

DT – Year 5 Autumn 1: Orrery

(Previous knowledge – moving parts of a toy in Year 4)

Vocabulary

Tier 1	Tier 2	Tier 3
Orbit	Orrery	Mechanical model
Design	Rotar arm	Heliocentric
Tools	Hack saw	Manufacture
Measure	Hand drill	Relative position/motion

Useful Resources

Male your own orrey at home:

<https://www.youtube.com/watch?v=n dE8aGbEB18>

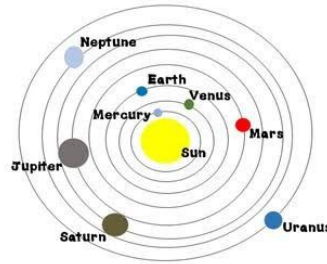
<https://schools.salfordmuseum.com/wp-content/uploads/2021/09/Orrery.pdf>
<https://www.stem.org.uk/resources/community/collection/12347/year-5-earth-and-space>

What is an orrery?

An orrery is a mechanical model of the solar system which is heliocentric.

What is the meaning of 'heliocentric'?

The sun as the centre of the solar system which planets revolve around.



What is scaling?

To reduce or increase in size according to a common scale, for example - a map, model, drawing, or plan.

Who is George Graham?

George Graham was a clock maker who named the first orrery an orrery in 1704 which was commissioned by Charles Boyle, 4th Earl of Orrery.

The first known orrery was the Antikythera mechanism, variously dated from 60 to 150 BC.



Antikythera mechanism (main fragment), ca. 125 BCE



Carlo G Croce, reconstruction of Doni's Astrarium, originally built between 1348 and 1364 in Padua



Astronomical clock (Venus-Mercury side), Eberhard Baldewein et al., Marburg-Kassel, 1563–1568 - Mathematisch-Physikalischer Salon, Dresden - DSC08057



The Orrery inside the Sphaera Copernicana, designed by Joseph of Gottorp and build by Andreas Bösch, 1653



A Philosopher Lecturing on the Orrery (ca. 1766) by Joseph Wright of Derby



Application of Knowledge

Develop a simple design specification to guide their thinking.

Design functional, appealing products that are fit for purpose.

Produce appropriate lists of tools, equipment and materials that they need.

Formulate step-by-step plans as a guide to making.

Critically evaluate the quality of the design, manufacture and fitness for purpose of their own products as they design and make.

Accurately measure, mark out, cut and shape materials and components

Accurately assemble, join and combine materials and components

Accurately apply a range of finishing techniques,
Demonstrate resourcefulness when tackling practical problems.

DT – Year 5
 Spring 1: Viking Embroidery
 (Previous knowledge - stone age
 pouches using sewing in year 3)

Vocabulary

Tier 1	Tier 2	Tier 3
Needle	Felt	Binca
Stitch	Tackling stitch	Applique
Cross stitch	Chevron stitch	Embroidery thread
Back stitch	Blanket stitch	Herringbone stitches
Running stitch	Thimble	

Useful Resources

Bayeux tapestry
<https://www.bbc.co.uk/bitesize/clips/zp8ykat>
 Viking clothing
<https://www.bbc.co.uk/bitesize/clips/z8ghqkZ>

What is embroidery?

A way of decorating fabric using a needle and thread.



A very famous embroidery...

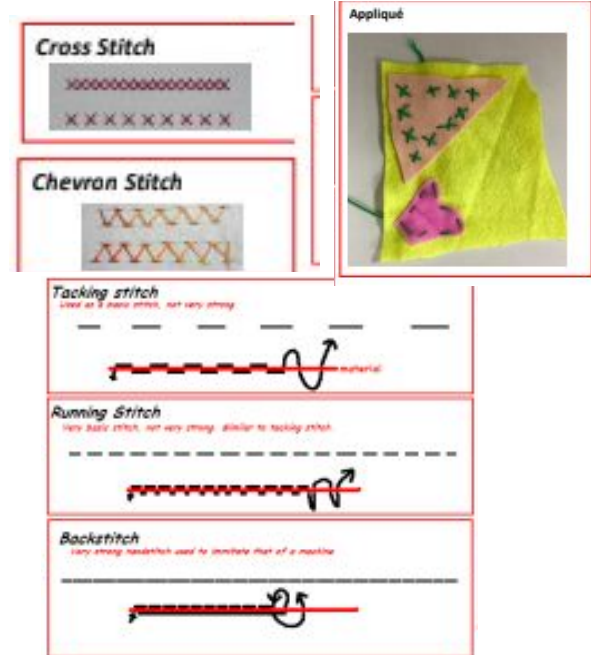
The Bayeux Tapestry is a historic embroidery which famously depicts the events of The Norman Conquest. The work, although known as a 'tapestry', is in fact an embroidery! The artist of this famous embroidery is unknown.



By the end of this unit you will know...

- What an embroidery is
- That embroidery is a form of art
- A range of embroidery techniques and stitches
- The meaning of viking knots
- How to use embroidery to tell a story
- How to create embroidery inspired by viking knots

Types of embroidery stitch...



DT – Year 5
Spring 2: Tudor Tarts
(Previous knowledge – Greek salads, pitta bread in year 4)

Vocabulary

Tier 1	Tier 2	Tier 3
Filling	Texture	Dock
Healthy	Nutrients	Kneading
Slice	Taste	Claw grip
Pastry Shell	Crumble	Rubbing in
Shaping and cutting	Combine	Cross-contamination
Mix	Egg wash	Curd

Useful Resources

Tasty Tudor recipes:

<https://cadw.gov.wales/learn/histories/foods-fashions-lifestyles/tasty-tudor-recipes>
<https://www.youtube.com/watch?v=arzlhf1TBHQ>

Maids of honour tart:

Maids of honour tart is a traditional English baked tart consisting of a puff pastry shell filled with cheese curds. A variation is to add jam or almonds and nutmeg. Traditionally the tart was a puff pastry filled with sweetened milk curds.



The tart was made in the time of King Henry VIII when he witnessed some of the Queen's Maids of honour eating some cakes and demanded to taste one. He found them delicious and named them after the maids. There is a theory that they were named after Anne Boleyn, a maid of honour at the time, who made the cakes for Henry VIII.

Pupils should be taught to:

- ✓ Understand and apply the principles of a healthy and varied diet.
- ✓ Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.
- ✓ Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Rubbing in

Technique where flour is rubbed into a fat to make dishes such as shortcrust pastry, crumbles and scones.

Using your fingertips, rub the flour and butter together until the mixture resembles breadcrumbs

Kneading - dough

Kneading means working and stretching dough, either by hand or using an electric dough hook.

The process makes the dough smoother and softer and develops the elasticity of the gluten in the flour.

Rolling Out - pastry

Be as cool as possible.

Firm consistency.

Lightly floured surface.

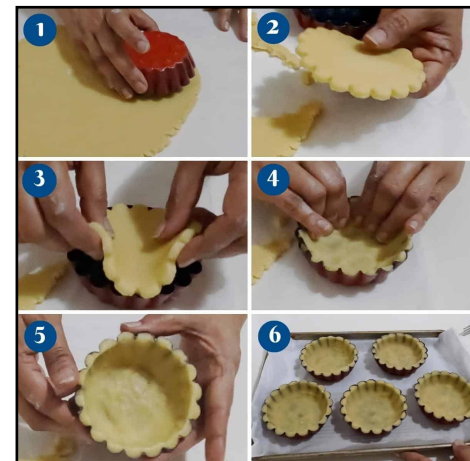
Use short, even strokes.

After each stroke, spin the pastry through a quarter turn, do not turn the pastry over.

Shaping and Cutting

Shaping – using your hands or a pastry cutter to style the product into desired shape (bread rolls)

Cutting – using a pastry cutter to cut out shapes (scones, biscuits)



Why is hygiene so important when cooking?

Before preparing food, it is important to wash your hands and ensure surfaces and equipment is clean. Using different chopping boards is important to avoid cross contamination. Cross contamination can cause food poisoning.