Subject Long Term Plan

Subject Purpose: At SJP, we believe that the Design & Technology curriculum builds a foundation of practical skills and knowledge to enable ALL students to contribute to society as creators, makers, providers and problem solvers. We foster the concept of intentional and conscientious consumption of food and products in line with working toward a more sustainable and healthier future and explore the role that design and technology can play in this vision. Our curriculum plan allows all students to follow one (or two) distinct specialist subject pathways, comprising of a range of GCSE, A Level and vocational qualifications, allowing ALL students to be successful and to access a range of career pathways across a broad spectrum of industries.

Week Commencing	6.09	13.09	20.09	27.09	4.10	11.10	18.10	1.11	8.11	15.11	22.11	29.11	6.12	13.12	4.01	10.01	17.01	24.01	31.01	7.02	14.02	28.02	7.03	14.03	21.03	28.03	4.04	25.04	3.05	9.05	16.05	23.05	6.06	13.06	20.06	27.06
	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14	WEEK 15	WEEK 16	WEEK 17	WEEK 18	WEEK 19	WEEK 20	WEEK 21	WEEK 22	WEEK 23	WEEK 24	WEEK 25	WEEK 26	WEEK 27	WEEK 28	WEEK 29	week 30	week 31	week 32	week 33	week 34	week 35	week 36

Year 7

Y7 INTRODUCTION TO FOOD & NUTRITION | Y7 POLYMERS & ENVIRONMENTAL FACTORS | Y7 PRODUCT DESIGN - BLOCK BOT (CATEGORISING MATERIALS & VISUAL COMMUNICATION)

Week	Topic
WEEK 1	Safety in the food room
WEEK 2	Pasta salad practical
WEEK 3	Food safety practices
WEEK 4	Pizza bread practical
WEEK 5	Principles of The Eatwell Guide
WEEK 6	Fruit muffins practical
WEEK 7	Healthy eating guidelines
WEEK 8	Fruit crumble practical
WEEK 9	Environmental issues
WEEK 10	Shortbread practical
WEEK 11	Written assessment
WEEK 12	Feedback and tasting investigation
WEEK 13	Properties of polymers
WEEK 14	Wastage processes
WEEK 15	Marking out and drilling
WEEK 16-17	Finishing and thermoforming plastics
WEEK 18	Feedback and practical assessment
WEEK 19	Sources and categories of timber
WEEK 20-21	Rendering techniques
WEEK 22-23	Designing the Block Bot
WEEK 24	3D Drawing and rendering
WEEK 25	3D Drawing and rendering
WEEK 26	Block Bot final idea
WEEK 27	Environmental impact and properties of timbers
WEEK 28	Mark out and cut Block Bot pieces
WEEK 29-30	Drill and sand Block Bot pieces
week 31-34	Assembling and decorating Block Bot
week 35	Assessment
week 36	Feedback & completion of project

Pupils will know:
- how to work safely and hygienically in the food room;
- the key principles of nutrition and food choices;
- how to protect the environment in food related issues.
Pupils will be able to:
- prepare, cook and present a variety of nutritious dishes;
- consider the environment and food choice factors in relation to food;
- keep food and themselves safe when working in the kitchen.

Pupils will know:
- how to categorise polymers into thermo polymers and thermosetting polymers
- how to describe the manufacture of a plastic product.
Pupils will be able to:
- use a range of tools, equipment and finishes to make an acrylic twizzle;
- thermoform acrylic using a convection oven.

Pupils will know:
- how to categorise materials by identifying their properties and sources;
- about the environmental impact of different materials;
- how to apply a range of visual communication and rendering techniques.
- how to use a range of tools, equipment and finishing techniques to manufacture a timber product.
Pupils will be able to:
- identify renewable and non renewable materials;
- render realistic materials on both 2D and 3D drawings.
- manufacture a product using basic workshop tools.

Year 8

Y8 DIET AND HEALTH NEEDS | Y8 GRAPHICS & TEXTILES - ERGONOMIC BOTTLE BRANDING & MARKETING | Y8 GRAPHICS - ERGONOMIC BOTTLE DESIGN & MODELLING

Week	Topic
WEEK 1	Application of The Eatwell Guide
WEEK 2	Scones practical
WEEK 3	Macronutrients and their functions
WEEK 4	Fajitas practical
WEEK 5	Micronutrients, their functions and deficiency characteristics
WEEK 6	Turkey burgers practical
WEEK 7	Nutritional need through life
WEEK 8	Burger buns practical
WEEK 9	Dietary needs of special diets
WEEK 10	Curry practical
WEEK 11	Written assessment
WEEK 12	Feedback and snacking investigation
WEEK 13	Identifying the context of bottle design and branding
WEEK 14	Developing a brand identity and logo
WEEK 15	Finalising a logo design
WEEK 16	Merchandising and material properties for printing
WEEK 17	Printing and dyeing techniques
WEEK 18	Printing and dyeing techniques
WEEK 19	Tie dye and flyer practical
WEEK 20	Tie dye and flyer practical
WEEK 21	Stencil design
WEEK 22	Stencil practical
WEEK 23	Assessment lesson
WEEK 24	Feedback and completion of project
WEEK 25	Ergonomics & user profiling
WEEK 26	Ideation and product analysis
WEEK 27	The ellipse technique
WEEK 28	Designing an ergonomic bottle
WEEK 29	Developing and finalising a bottle design
week 30	Producing a template
week 31	Using the hot wire cutter
week 32	Wastage processes
week 33	Shaping processes
week 34	Finishing the bottle
week 35	Assessment
week 36	Feedback & completion of project

Pupils will know:
- how to prepare and cook meals that suit a variety of nutritional needs;
- about the functions of macro and micronutrients in the human body;
- what nutritional requirements individuals can have and how these can change.
Pupils will be able to:
- prepare and cook a variety of family meals and desserts taking nutrition into consideration throughout;
- explain the function of nutrients in the human body and describe nutritional requirements of given individuals.

Pupils will know:
- how to develop a brand identity and design a logo which can be used on a range of promotional products and merchandise;
- how to use dying and printing techniques on a range of materials and surfaces.
Pupils will be able to:
- design a logo to promote a product;
- dye and print on paper based and textiles materials.

Pupils will know:
- how to design a product which meets the requirements of a primary user;
- how to develop a range of innovative and ergonomic design ideas.
Pupils will be able to:
- use a range of visual communication methods, including the ellipse technique and block modelling to communicate design intentions.
- use a range of modelling tools and equipment safely and accurately.

Year 9

Y9 FOOD SCIENCE AND SERVICE | Y9 VISUAL COMMUNICATION & VIRTUAL MODELLING | Y9 PRODUCT DESIGN - PASSIVE SPEAKER & PROPERTIES OF TIMBER

Week	Topic
WEEK 1	Techniques and recall of principles of The Eatwell Guide
WEEK 2	Pizza practical
WEEK 3	Scientific function of bread ingredients
WEEK 4	Jam tarts practical
WEEK 5	Food packaging and labelling
WEEK 6	Pasta bake practical
WEEK 7	Hospitality and Catering establishments
WEEK 8	Risotto practical
WEEK 9	Menu planning
WEEK 10	Victoria sponge practical
WEEK 11	Written assessment
WEEK 12	Feedback and snacking investigation
WEEK 13	Oblique and isometric projection
WEEK 14	Practicing isometric projection skills
WEEK 15	Applying isometric projection skills
WEEK 16	Intro to 3D CAD modelling
WEEK 17	Using 3D CAD tools to model a house
WEEK 18	Rendering skills for 3D CAD modelling and assessment
WEEK 19	Passive speaker context
WEEK 20	Hardwoods, softwoods and sustainability
WEEK 21	Marking out and cutting timber
WEEK 22	Understanding and identifying stock forms
WEEK 23	Designing the Passive Speaker
WEEK 24	Use of Scroll saw/ tenon saw
WEEK 25	Use of hole saw
WEEK 26	Shaping processes
WEEK 27	Shaping and gluing processes
WEEK 28	Assessment
WEEK 29	Feedback and finishes
week 30	Final design
week 31	Shaping and sanding processes
week 32	Applying a finish
week 33	Applying a finish
week 34	Decoration
week 35	Assessment
week 36	Feedback & completion of project

Pupils will know:
- how to work professionally to plan, prepare and cook various dishes suitable for different establishments and individuals;
- about the role of food science in production of dishes;
- the elements of packaging and labelling for different food products.
Pupils will be able to:
- plan, prepare and cook a variety of restaurant standard dishes;
- explain the chemical functions of ingredients used in bread production;
- consider nutritional elements and needs when menu planning.

Pupils will know:
- how isometric projection and CAD tools are used to create 3D drawings & models;
Pupils will be able to:
- communicate ideas using 3D drawing methods;
- communicate ideas using CAD modelling methods.

Pupils will know:
- about timbers and boards and their properties,
- how to permanently bond timber based materials to each other;
- how to apply different finishes and decoration to a timber product.
Pupils will be able to:
- how to use waste processes and tools to manufacture a Passive Speaker.
- use a range of hand and machine abrading equipment to prepare the materials for finishing;
- apply paint, varnish and other finishes to a timber product.