Beacon — Shine brightly Year 2 with Design Technology - Autumn

Enquiry Question	How do you make a glove puppet?	Focus:	Textiles

Be Brilliant CULTURAL DIVERSITY
Enables our children to develop a growth mindset, by exposure to challenging experiences that allow our children to question and explore opportunities that will enable them to become confident and resilient in all areas of their lives.

Believe POSSIBILITIES
Allows our children to explore the world around them, knowing that the experiences they gain will enhance their lives and open doors to new adventures.

Bebrave ADVENTURE
Exposes our children to a rich and diverse world that is full of colour, music, creativity and celebration. Providing our children with the opportunity to see a world beyond their own, that will inspire and influence their future choices.

	Sequence of lessons	Outcome - from overview	Skills used (NC)
1	We are learning to investigate a range of puppets. Children to discuss and explore a range of puppets, their features, what materials are used and what they are used for. How are they made? What are they made from?	Draw and label features of their favourite puppet.	Explore and evaluate a range of existing products
2	We are learning to work with fabric to create a finger puppet Use a template to design, make and decorate a finger puppet from fabric.	Children have examples of materials joined in a variety of ways to design and create a fabric finger puppet from given template	Select from and use a wide range of materials and components
3	We are learning to develop and practise sewing skills to use when creating a puppet. Teach different sewing techniques (running stitch and over stitch)	Children use running stitch or back stitch to join 2 pieces of fabric.	Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
4	We are learning to design a glove puppet Recap possible techniques to help create glove puppet design.	Children design a superhero puppet and list • steps they will need to create a puppet. • Tools and materials needed • Joining method	Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups
5	We are learning to follow a design to make a puppet. Children use their designs from previous lesson to cut and assemble glove puppet	Children describe the steps they will use to create their puppet. They follow their design to create a template. Use the template to create individual puppets	Design purposeful products for themselves and others to use based on design criteria
6	We are learning to evaluate our finished puppet	Children to demonstrate and share their puppets and discuss how the design could be improved in the future	Evaluate their ideas and products against design criteria

Composite: Children design and make a Christmas puppet using their new stitching skills.

Beacon

Shine brightly Year 2
Design Technology - Spring

Enquiry Question	How can I make a structure stable?	Focus:	Structures

Be Brilliant CULTURAL DIVERSITY
Enables our children to develop a growth mindset, by exposure to challenging experiences that allow our children to question and explore opportunities that will enable them to become confident and resilient in all areas of their lives.

Believe POSSIBILITIES
Allows our children to explore the world around them, knowing that the experiences they gain will enhance their lives and open doors to new adventures.

Bebrave ADVENTURE
Exposes our children to a rich and diverse world that is full of colour, music, creativity and celebration. Providing our children with the opportunity to see a world beyond their own, that will inspire and influence their future choices.

	Sequence of lessons	Outcome - from overview	Skills used (NC)
1	*As designers, we are learning to build a tall structure.*	Knowledge Harvest—what do we already know about structures/making things stable. Challenge to create the tallest tower using newspaper and Sellotape.	Select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing)
2	*As designers, we are learning to investigate what techniques can be used to stabilise freestanding structures.*	Research freestanding structures around the world and what techniques are used to stabilise them.	Design purposeful, functional, appealing products for themselves and other users based on design criteria Explore and evaluate a range of existing products
3	*As designers, we are learning to design a free standing structure that uses stabilising structures.*	Use annotated sketches to design a tower to be made out of paper using stabilising techniques. Practise making parts of the design with different stabilising structures, paper and adhesive methods and amend the design.	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
4 5	*As designers, we are learning to build a free standing structure using stabilising techniques.*	Select the chosen paper and adhesive technique set out in the design and build a tower using the selected stabilising techniques.	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
6	*As designers, we are learning to evaluate the stability of our structures.*	Present the tower to the class and discuss what went well and what improvements could be made.	Evaluate their ideas and products against design criteria

Composite
Explore local structures and compare to their own designs.

Beacon

Shine brightly Year 2 Summer
Design Technology

Enquiry Question	How do you make a rocket blast off?	Focus:	Mechanisms – winding mechanisms

Be Brilliant CULTURAL DIVERSITY
Enables our children to develop a growth mindset, by exposure to challenging experiences that allow our children to question and explore opportunities that will enable them to become confident and resilient in all areas of their lives.

Believe POSSIBILITIES
Allows our children to explore the world around them, knowing that the experiences they gain will enhance their lives and open doors to new adventures.

Bebrave ADVENTURE
Exposes our children to a rich and diverse world that is full of colour, music, creativity and celebration. Providing our children with the opportunity to see a world beyond their own, that will inspire and influence their future choices.

	Sequence of lessons	Outcome - from overview	Skills used (NC)
1	*As designers, we are learning to investigate what a winding mechanism is.* Look at toys that have winding mechanisms and/or construct a simple winding mechanism using a construction kit.	Look at toys that have winding mechanisms and discuss what the winding mechanism does and how it works. What might you need to wind up?	Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
2	*As designers, we are learning to make a winding mechanism.* How did they construct the winding mechanism? How did they attach the axle so it moves? How can they turn the axle? Ask them to use the mechanism to wind up something.	Explore making winding mechanisms using a selection of different construction kits. Draw a toy and label the different parts of the mechanism	Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
3	*As designers, we are learning to explore different techniques for making a winding mechanism.* Demo techniques for holding axles to enable them to turn eg punching holes in the side of a box, using clothes pegs or triangular pieces of card with holes punched, discuss possible difficulties eg what happens when the axles are not parallel. Show the children how to cut, fix and use appropriate amounts of masking tape, or plastic tubing, to secure the cotton reels on the axle if there is a loose fit. Discuss the importance of the size of the drum on a 'winder'. The bigger the drum the faster it winds up for a given winding speed. Explore using different drum sizes	Explore techniques for making winding mechanisms and learn how to use tools accurately and safely. Investigate and evaluate ways of making the rocket blast off	Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
4 5	*As designers, we are learning to build a free standing structure using stabilising techniques.* Which winding mechanisms would be most suitable for your toy? How will you construct the rocket? How will you make it strong enough for people to use? Discuss other design criteria. Ask the children to collect their materials and list the tools that they think they will use. Encourage the children to make well-constructed structures. How is it going to move? How will you join the pieces so that it can move? How could you make it stronger? Where are the weak points? How could you reinforce them? Are there different ways of making this? Which would give the best results?	Design and make a winding up toy to represent Neil Armstrong's rocket blasting off to space.	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
6	*As designers, we are learning to evaluate our rocket against our design criteria.*	Present rockets to the class and evaluate how well the toy works in relation to the design criteria.	evaluate their ideas and products against design criteria

Cross-curricular Composite (Science): Competition measuring which rocket goes the furthest.