





## TENSEGRITATE

Modelul dragonului atârna în aer și aproape că pare să zboare. Cum poate fi asta?

Principiul care permite crearea structurilor plutitoare se numește tensegritate. Termenul provine din combinația dintre tensiune și integritate și a fost inventat de un inginer, Richard Buckminster Fuller. Provocarea constă în combinarea optimă a tracțiunii, care în acest caz este întinderea unui material, și compresia pentru a genera tensiune. Obiectul care poartă tensiune atinge un echilibru și, prin urmare, o condiție de integritate structurală.



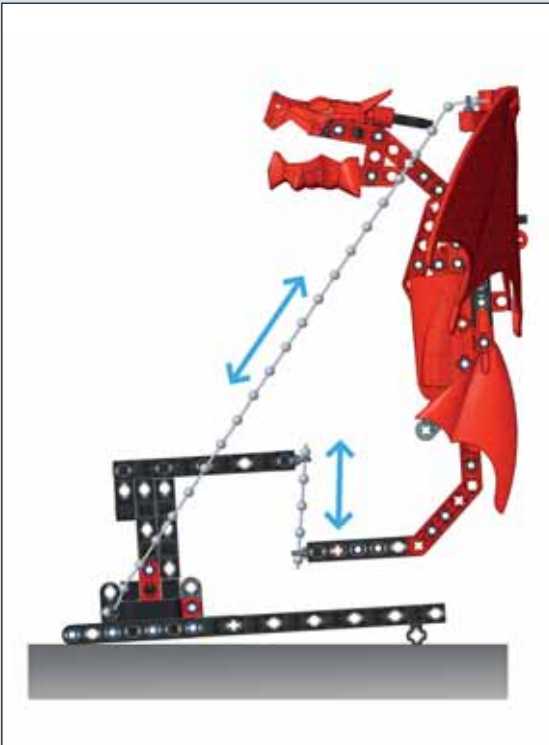
**TRACȚIUNE:** o forță care tinde să întindă un corp.



**COMPRESIE:** o forță care tinde să zdrobească un corp, reducându-i volumul.

Dragonul nostru este astfel supus acțiunii acestor două forțe opuse:

- Cele trei corzi care leagă dragonul de bază sunt supuse TRACȚIUNII.
- Dragonul și baza sunt două elemente separate, supuse COMPRESIUNII.



# DRAGONS

## MITURILE ȘI LEGENDELE

Uneori descris ca fiind rău și teribil făpturi și alte vremuri ca înțelepte și protectori binevoitori ai comorilor, dragoni caracteristică în imaginația aproape tuturor culturilor. Numele lor derivă din cuvântul latin **draco**, care provine din cuvântul grecesc **δράκων**

(**drakon**), adică șarpe. Dragonii sunt descriși în mod obișnuit ca reptile cu trăsături impunătoare și multe trăsături diferite.

Apar în mitologia greacă și în cultura romană. În celebrul mit al **dragon Ladon**, animalul este ucis de Heracles și plasat pe cer într-o constelație numită Draco. Dragonii au făcut parte din cultura chineză de secole și apar în simbolurile familiilor imperiale.



Long and slender like snakes, stocky and winged, with one or more heads, dragons have been classified over the centuries according to their physical characteristics. Below are a few examples:

**AMPHITHERE:** has large wings and no legs.

**LINDWORM:** has two rear legs and no wings.

**WYVERN:** a two-legged winged dragon with a snake-like tail ending in an arrow-shaped tip.

**WESTERN DRAGON:** has four legs and two wings.

**EASTERN DRAGON:** has four legs but no wings.

**HYDRA:** has several heads.

**AMPHISBAENA:** lacks wings and legs, or has two legs and two heads.

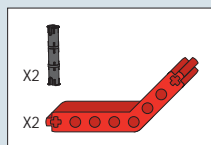
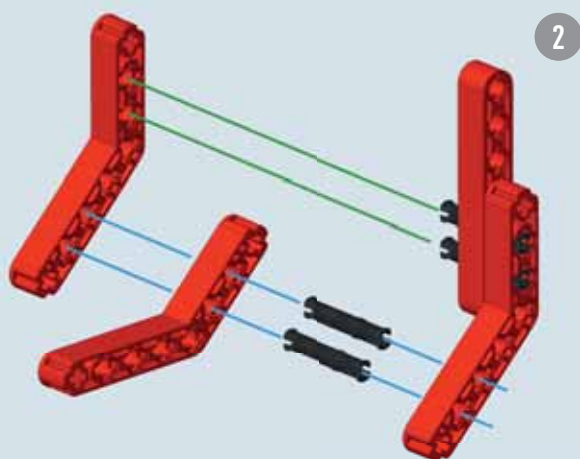
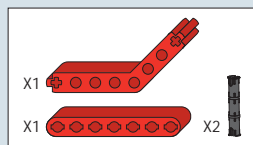
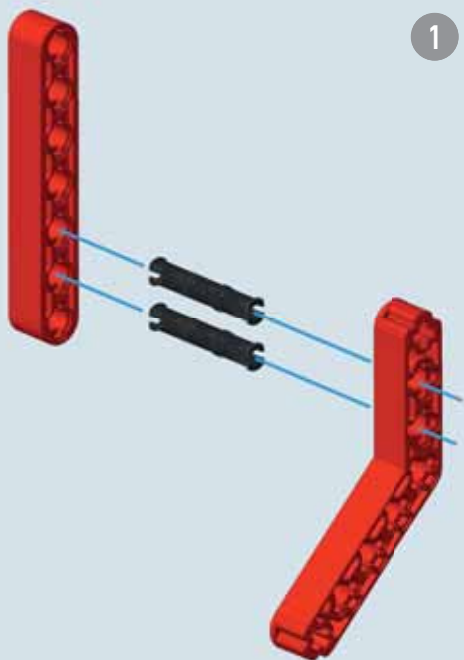
**KNUCKER:** water dragon with small limbs that slides since it cannot fly due to its excessively short wings.



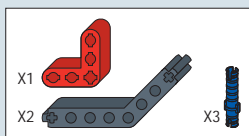
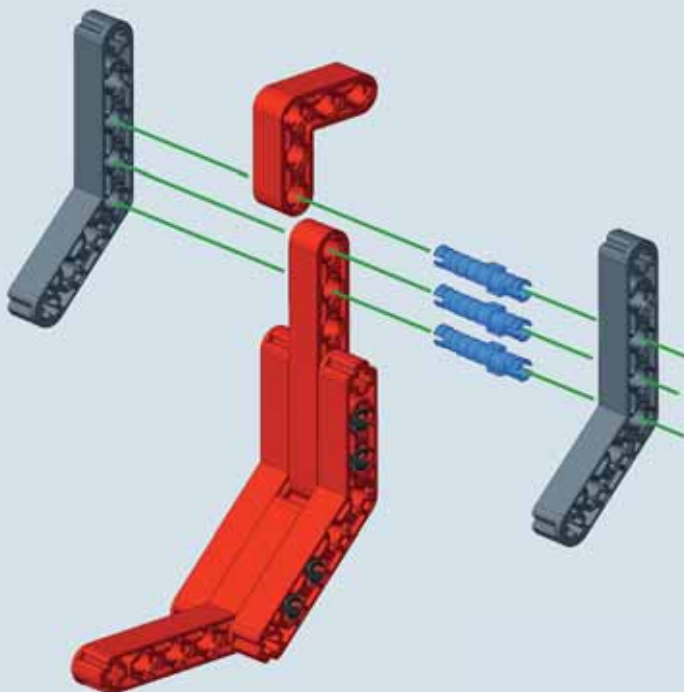
# DRAGON



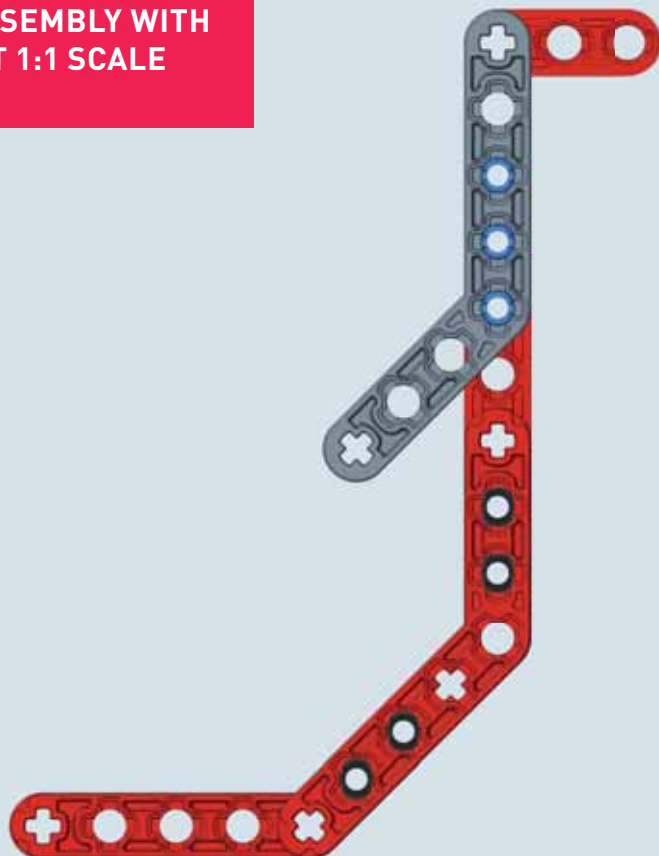
Interactive 3D  
instructions in the APP.



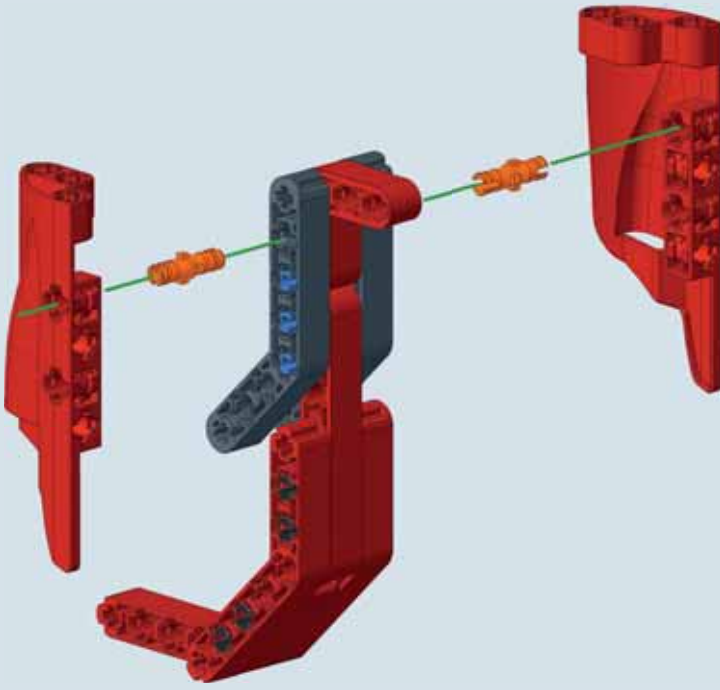




**CHECK THE ASSEMBLY WITH  
THE ADJACENT 1:1 SCALE  
IMAGE**

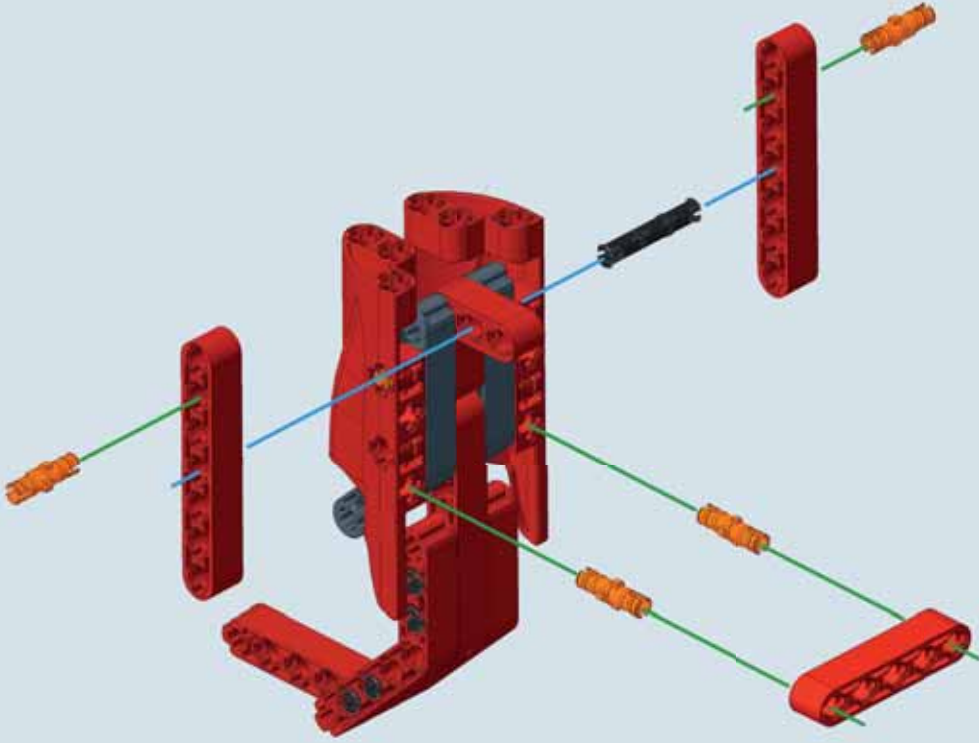


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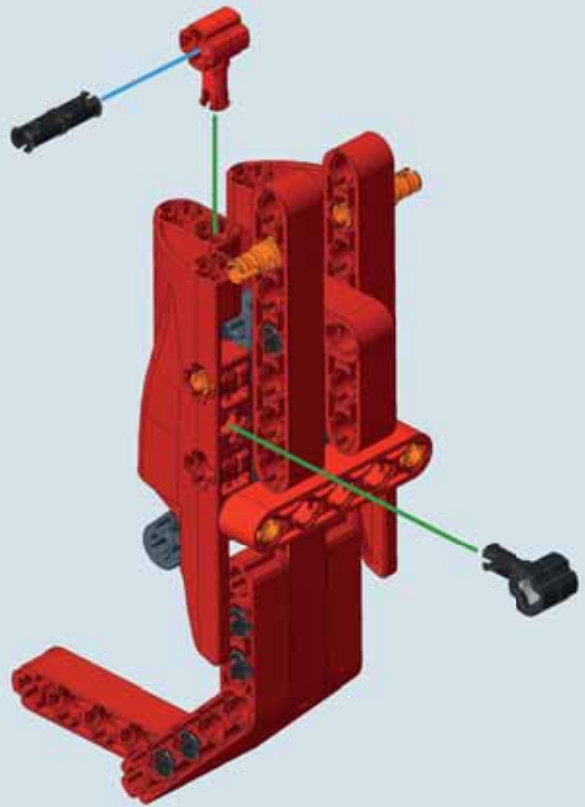
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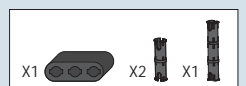
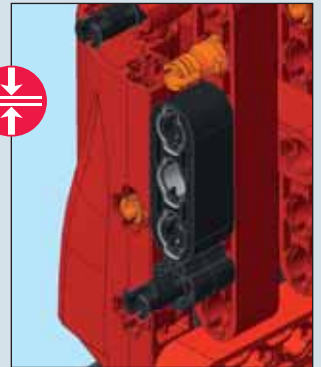
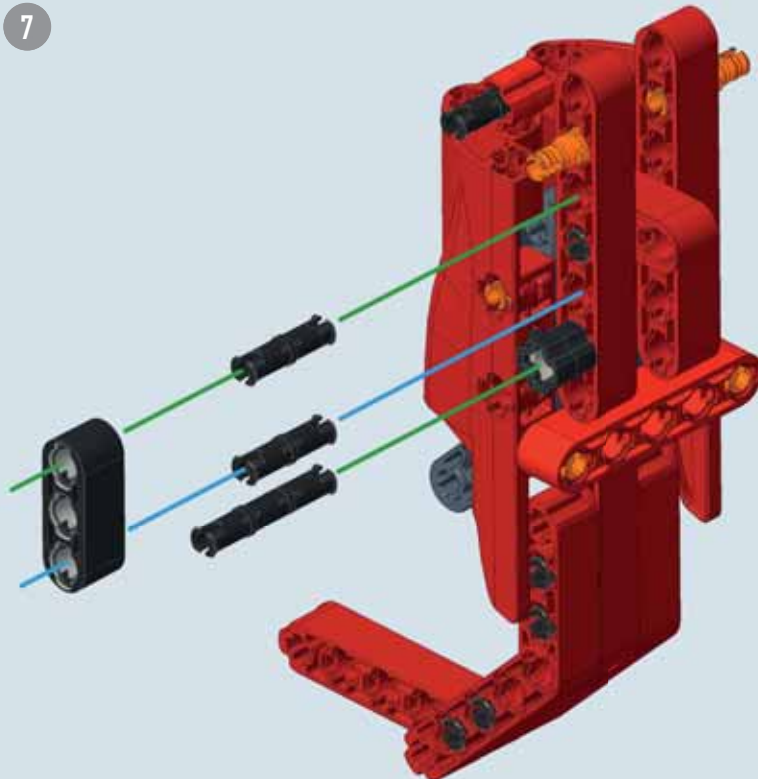


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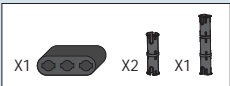
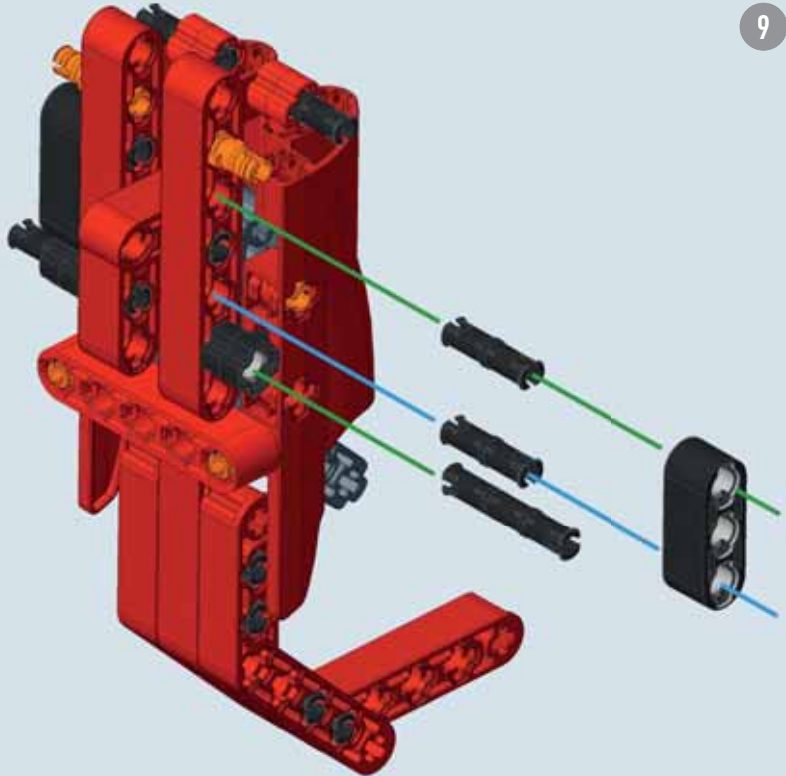
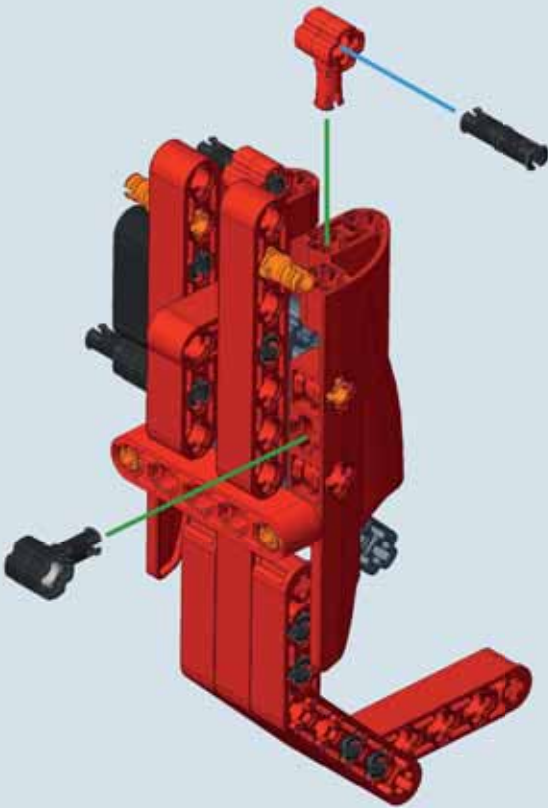
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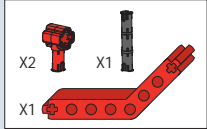
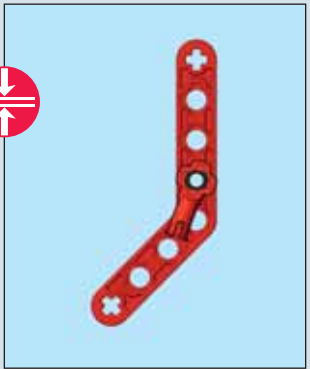
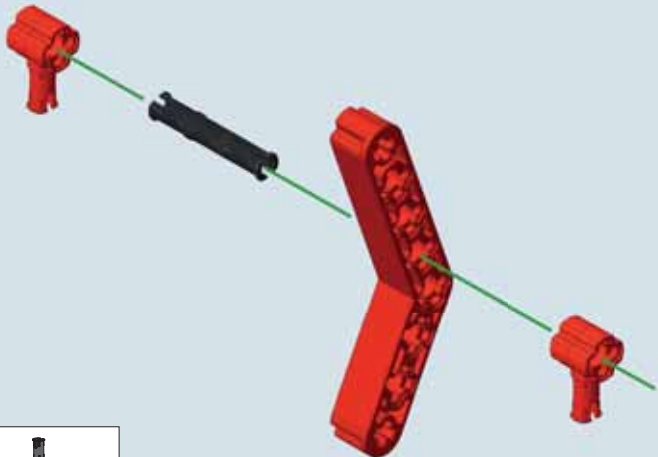
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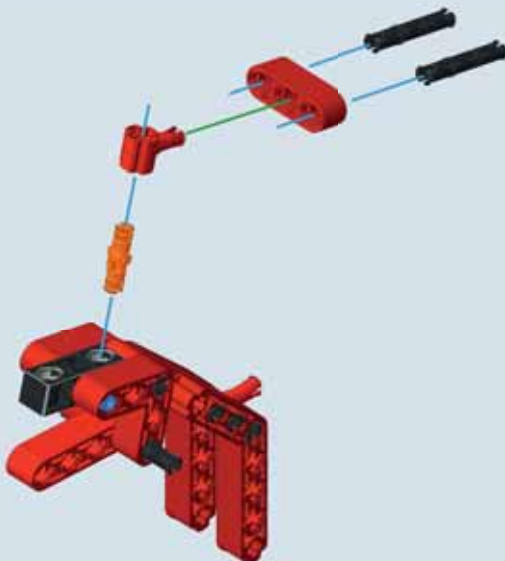
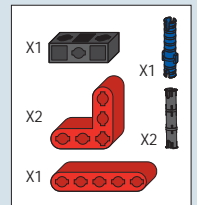
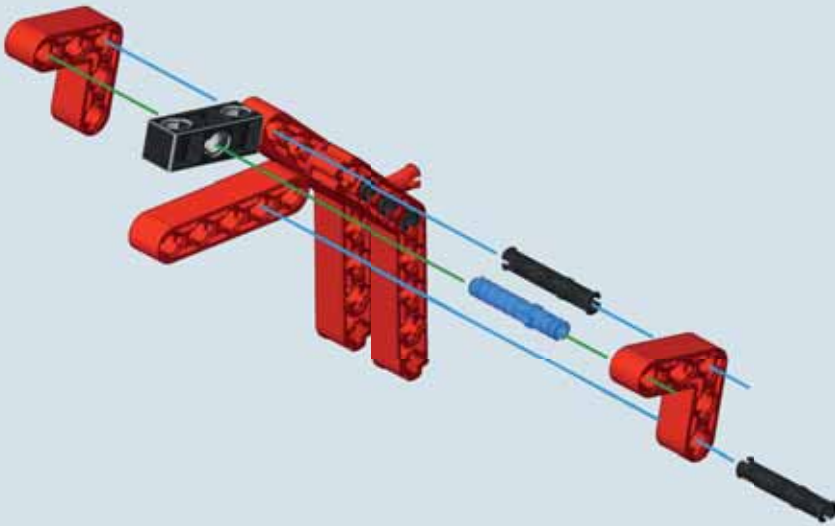
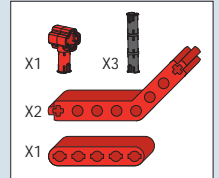
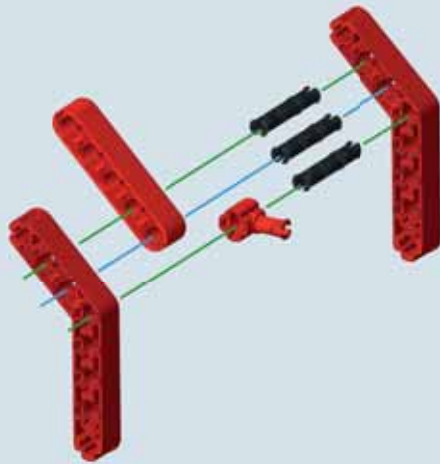


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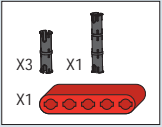
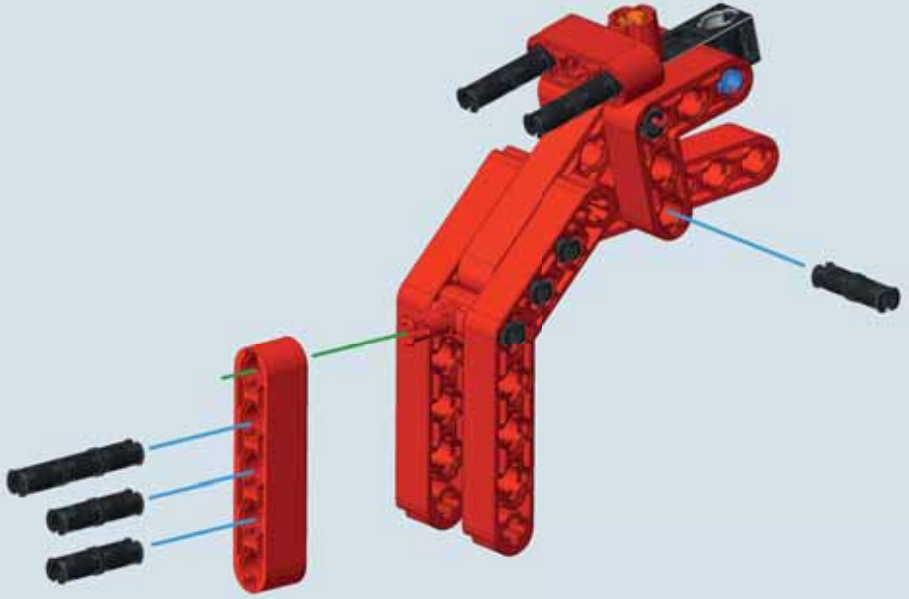


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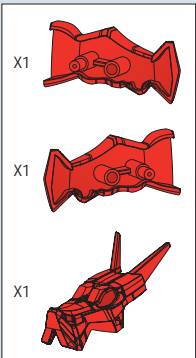
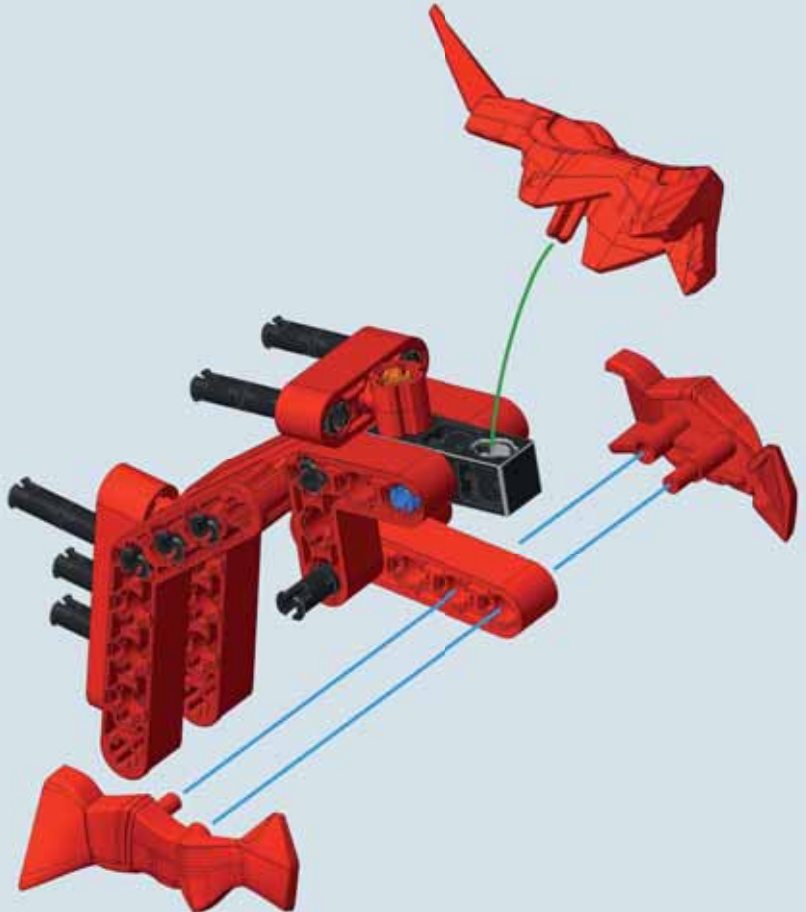


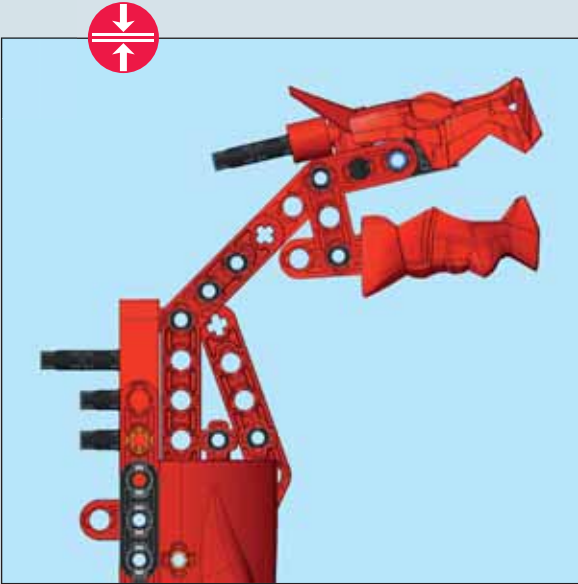


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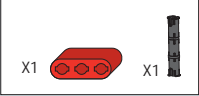
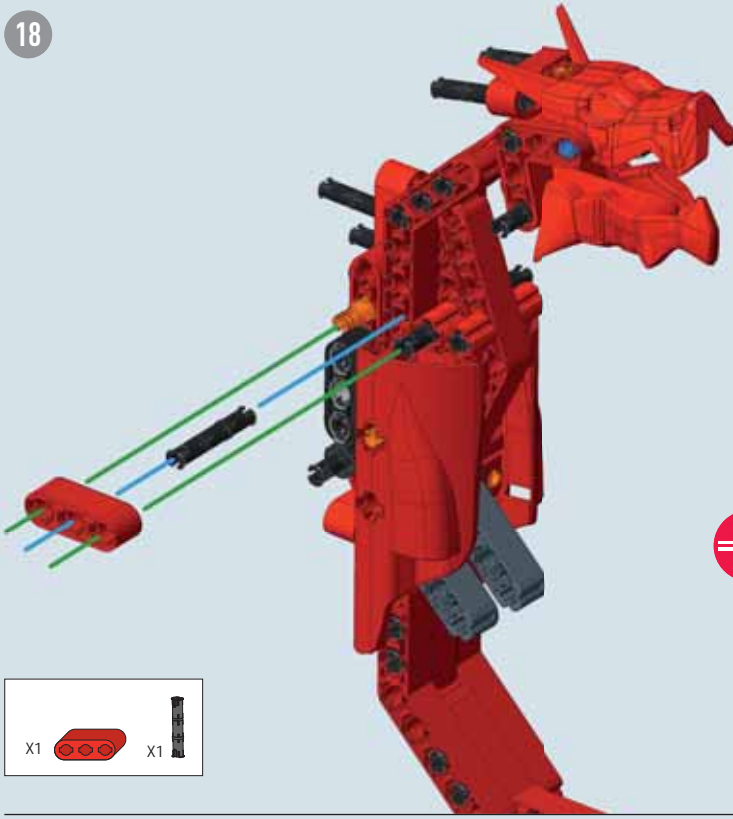
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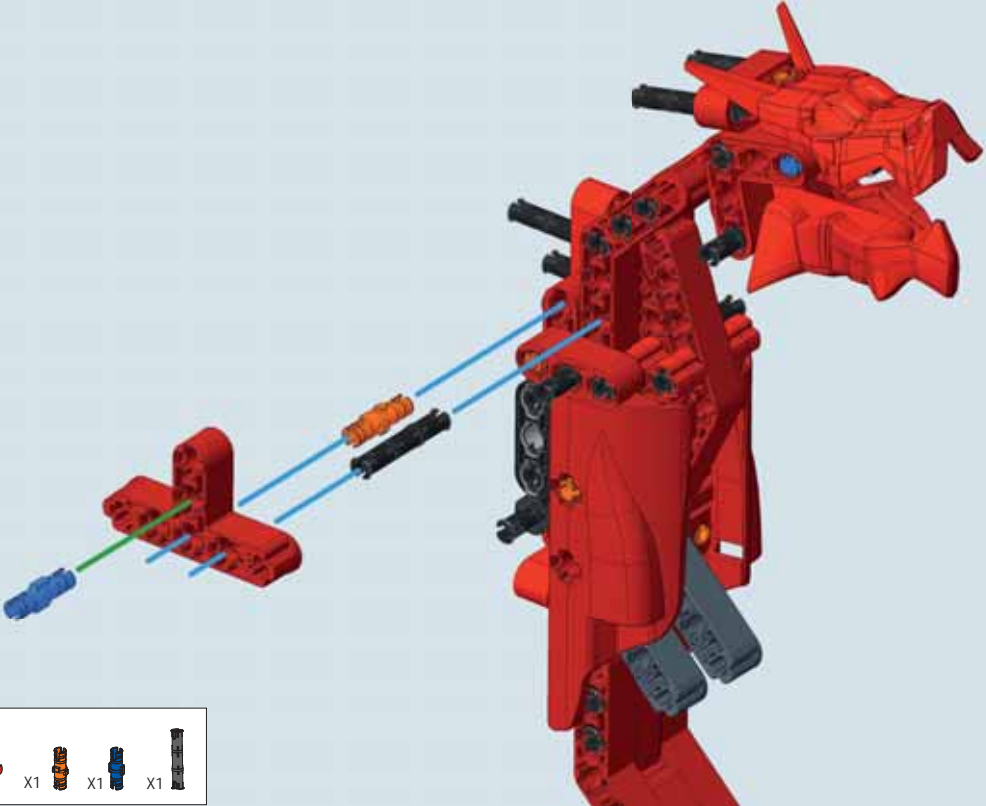


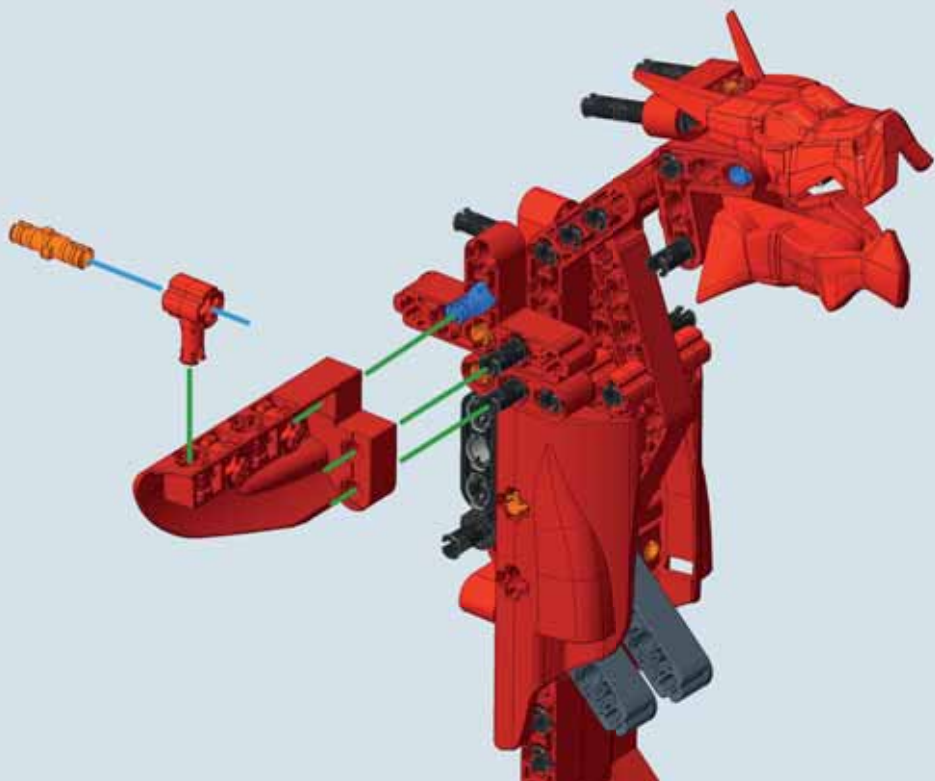





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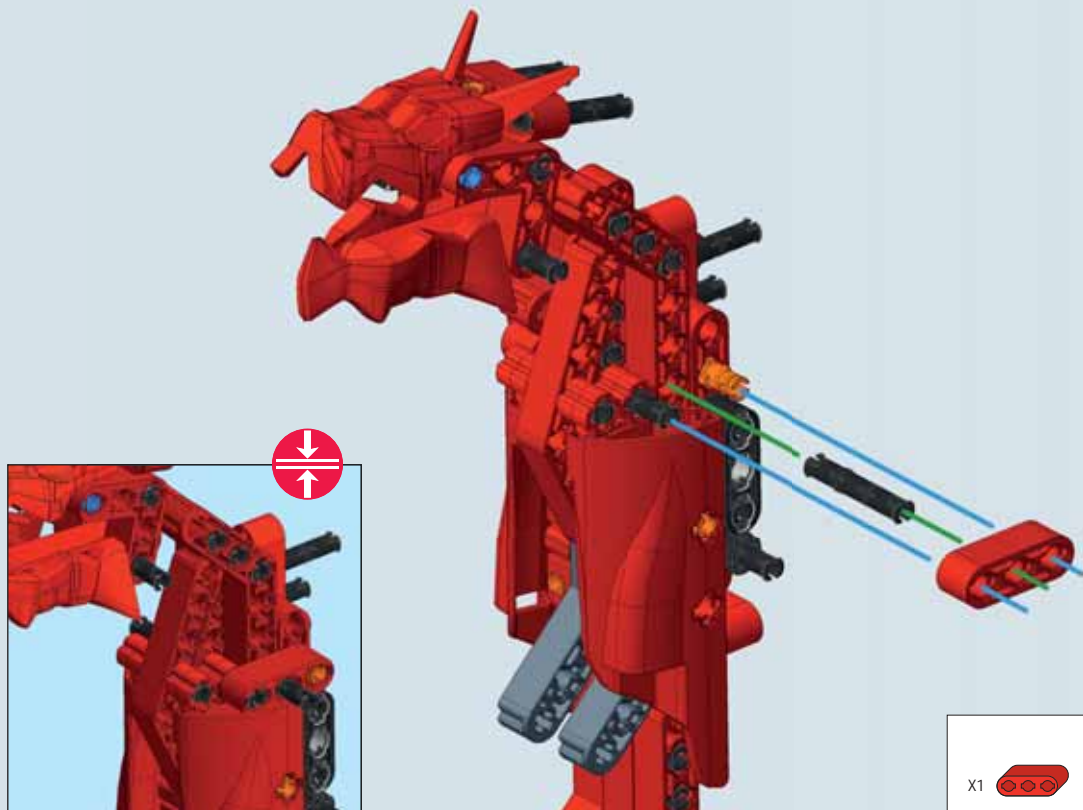




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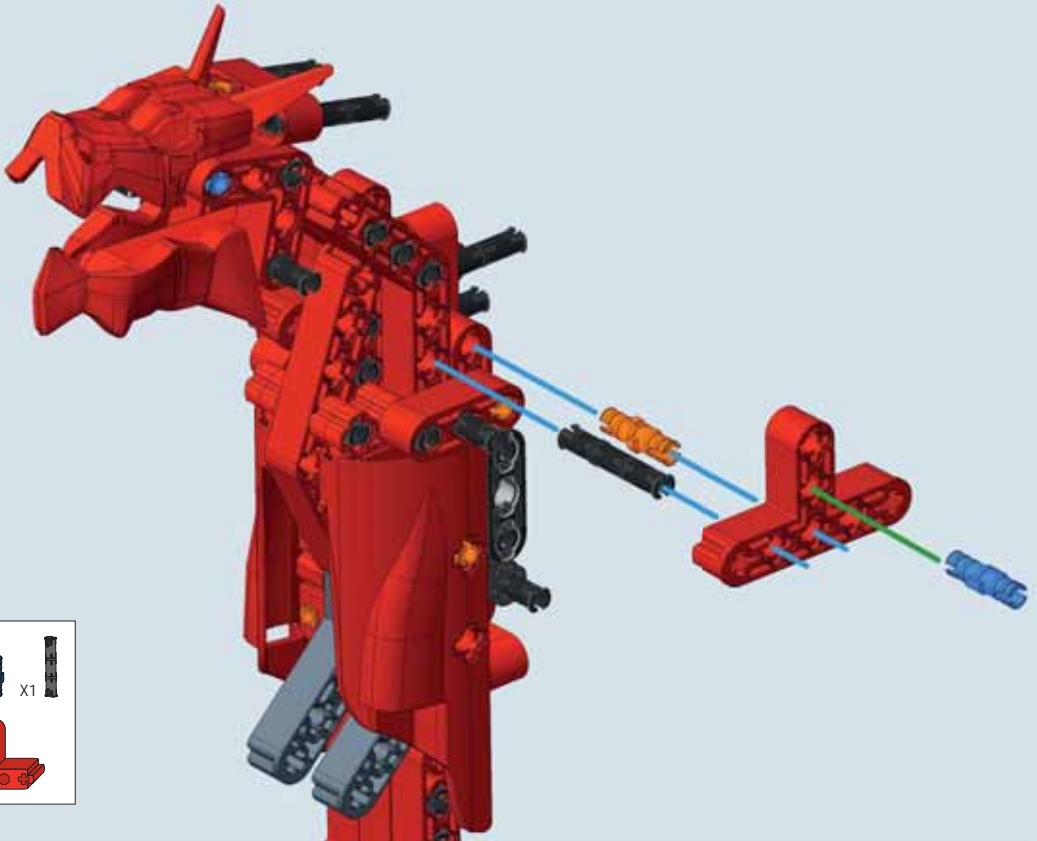





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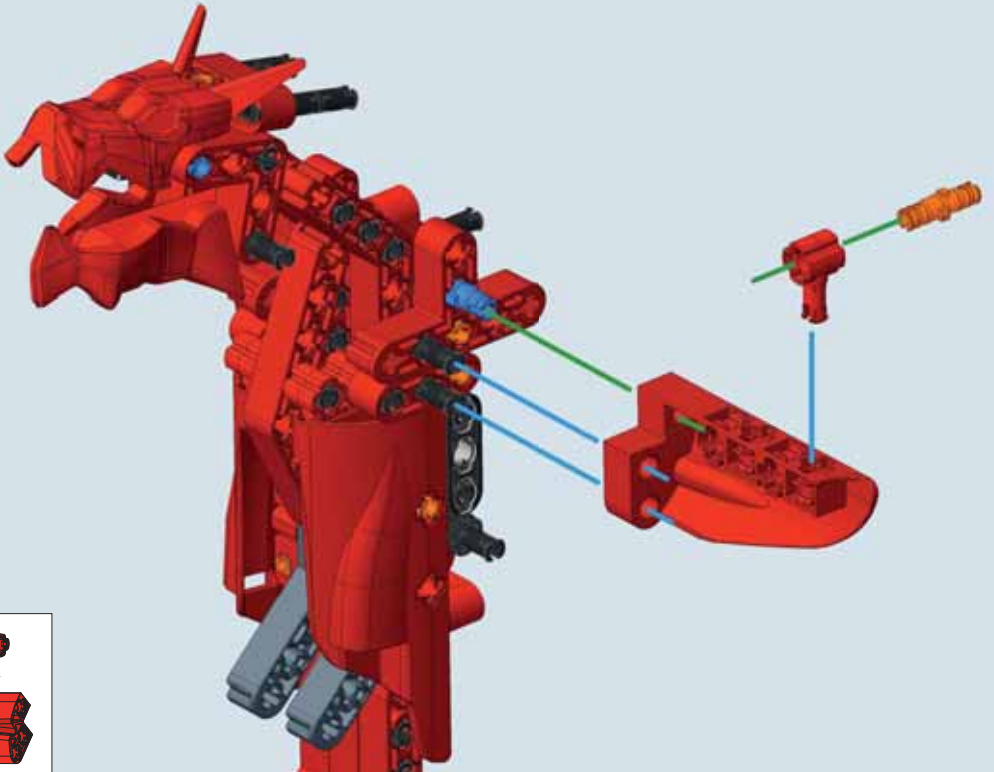
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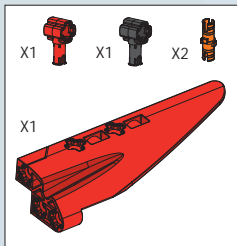
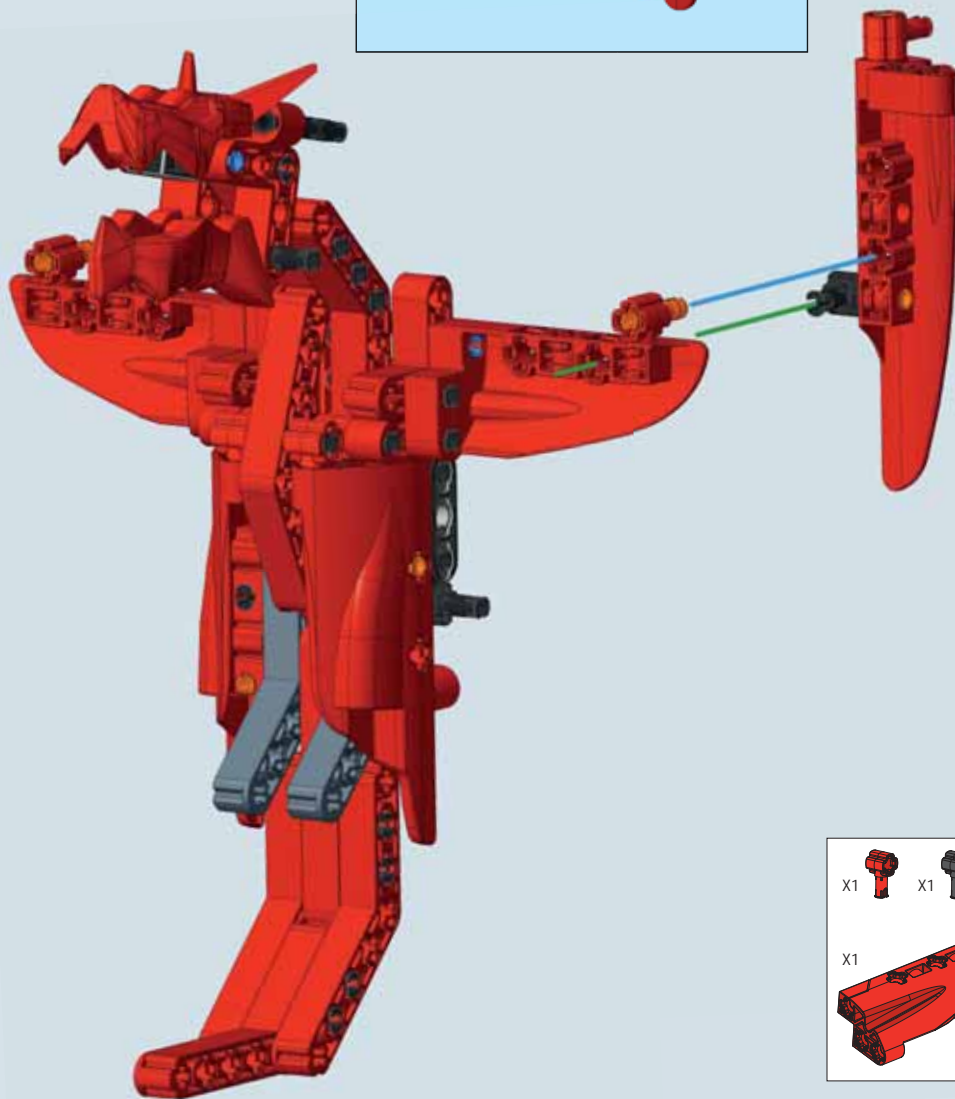
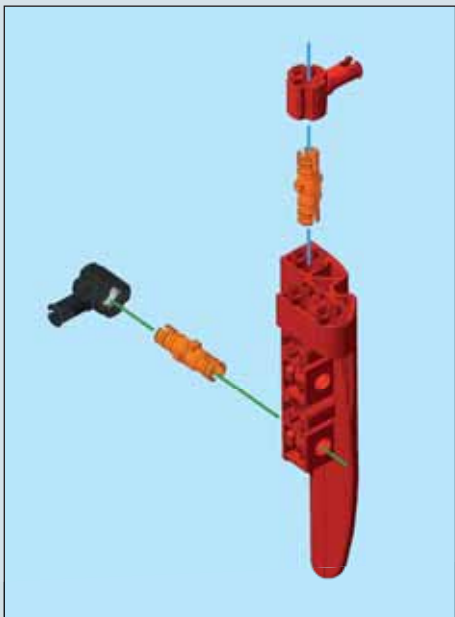
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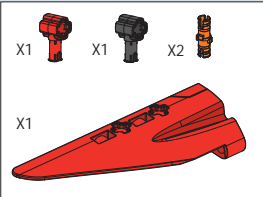
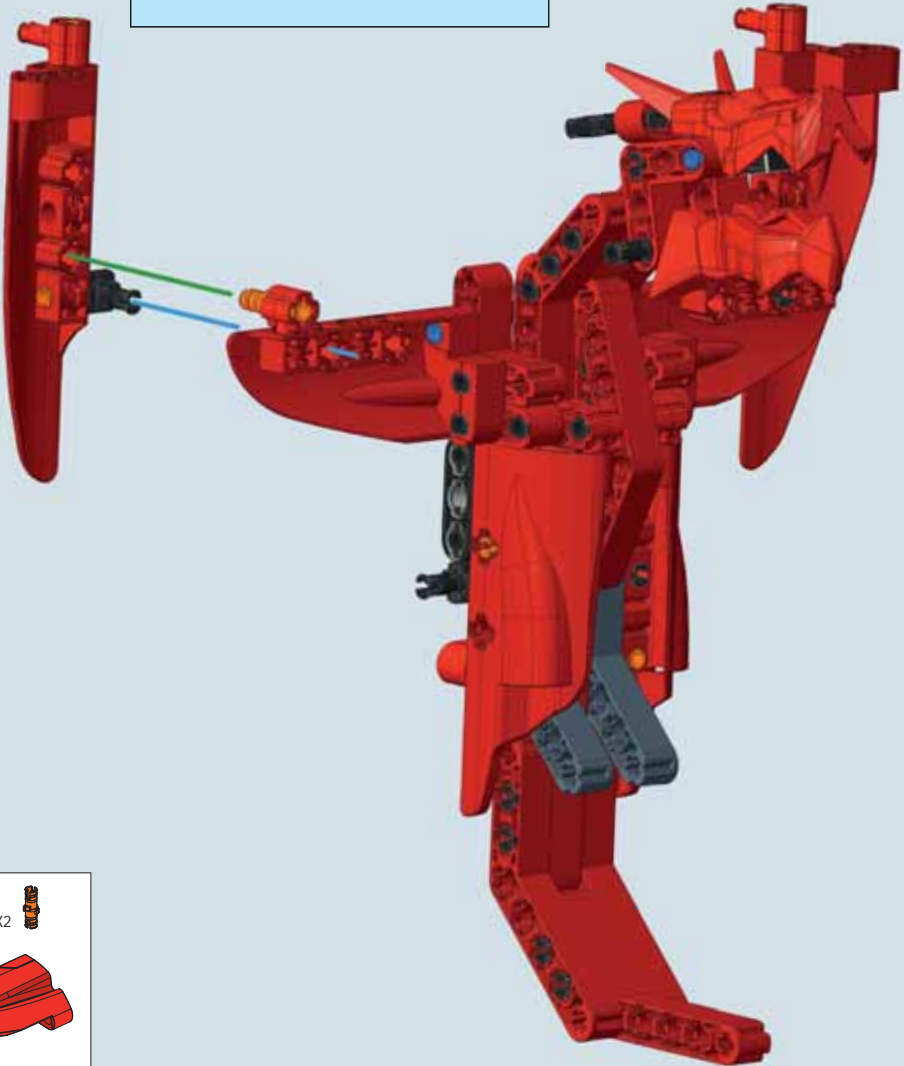
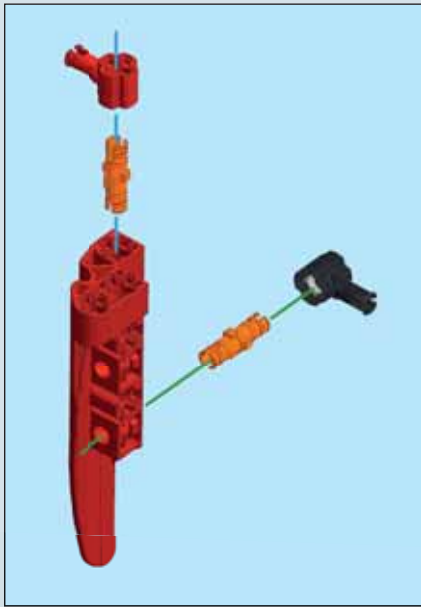
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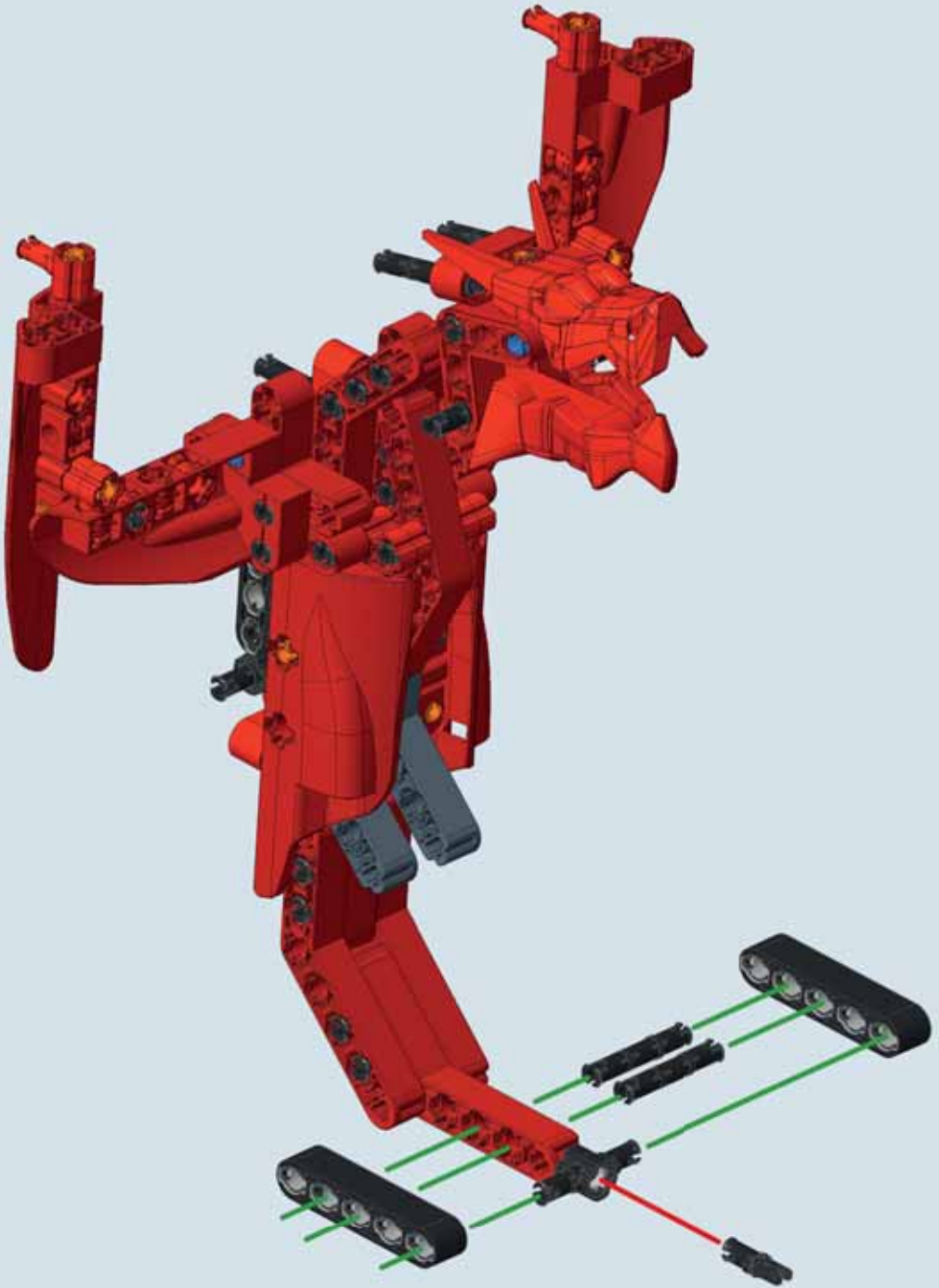
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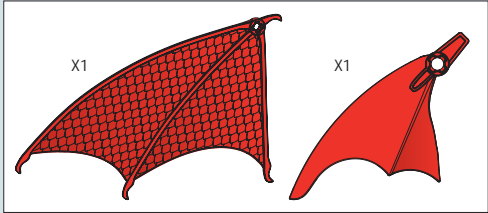




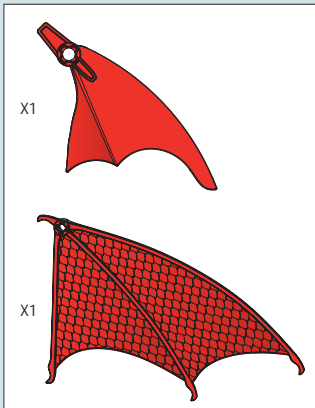
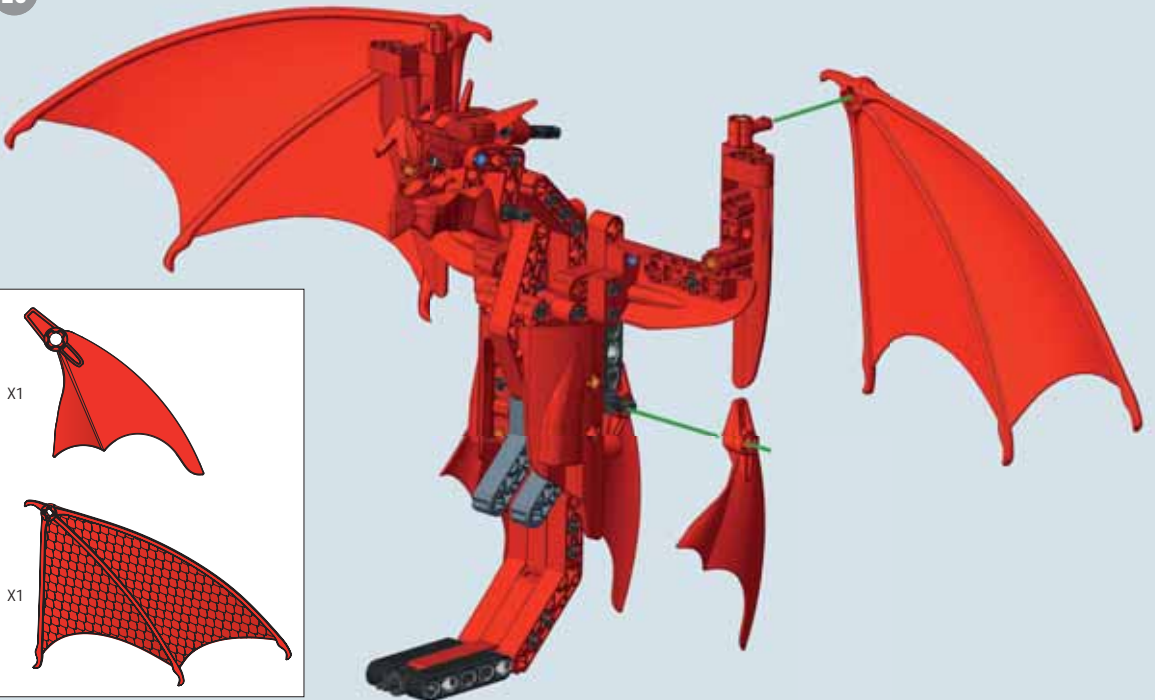


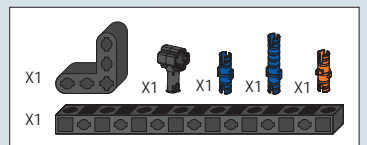
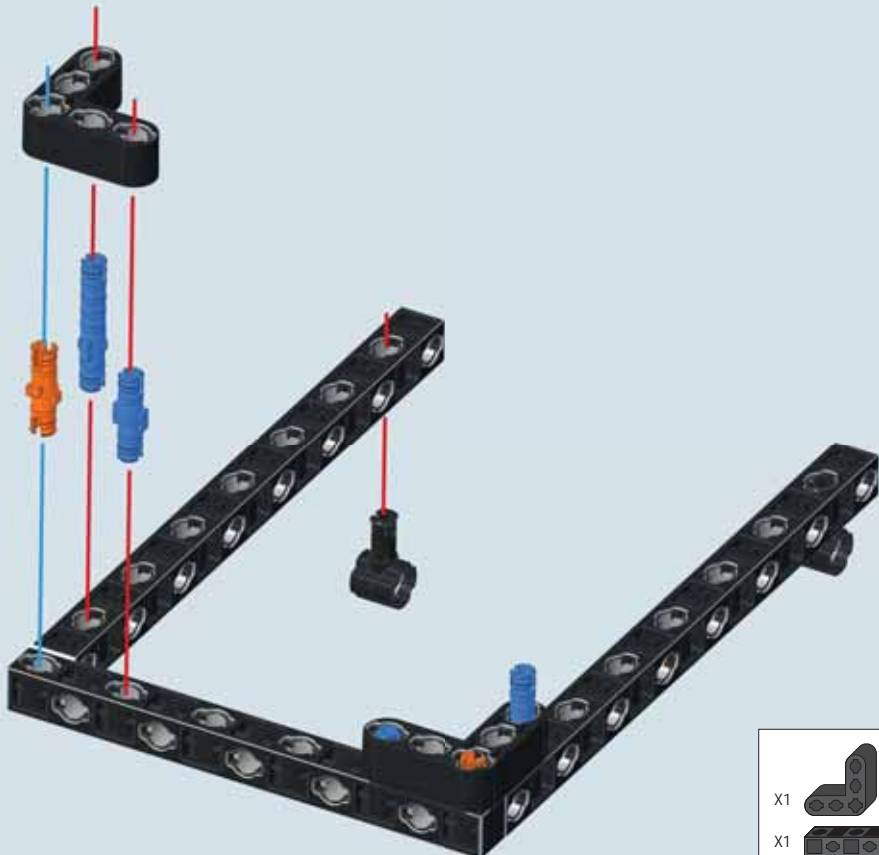
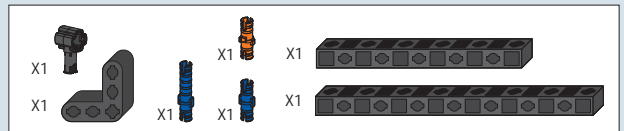
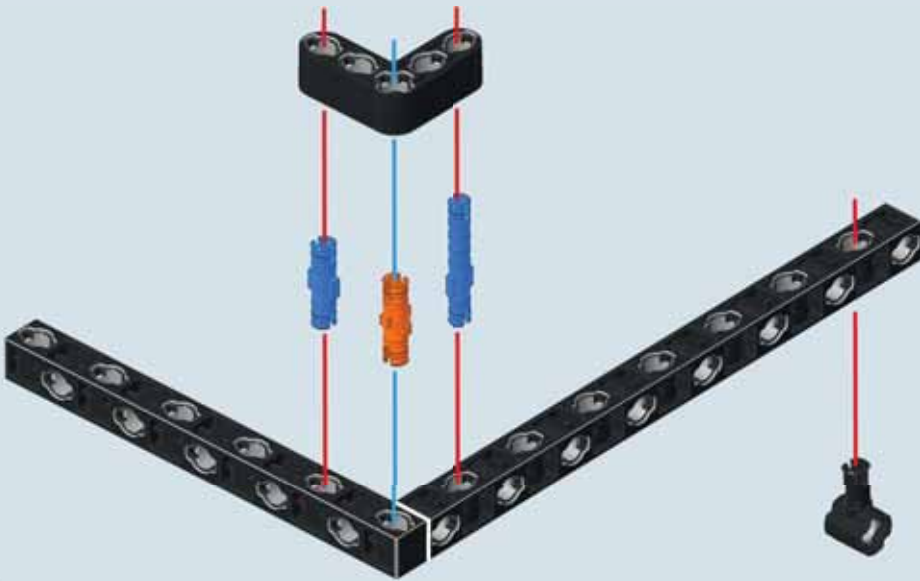
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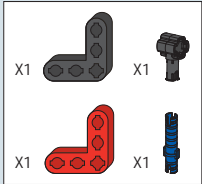
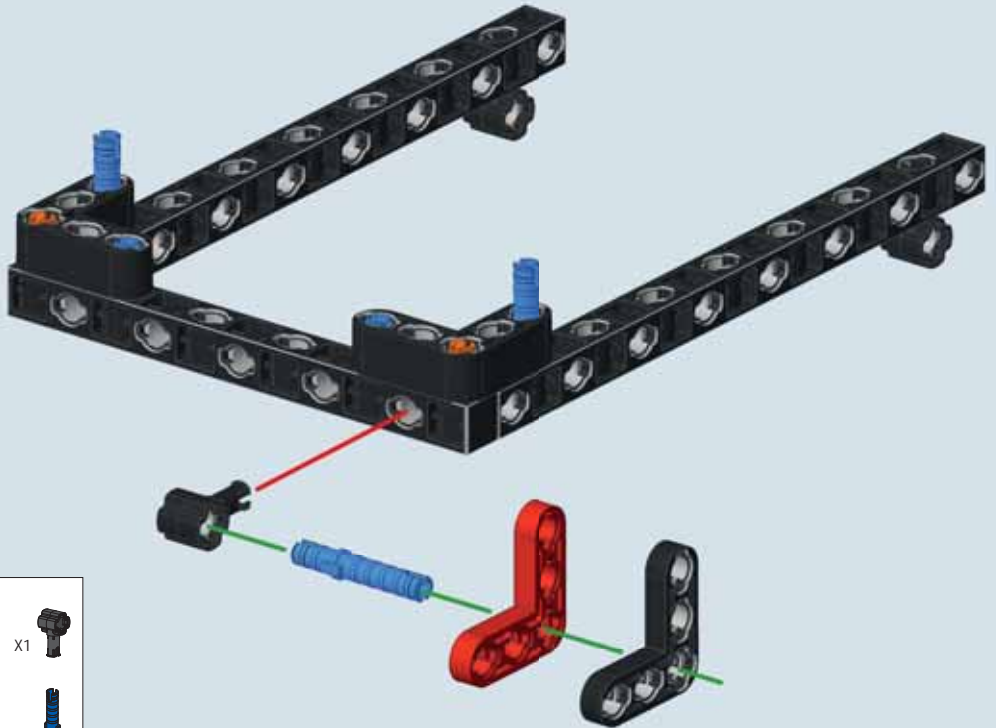


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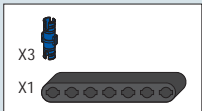
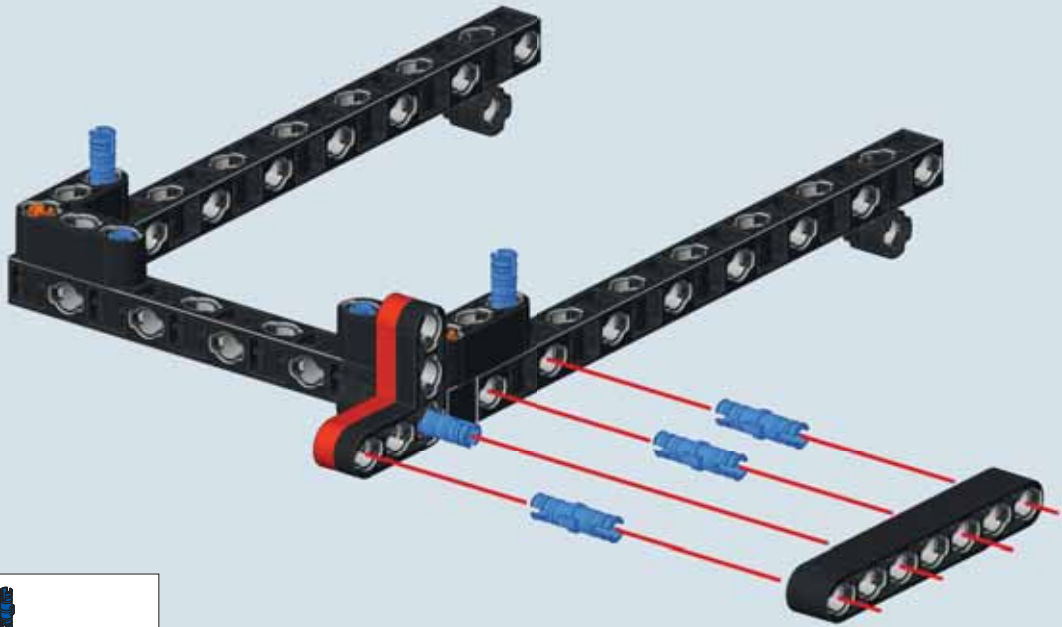


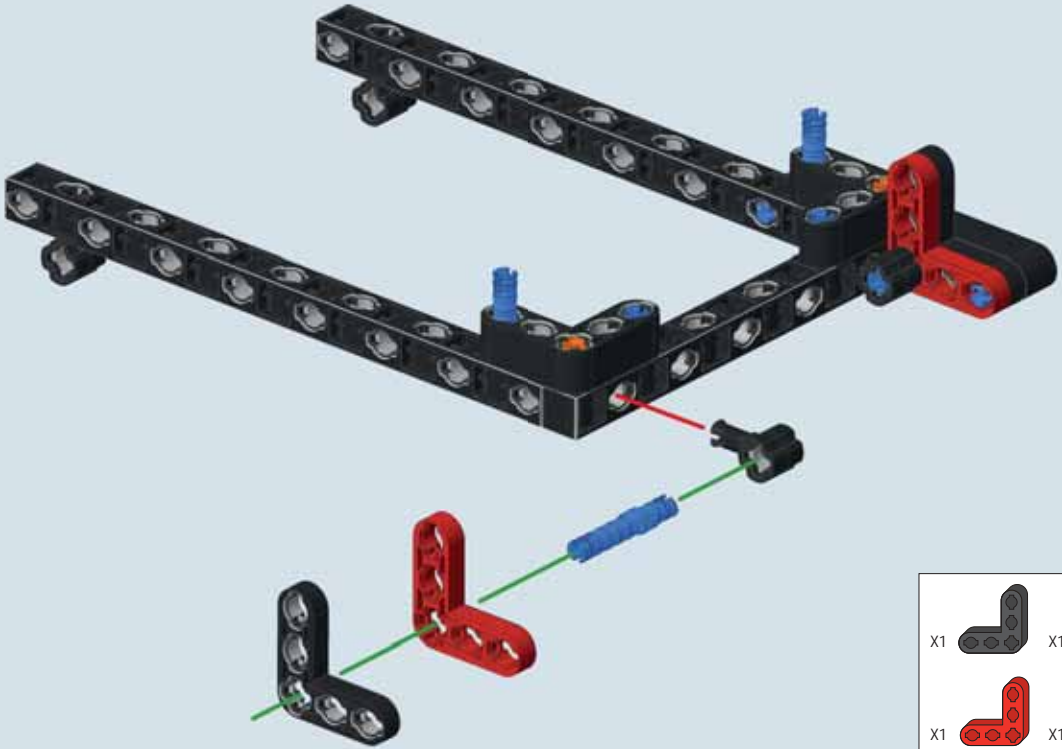


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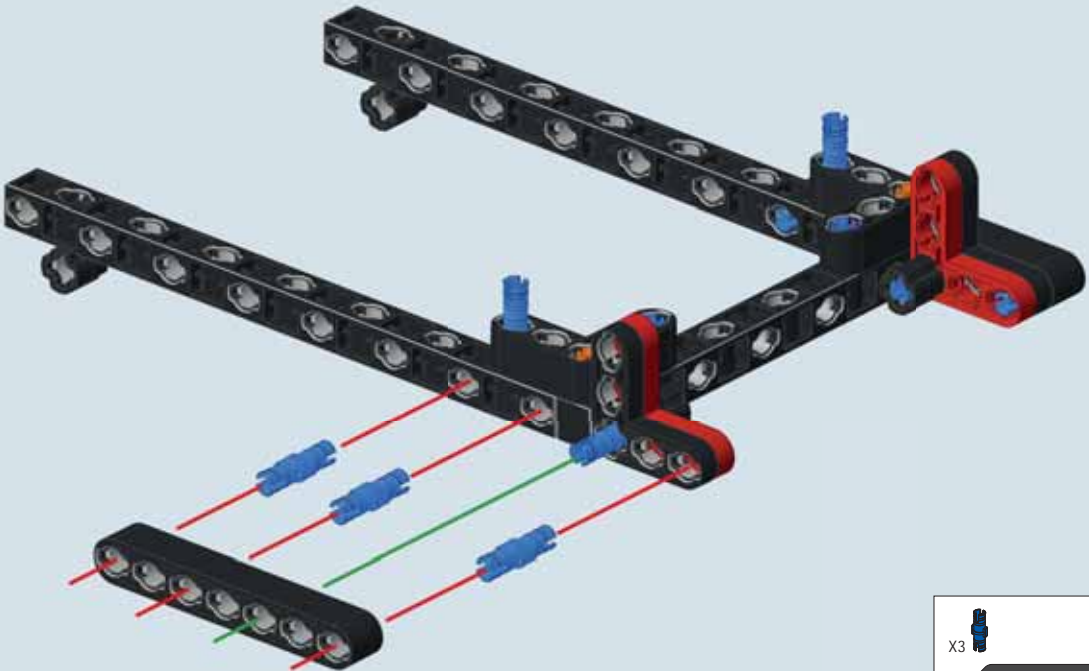


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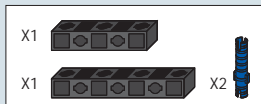
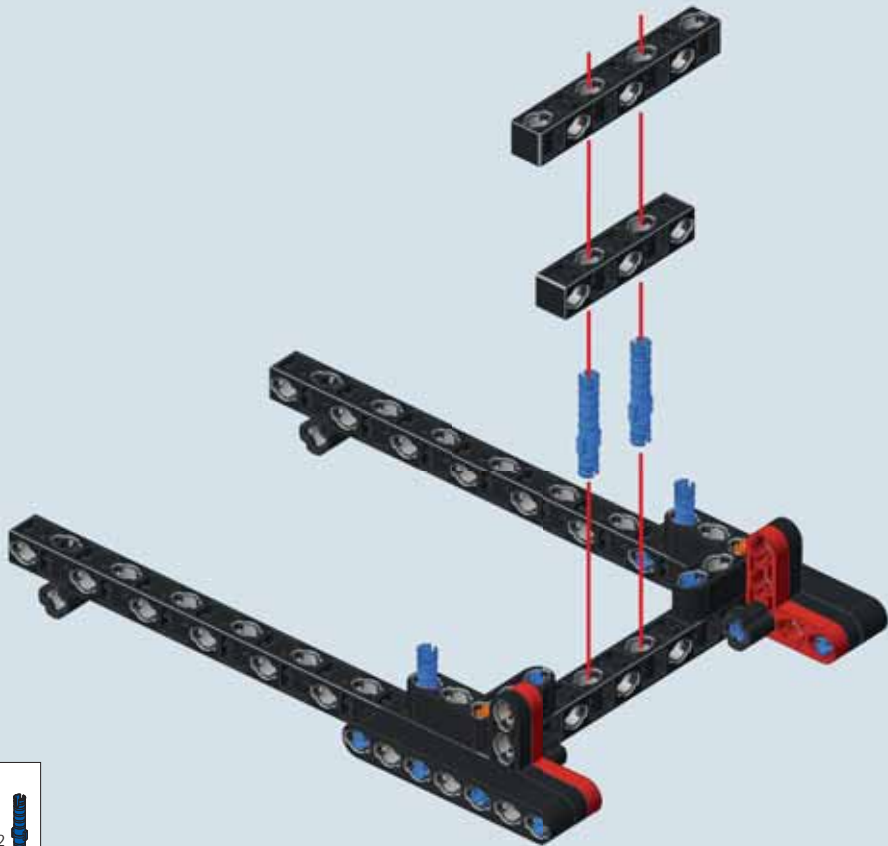
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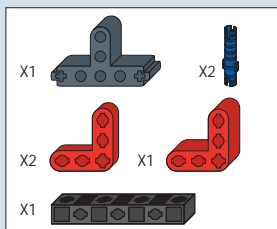
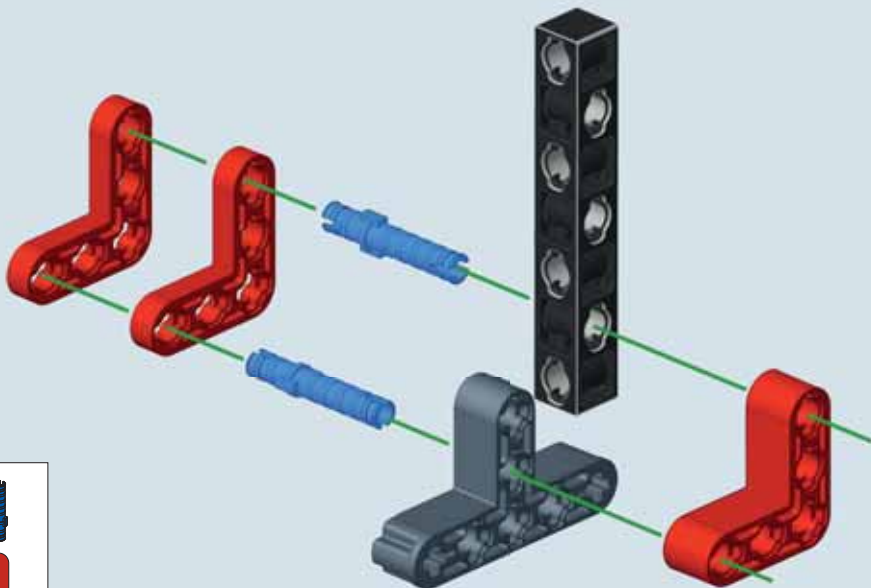
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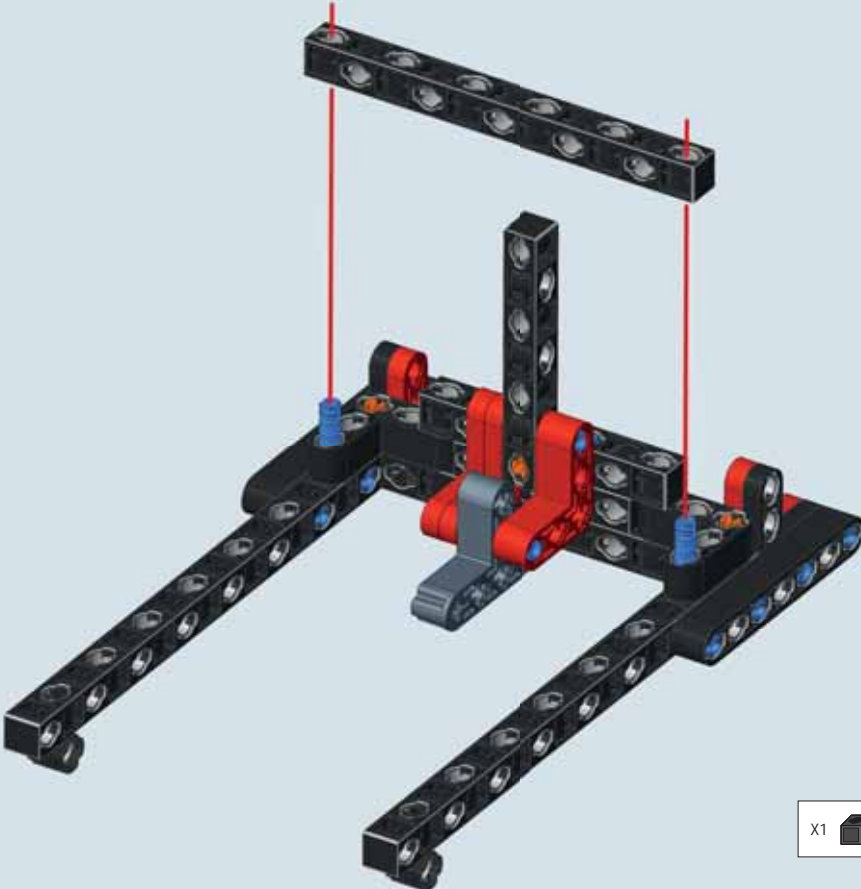
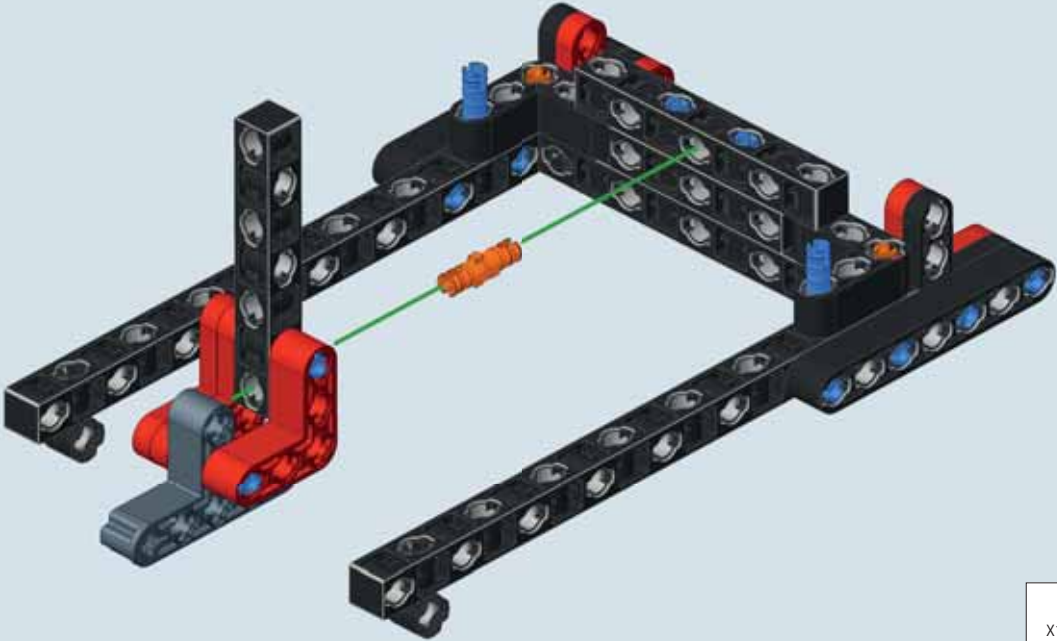


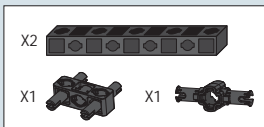
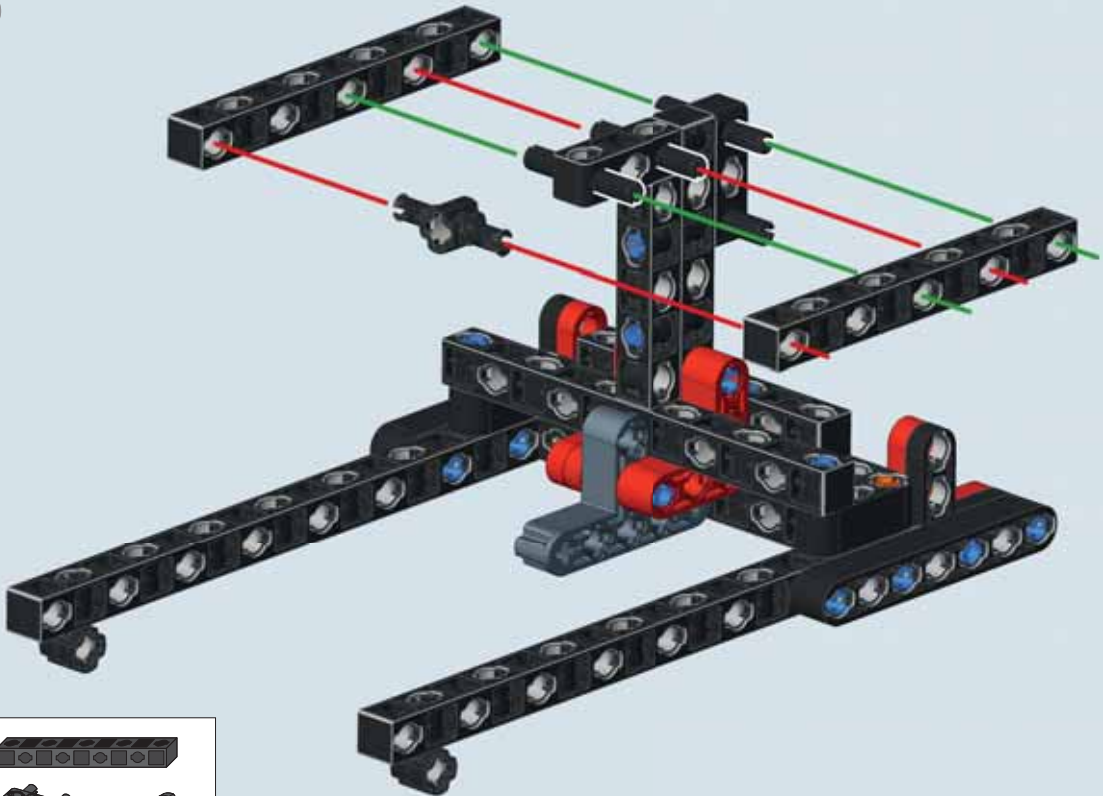
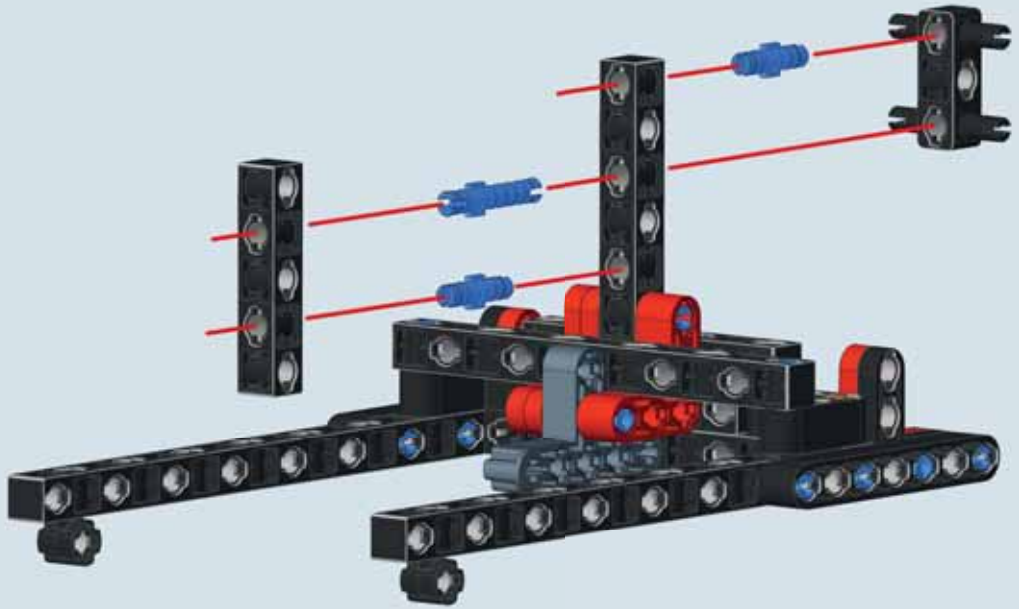
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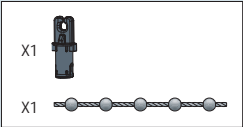
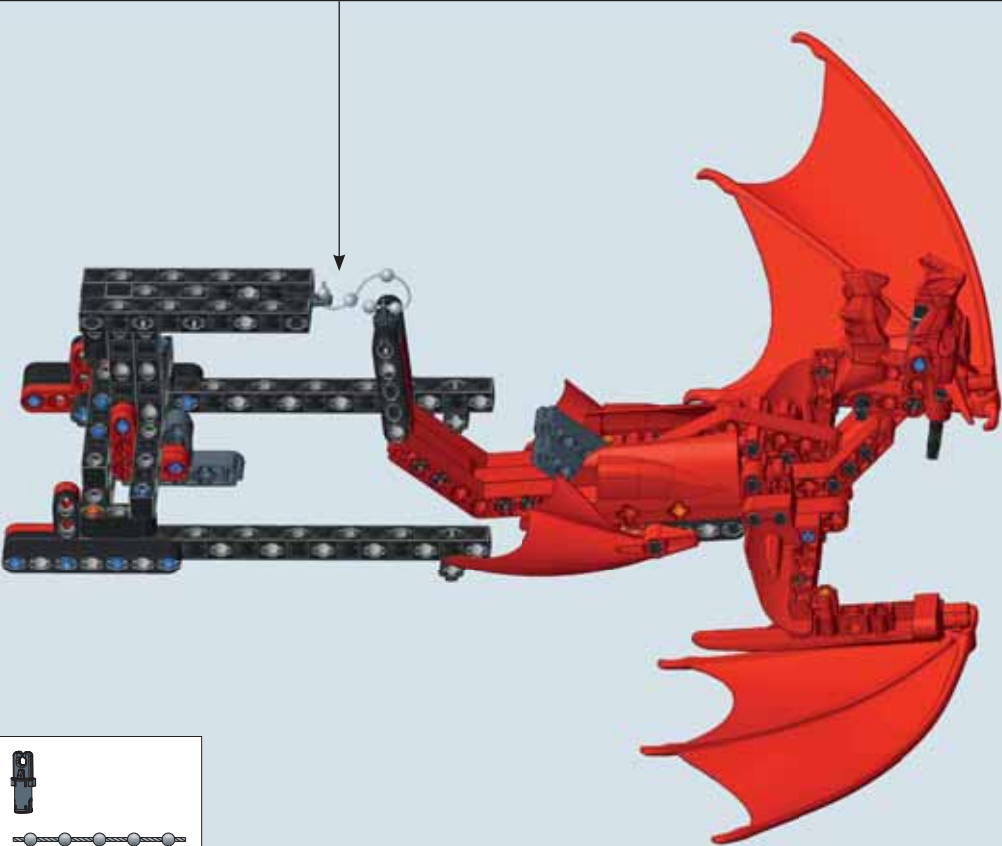
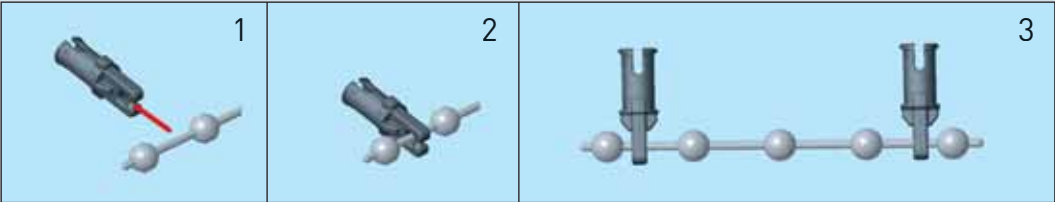


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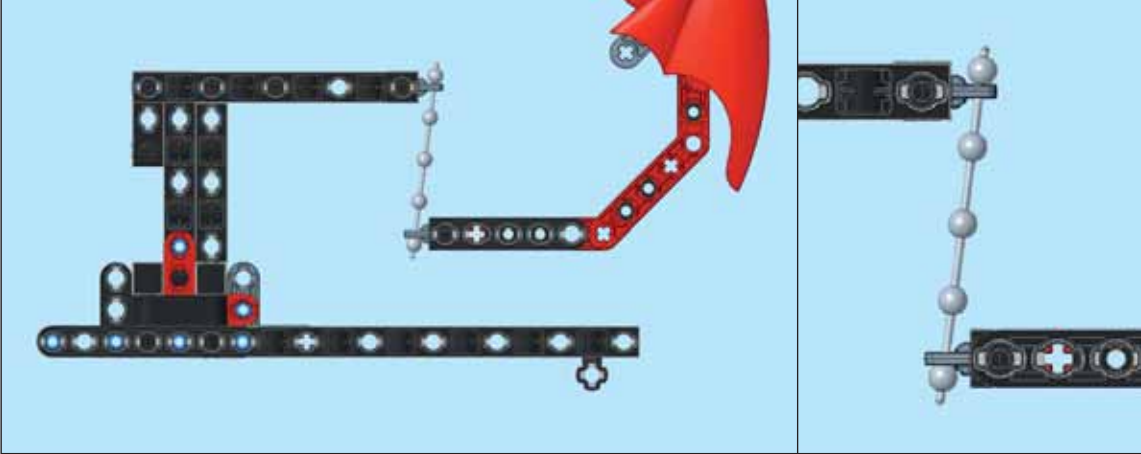


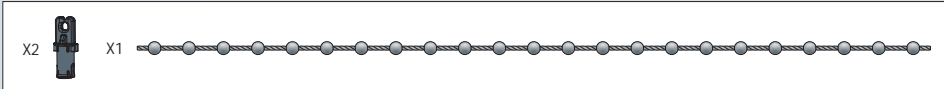
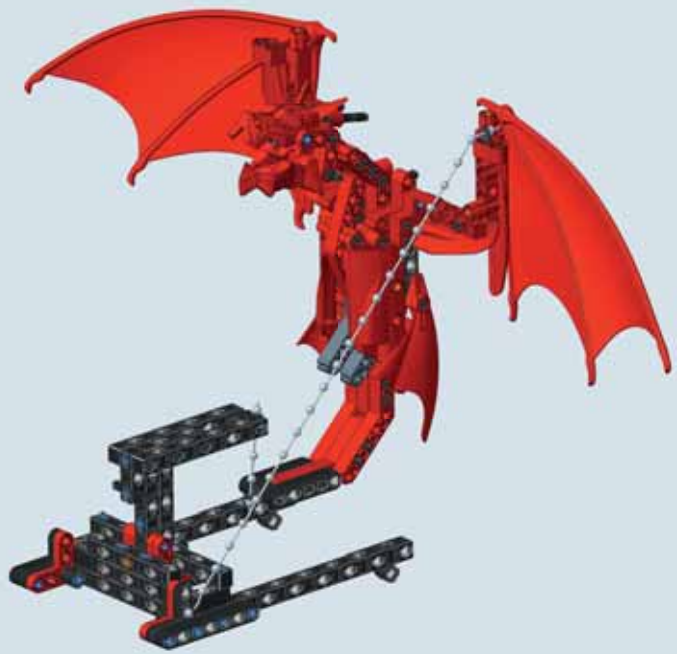




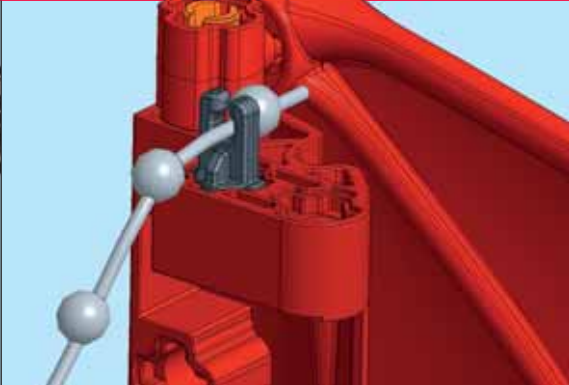
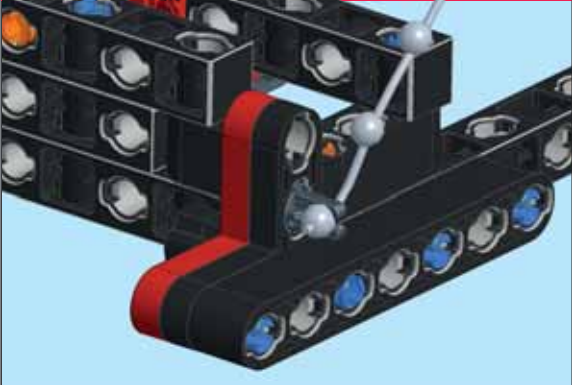


**Check that the pegs and the chain are correctly placed and aligned.**  
*Refer to the image shown below.*

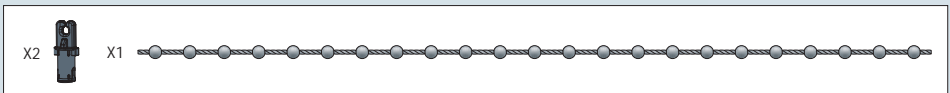
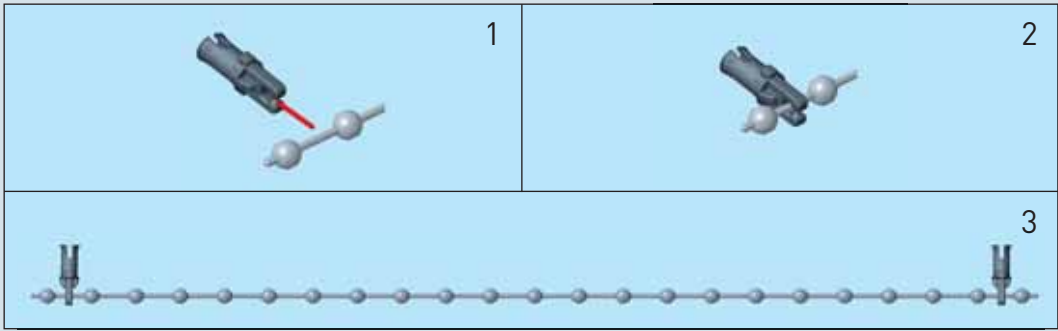




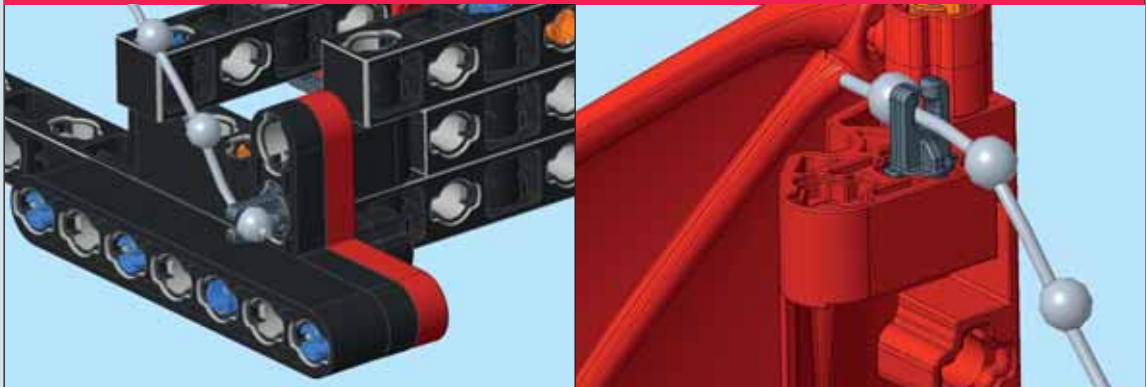
**Check that the pegs and the chain are correctly placed and aligned.**  
*Refer to the image shown below.*







**Check that the pegs and the chain are correctly placed and aligned.**  
*Refer to the image shown below.*



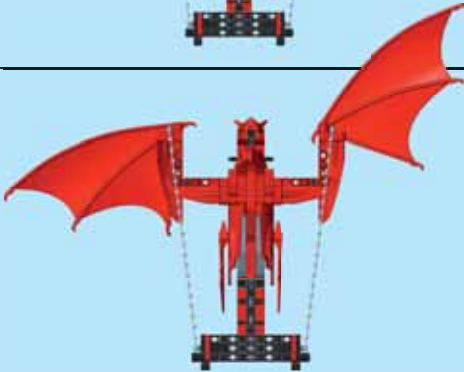
Lift the dragon carefully and watch it float above the base!



To keep the dragon balanced, try placing its wings at the same height.

**WARNING:** the more you lift the wings, the more the balance becomes unstable!

If the dragon appears to lean towards one side, try changing the position of the right or left wing until the body returns to the centre.



If the wings are placed at two very different heights, the dragon will lose its balance and fall.

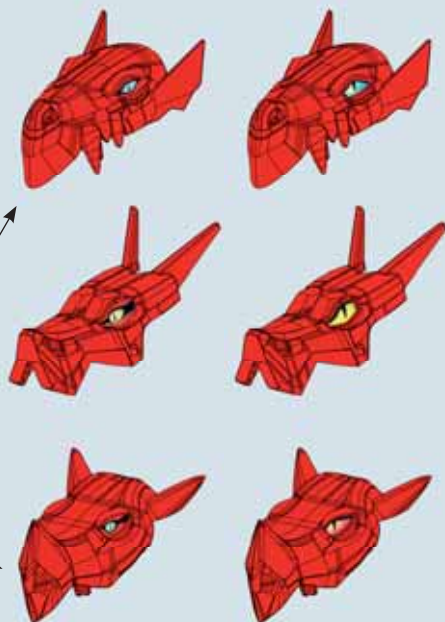
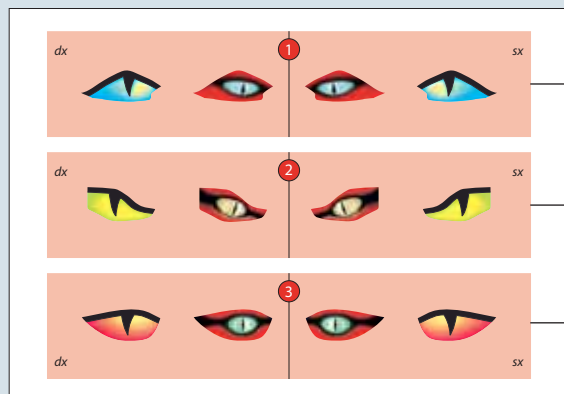


*Scan the code and watch the video!*

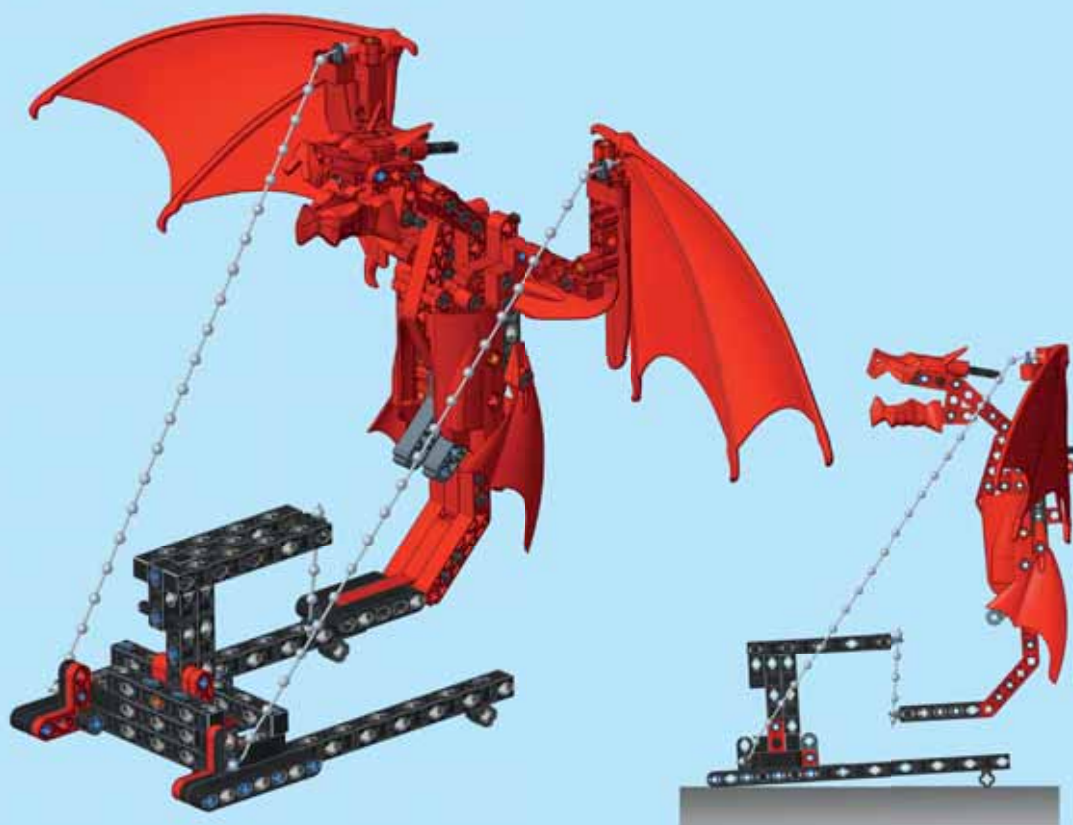
**THE DRAGON HANGS IN MID-AIR!**

## STICKERS

Attach the stickers to customise your dragon's head by following the numbering shown on the board.



## FINAL ASSEMBLED MODEL





Download the **free Science & Play BUILD app**.

The interactive animations will guide you through the assembly of **3 fantastic models** in a simple and quick way.

### APP - COMPATIBILITY

The App is **compatible** with **ANDROID™**, **APPLE®** and **AMAZON®**.

**Not compatible** with **WINDOWS®** operating systems.



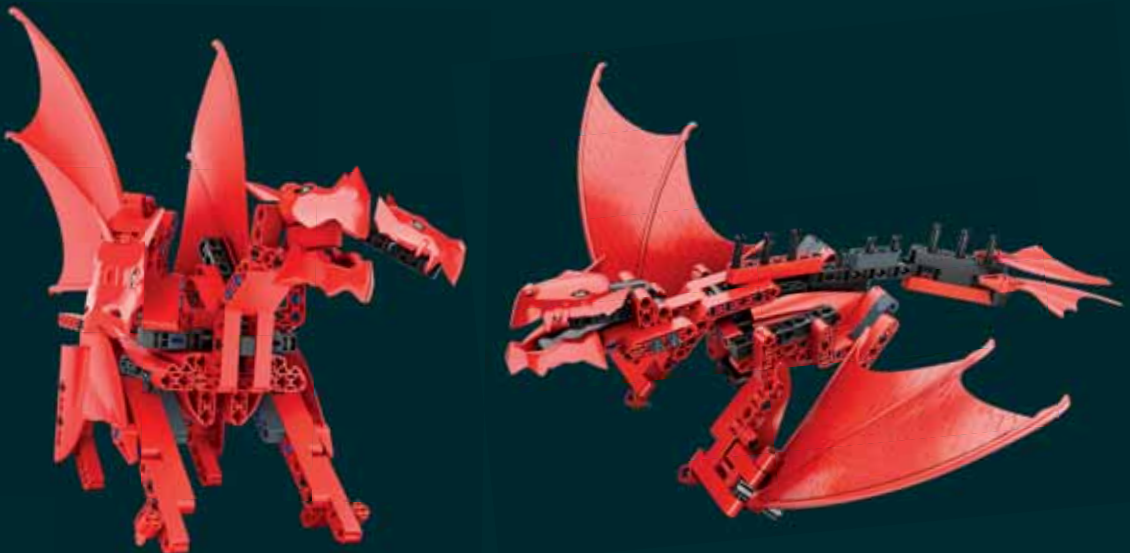
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**IMPORTANT: the two additional models do not rely on the tensegrity principle!**