RODMERSHAM PRIMARY SCHOOL

Together we grow, learn and achieve

DESIGN & TECHNOLOGY PROGRESSION OF SKILLS

CREATIVE THINKERS • PROBLEM SOLVERS • CONFIDENT MAKERS

DESIGNING AND MAKING WITH PURPOSE • DEVELOPING PRACTICAL SKILLS FOR LIFE

OUR DT GOLDEN THREADS

DESIGN
Generating ideas, designing with purpose and considering the user and their needs.

MAKE
Selecting tools and materials and using them safely to make high quality products.

EVALUATE
Testing products, judging success and identifying ways to improve.

TECHNICAL KNOWLEDGE
Understanding how things work and using technical vocabulary.

SUSTAINABILITY
Making responsible choices to care for people, communities and the planet.

INNOVATION
Using creativity and imagination to solve problems and make things better.

EYFS (CONTINUOUS PROVISION)

In EYFS, children explore and develop DT skills through continuous provision and child-initiated play.

- Explore materials and textures
- Use tools safely and with control
- Build, join and construct
- Share ideas and make choices
- Investigate how things work
- Develop confidence and independence

YEAR 1

A PACKED LUNCH PROBLEM	MAKING SMOOTHIES	WHEELS AND AXLES
		
• Explore the problem. • Generate ideas. • Design a healthy packed lunch. • Draw and label ideas.	• Choose fruits and flavours. • Design a smoothie that is appealing and healthy.	• Explore moving toys. • Design a vehicle with moving wheels. • Draw and label design.
• Prepare ingredients safely. • Assemble a balanced lunch.	• Prepare fruit safely. • Use tools to cut, blend and pour.	• Cut, shape and join materials. • Assemble wheels and axles.
• Taste and evaluate. • Does it meet the design brief? • What could be improved?	• Evaluate taste, texture and appearance. • How could it be improved?	• Test the vehicle. • Does it move well? • What could be improved?
• Food groups and balanced diet. • Hygiene and safety.	• Names of fruits. • Blending techniques. • Healthy eating.	• Wheels, axles and how they move. • Materials and joints.
• Use less packaging. • Choose local and seasonal foods.	• Reduce waste. • Use seasonal fruit where possible.	• Reuse and recycle materials. • Make products last longer.
• Create original lunch ideas. • Think creatively about presentation.	• Invent new flavour combinations. • Present smoothies in creative ways.	• Try different designs to improve speed and distance.

YEAR 2

BABY BEAR'S CHAIR	FABRIC FACES	LEVERS AND SLIDERS
		
• Explore chairs and their features. • Design a chair for Baby Bear. • Annotate design.	• Design a face with features and expressions. • Choose fabrics and decorations.	• Explore lever and slider products. • Design a moving picture or story mechanism.
• Measure, cut and shape materials. • Join to make a strong structure.	• Cut, shape and join fabrics. • Add details and decorations.	• Build a strong frame. • Make and fit levers/sliders.
• Test the chair. • Is it strong and stable? • How could it be improved?	• Evaluate design and sewing. • Are the features secure and appealing?	• Test the movement. • Does it work smoothly? • How could it be improved?
• Strong and stable structures. • Materials and their properties.	• Different fabrics and fastenings. • Joining and decorating.	• Levers, sliders and movement. • Pivots, guides and slots.
• Use sustainable materials. • Make products that last.	• Reuse fabric offcuts. • Reduce waste in decoration.	• Choose materials carefully. • Reduce, reuse and recycle.
• Try different ideas to make the chair better.	• Create original characters and expressions.	• Innovate with different linkages and movement.

YEAR 3

FLYING A KITE	MAKING BREAKFAST	SLINGSHOT CAR
		
• Explore kites. Design a kite that will fly well. • Plan shape and decorations.	• Plan a healthy breakfast. • Consider taste, nutrition and presentation.	• Design a car that will travel far. • Consider shape, size and materials.
• Cut and assemble frame. • Attach covering and tail.	• Prepare food safely. • Cook ingredients using utensils.	• Build the car body. • Make the slingshot mechanism. • Assemble securely.
• Test the kite. • Does it fly well? • What could ibe improved?	• Taste and evaluate. • Is it healthy and tasty? • How could it be improved?	• Test and measure distance. • What worked well? • How could it be better?
• Structures and stability. • Materials that are light and strong.	• Heat sources and cooking techniques. • Balanced diet.	• Elastic potential energy. • Wheels, axles and chassis.
• Use lightweight, durable materials. • Care for and repair products.	• Reduce food waste. • Choose seasonal ingredients.	• Reuse materials where possible. • Make products that last.
• Create unique kite shapes and designs.	• Invent new breakfast ideas and combinations.	• Improve speed and distance through design.

YEAR 4

JUGGLING BALLS	MECHANICAL CARS	SEASONAL EATING
		
• Research juggling balls. • Design size, shape and decorations.	• Explore mechanical cars. • Design a car with gears/axles.	• Plan a seasonal meal. • Consider nutrition, cost and presentation.
• Cut, shape and sew fabrics. • Stuff and finish to a high quality.	• Build chassis and body. • Add axles and gears. • Assemble and finish.	• Prepare ingredients safely. • Cook using a range of techniques.
• Test for shape, weight and bounce. • How could they be improved?	• Test performance. • Evaluate gears and movement. • Suggest improvements.	• Taste and evaluate. • Is it healthy, seasonal and appealing? • What could be improved?
• Textiles: sewing techniques and finishing.	• Gears, pulleys and axles. • Mechanical systems and motion.	• Seasonality and provenance. • Cooking methods and nutrition.
• Use durable materials. • Reuse and repair where possible.	• Design for durability. • Recycle materials responsibly.	• Eat seasonally. • Reduce food waste and packaging.
• Explore patterns and creative designs.	• Innovate with gear ratios and construction.	• Create original, healthy and tasty dishes.

YEAR 5/6

CYCLE A

TERM 1	TERM 2	TERM 3
TEXTILES - STUFFED ANIMALS	ELECTRICAL - STEADY HAND GAME	AUTOMATA ANIMALS
		
• Research users and existing products. • Develop annotated designs, prototypes and specifications. • Make purposeful, informed design decisions.	• Research users and existing products. • Develop annotated designs, prototypes and specifications. • Make purposeful, informed design decisions.	• Research users and existing products. • Develop annotated designs, prototypes and specifications. • Make purposeful, informed design decisions.
• Select and use tools, materials, components and ingredients accurately. • Measure, cut, join, shape, sew, wire, cook and finish with precision.	• Select and use tools, materials, components and ingredients accurately. • Measure, cut, join, shape, sew, wire, cook and finish with precision.	• Select and use tools, materials, components and ingredients accurately. • Measure, cut, join, shape, sew, wire, cook and finish with precision.
• Test against design criteria and user needs. • Analyse strengths and weaknesses. • Refine products throughout the process.	• Test against design criteria and user needs. • Analyse strengths and weaknesses. • Refine products throughout the process.	• Test against design criteria and user needs. • Analyse strengths and weaknesses. • Refine products throughout the process.
• Apply knowledge of electrical circuits, cams, gears and pulleys. • Strengthen and reinforce structures. • Use technical vocabulary accurately.	• Apply knowledge of electrical circuits, cams, gears and pulleys. • Strengthen and reinforce structures. • Use technical vocabulary accurately.	• Apply knowledge of electrical circuits, cams, gears and pulleys. • Strengthen and reinforce structures. • Use technical vocabulary accurately.
• Choose materials and ingredients responsibly. • Reduce waste and consider repair, reuse and environmental impact.	• Choose materials and ingredients responsibly. • Reduce waste and consider repair, reuse and environmental impact.	• Choose materials and ingredients responsibly. • Reduce waste and consider repair, reuse and environmental impact.

CYCLE B

TERM 1	TERM 2	TERM 3
GEARS AND PULLEYS	COOKING AND NUTRITION - COME DINE WITH ME	STRUCTURES - PLAYGROUND PIONEERS
		
• Research users and existing products. • Develop annotated designs, prototypes and specifications. • Make purposeful, informed design decisions.	• Research users and existing products. • Develop annotated designs, prototypes and specifications. • Make purposeful, informed design decisions.	• Research users and existing products. • Develop annotated designs, prototypes and specifications. • Make purposeful, informed design decisions.
• Generate original solutions. • Take informed creative risks. • Adapt designs in response to testing and feedback.	• Generate original solutions. • Take informed creative risks. • Adapt designs in response to testing and feedback.	• Generate original solutions. • Take informed creative risks. • Adapt designs in response to testing and feedback.

DT VOCABULARY PROGRESSION

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
make	design	structure	frame	precision
use	plan	strong	stable	gears
cut	measure	weak	join	axle
join	cut	measure	tension	chassis
tool	join	join	mechanism	elastic
soft	material	lever	cook	sew
hard	tool	slider	heat	evaluate
safe	wheels	pivot	ingredients	nutrition
test	axle	fabric	balanced	seasonal
choose	healthy	decorate		

WHOLE SCHOOL DT PRINCIPLES

USER FOCUS
We design with real people in mind.

SAFETY FIRST
We use tools and equipment safely and responsibly.

QUALITY & PRIDE
We take pride in our work and aim for high quality.

REFLECT & IMPROVE
We test, evaluate and improve our ideas and products.

WORK TOGETHER
We collaborate, share ideas and learn from each other.

CARE FOR OUR WORLD
We make responsible choices to protect people and our planet.

DT VOCABULARY PROGRESSION

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4
make	design	structure	frame	precision
use	plan	strong	stable	gears
cut	measure	weak	join	axle
join	cut	measure	tension	chassis
tool	join	join	mechanism	elastic
soft	material	lever	cook	sew
hard	tool	slider	heat	evaluate
safe	wheels	pivot	ingredients	nutrition
test	axle	fabric	balanced	seasonal
choose	healthy	decorate		

YEAR 5/6				
specification	prototype	precision	seam	stuffing
circuit	switch	cam	follower	automata
gear	pulley	ratio	nutrition	structure
reinforce	evaluate	refine		

USER FOCUS
We design with real people in mind.

SAFETY FIRST
We use tools and equipment safely and responsibly.

QUALITY & PRIDE
We take pride in our work and aim for high quality.

REFLECT & IMPROVE
We test, evaluate and improve our ideas and products.

WORK TOGETHER
We collaborate, share ideas and learn from each other.

CARE FOR OUR WORLD
We make responsible choices to protect people and our planet.

FAMILY
We care for one another and belong together.

FEARLESS
We are brave, curious and ready to try new things.

FAIRNESS
We treat everyone with respect and act with kindness.