

## Wooden Toy Car.

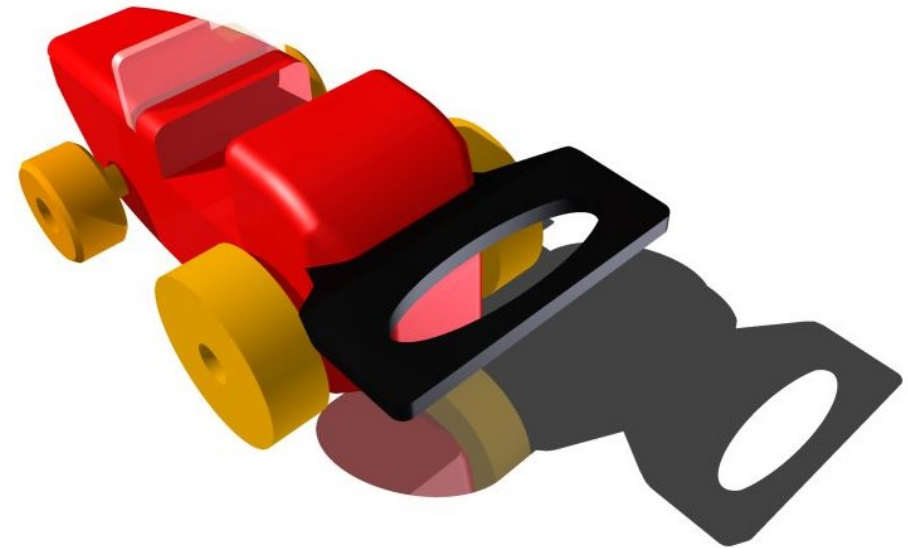
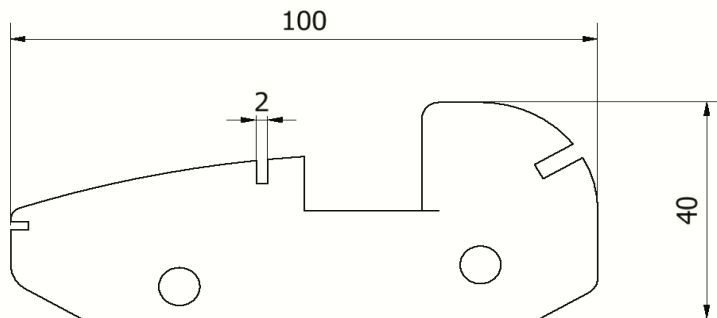
A well known toy shop is interested in some new creative ideas for a wooden model car as they are popular among young children. In this project you will have to design and make your own wooden model toy car.

You will be provided with the materials, tools and equipment, to make the parts, assemble them, and apply a finish.

You will be given a block of yellow pine 40x30x100mm to shape into the car body; 4 pre-cut wooden wheels; 2mm thick clear acrylic to shape into a windscreen and 3mm thick acrylic to shape and bend to form the rear spoiler. The axles may be made from 6mm diameter mild steel threaded rod, or 6mm diameter wooden dowel rod.

During the project you will be introduced to a variety of different workshop tools, techniques and processes.

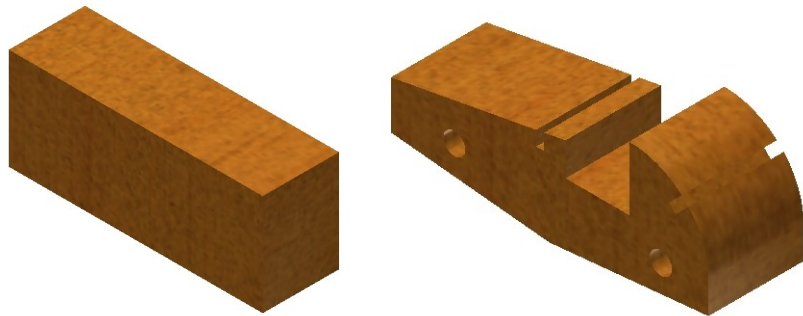
**For the best results it is important that the sequence of work is carried out correctly and in the right order. To be successful you must follow the instructions of your teacher to use the tools effectively and accurately.**



When complete your car should satisfy the following criteria:

- 1 All parts should be assembled.
- 2 The wheels should be securely fixed to the axles.
- 3 The axles should be level and should turn freely.
- 4 All parts should be smooth, without rough edges.
- 5 The car body should have a smooth applied finish.

## Manufacturing Sequence of operations.



### **Car Body:**

Mark-out profile, including drivers seat, and slots for windscreen and spoiler.

Mark-out location of axles.

Saw-cut drivers seat.

Drill holes for axles.

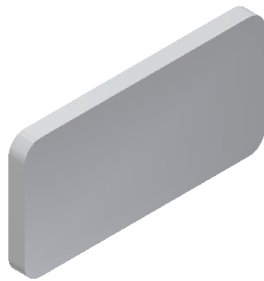
Saw-cut profile.

Form through housing for driver seat.

Form slots for windscreen and spoiler.

Sand smooth removing all pencil marks.

Apply finish.



### **Windscreen:**

Cut to size.

Round corners.

Cross and draw file all edges.

Smooth all edges with wet and dry paper.

Finish edges with metal polish.

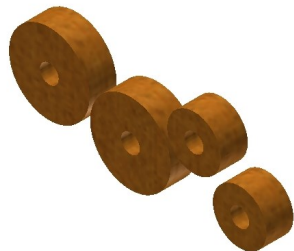


### **Rear spoiler:**

Create design using CAD-CAM software.

Cut spoiler using laser-cutter.

Shape spoiler using strip-heater.



### **Axles:**

Cut to size.



### **Assemble parts**

List of tools and equipment	Used
Steel rule	
Pencil	
Try-square	
Bench vice	
Tenon saw	
Mallet	
12mm bevel-edged chisel	
Bench or pillar drill	
HSS drill bit	
Belt-sander	
Hand file	
Wet and dry paper	
Sandpaper, (grade: 100, 400)	
CAD-CAM software	
Laser-cutter	
Strip heater	
Metal polish	
Engineers vice	
Hack-saw	
Glue-gun	
Acrylic paint, wax or varnish	
Wood-glue or M6 locking nut,	