DT Overview Guidance – Years A and B to ensure curriculum is delivered.

Yellow Highlighted is the key DT area to be taught through the 4 elements of Design, Make, Evaluate and Technical Knowledge

Use the skills progression grid to inform and guide teaching and assessment. There are opportunities for evaluation throughout.

Activities listed are an example of how to facilitate a DT block of learning, building on previous experiences and learning.

KS 2: Mixed age group Years 3 & 4 **DT Rolling programme A**

Autumn	Spring	Summer
A. DT Focus – linkages and levers ***Activity suggestion-*** *make a moving shadow puppet* **Design** • Identify purpose – research beginnings of ancient shadow puppetry • Watch a shadow puppet show online – draw up a success criteria • Research moving parts and linkages – deconstruct moving part books etc – evaluate these • Use this to design a simple puppet with moving parts - notate drawings, diagrams etc (twinkl crocodile / dragon) **Make** • Explore simple levers and linkages (twinkl has accessible info, activities and powerpoints) • Select apt materials to allow movement and connection without weakening • **Option for evaluation during this process** **Evaluate** • Evaluate against the class / group / own design criteria • Shadow show - Group feedback opportunities for modifying or identifying key mechanisms	**A. DT Focus – Food and Nutrition** **Activity suggestion –** *cooking changing states of food matter (bread / make moulded and filled chocolate mice like stuffed dormice)* **Design** • Research Roman daily meals and / or banquets • Identify Roman food sources – what was seasonal, did they import foods? • Look at different breads today – how could you make it appealing for Romans? Tasty? (add olives / herbs etc) **Make** • Look at and use senses to explore and sample range of herbs – senses and taste additional healthy extras that could be added. • Choose healthy flavourings to add to the roman bread recipe **Evaluate** • Taste and compare own to usual and basic roman bread. • What would you change? What works and why? Is it appealing to look at / taste/ smell/ touch?	**B. DT Focus – complex structures** ***Activity suggestion-*** *create a shelter for animal / monsoon* Den Designers primary school lesson plan - Eden Project, Cornwall **Design** • Explore local and immediate area and look at different shelters – willow circle, KS 1 playground, bus stops, porches, forest school shelter, pop up play tents etc • Discuss purpose of their shelter and use all to inform their design using range of methods of design (see skills progression) **Make** • Explore different material structures – wood, pipe cleaners / straws – see planbee.co.uk for ideas and joins to strengthen strutures • Either make a mini scale shelter using small world amazon creatures / people using chosen material samples OR – den building in forest school / den building day **Evaluate** • How can you test the effectiveness? Revisit the purpose of the shelter and design criteria.
Enrichment: role play puppet show, workshop and exhibits at Techniquest • Science Centre UK • Science Discovery	Enrichment: bakery visit at supermarket, parent/ local breadmaker? Food sampling	Enrichment: den building in our forest school, Dean Heritage Centre - Dean Heritage Centre den building day

KS 2: Mixed age group Years 3 & 4 **DT Rolling programme B**

Autumn	Spring	Summer
C. DT Focus – cogs, levers, pulleys ***Activity suggestion-*** *Make a shaduf – relate to modern day where it could be used.* **Design** • Use range of design methods – see skills progression sheet **Make** • Use the gears and cogs set to explore how to make things move and turn • Explore and create, using the design criteria, to make a shaduf **Evaluate** • Research Egyptian examples to inform design • Look at modern examples to move / transport water • Evaluate own design against criteria	**B. DT Focus – Electrical Systems** ***Activity suggestion-*** *Earthquake / volcano alarm / warning* **Design** • Identify purpose • Group research / collate / collect info on functional and effective alarms – use senses • Use this to notate drawings, diagrams etc **Make** • Explore electrical components and simple structures • Select apt materials and components to makes an alarm achieve its purpose (flashing lights / buzzers / switches etc) **Evaluate** • Research and discover how key individuals / events have had impact around the world • Group feedback opportunities for modifying design	**D. DT Focus – coding Scratch "Imagine a world"** **Additional DT Focus – Food and nutrition** **Design** • Refer to learning about the wonders of our world – nature's beauty to inform what makes our world magical • Use this to inform what they would like in their world – why? • Explore scratch functions • Use the above to produce a design criteria for their product – visit our imaginary world. Create notated and expanding diagrams **Make** • Make an imaginary world using Scratch **Evaluate** • Ask peers to visit - evaluate the experience. **Additional food and nutrition** – use ingredients planted by and grown by the children to create a healthy recipe / meal / product – refer to skills progression grid for guidance
Enrichment:	Enrichment: Fire service visit	Enrichment: gaming opportunities, garden and allotments

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KS 2: Mixed age group Years 5 & 6 **DT Rolling programme A**

Autumn	Spring	Summer
A. DT Focus - Mechanical systems cams/ gears *Activity Suggestion – make a Christmas toy using a cam mechanic* **Design** • Explore variety of toys and cam toy kits – see resources • Identify its purpose and use this to inform the design criteria – a toy's purpose and use this an the exploration to inform designs (see skills progression for types) **Make** • Choose the correct components, materials and use appropriate tools and joins to construct a cam toy (twinkl has powerpoints and explanations if needed) **Evaluate** • Market research – use a different class to collate feedback and use this to inform data handling in Computing. Refer back to criteria and purpose.	**A. DT Focus – Coding using Scratch make a space chase game** ***Activity suggestion*** *– create a Space chasing game for a younger pupil* **Design** • Explore computing chasing games Danger Mouse Game - Platform Games for Kids - CBeebies - BBC • Use this to examine the task purpose. Print screen shots etc, use notation to inform design research • Use this to inform and create own design criteria – always return to the purpose **Make** • Explore scratch chasing game software • Use this to create scratch chasing game **Evaluate** • Peer evaluation • Possible link with buddies in Reception – the intended audience / client! **Also look at technology giants and game / app creators**	**A. DT Focus – Food and Nutrition** ***Activity suggestion*** *– Create a healthy meal / food using the healthy eating plate. Use seasonal food where poss* **Design** • Look at and research relevant chefs and their food e.g. Tom Kerridge healthy eating • Annotate what makes it appealing etc • Refer to and research food products and types using the healthy plate **Make** • Food tasting and decision about which foods to use as a class – with one changing ingredient or different recipes using those foods • **Evaluate** • Use of techniques, taste, smell etc
Enrichment:	Enrichment: Game Gloucester	Enrichment: visit from / to local chef / restaurant, links with the school kitchen

KS 2: Mixed age group Years 5 & 6 **DT Rolling programme B**

Autumn	Spring	Summer
B. DT Focus – Electrical systems ***Activity suggestion*** *– Make a battery lighted Christmas decoration* **Design** • Research, handle, explore existing products • Form prototypes / use range of design methods (see skills progression) to form own ideas • What materials components etc would be needed? Why? measurements etc. **Make** • Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] – using design notes • Accurately select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities **Evaluate** • Functionality / aesthetics, safety, structure – evaluate and feedback • Research and identify key movements / events in Victorian era that led to decorations also lighting etc	**B. DT Focus – complex structures** ***Activity Suggestion –*** *build a bridge using complex structures* **Design** • See below links for research and input to aid designs • Explore reinforcing and trusses as well as shapes – see links below for support **Make** • Accurately select from and use a wider range of materials and components, including construction materials, according to their functional properties • Build a bridge that is strong enough or long enough – what has been set in purpose? **Evaluate** • Adapt and amend design – allow time to improve design • **Isambard Kingdom Brunel – Clifton suspension Severn Bridges**	**B. DT Focus – Textiles and Fashion** ***Activity Suggestion –*** *design own clothing for End of Year show* **Design** • Look at different stage costumes and basic clothing pieces – tops, bottoms, sheet use, head ware • Compare different designers and look at their drawings • Use magazines, catalogues, posters etc Collate samples of different types of clothing and costume designers – look at fastenings, wraps, colours **Make** • Either upcycle a sheet / T-shirt • Sewing techniques and joins, finishing and cutting, measures and embellishments. **Evaluate** • Did a designer they found in their research inform their design? • Evaluate functionality and design
Enrichment: Christmas grotto / garden centre visit!	Enrichment: Bridges and Structures | STEM Building Bridges: KS2 structures Design and Technology lessons (planbee.com) Learning About Bridges - Rochester Bridge Trust	Enrichment: fashion show!