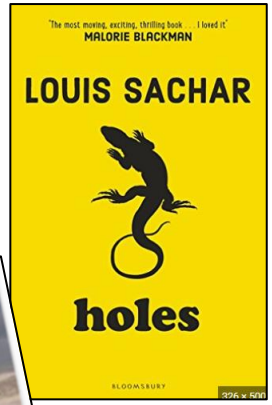
Year 6 Knowledge Organiser Subject: D T Topic: Frame Structures

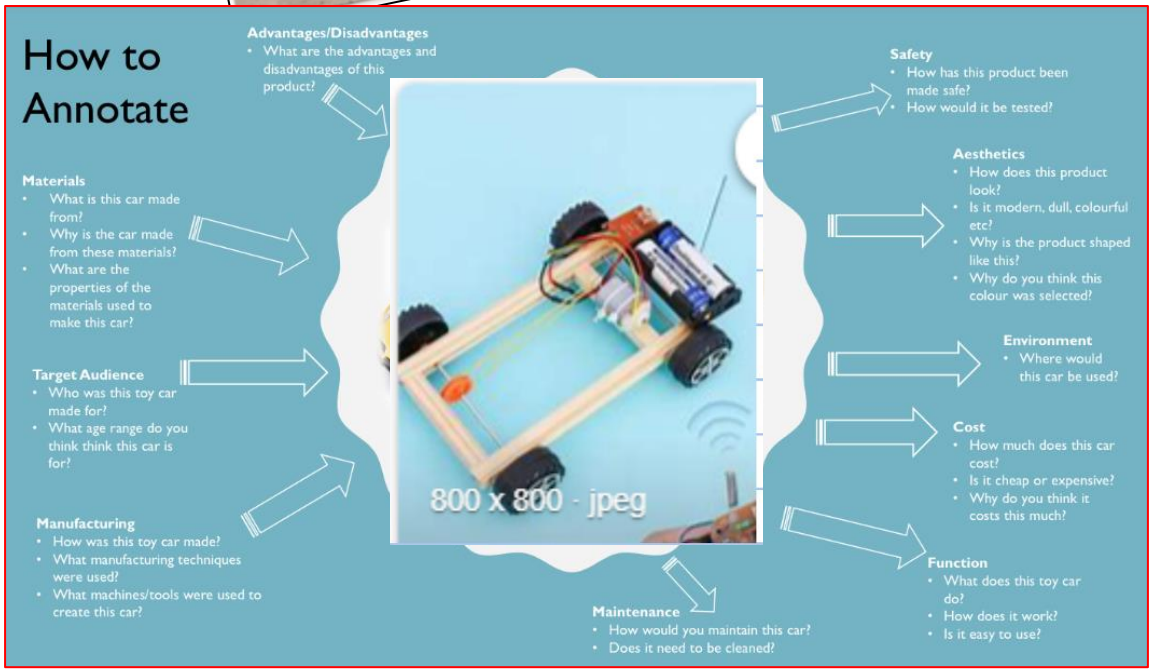
Our text is Holes by Louis Sachar. We will be using the text as inspiration for our project. The boys, who dig holes all day, need water brought to them on a water truck.



Project title

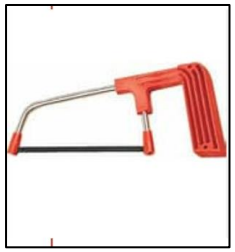
Design, make and evaluate a self-propelled vehicle for Camp Green Lake for moving water to the campmates.

We will design our vehicle using our Science knowledge of circuits and produce an annotated sketch



Key vocabulary	Definition
frame structure	A frame is the supporting structure of a piece of furniture, a building, a vehicle etc.
reinforce	To reinforce an object means to make it stronger or harder
stability	Stability is a measure of how likely it is for an object to topple over when pushed or moved. Stable objects are very difficult to topple over.
annotated sketch	Sketches that are labelled with notes to give useful information about the design e.g key parts, sizes, materials, components and construction .
purpose	What the product will be used for.
functional	Whether a design works and helps the users meet their goals and needs.

When constructing your frame you will need:



Hand saw

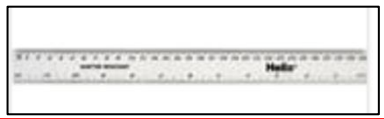
Bench hook

PVA Glue

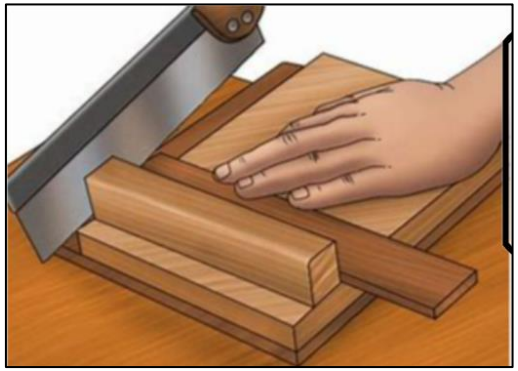
Cardboard triangles

Focused observation skills

Pencil and ruler



Focused task: cutting wood.



Place the bench hook onto the edge of your table (move your chair)
Push on the bench hook towards the centre of the table.
With the correct amount of pressure it will not move

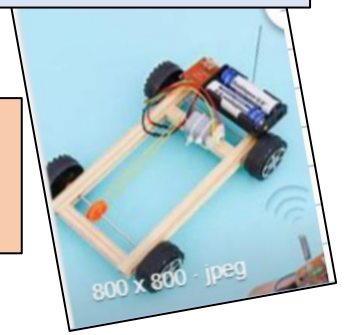
Push a piece of the wood up to the stop using your thumb and put your fingers on top of the wood.
NOTE your fingers should be now where need to the place you will cut!
Match your pencil mark up with the end of the stop.

Pull the hand saw back three times to create a groove in the wood.
With even, smooth movements push and pull the hand saw forwards and backwards until you have cut the wood through.

Glue the corners of the wood together. Glue the cardboard triangles on each corner reinforce the join.

Can you add a switch onto your vehicle?

Add an electrical circuit onto your frame so that the motor turns the axle of the car. You will need the correct tension on your elastic bands!



We will evaluate our finished product based upon our design brief.

List three positives about your product and three possible improvements in the table below.

Positives	Improvements
1)	1)
2)	2)
3)	3)

What would you do differently next time?