

The King's Quest

Design and make a throne for a King

DT Theme: (Structures)

Teaching focus:

Learning Lens: Structures

Class: Year 2

Previous Knowledge

How can I join? (EYFS)

Project Hook or 'Wow' memory

Introducing the King's Quest

Learning Steps	Key Knowledge
Which shape and structure is the most stable?	Shapes and structures with a low height, a wide and flat base are the most stable.
How can you make structures stronger, stiffer and more stable?	Square and triangle structures are weaker because they have corners. Corners work really hard and try to support the weight, while the walls between them do very little of the weightlifting. Eventually, the corners buckle under the whole load and collapse. Cylinders are the strongest, simply because they do not have any corners. The whole structure bears the weight evenly and can therefore carry more weight. To improve strength in a structure, simply remove the corners. Overlapping the paper improves the stiffness of the structure as it thickens the walls by layering. To increase stiffness, thicken the walls by adding more layers – glue makes them even stiffer. Stiffer structures can improve strength.
What is your throne going to look like? How is it strong, stiff and stable?	Producing a drawing that shows what the throne will look like and how it will be decorated. Explain how many tubes/cylinders, the size thinner or shorter, what materials, the construction techniques to be used and how it will be strong, stiff and stable.
How does your throne meet the success criteria? How strong, stable and stiff is it?	Make a throne that supports the king. Test its stability, strength, stiffness and explain how it's attractive. Evaluate the chair saying how it is stiff, stable, strong and attractive plus say two ways that it could be improved.

Key skills

Generating and communicating ideas using sketching and modelling. Learning about different types of structures, found in the natural world and in everyday objects.

Creating joints and structures from paper/card and tape. Building a strong and stiff structure by folding paper. Exploring the features of structures.

Comparing the stability of different shapes. Testing the strength of their own structures. Identifying the weakest part of a structure.

Making a structure according to design criteria. Evaluating the strength, stiffness and stability of their own structure.

Key vocabulary

design criteria
man-made
natural
properties
structure
stable

stiff
strong
shape
model
test
mould

Final outcome

Make a throne for the King that is strong, stiff, stable and attractive.

Provide objects to roll the paper around, pre-made cylinders and shapes, plus word cards. Work with a partner or adult. Copy a design already. Give support for cutting materials and using tape to secure joints.

