

GGA Knowledge Organiser Year 4 STEM Investigation – Spring Term - Ancient Egyptian Shaduf

Making - Learning using Tools and Equipment

FPT – Focussed Practical Task	This is a small practical investigation, a mini focus on an aspect of your design. E.g. structuring a join or making a fastening
Use of card-scissors	To cut the wooden doweling for the tripod base to size
Use of twine/string as a joining method	To secure the tripod and create a loop allowing the effort/resistance arm to pivot
Building the tripod base frame	You will use the measurements provided to guide you and build your scale model of a Shaduf
Vessel (for the water)	What would be the best method for your vessel? What 21 st century materials could you use?
Counter - weight	Trial lumps of model clay or pebbles to trial the best performance material for your structure.

Cross Curricular Opportunities

Maths	Measuring
Geography	Human Geography/farming and land management
English	Evaluating your product in your DT booklet
Science	Weight distribution and counter-weight balance,
Art	To re-create the look of an Ancient Egyptian Shaduf and set it in a diorama of a Nile bank
PSHE & Values	Collaboration, perseverance resourcefulness

Why are we learning this?

To know how to:
Create a scaled down version of a functioning Shaduf

Why is it important?

So that we understand how to:
(on a smaller scale)
recognise the processes to transfer vital water to supply crops



Vocabulary

Fulcrum/Pivot	The point where the lever is supported and/or turns.
Effort Arm	The section of the long-length of the pole between the object you're lifting and the fulcrum/pivot
Resistance Arm	The section of the short-length of the long pole between the fulcrum and the weight at the end doing the work
Counter-weight	This is the block weight on the resistance arm.

