

Introduction Page

Two Bridges

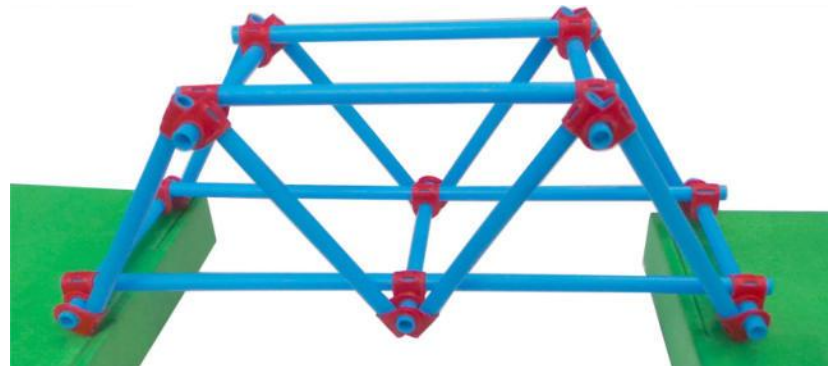
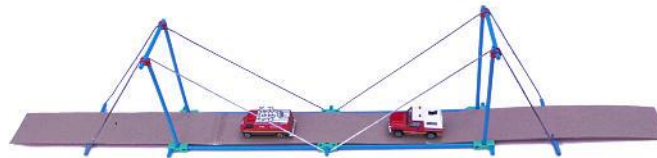
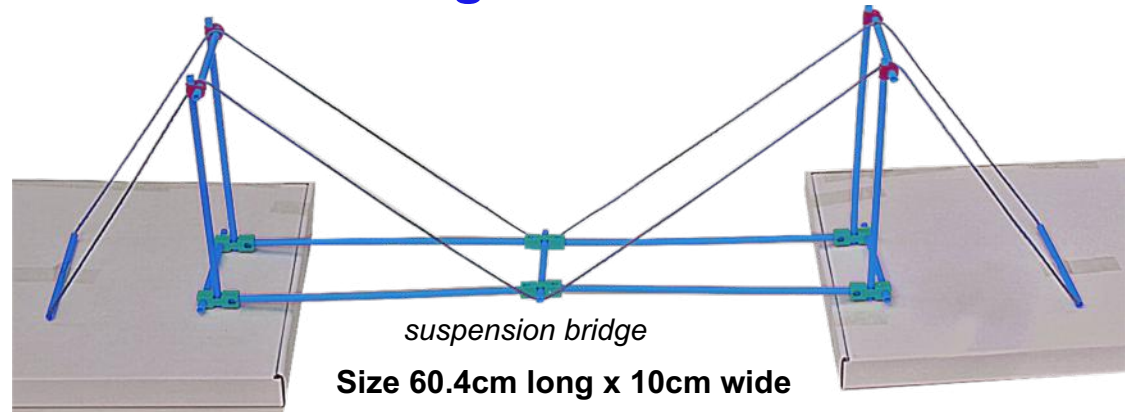
Make a suspension bridge and a truss bridge, one model at a time. Quick to assemble.

Models shown are resting on boxes.

Truss bridges are often found spanning streams, rivers and roads. When longer spans are wanted a suspension bridge can be used.

Keywords / Knowledge

Span, Triangulation of structure, stiffness, load, deflection, fail, rigid, stretching (tension) compression, redundant(not used) part, stable, counter weight and enclosed space



SAFETY

Bridges need to be safe. During testing avoid the load landing on you when the bridge fails and the test load falls down.

Test - See how much they can carry by adding a point load and then a uniform spread out load along the part used to carry the traffic. Can be undertaken between two tables



HO Bridges

Two Bridges Parts List



Parts List

22 x Kre8® 5mm x 200mm tubes

30 x Kre8® cross pieces

2 x Kre8® green connector

1 x string 2.5m long

Parts List with Images



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



30 x Kre8 cross pieces (usually supplied as a strip)

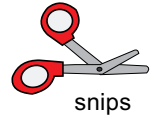


2 x Kre8 green connectors



1 x string 2.5m long

Tools you may need



snips



pencil



small screwdriver



ruler



Using the Cross Pieces Assembling TIPS



1



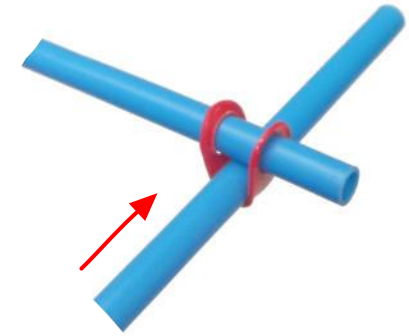
Slide **cross piece** on the **tube**

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*

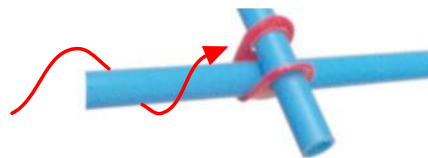


Leave Cross Pieces on strip until needed



Twist and insert Tube

Twisting the tube as inserted can also make assemble easier



angle



Cutting tubes at an angle can make assemble easy

Truss Bridge

Making Step by Step 1 of 2

Top Part

1a **1b** **1c** **1d** **1e**

80mm

80mm x 4

x2

adding the cross pieces to 80mm rod

insert four tubes

Turn over then make another **Top Part**

Road Part

2a **2b** **2c** **2d**

80mm

200mm

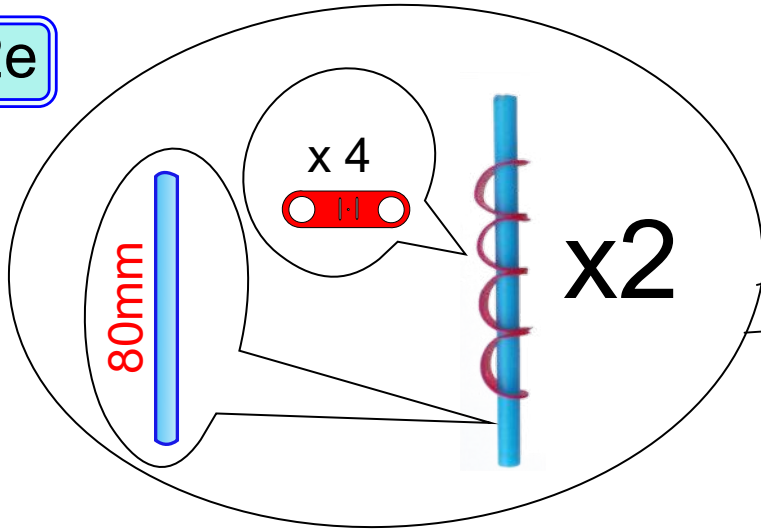
adding the cross pieces

Add two **200mm** tubes

Truss Bridge

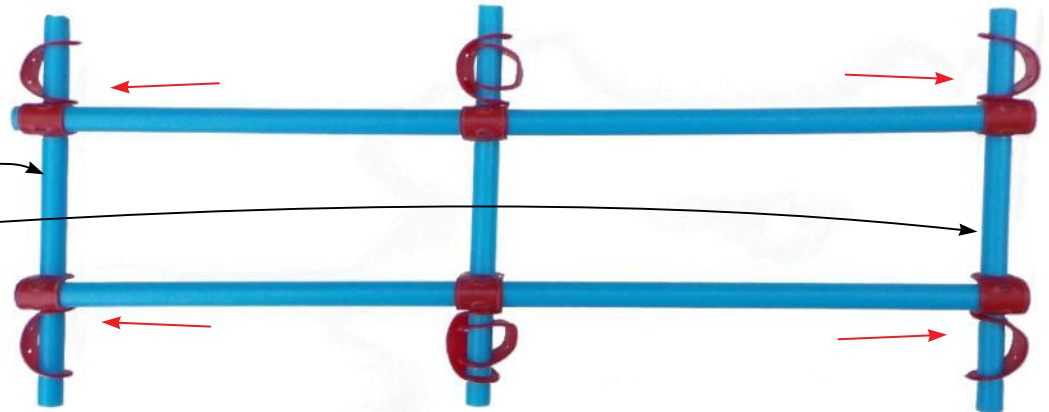
Making Step by Step 2 of 2

2e



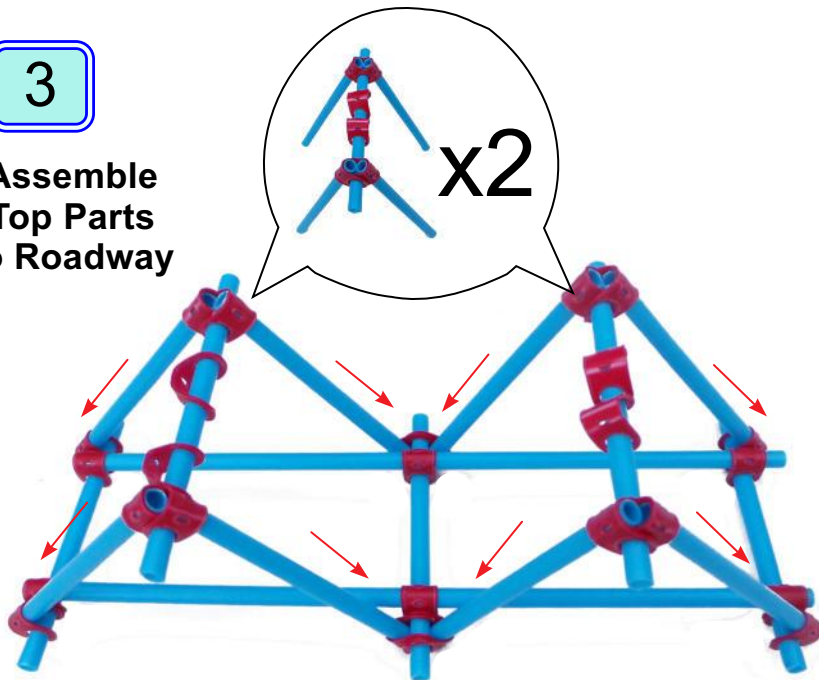
2f

Add both ends to Road Part

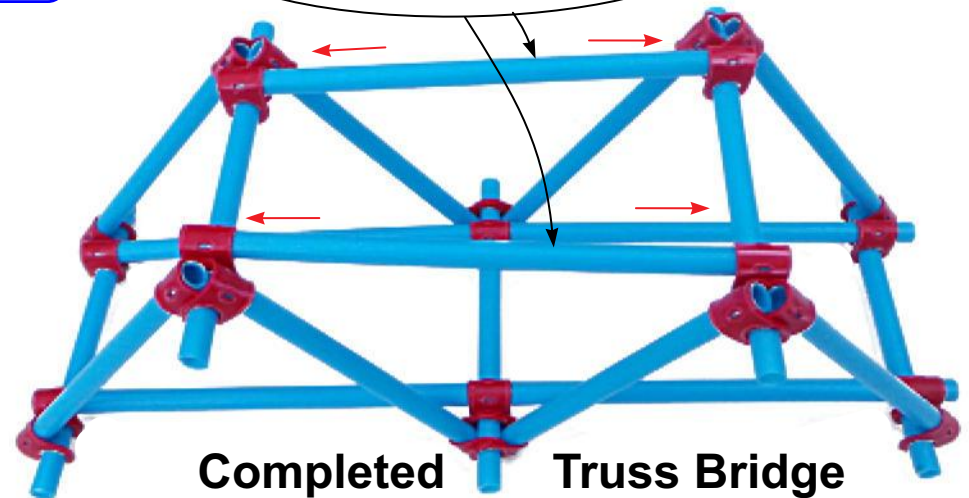
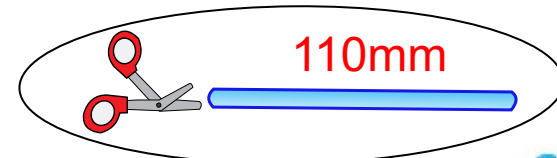


3

Assemble
Top Parts
to Roadway



4



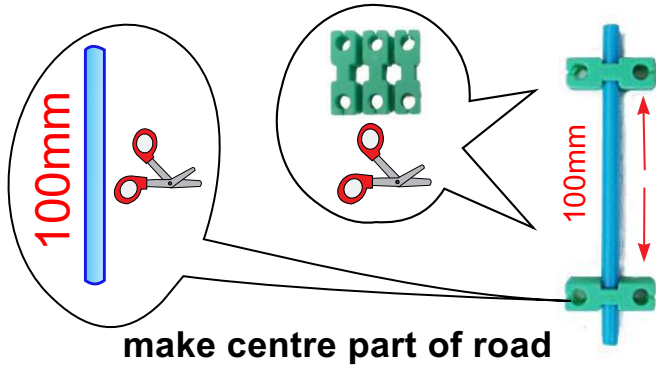
Completed Truss Bridge

Suspension Bridge

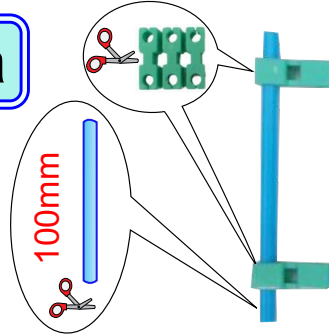
Making Step by Step 1 of 3

1

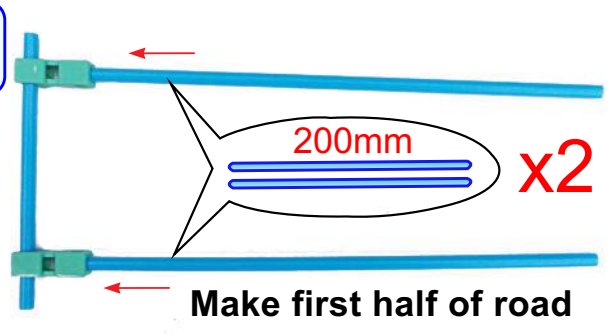
Road Part



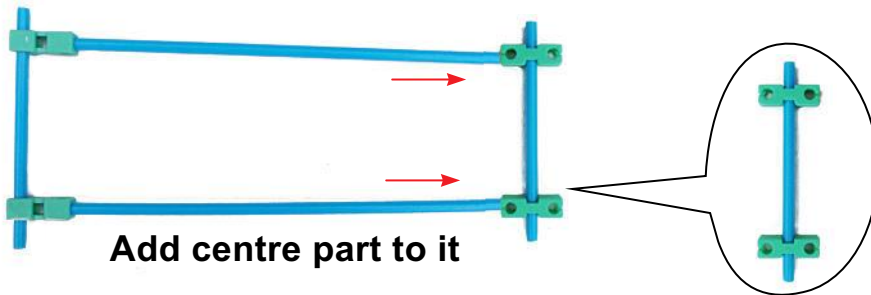
2a



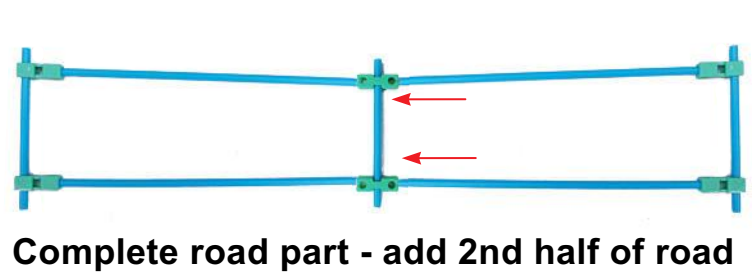
2b



2c

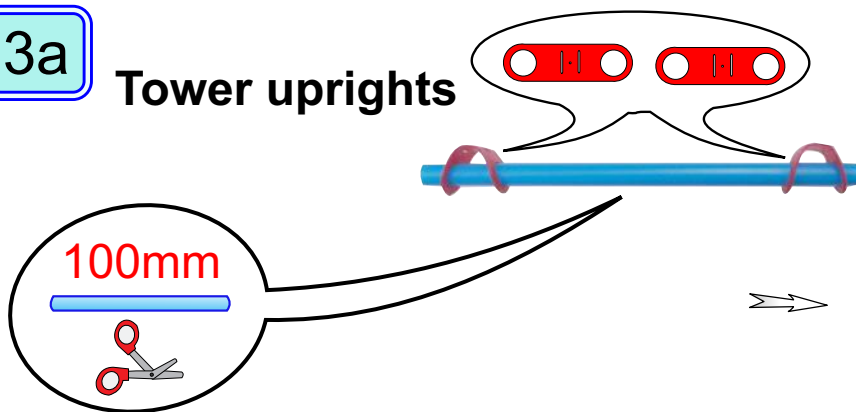


2d

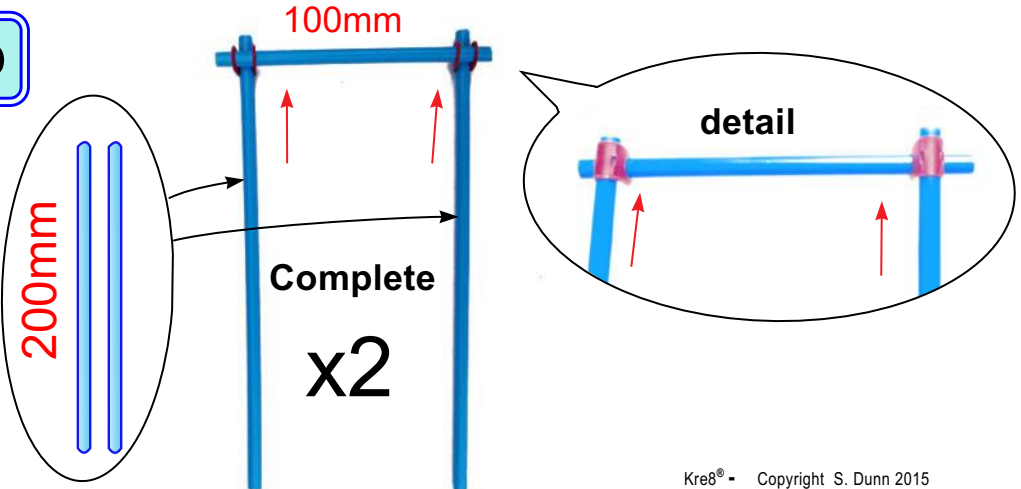


3a

Tower uprights



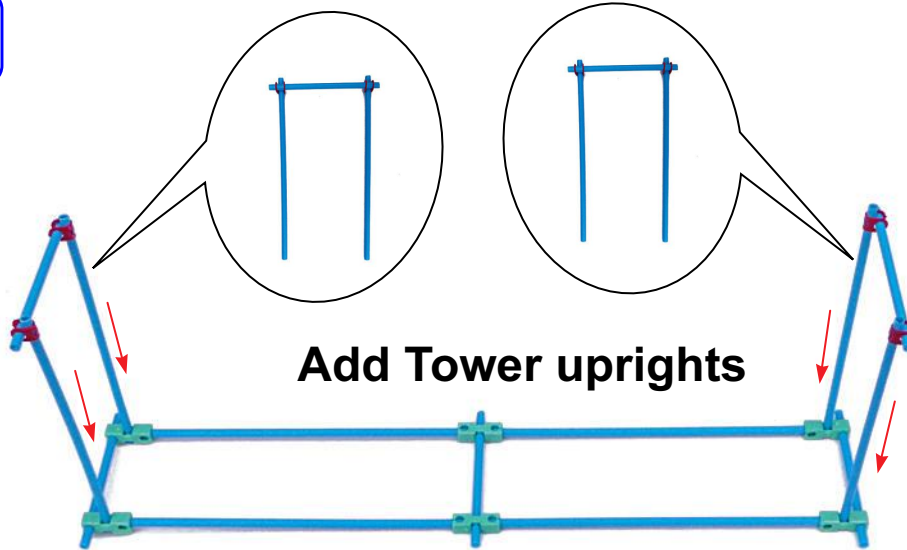
3b



Suspension Bridge

Making Step by Step 2 of 3

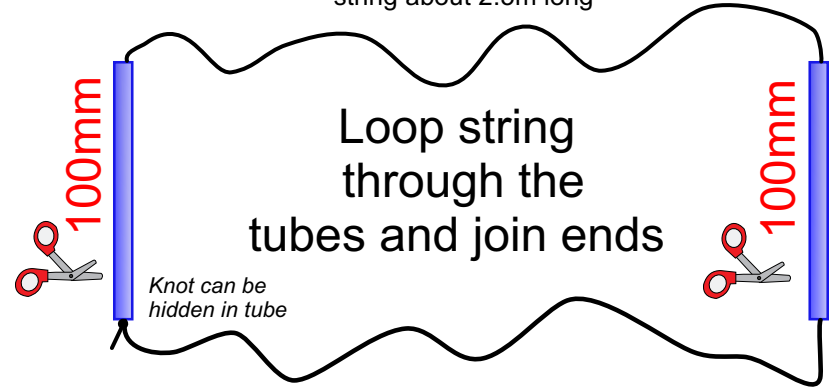
4



5

Rope Suspension

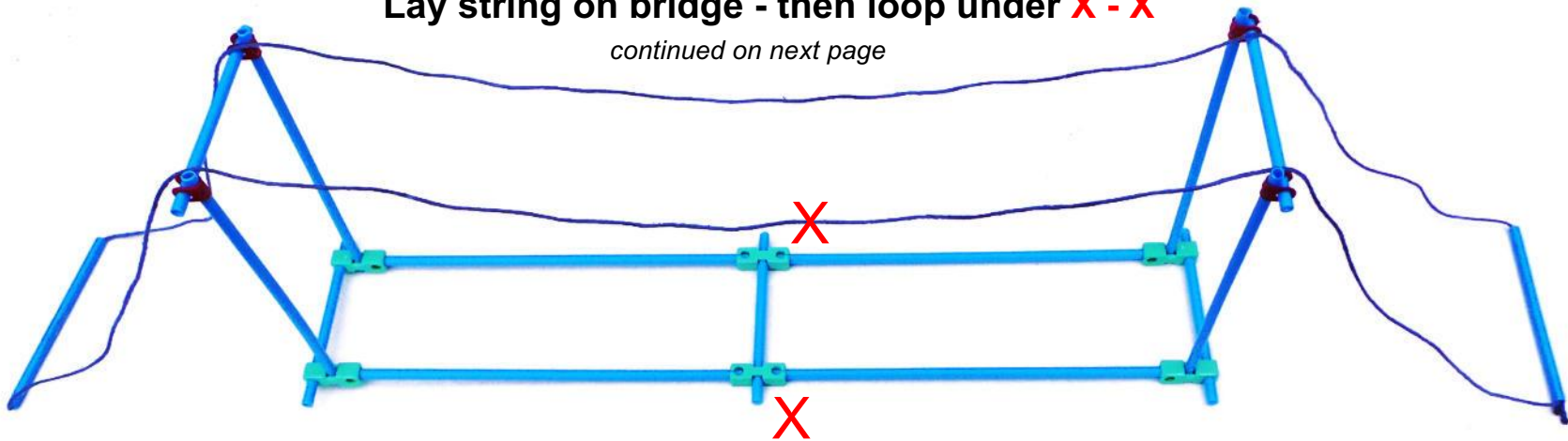
string about 2.5m long



6

Lay string on bridge - then loop under X - X

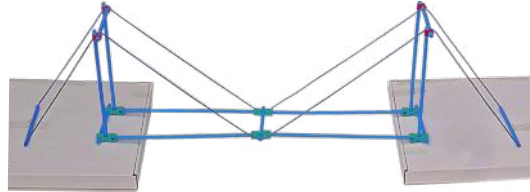
continued on next page



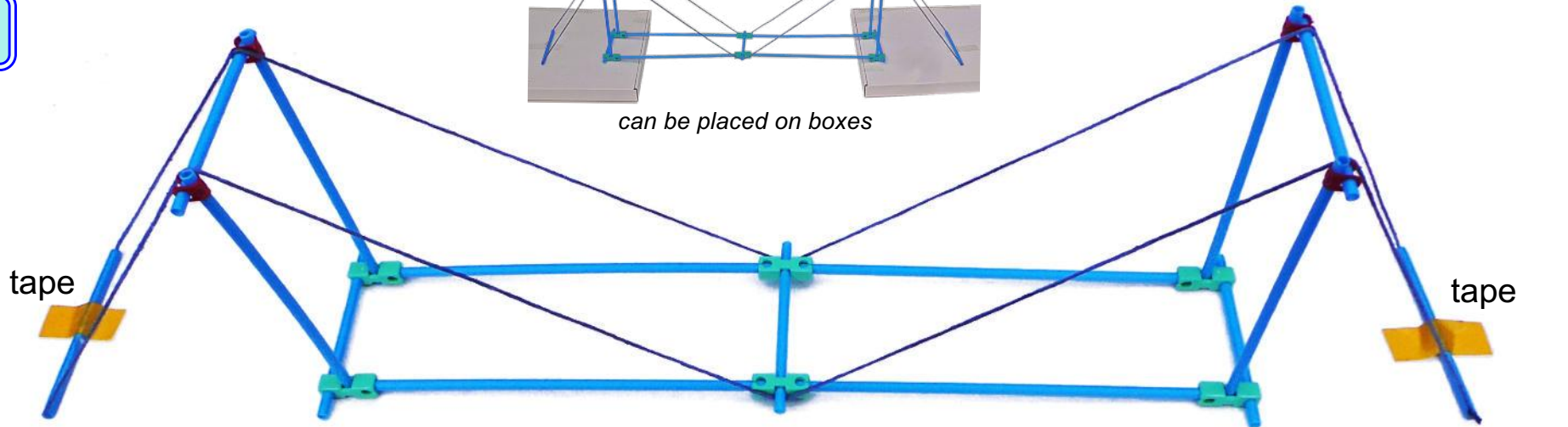
Suspension Bridge

Making Step by Step 3 of 3

7



can be placed on boxes



tape

tape

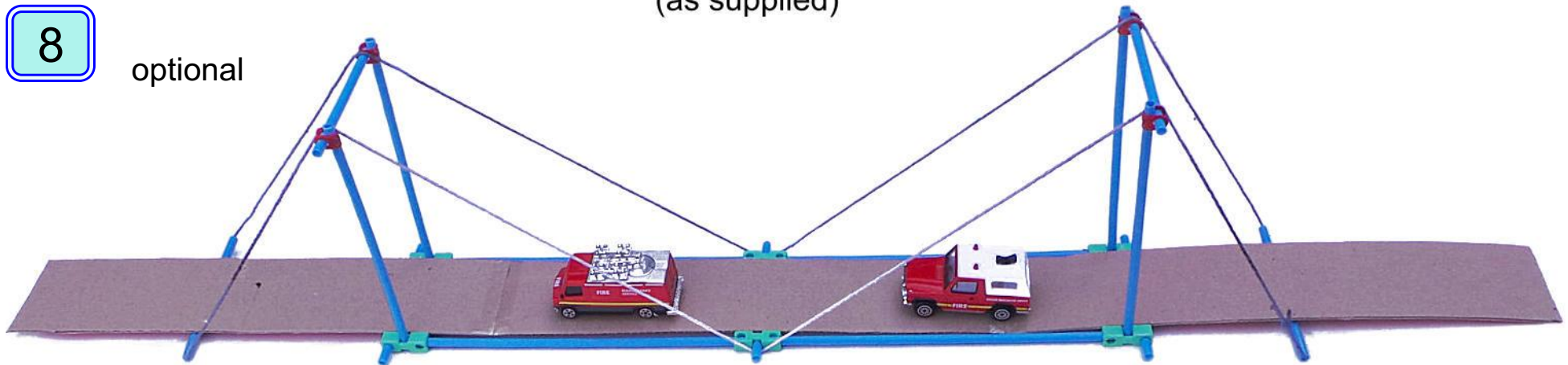
Anchor ends

Anchor ends

Finished Suspension Bridge
(as supplied)

8

optional



Finished Suspension Bridge
with optional card road added (add your own card)