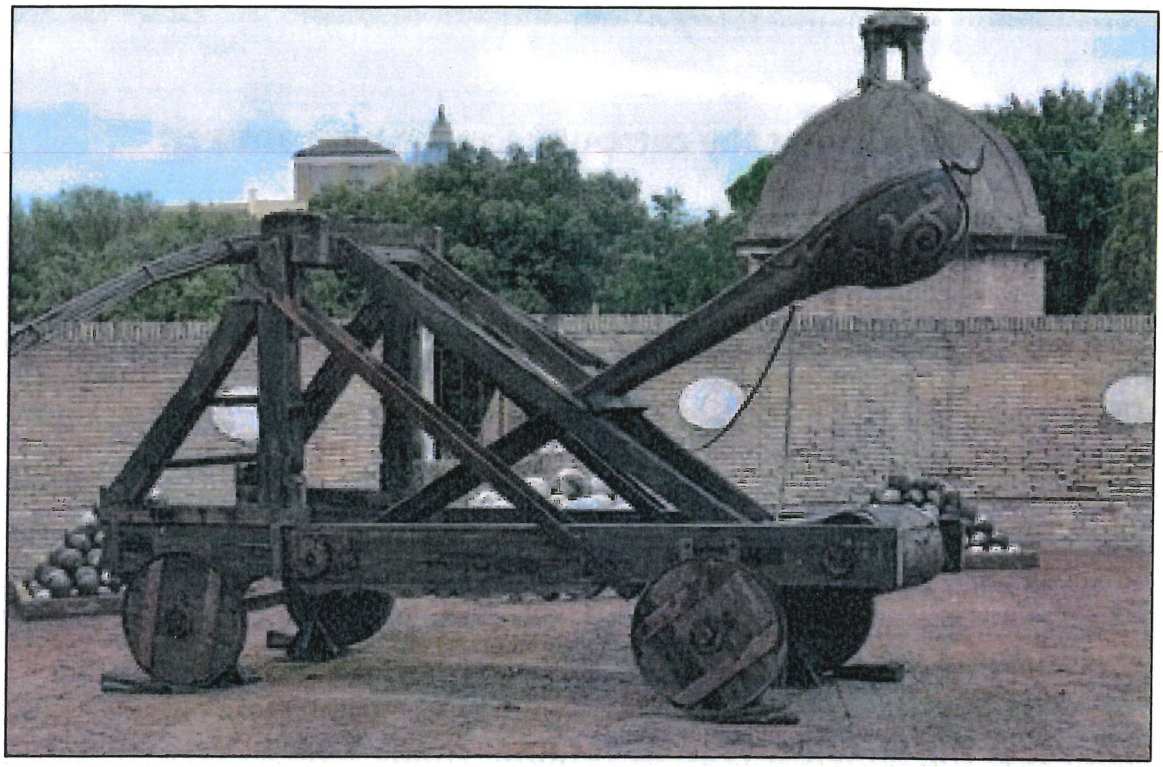
Design and Technology



Designing and making

Roman Catapults

Name .....Grace R.....

2.2.23

02.02.23

INITIAL RESEARCH

L.O. To research and collect information about catapults and levers.

What were catapults used for?

The catapults were used for hurling or heaving an object like a missile in the direction of a group of soldiers or buildings

Did the Romans invent the catapult? Explain your answer.

No the catapult was invented by the Greeks but the Romans improved the design.

What were the main three types of Roman Catapult called?

1. Scorpion
2. Ballista
3. Onager

What was the smallest type of catapult made from?

The scorpion was the smallest catapult it was made of metal and wood.

What made the Ballista better than enemy bowmen?

The Ballista was an advantage because it delivered a heavier force and a longer range.

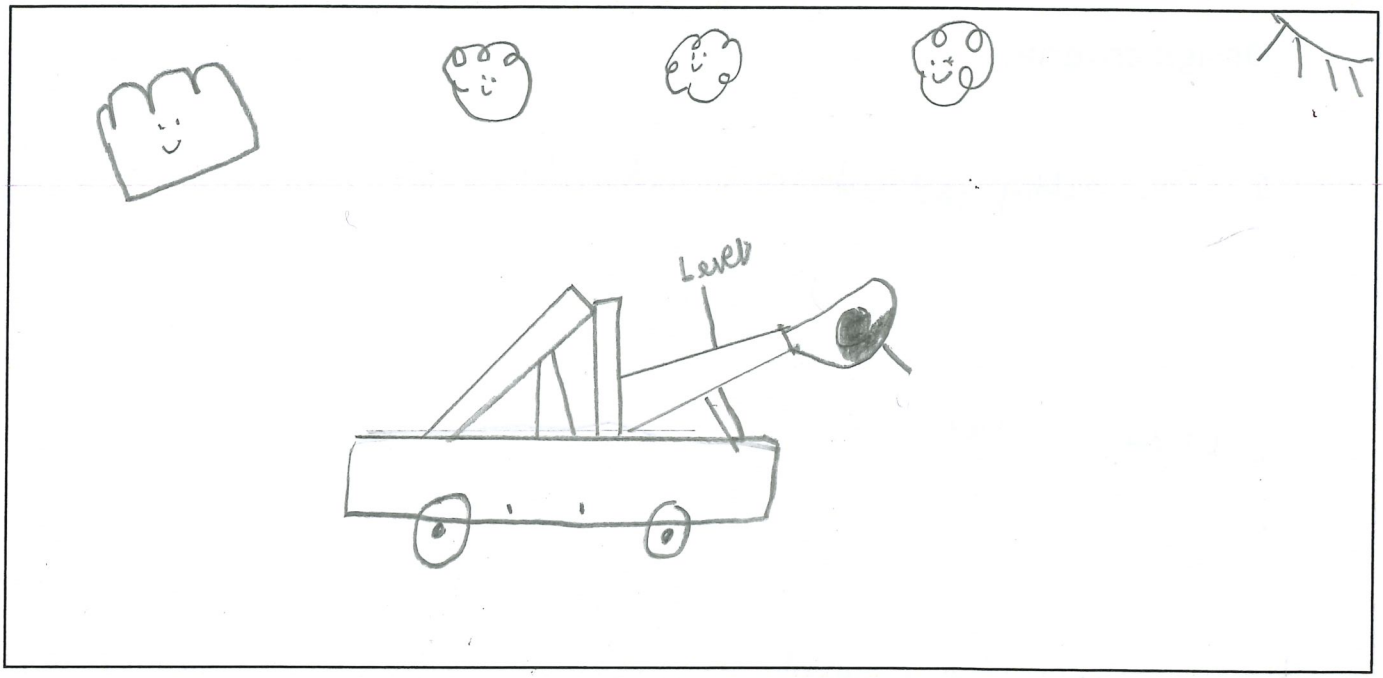
What gave the spring action to the Onager?

It was made from Torsion that was twisted rope.

Other interesting facts:

The bigger the catapult the stronger it can be.

Draw and label a Roman catapult



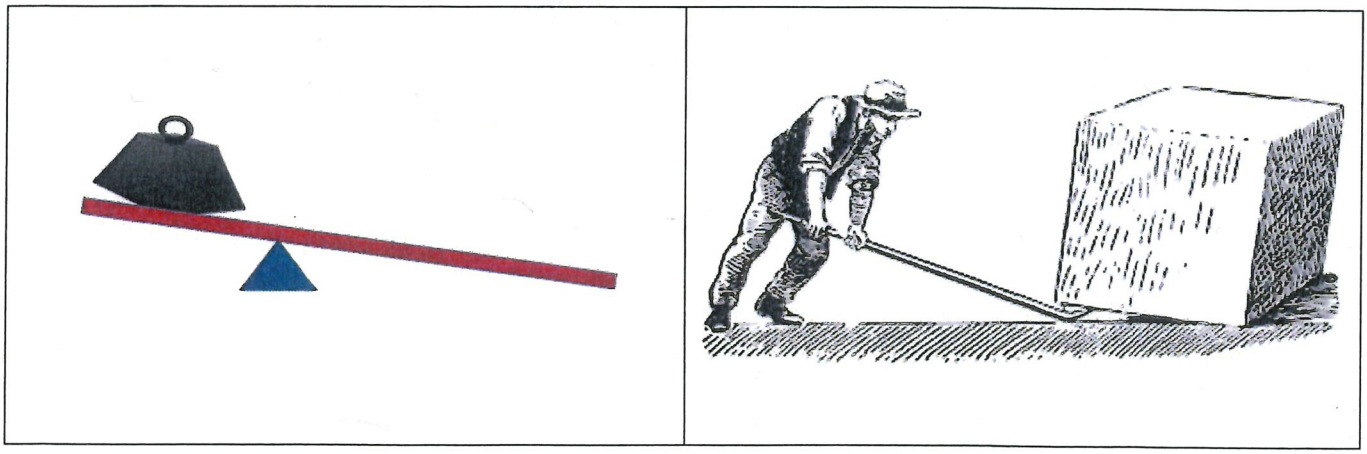
What is a lever?

A long arm that moves at the pivot

What is a pivot?

A point where the lever turns

Label the levers and pivots in these pictures.



L.O. To recognise that designs have to meet a range of different needs.

DESIGN BRIEF:

Design, make and evaluate a catapult to help the Roman army invade a new town.

Design criteria:

1. The structure that needs to be made from wood.

2. It needs a lever

3. It must project a payload

4. The structure must be strengthened and reinforced

INITIAL IDEAS – COLLECTING IDEAS

What I found:

I found out that they shoot projectiles and they try to hit soljys they can be made of many things. The bigger the catapult the stronger it is.

Which designs do you prefer and why?

I prefer the 1st and 4th because 1 is lying down and you push it and it goes out, 4th because Everything is holding something

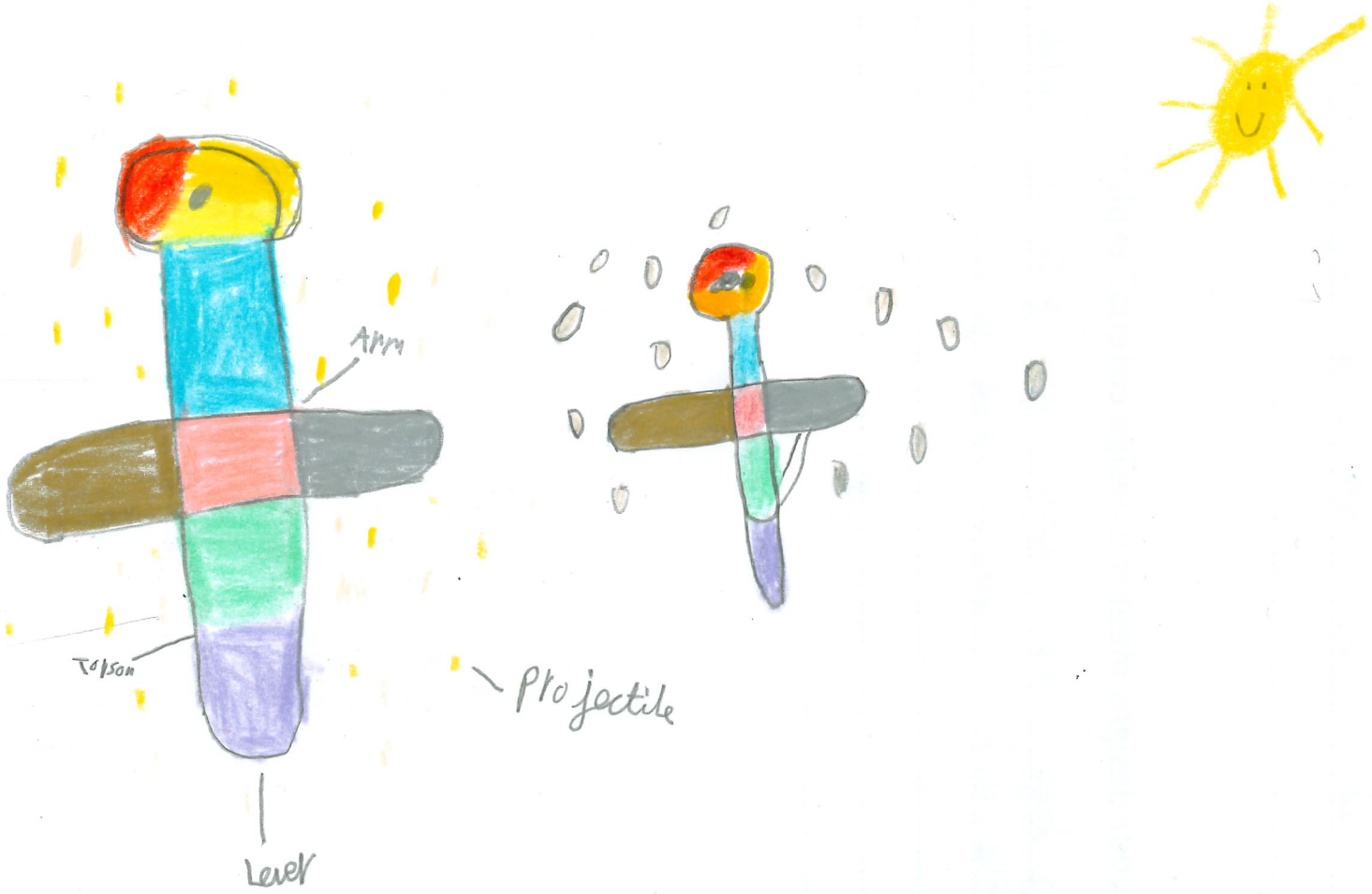
Do your designs meet the design criteria? Explain.

My design worked because you push a wooden bit then the projectile goes, it is also made from wood

FINAL DESIGN

L.O. To communicate my ideas using words and labelled sketches, showing that I am aware of the constraints of my design.

Draw and colour your final design. Label the materials required.



SEQUENCE OF WORK

L.O. To think ahead about the order of my work, choosing appropriate tools, equipment, materials, components and techniques.

Materials/ equipment needed:

Materials:	Equipment
· wood · Rubber band · Milk bottle lid · straw · card · pins · wooden dowel	· Sissors · pencil · Ruler · Hot glue gun · Saw

Step-by-step process to make your catapult.

1. Gather all equipment and start to prepare.

2. Mesure and cut wood and label them with my pencil.

3. Assemble attach glue, and build your catapult

4. Make the arch and attach it ~~out~~, strengthen and riehgorced.

5. construction of my giving arm. That you push down and the Projectile launches.

6. Attach and support the giving arm and then you can give.

G Race

L.O. To recognise what I have done well in my work and suggest things I could do in the future.

My evaluation

Design, make and evaluate a catapult to protect a Roman town from an attack.

What was successful?	What improvements could be made?	Is it as you had designed it? If not, what alterations did you make and why?
I think the sawing and sticking because it didn't break and I had a good team	I would make the milk cap more strong so it stayed on longer.	It was a bit of a change of design but is very good and fun

Did I meet my success criteria?

Criteria	What I think	Was it successful?
It must be made of wood	It only had elastic bands pins and milk cap ES the only diggerthings	Yes ✓
Must have a leaver	It was because we pulled it back and It fired	Yes ✓
Must project a payload	It fired a button and a metal thing: It didn't break once.	Yes ✓
Must be strengthen and re-ingored	There was felt to stop damaging the wood, There was an extra pieces of wood to hold up the 3pieces	Yes ✓

FINAL PRODUCT