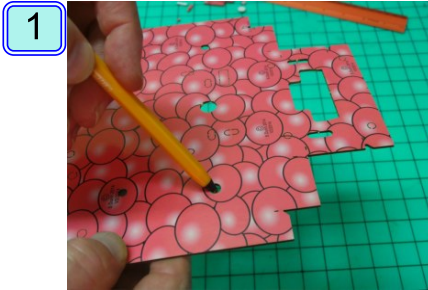


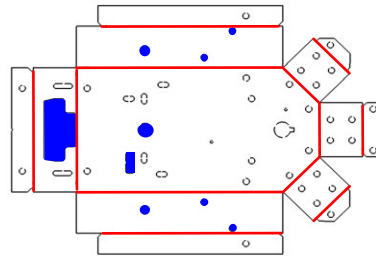
Images taken from our
YouTube video

Equipment Needed

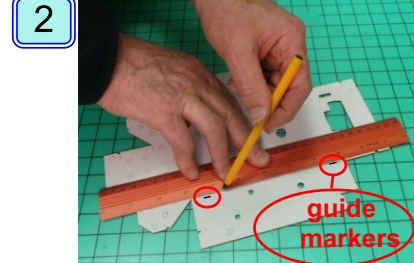
- (1) HapPi-Robot Kit
- (2) Ball Point pen
(preferable thin point type)
- (3) Clear adhesive tape
(12mm wide is easiest to use)
- (4) Rule (30cm long is ideal)
- (5) Cutting board (protect table)
(or work on used paper)



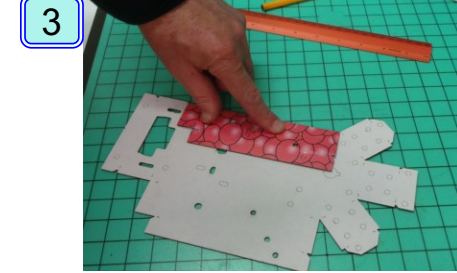
1 Push out holes needed, see next drawing. You can use a ball point pen for this.



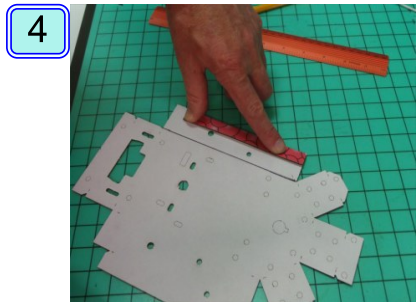
Drawing showing holes and score lines. Only need holes marked blue.



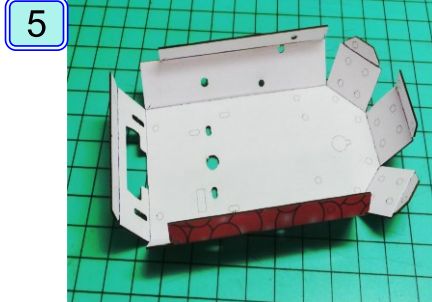
2 Score the fold lines using a ball point pen by joining the guide markers.
NOTE Score a light line first



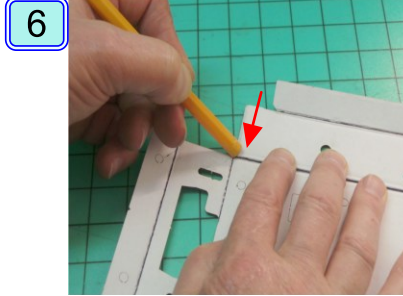
3 Fold along the first score line



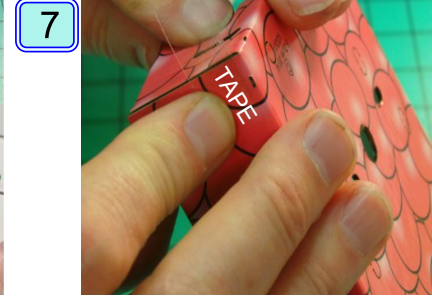
4 Fold along the second scored line



5 Complete the other folds so it looks like this.



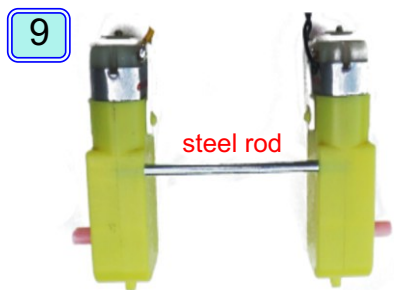
6 Optional - bevel edges that will touch, by dragging along the edge with a pen end at 45 degrees.



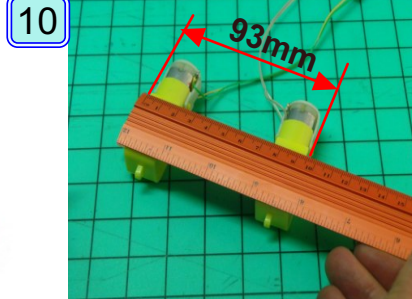
7 Tape only the back corners using clear tape.



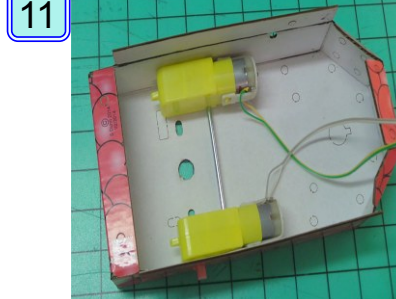
8 At this stage we we can add the motors - see next steps.



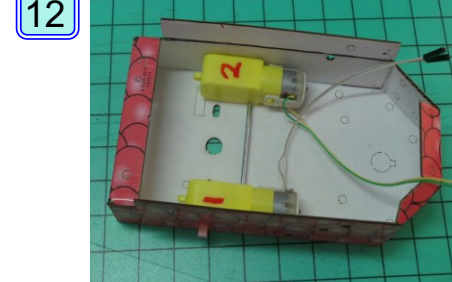
9 Push the 3mm steel rod into the motors holes as shown.



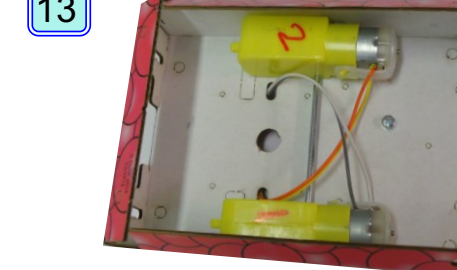
10 Twist and waggle the motors until they are 93 mm apart.



11 Slide motors into place as shown with axles through holes.



12 Number motors 1 and 2 as shown.



13

(Note - Raspberry Pi B+ models require four fixing holes)

Images taken from our YouTube video

If directly fixing HapPi add-on to RaspPi model B

1 **x2**

2

3 Model B shown fixed on

RaspPi added

Assembly of each bolt

Add **bolt fixing assembly** on the robot chassis.
a) Place washer on the **bolt** then pass it through robot base then **b) add spacer** and fix with **nut**.

Boles added temporarily

When bolt added as above with continue making.

To prevent **Raspberry Pi** getting damaged **add it later**

14

x 2

Use one **dowel rod** and two **blue collars** then

15

... slide rod **under the electric motors** and fix in place with one collar at each end.

16 **x 4**

IMPORTANT
 If you have grey wheels supplied instead of a ball see B+ instructions for this part only

Assemble ball wheel parts as shown then

17

... add **front ball wheel** as shown and fix with the **blue collars**.

18

Push out the **holes** as in the **pen holder piece**

19

On the back **score a line** by joining the **guide markers**.

20

Fold in half and hold **together** with a piece of **clear tape**.

21

Match up the **two notches** to get in **centre** then **tape** together.

22

Add the **pen holder** as shown. (you may need to **squeeze sides** in a little so it fits properly)

23

Complete **taping** and add **extra pieces of tape** where needed.

24

Push and twist **wheels** onto the **motor axles**.

25

Fix the Raspberry Pi on using **bolts** added earlier

OR see other page for alternatives

26

(a) Carefully add the HapPi add-on to the **Raspberry Pi**

(b) Connect wires from **motor 1** to **motor 1** on **HapPi add-on**.

(c) Repeat for wires to **motor 2**

Plus add any stickers wanted

(d) Add 4 AAA batteries in **battery holder** then connect **red wire** to **+** connection and **black wire** to **negative**.

(e) Push battery holder into the back of the robot.

Also needed 5V Power pack for the Raspberry Pi options to consider link (on pi-school website)