



DT Curriculum

Design and Technology

Intent, Implementation and Impact

Our community is inspired by our Christian values to enable all to flourish in mind, body, heart and spirit.

INTENT

At St. Giles' and St. George's, our curriculum is rooted in our Gospel Values and our Christian vision to enable all to flourish in mind, body, heart and spirit. Each subject follows a progressive learning journey from EYFS to Year 6, where knowledge and skills build over time and are applied through real, meaningful experiences.

Design and Technology encourages children to think creatively and practically, designing and making high-quality products that solve real problems. Through DT, pupils develop technical skills, imagination, and resilience, while considering the needs, values, and impact of their designs on others.

By the time they leave St. Giles' and St. George's, pupils are confident, resourceful, and innovative learners, ready to use their skills and creativity to make a positive difference in the world.



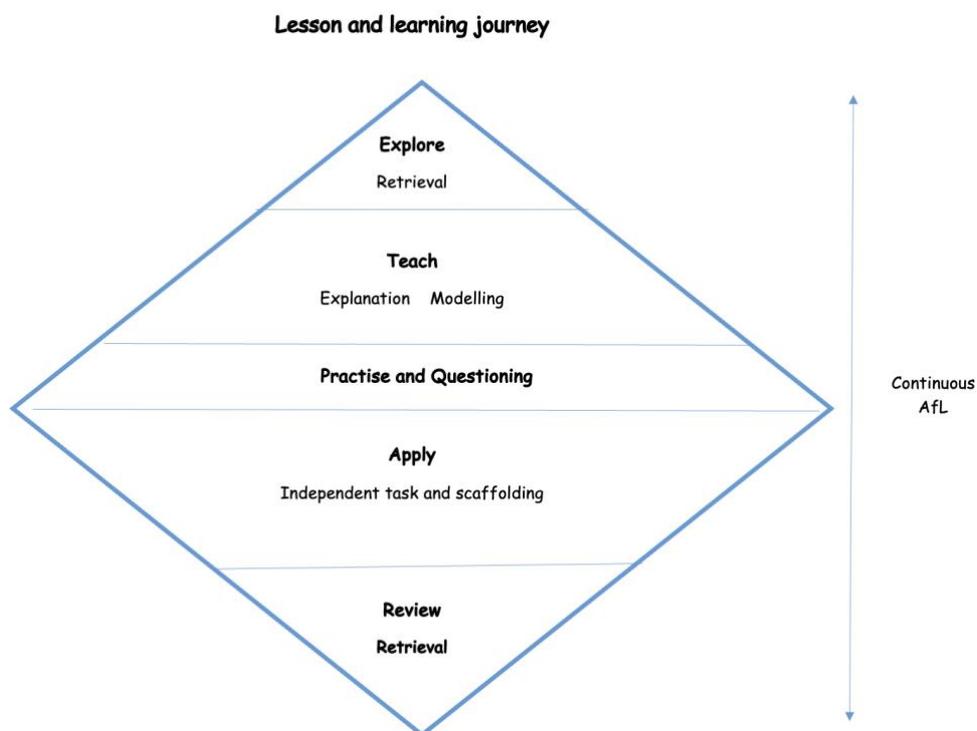
IMPLEMENTATION

Design and Technology at St. Giles' and St. George's is taught through six key areas:

Mechanisms, Textiles, Structures, Cooking and Nutrition, Electrical Systems (KS2), and Digital World (KS2). Each unit develops the core elements of **design, make, evaluate** and **technical knowledge**.

Our spiral curriculum ensures that key skills and knowledge are revisited and built upon with increasing depth and complexity. DT is taught for **one hour weekly** or **two hours fortnightly**, depending on the unit and year group.

Each unit begins by revisiting prior learning before introducing new skills, knowledge, and vocabulary. Lessons follow a clear sequence: **Explore – Teach/Practise – Apply – Review**, with feedback focused on addressing misconceptions and guiding next steps. Children record their work in workbooks, showing their creative process and growing technical understanding.



EYFS



Reception Theme Subject Journey



Explore

Children have the opportunity to explore the topic and subject area through tuff trays and child led learning. KWL grids and mind maps used to identify prior learning.

Teach

Input and carpet sessions, in the moment teaching opportunities, concrete materials, teaching of new topic specific vocabulary.

Practise

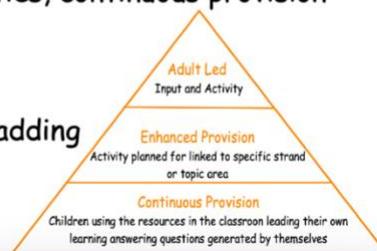
Group work, teacher guided sessions, tuff tray activities after input, key questions for children to explore and investigate on their own after being taught skills.

Apply

Independent tasks, some enhanced provision opportunities, continuous provision opportunities, child-led learning

Review

Mini input on previous learning, KWL revisit, mind map adding repeating 'explore' activities.



Design and Technology is taught as part of the Expressive Art and Design area of the EYFS learning and development. Children in Reception have an Art or DT lesson once per week, following the units on the yearly overview. Where appropriate, lessons and units will take the same form as the rest of the school: explore, teach, practise, apply and review. Children will also have the opportunity to practise and develop their Design and Technology skills in the enhanced and child-initiated continuous provision. Evidence of Design and Technology lessons and other supporting evidence can be found on Evidence Me linked to the appropriate statements and ELG.

ELG	Physical Development	Fine Motor Skills	• Use a range of small tools, including scissors, paintbrushes and cutlery.
	Expressive Arts and Design	Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used.

IMPACT

Through the Design and Technology curriculum at St. Giles' and St. George's, children will:

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|---|
| <ul style="list-style-type: none"> ▪ Understand the functional and aesthetic properties of a range of materials and resources |
| <ul style="list-style-type: none"> ▪ Understand how to use and combine tools effectively to shape, decorate, and manufacture products |
| <ul style="list-style-type: none"> ▪ Build and apply a variety of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD and products to fulfil the needs of users, clients and scenarios |
| <ul style="list-style-type: none"> ▪ Understand and apply the principles of healthy eating, diets and recipes, including key processes, food groups and cooking equipment |
| <ul style="list-style-type: none"> ▪ Appreciate key individuals, inventions, and events that have shaped our world. |
| <ul style="list-style-type: none"> ▪ Recognise where our decisions can impact the wider world in terms of community, social and environmental issues |
| <ul style="list-style-type: none"> ▪ Self-evaluate and reflect on learning at different stages and identify areas to improve |
| <ul style="list-style-type: none"> ▪ Meet the end of key stage expectations outlined in the National Curriculum |

Formative assessment takes place in every lesson, with feedback focused on addressing misconceptions and identifying next steps. Summative assessment is completed at the end of each unit, using a best-fit approach to determine an end-of-year grade for each child.

Adaptive teaching strategies

In our Design and Technology lessons, we cater for our SEN children using the following strategies.

Cognition and Learning	Communication and Interaction	SEMH	Physical and Sensory
<ul style="list-style-type: none"> • Alternative methods of recording (talking tins, laptops, creative tasks) • Differentiated tasks • Visual supports • Pre-teaching of vocabulary • Teaching of key skills • Timers and chunked activities 	<ul style="list-style-type: none"> • Talking tins • Pre-teaching language • Visuals to support • Now/Next • Increased focus on Oracy and developing talk opportunities • Thinking time • Explicit instructions • Makaton signs • Steps to success (one task at a time) 	<ul style="list-style-type: none"> • Brain and movement breaks • Calm Brain • Reward time • Reflection areas (weighted blankets) • Sensory/fidget toys • Sit near to the teacher • Steps to success (one task at a time) • Peer buddies 	<ul style="list-style-type: none"> • Own learning space (workstation) • Brain breaks • Appropriate seating • Fidget toys • Adapted resources (scissors, rulers etc.) • Sloping board • Alternative methods of recording • Wobble cushions • Use of a sensory areas (tent) • Chew buddies • Pencil grips/sloping boards

Gospel Values

EYFS

Loving and Compassionate

In what different ways do we celebrate the people we love?

Grateful and Generous

How can we show that we are grateful to the people who help us?

Curious and Active

Which animals live by the seaside?

Intentional & Prophetic

Why is it important to make the right choices?

Learned and Wise

How can we make sure that we keep our minds and bodies healthy?

Faith-filled and Hopeful

Can having faith help us to grow?

KS1

Loving and Compassionate

Why do children love their toys?

Grateful and Generous

How can I help people less fortunate than me?

Curious and Active

Does eating healthily help us to be active?

Attentive and Discerning

What kind of world has God made for us?

Learned and Wise

Why do we need renewable energy in the form of windmills?

Faith-filled and Hopeful

What celebrations would you find in other religions?

LKS2

Loving and Compassionate

If you make a sculpture of someone does that show that you love them?

Grateful and Generous

What did the Stone Age teach us?

Curious and Active

How does Jesus shine a light in our lives?

Attentive and Discerning

What artistic talents has God given you?

Learned and Wise

Why were the Greeks good at building?

Faith-filled and Hopeful

What effect does religious art have on our faith?

UKS2

Loving and Compassionate

How could you use art to show someone you love them?

Grateful and Generous

Who could you donate your automata toy to?

Curious and Active

Is healthy eating a way to praise God?

Attentive and Discerning

How does your card/story give joy to others?

Learned and Wise

How does Art/DT celebrate God?

Faith-filled and Hopeful

What does the past teach us about the future?

DT Overview

	Autumn Term		Spring Term		Summer Term	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception		<p>DT Structures: Junk model homes</p>  <p>(Marvellous me)</p>  <p>What do you do in your time after school?</p>		<p>DT Cooking and nutrition: Fruit Kebabs</p>  <p>(Healthy me)</p>	<p>DT Mechanisms: Design a pirate ship</p>  <p>(Pirates)</p>	
KS1 Year A			<p>DT Textiles: Puppets</p>   <p>What gives colour their moods?</p>			<p>DT Mechanisms: Making a moving story book</p>  <p>(Writing: Look Inside a Castle flip book)</p>
KS1 Year B	<p>DT Structures: Baby bear's chair</p>  <p>(History: Make a throne)</p>  <p>If I try to succeed and fail, what have I learnt?</p>		<p>DT Mechanisms: Making a moving monster</p>  <p>(Geography: explorers – different animals discovered)</p>  <p>What am I scared of?</p>	<p>DT Cooking and nutrition: A balanced diet</p>  <p>(PSHE: Healthy me)</p>  <p>What am I worth?</p>		

	Autumn Term		Spring Term		Summer Term	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
LKS2 Year A			DT Structures: Castles (History: Settlements)   Will we ever live in a world without fighting?		DT Textiles: Cushions (History: Ancient Egypt)   Is it good that scientists can't explain everything?	
LKS2 Year B					DT Digital world: Light up wearables 	
UKS2 Year A					DT Structures: Bridges (	
UKS2 Year B			DT Electrical systems: Steady hand game 	DT Cooking and nutrition: Come dine with me (PSHE: Healthy me)   Should you respect yourself over all things?	DT Mechanical Systems: Automata toys (English: Hugo) 	

Skills and Knowledge Progression

Structures

Skills

	KS1 – Baby Bear’s chair	LKS2 – Castles	UKS2 – Bridges
Design	<ul style="list-style-type: none"> Generating and communicating ideas using sketching and modelling 	<ul style="list-style-type: none"> Designing with key features to appeal to a specific person/purpose. Drawing and labelling a design using 2D shapes, labelling; 3D shapes - materials needed and colours. 	<ul style="list-style-type: none"> Designing a stable structure that is able to support weight Creating frame structure with focus on triangulation
Make	<ul style="list-style-type: none"> Making a structure according to design criteria Creating joints and structures from paper/card and tape 	<ul style="list-style-type: none"> Constructing a range of 3D geometric shapes using nets. Creating special features for individual designs. Making facades from a range of recycled materials. 	<ul style="list-style-type: none"> Create a structure that span a given distance and supports a load, reinforcing where needed. Independently measuring and marking wood accurately Selecting appropriate tools and equipment and techniques for particular tasks
Evaluate	<ul style="list-style-type: none"> Testing the strength of own structures Evaluating the strength, stiffness and stability of own structure 	<ul style="list-style-type: none"> Evaluating own work and the work of others based on the aesthetic of the finished product and in comparison, to the original design. Suggesting points of modification of the individual designs. 	<ul style="list-style-type: none"> Adapting and improving own structure by identifying points of weakness and reinforcing them as necessary Suggesting points for improvements for own structures and those designed by others

Knowledge

Technical	<ul style="list-style-type: none"> To know that materials can be manipulated to improve strength and stiffness To know that a structure is something which has been formed or made from parts To know that a ‘strong and stable’ structure is one which does not break easily and is firmly fixed 	<ul style="list-style-type: none"> To understand that wide and flat based objects are more stable. To understand the importance of strength and stiffness in structures. 	<ul style="list-style-type: none"> To understand some different ways to reinforce structures To understand why material selection is important based on their properties To understand the material (functional and aesthetic) properties of wood
Additional	N/A	<ul style="list-style-type: none"> To know that a design specification is a list of success criteria for a product. To understand why castles had to be strong, know the features of a castle and their purpose. 	<ul style="list-style-type: none"> To understand the difference between arch, beam, truss and suspension bridges To understand how to carry and use a saw safely

Vocabulary

Function	Test	Castle	Structure	Finish	Lamination
Weak	Natural	3D	Tab	Material properties	Factors
Strong	Man-made	2D	Net	Technique	Rigid
Stable	Mould	design	Assemble	Stability	Soft wood
Stiff	Evaluate	Scoring		Strength	Hard wood
				Visual appeal	Reinforce
				Truss bridge	

Mechanisms/Mechanical systems

Skills

	KS1 – Making a moving story book	KS1 - Making a moving monster	UKS2 – Automata toys
Design	<ul style="list-style-type: none"> Explaining how to adapt mechanisms, using bridges or guides to control the movement Designing for a given audience 	<ul style="list-style-type: none"> Creating a class design criteria. Designing for a specific audience in accordance with a design criteria. 	<ul style="list-style-type: none"> Creating a design based on a choice of cam to create a desired movement Understanding how linkages change the direction of a force Understanding and drawing cross-sectional diagrams to show the inner-working
Make	<ul style="list-style-type: none"> Following a design to create moving models that use levers and sliders 	<ul style="list-style-type: none"> Making linkages using card for levers and split pins for pivots 	<ul style="list-style-type: none"> Measuring, marking, cutting and checking the accuracy of the components.
Evaluate	<ul style="list-style-type: none"> Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed Reviewing the success of a product by testing it with its intended audience 	<ul style="list-style-type: none"> Evaluating own designs against design criteria Using peer feedback to modify a final design 	<ul style="list-style-type: none"> Evaluating the work of others and receiving feedback on own work Describing changes they would make/do if they were to do the project again

Knowledge

Technical	<ul style="list-style-type: none"> To know that a mechanism is the parts of an object that move together To know that a slider mechanism moves an object from side to side 	<ul style="list-style-type: none"> To know that mechanisms are a collection of moving parts that work together as a machine to produce movement. To know that there is always an input (energy to start something) and output (movement / result) in a mechanism 	<ul style="list-style-type: none"> To understand that the mechanisms use a system of cams, axles and followers To understand that different shaped cams produce different outputs
Additional	<ul style="list-style-type: none"> To know that in Design and technology we call a plan a 'design' 	<ul style="list-style-type: none"> To know some real-life objects that contain mechanisms 	<ul style="list-style-type: none"> To know that a cross-sectional diagram shows the inner workings of a product To know that a set square can be used to help mark 90° angles

Vocabulary

<ul style="list-style-type: none"> Template Design Test Evaluate 	<ul style="list-style-type: none"> Model Slider Stencil 	<ul style="list-style-type: none"> Input Output Linkage Mechanical Pivot Survey 	<ul style="list-style-type: none"> Wheel Axle 	<ul style="list-style-type: none"> Automata Accurate Axle Bench hook Cam Cam profile Component 	<ul style="list-style-type: none"> Cross-sectional diagram Dowel Exploded diagram Frame Function Housing Mechanism
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Cooking and nutrition

Skills

	KS1 – A Balanced Diet	UKS2– Come Dine With Me
Design	<ul style="list-style-type: none"> Designing based on food combinations which work well together 	<ul style="list-style-type: none"> Writing a recipe, explaining the key steps, method and ingredients Including facts and drawings from research undertaken
Make	<ul style="list-style-type: none"> Slicing food safely using the bridge or claw grip •Constructing accord to a design brief 	<ul style="list-style-type: none"> Following a recipe, including using the correct quantities of each ingredient Adapting a recipe based on research Working safely and hygienically with independence
Evaluate	<ul style="list-style-type: none"> Describing the taste, texture and smell of fruit and vegetables Describing the information that should be included on a label Evaluating which grip was most effective 	<ul style="list-style-type: none"> Evaluating a recipe, considering: taste, smell, texture and origin of the food group Taste testing and scoring final products, evaluating how they could be improved. Evaluating health and safety in production to minimise cross contamination

Knowledge

Cooking and Nutrition	<ul style="list-style-type: none"> To know that ‘diet’ means the food and drink that a person or animal usually eats To understand what makes a balanced diet To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar To know that ‘ingredients’ means the items in a mixture or recipe 	<ul style="list-style-type: none"> To know that many countries have ‘national dishes’ which are recipes associated with that country To know that ‘processed food’ means food that has been put through multiple changes in a factory To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork)
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Vocabulary

	Healthy Ingredients Balanced diet Refrigerator Nutrients Design Smell Fruit	Vegetables Taste Appearance Feel	Cook book Complement Cross contamination Enhance Farm to fork Flavours Method Pairing	Preparation Recipe Research Bitter Sweet Salty Sour Unami
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Textiles

Skills

	KS1 - Puppets	LKS2 - Cushions
Design	<ul style="list-style-type: none"> Using a template to create a design 	<ul style="list-style-type: none"> Designing, creating a template and applying individual design criteria
Make	<ul style="list-style-type: none"> Cutting fabric neatly with scissors Using joining methods to decorate Sequencing steps for construction 	<ul style="list-style-type: none"> Following design criteria. Cutting fabric, threading needles and tying knots with greater independence Sewing using cross stitch and running stitch to join fabric and apply appliqué
Evaluate	<ul style="list-style-type: none"> Reflecting on a finished product, explaining likes and dislikes 	<ul style="list-style-type: none"> Evaluating an end product and thinking of other ways in which to create similar items

Knowledge

Technical	<ul style="list-style-type: none"> To know that 'joining technique' means connecting two pieces of material together To understand that a template (or fabric pattern) is used to cut out the same shape multiple times To know that drawing a design idea is useful to see how an idea will look 	<ul style="list-style-type: none"> To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric To know that when two edges of fabric have been joined together it is called a seam To know that it is important to leave space on the fabric for the seam
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Vocabulary

	Template Model decorate design fabric	Equipment glue safety pin staple stencil	Accurate Attach Seam Running stitch Cross Stitch	Embellish Appliqué Fabric Annotate Technique
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Digital World and Electrical Systems

Skills

	LKS2 – Wearable Technology	UKS2 – Steady Hand Game
Design	<ul style="list-style-type: none"> Problem solving by suggesting which features that might be useful and justifying my ideas. Developing design ideas through annotated sketches to create a product concept. Developing design criteria to respond to a design brief. 	<ul style="list-style-type: none"> Designing by identifying and naming the components required Drawing a design from three different perspectives, generating ideas through sketch and discussion Modelling ideas through prototypes
Make	<ul style="list-style-type: none"> Following a list of design requirements. Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm. 	<ul style="list-style-type: none"> Constructing and decorating a stable base Accurately cutting, folding and assembling a net Making and testing a circuit incorporating a circuit into a base
Evaluate	<ul style="list-style-type: none"> Analysing and evaluating the design. Using feedback from peers to improve design. 	<ul style="list-style-type: none"> Testing own and others finished games, identifying what went well and making suggestions for improvement Gathering images and information about existing products Analysing a selection of existing products.

Knowledge

Technical	<ul style="list-style-type: none"> To understand that, in programming, a 'loop' is code that repeats something again and again until stopped. To know that a micro:bit is a pocket-sized, codeable computer. To know that a simulator is able to replicate the functions of an existing piece of technology. 	<ul style="list-style-type: none"> To know that batteries contain acid, which can be dangerous if they leak To know the names of the components in a basic series circuit including a buzzer
Additional	<ul style="list-style-type: none"> To understand what is meant by 'point of sale display.' To know that CAD stands for Computer-aided design. To know what a focus group is by taking part in one. 	<ul style="list-style-type: none"> To know the difference between 'form' and 'function' To understand that 'fit for purpose' means that a product works how it should and is easy to use To know the importance of 'form follows function' when designing: the product must be designed primarily with the function in mind

Vocabulary

Digital technology Display Annotate Opinion Feature Function	Monitor Product Program Simulator Test	Assemble Benefit Bulb Buzzer Circuit Circuit symbol Component	Conductor Form Insulator Fine motor skills Gross motor skills LED User
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National Curriculum Coverage - DT

Key Stage 1	Puppets	Story book	Baby bear	Balanced diet	Monster
Design purposeful, functional, appealing products for themselves and other users based on design criteria	•	•	•		•
Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology	•	•	•		•
Select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing)	•	•	•		•
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	•	•	•	•	•
Explore and evaluate a range of existing products		•		•	•
Evaluate their ideas and products against design criteria	•	•	•		•
Build structures, exploring how they can be made stronger, stiffer and more stable			•		
Explore and use mechanisms (for example, levers, sliders, wheels and axles) in their products.		•			•
Use basic principles of a healthy and varied diet to prepare dishes				•	
Understand where food comes from				•	

Key Stage 2	Castles	Wearables	Cushion	Bridges	Steady game	Come dine	Automata
Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups	•	•	•	•	•	•	•
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	•	•	•	•	•		•
Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) accurately	•		•	•	•		•
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	•		•	•	•	•	
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		•			•	•	•
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures	•			•			
Understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages)							•
Understand and use electrical systems in their products (for example, series circuits incorporating switches, bulbs, buzzers and motors)					•		
Apply their understanding of computing to program, monitor and control their products		•					
Understand and apply principles of a healthy and varied diet						•	
Prepare and cook 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						•	