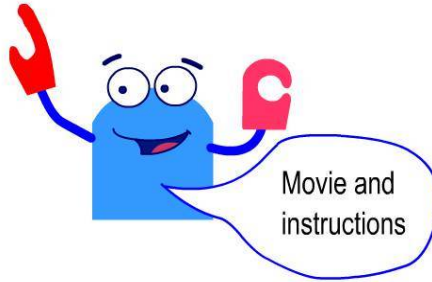
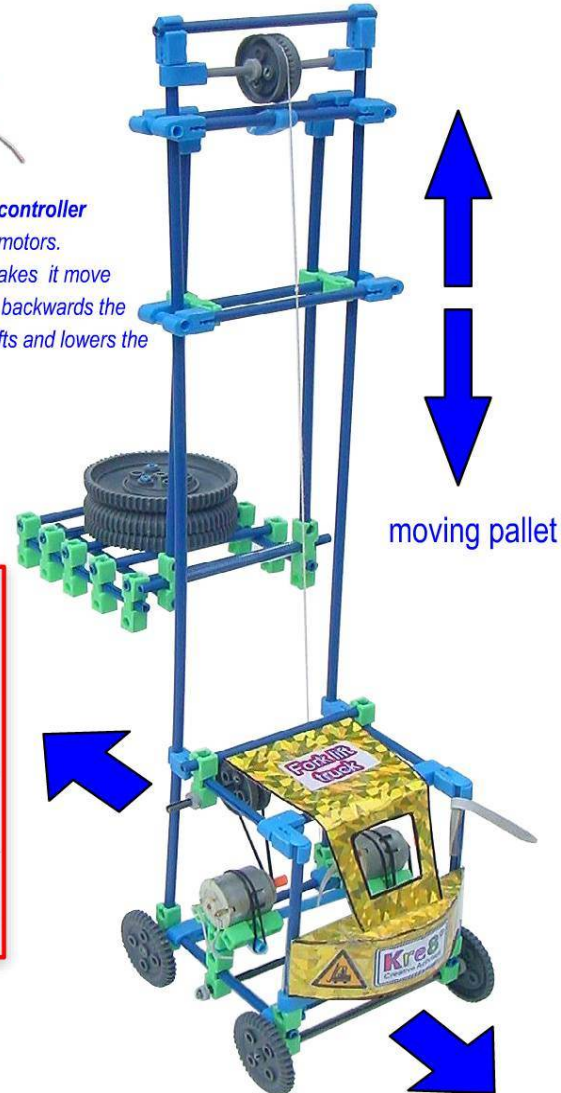


Contents

- P1 Introduction
- P2 Parts List
- P3 Making 1
- P4 Making 2
- P5 Making 3
- P6 Pulley and motor help
- P7 Box for weight
- Assembly movie



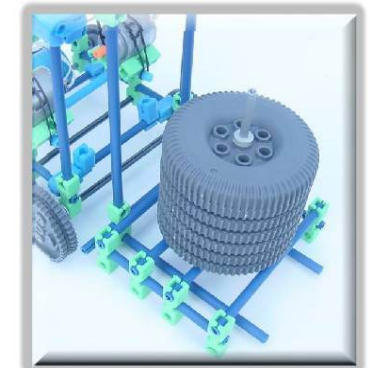
The manual controller operates the motors. One motor makes it move forwards and backwards the other motor lifts and lowers the load.



Activity ideas

The big lift.
This fork lift truck can be used to go forward and collect a load, which could be a pallet onto which is with a load of some large Kre8 wheels on.
If a competition do this as fast as possible.

Egg race variation
Go forward to collect an egg lift it then return to the start as fast as possible.
The egg to be held in a kre8 frame that can be lifted up.



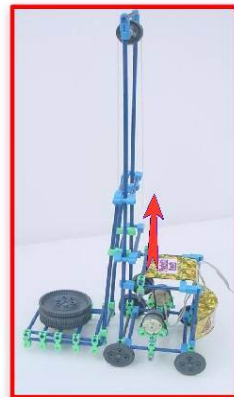
You will learn & achieve

Knowledge - Energy- potential, stored, kinetic energy, linear to rotary motion, centre of gravity, balance, friction, measuring, reducing friction, obtaining grip, mass and speed. Control using switches, wiring up motors, ratios using pulleys.



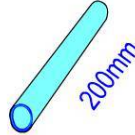
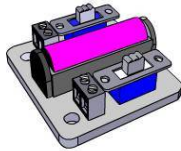
Making

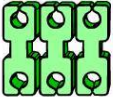
Assembly and constructions skills - testing then adjusting to get best results. Possible competition. Refining and solving technical hitches.

Designing - Practical adjustments to get best results. Customisation after initial testing.



Trim all sharp edges after cutting

-  11 x blue slit rod
-  8 x blue slit rod
-  1 x 5mm dia. light blue tubes
-  1 x Manual Controller and 1 x Ribbon Cable

-  6 x Multiblocks (green)

-  7 x clip connectors - blue


-  6 x grey snap rod

-  2 x blue slit rod


-  2 x blue slit rod


-  6 x 28mm wheels


-  5 x 40mm gears


-  1 x 3.9 grey tube

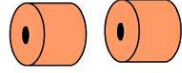
-  8 x 4mm steel washers

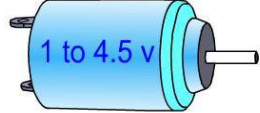
-  Bag

-  3 x 60mm rubber bands

-  2 x 45mm rubber bands


-  2 x holographic card A5 size

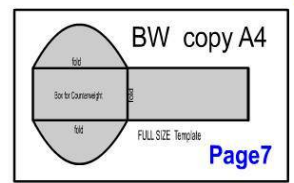
-  2 x orange tubes (or cut 5mm long from a length)

-  1 to 4.5 v
- 2 x Motor Fast small type

-  2 x blue collars

-  12x grey collars

-  1-cord 1m long



Go to www.kre8.com for free instructions

Easy Assembly

The rods are easier to insert into the connectors if twisted as they are pushed into place. Younger students should 'round off' and smooth the tube and rod ends using the abrasive paper.

Tools

Snips
Use to cut Kre8 connector hinges, plastic sheet, light blue tubing etc
Note - Scissors are not very satisfactory as they do not have serrated blades.



Emery Cloth
Use fine 'emery cloth' or other 'abrasive paper' to round and smooth the slit rod or blue tube ends to make assembly easier.



Pencil and Rule
Use to mark lengths of blue tube or slit rods before cutting. Can also be used on plastic sheet before shapes are cut out.



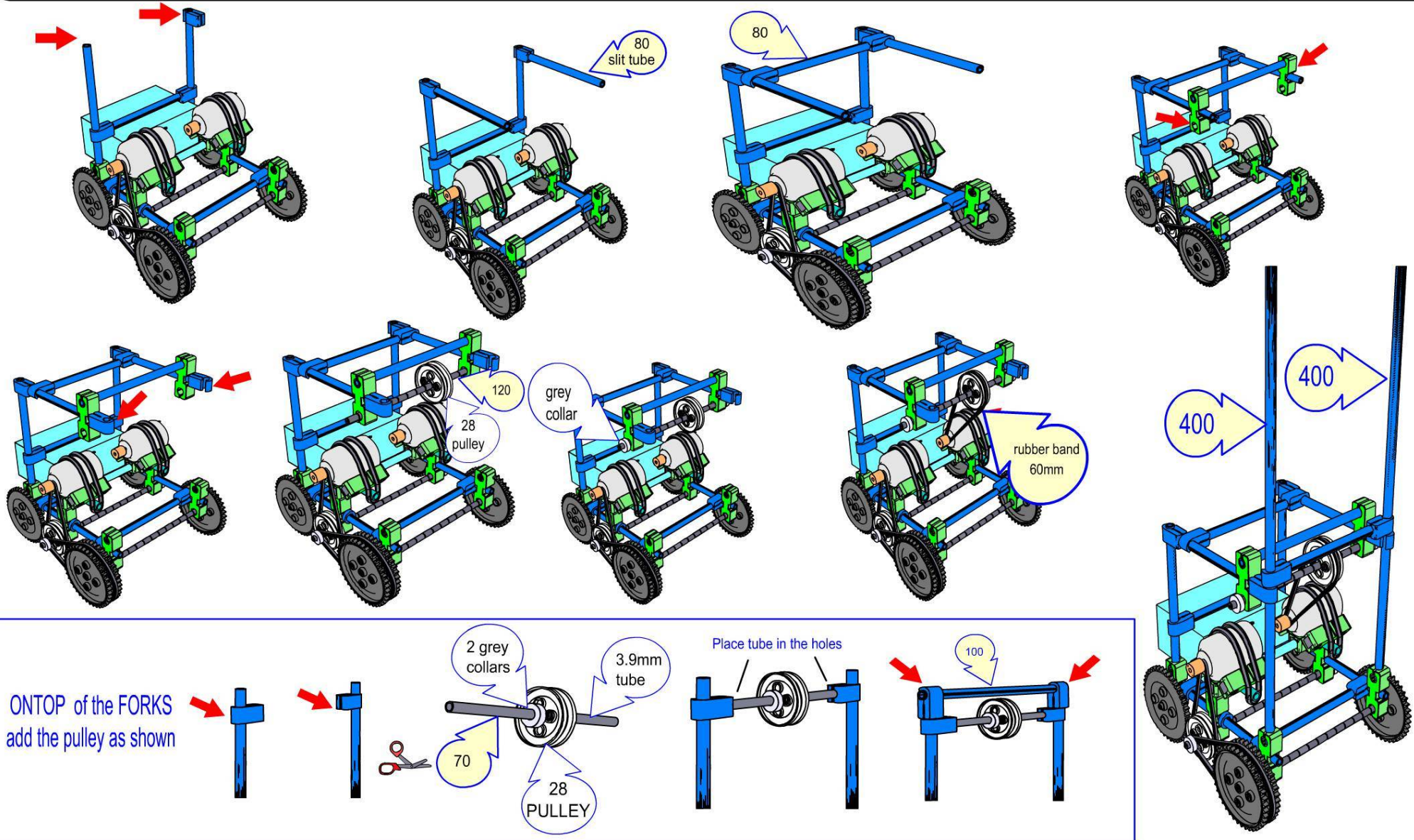
Also needed

Clear tape



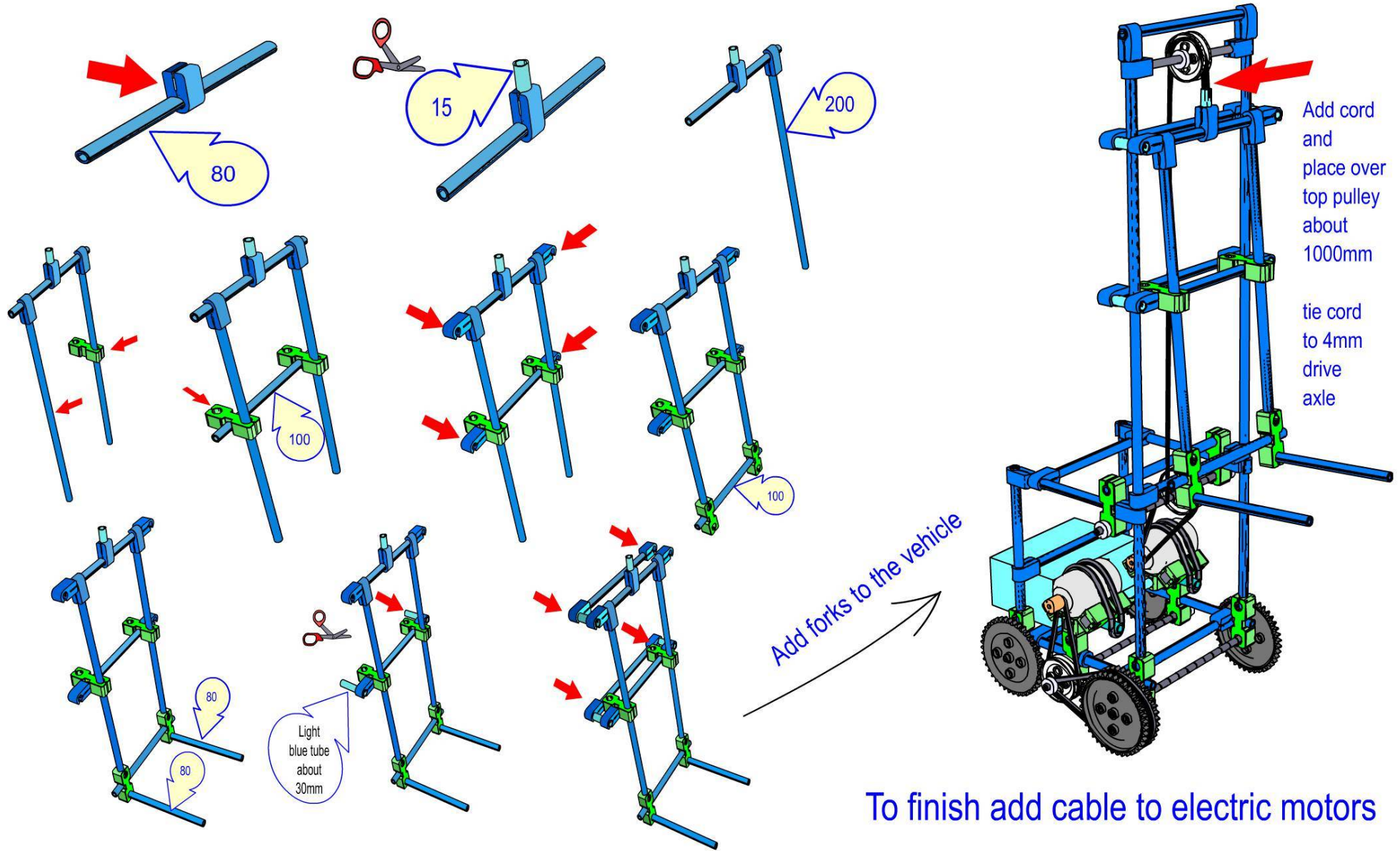
4

2 - Kre8® Fork Lift - Making 'Step-by-Step' Cab and fork mechanism



5

3 - Kre8® Fork Lift - Making 'Step-by-Step' The Forks



Add forks to the vehicle

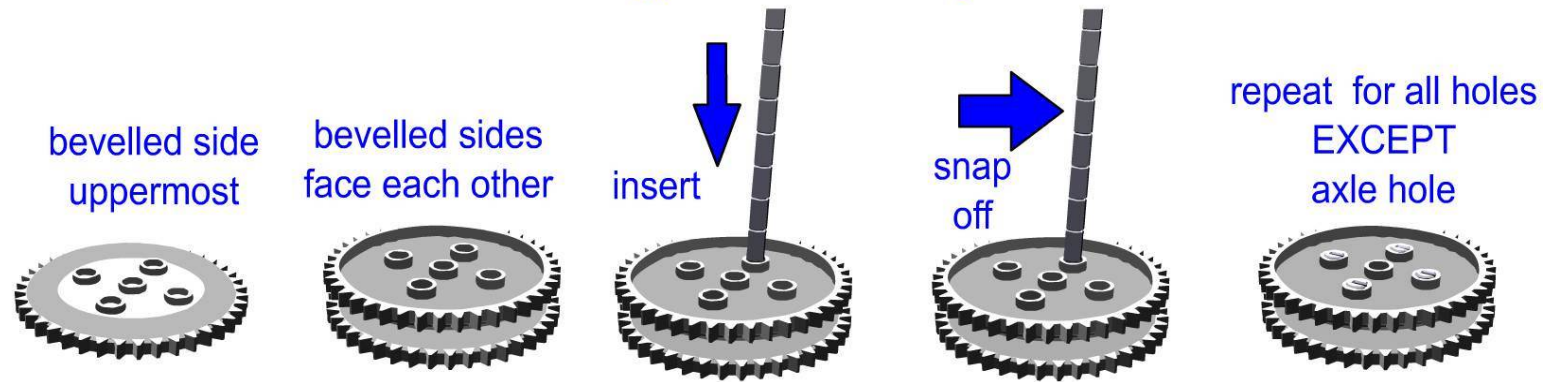
Add cord and place over top pulley about 1000mm
tie cord to 4mm drive axle

To finish add cable to electric motors

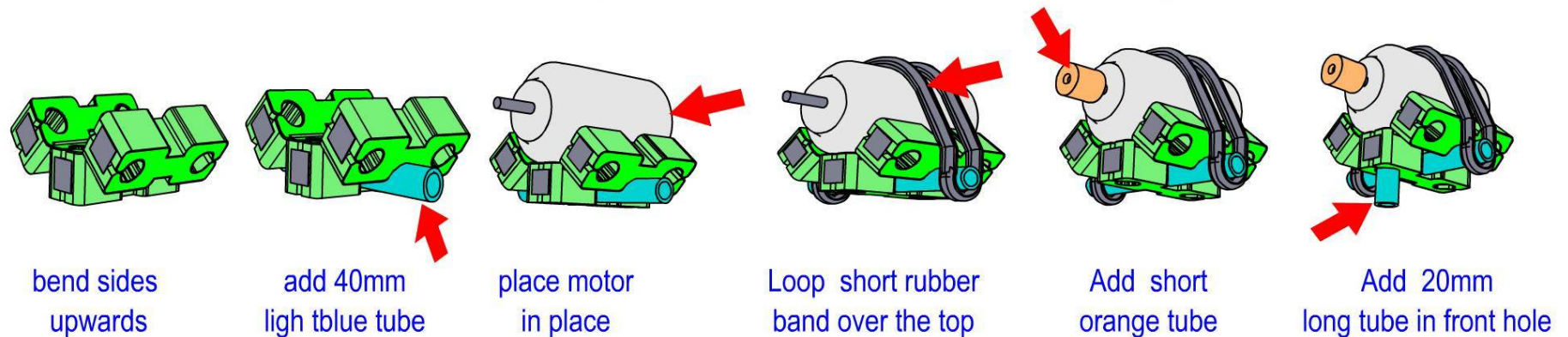
Wiring Up

This is fairly easy
 Connect two pairs of wires to manual controller and other end to electric motors
 For more detailed help see [Robots 1 > Manual controller](#) on www.kre8.com

Making the Pulley



Making the Motor Assembly



7

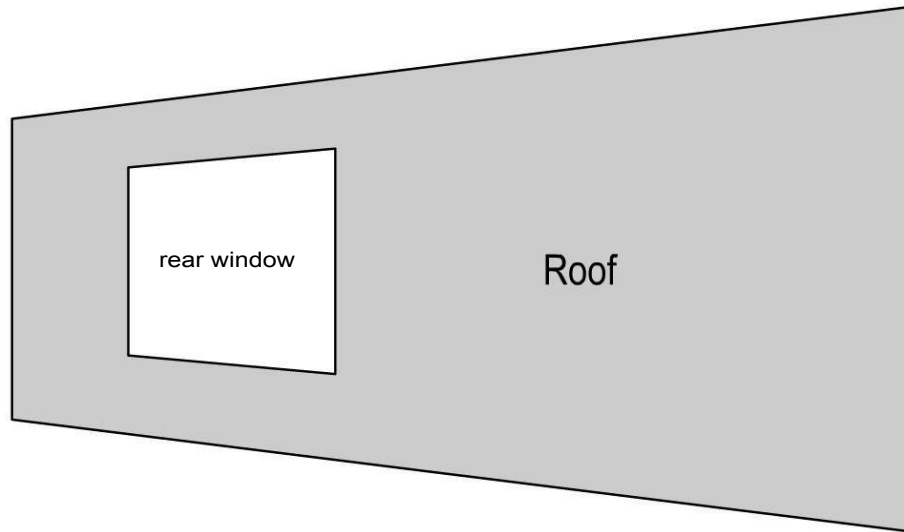
Kre8® Fork Lift - Counterweight Box and Top

print Landscape black

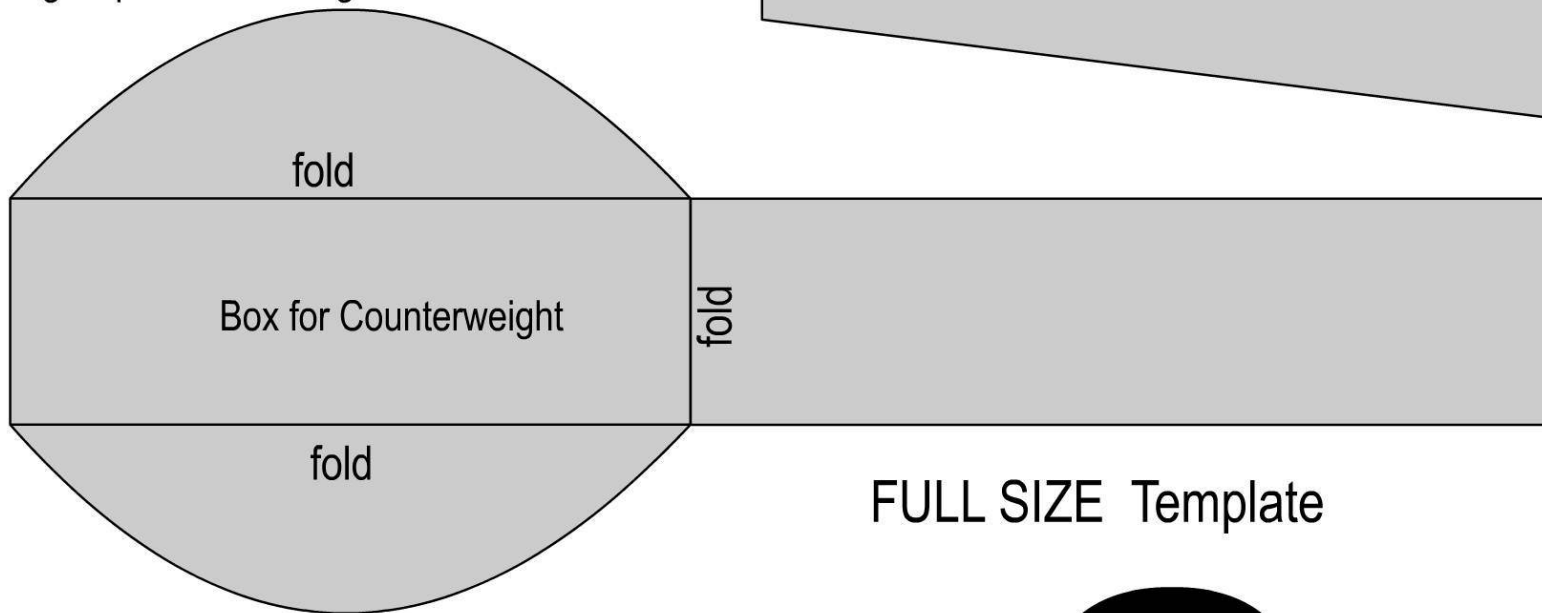
Why is this counterweight box needed?

When a fork lift truck lifts a load it will 'tip over' unless it has enough 'counter weight' at the back.

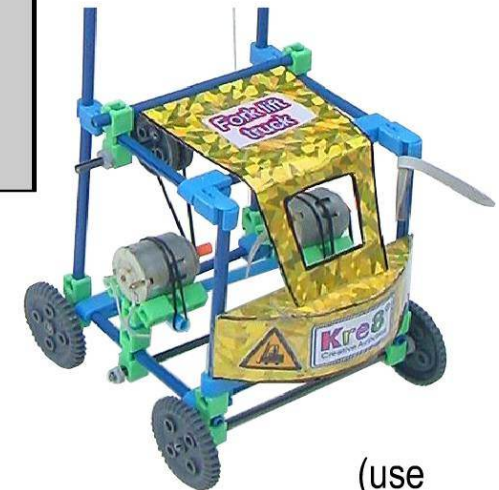
The box holds a weight such as a stone, to give provide its weight.



Decoration



Place this template on a piece of plastic coated thick A5 size card (e.g. Kre8 holographic card) and make copy (to copy use a sharp point (e.g. compass point) to mark all the corners then join up the dots made)



(use clear tape)