DT – 3D Volcano (Year 3)

Outcome: To create a 3D model volcano.

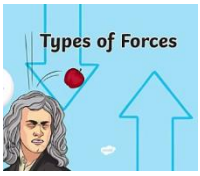
Prior Knowledge and Skills	
Structures:	
	Select and use a range of tools and equipment to cut, shape and join a structure
	Select and use a range of materials to make a purposeful house
	Know how to make a freestanding three-dimensional structure stronger, stiffer and more stable

Ideas and inspiration:

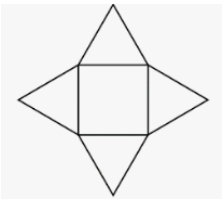
Geography – Volcanos



Science – Forces



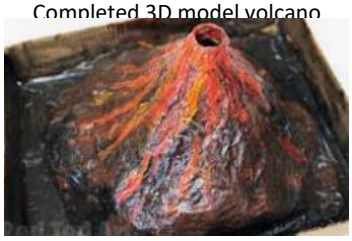
Maths – Nets



Exploding lava



Completed 3D model volcano



Vocabulary:

design criteria	a list of what your design must do
construct	verb: to build, make or create something
three dimensional	with three dimensions – height, width and depth
net	a flat pattern that can be folded along its edges to form a three-dimensional (3D) shape.
pyramid	a 3D shape with a flat base and triangle faces joining in a point at the top
structure	an object build of several different parts

Developing Knowledge and Skills					
Design:		Below	Just at	At	Above
	To plan and sketch realistic ideas for a functional, exploding three-dimensional volcano				
	To design and develop a lifelike volcano with annotated drawings and diagrams				
	To discuss and use mathematical knowledge of nets of pyramids				
	To discuss the scientific chemical reaction and the forces used to make the explosion				
Make:		Below	Just at	At	Above
	To successfully use paper-mache to build a three-dimensional structure				
	To accurately shape and mould the volcano to construct a strong, stable structure				
	To make a functional three-dimensional volcano with aesthetic qualities				
Evaluate:		Below	Just at	At	Above
	To test the exploding chemical reaction				
	To evaluate the positive stages of the design and make process				
	To evaluate the challenges of the design and make process				
	To make suggestions for future improvements				

The best bit about my volcano was_____

_____

My volcano would have been even better if _____

_____

What have I learnt?

_____