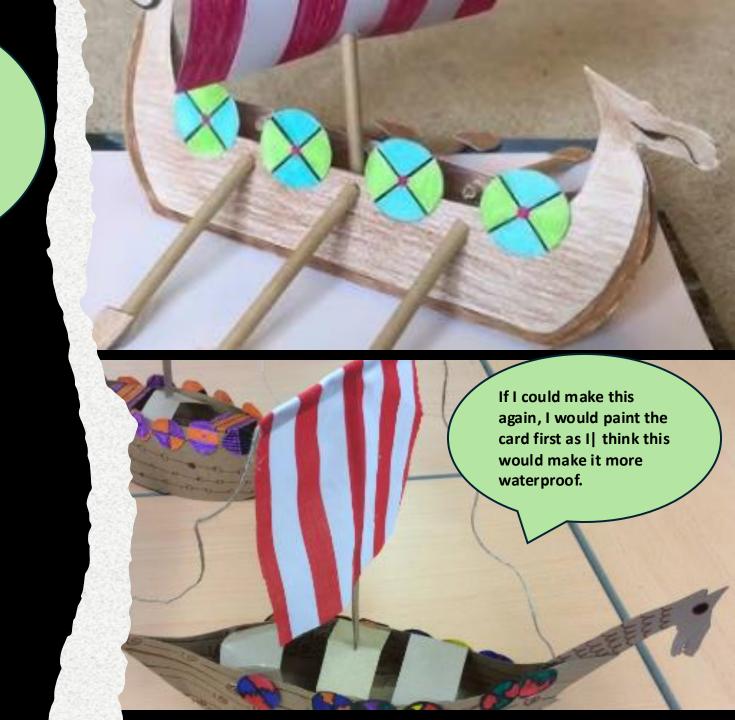
Year 5: Food & Nutrition -Cupcake
Autumn 2 2022

Design a 'new take' on a cupcake!

Keeping the longboat waterproof when joining the different pieces was hard. I think using hot glue next time would be better

# Year 5: Structures - Viking Longships Spring 1 2024

- Design a craft, using and joining suitable materials, that is a solid structure and will float & be stable in the water.
- Links: Science







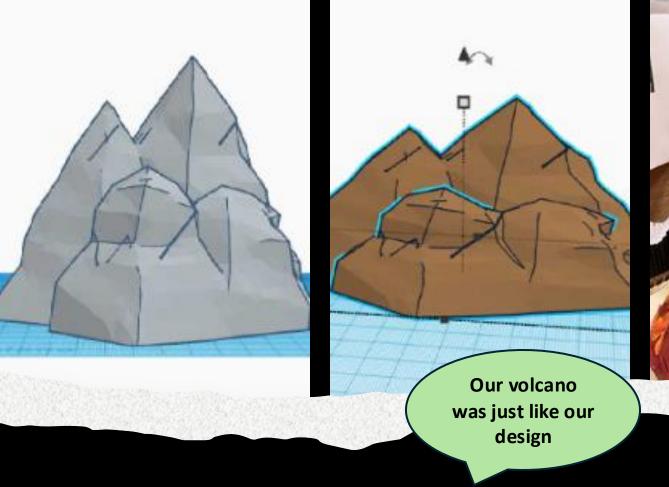


I think we could make these for Ramadan too.

I enjoyed programming the circuit – I made the snowman's eyes blink!

The circuit was easy but making the decoration look good to present on Dragon's Den was hard.

- Year 6: Programmable circuits Christmas decoration
- Design a craft, using and joining suitable materials, that is a solid structure and will float & be stable in the water.







Year 6: Structures – Volcanoes. Spring 1 Use CAD to design a stable volcano structure that enables an 'erupting' science experiment.

It was important to get a wide, flat base for stability

