

## Introduction Page

### Ping Pong Ball Catapult

Have fun aiming then firing a ping-pong ball at a target 6 metres or more away. Adjust the moving arm to alter the distance the ping pong balls are thrown.

#### Competition -

Try to get the balls into a target container such as a card box a few metres away.

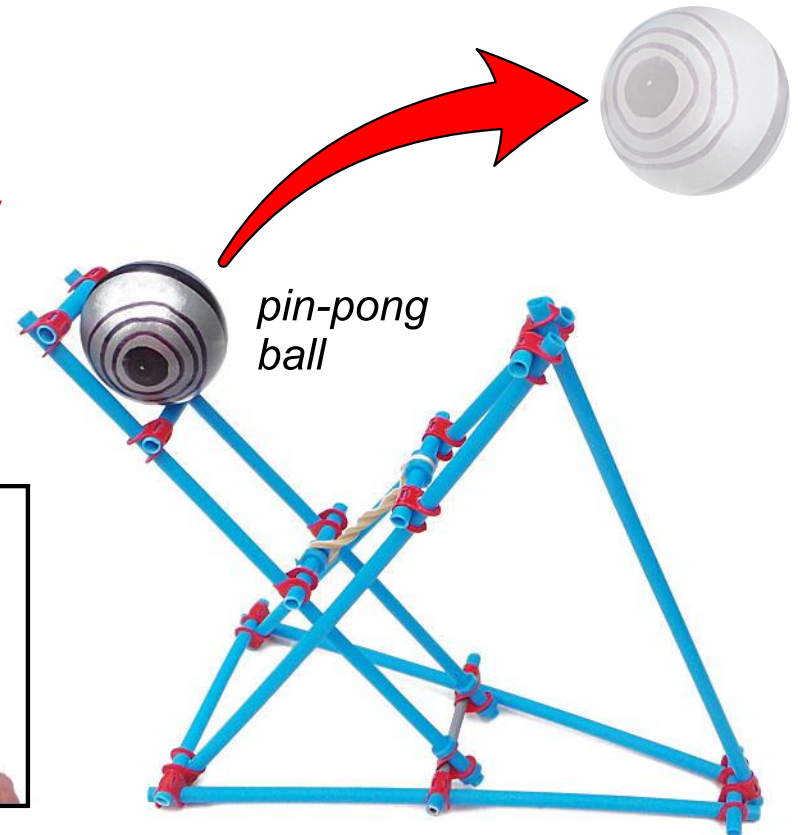
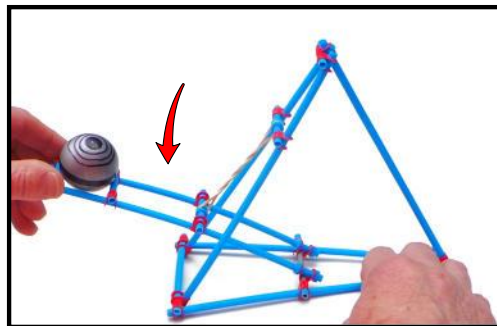
**TIP** If using the catapult on your own you can get the ball back by bounce off a wall.

### Keywords / Knowledge

Movement, force, power, trajectory, testing, accuracy, rubber band, stretch, elastic, target, triangulation and structures.

### SAFETY

Do NOT aim at people. Only operate in a safe place where objects cannot be knocked off shelves and where balls cannot roll away into a dangerous place such as a road or a pond.



**LOADING.....AIM.....FIRE**

Size 20cm high x 25cm long



HO Cata Thow

# Catapult Thrower Parts List



## Parts List

- 10 x Kre8® 200mm blue tubes
- 22 x Kre8® cross pieces
- 1 x Kre8® grey tube
- 2 x standard rubber band
- 1 x Ping pong ball
- 8 x Kre8® blue collars

## Parts List with Images



10 x Kre8 5mm dia. blue tubes 200mm long



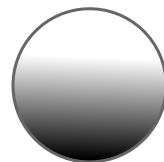
22 x Kre8 cross pieces - usually supplied as strip



1 x Kre8 grey tube 3.9mm dia



2 x rubber band

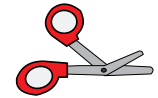


1 x ping pong ball



8 x Kre8 blue collars

## Tools you may need



snips



pencil



small screwdriver



ruler



# Using the Cross Pieces Assembling TIPS



1



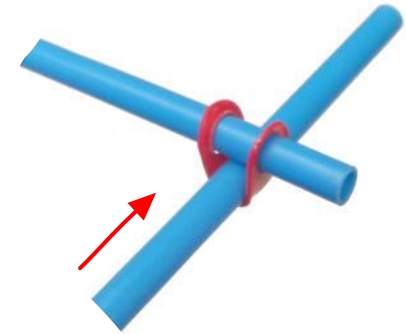
Slide **cross piece** on the **tube**

2



**Fold** over to make a **loop**

3



Slide **second tube** into the **loop**

## Tips

### Fold Cross Piece

Assembly is made easier if the **cross pieces** are folded as shown below before sliding along the tube

*Fold ready  
to use*

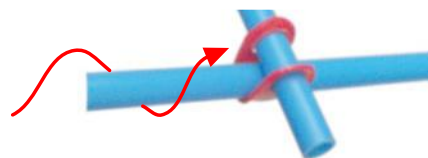


### Leave Cross Pieces on strip until needed



### Twist and insert Tube

Twisting the tube as inserted can also make assemble easier



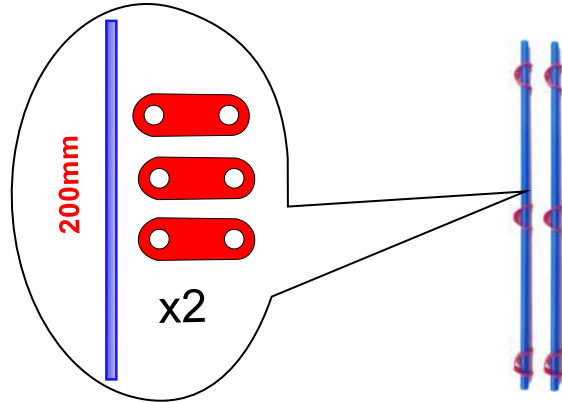
angle



Cutting tubes at an angle can make assemble easy

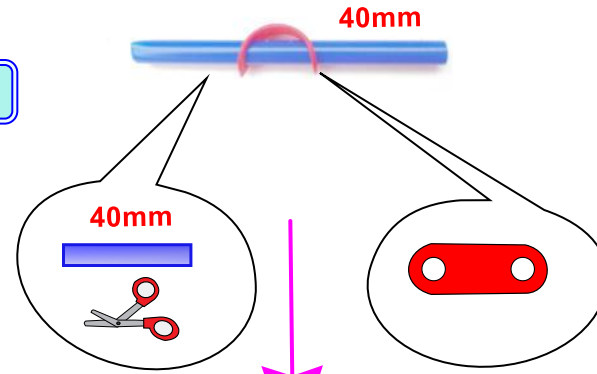
### Making the Base Part

1

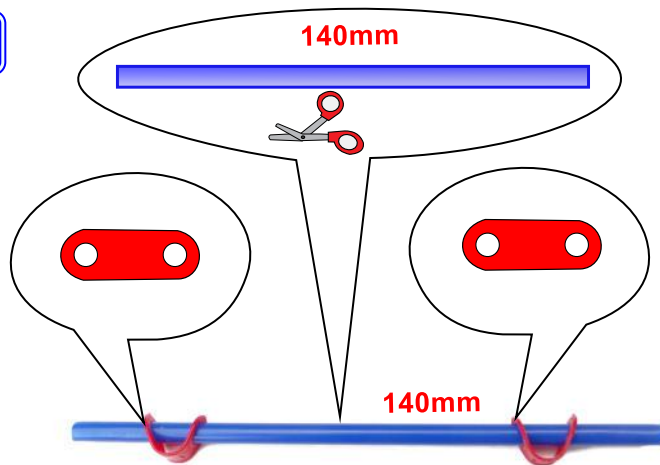


Add cross pieces to blue rods

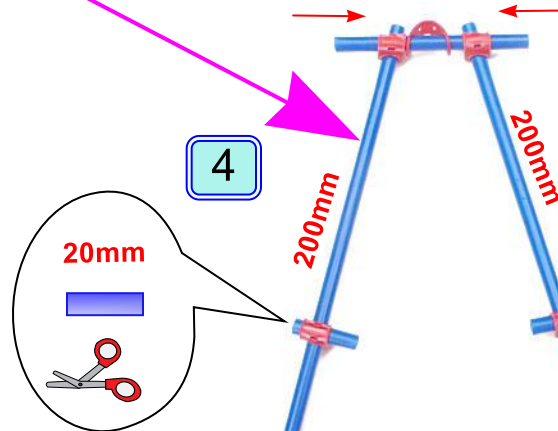
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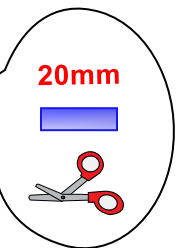
3



4



5

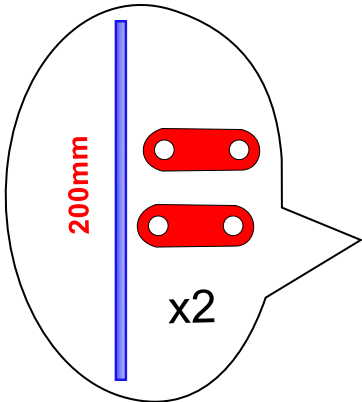


Completed  
Base

Then  
keep  
until needed

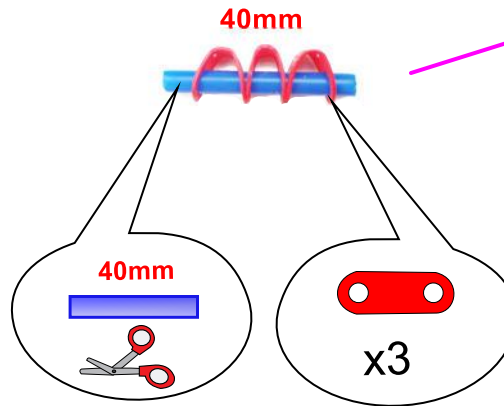
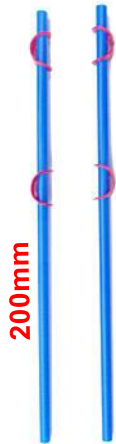
### Making the Top Frame

6



Add cross pieces to blue rods

7

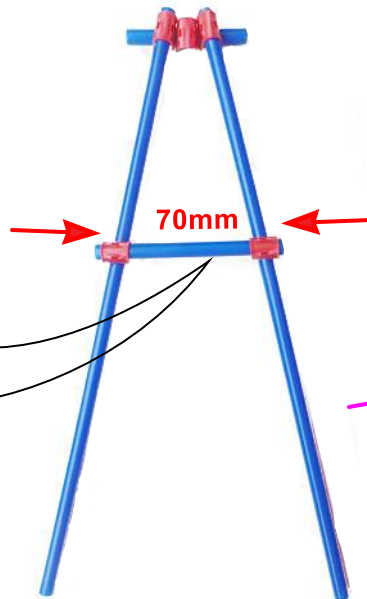
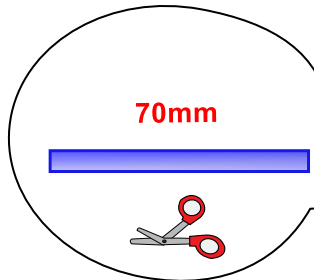


8

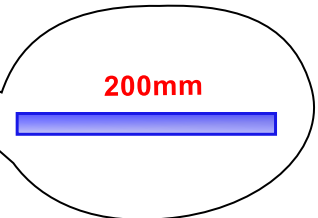
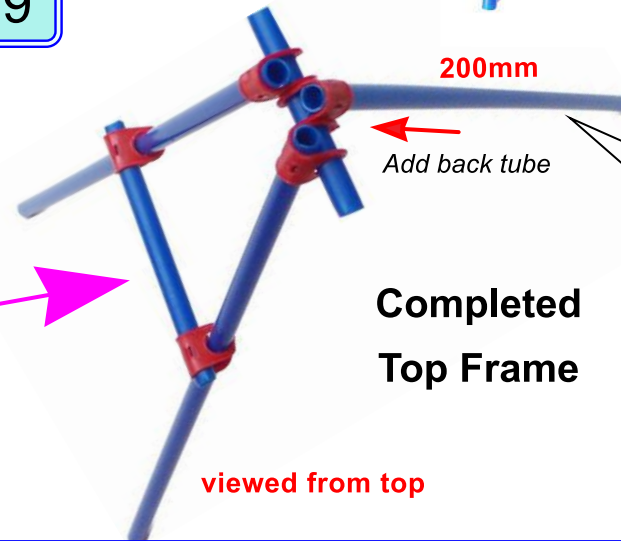


Add the top part just made to ends of the long tubes

8



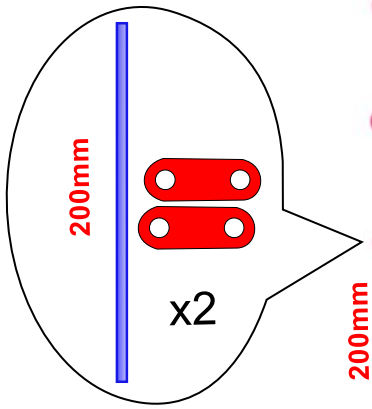
9



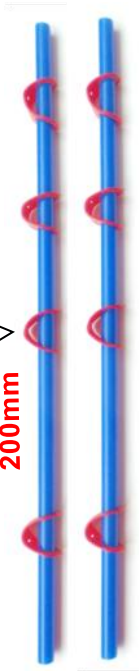
Then keep until needed

### Making the Throwing Arm

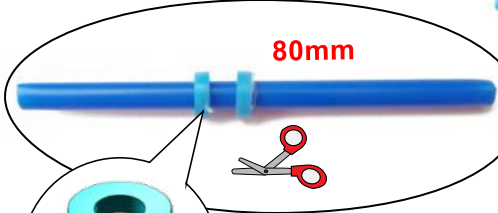
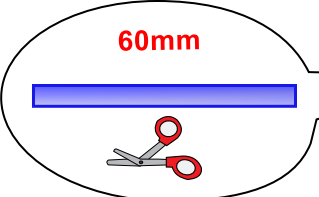
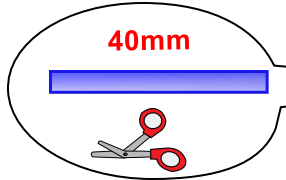
10



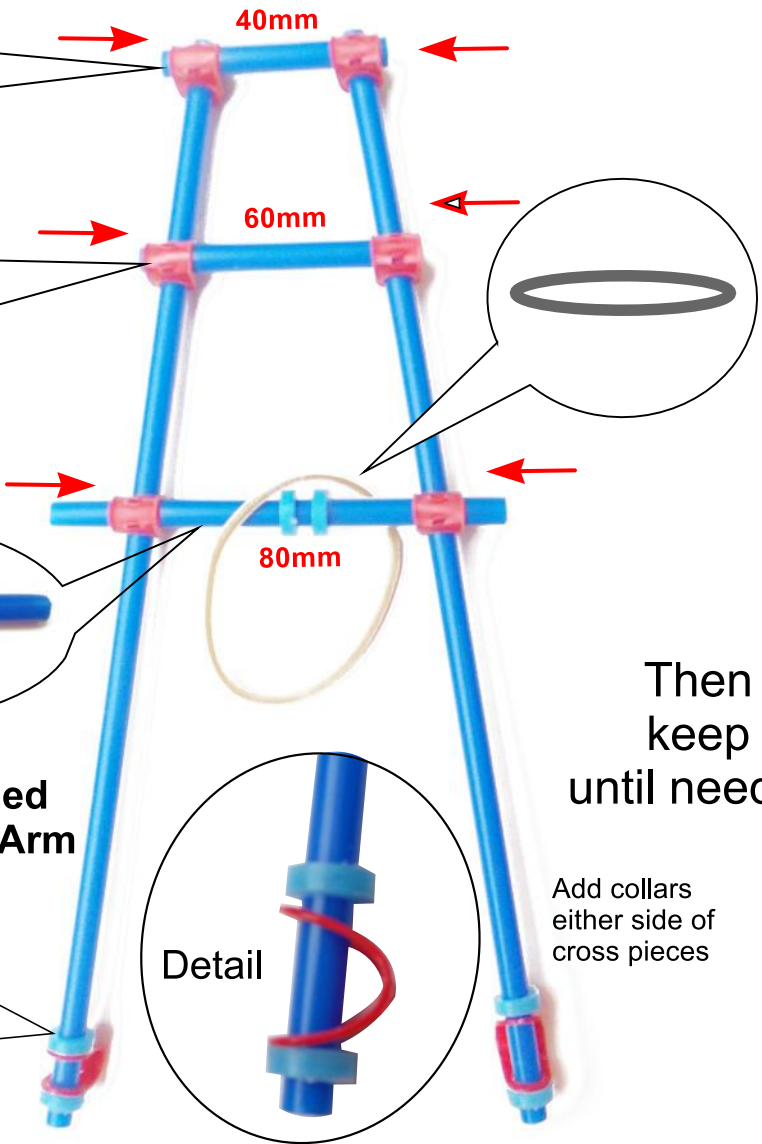
Add cross pieces to blue rods



11



Assembled Throwing Arm



Then keep until needed

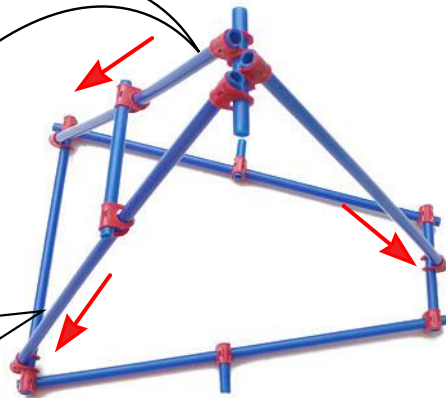
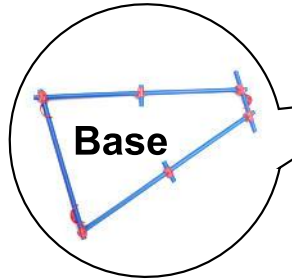
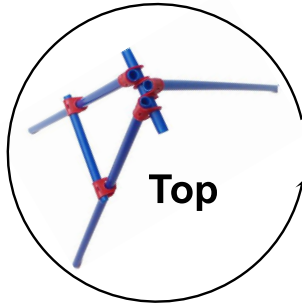
Add collars either side of cross pieces

# Catapult Thrower

## Making Step by Step 4 of 5

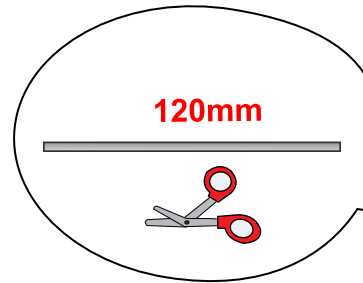
### Assembling Base, Top and Thrower

12

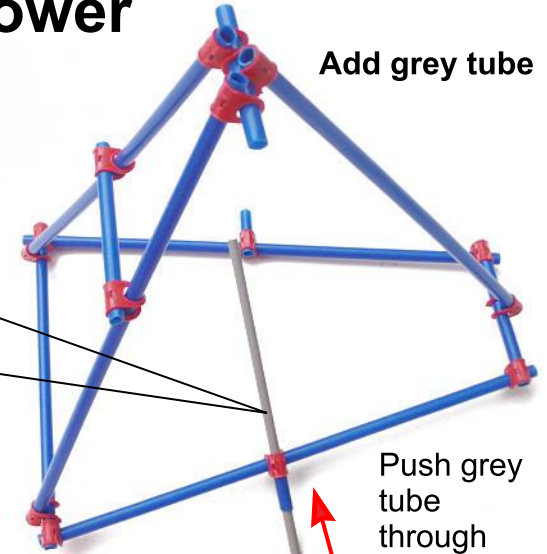


Add Top to Base

13



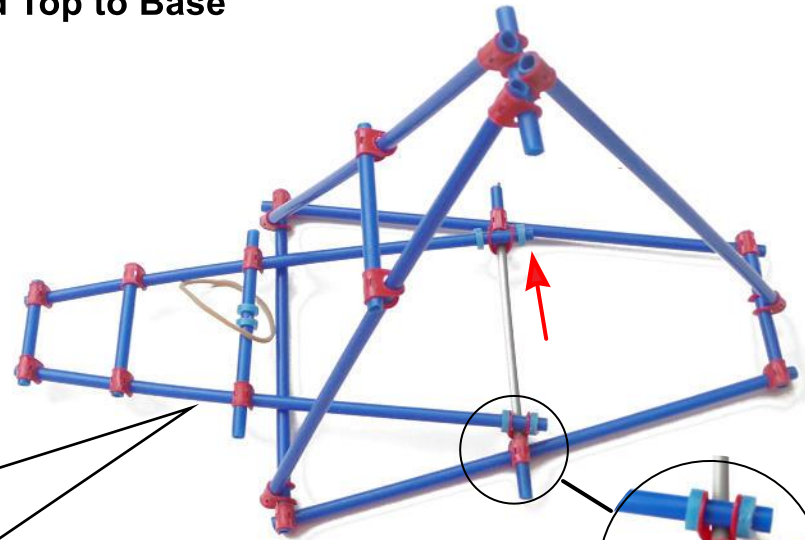
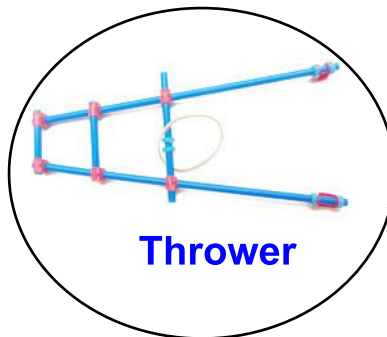
120mm



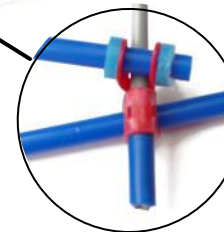
Add grey tube

Push grey tube through first tube ready for Step 14

14



Fix Throwing Arm using the grey tube

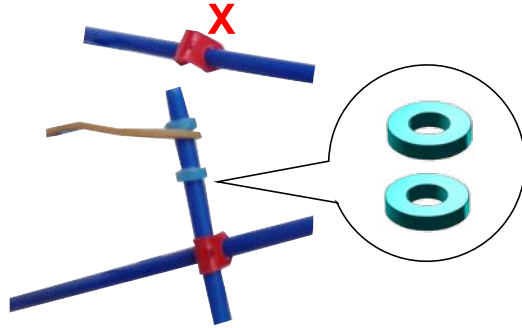


# Catapult Thrower

## Making Step by Step 5 of 5

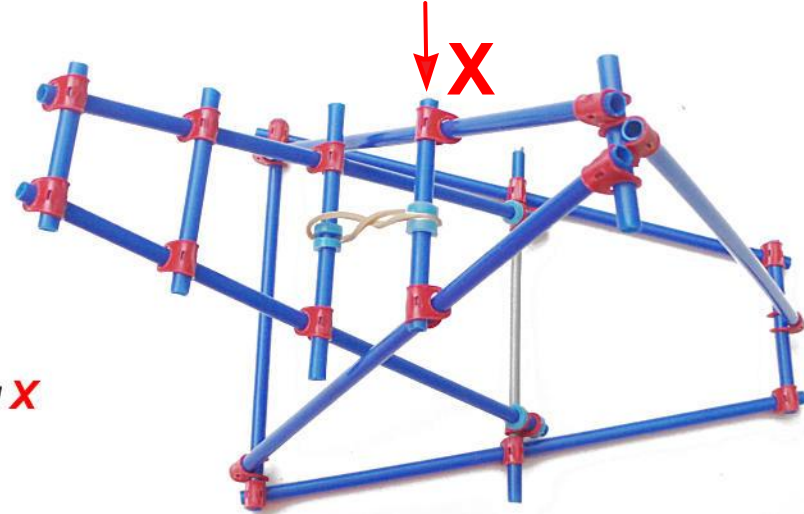
15

Link rubber band on throwing Arm to Top Frame



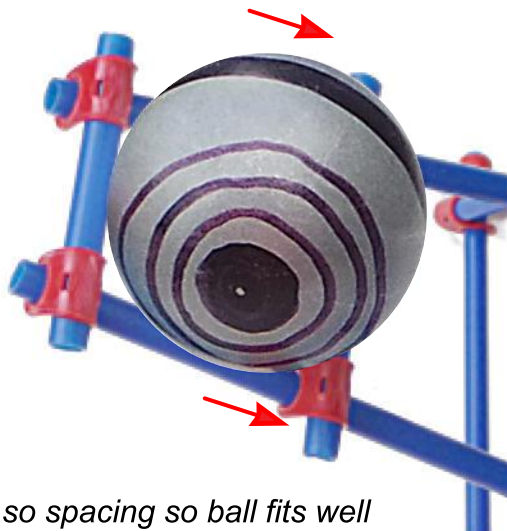
How to Link Rubber Band

- Undo **blue tube** from **cross piece** marked **X**
- Add **collars** and link **rubber band**
- Replace **blue tube** in **cross piece**



16

Adjust ball holder size



Adjust so spacing so ball fits well

Completed Model

Test and adjust so it works well

