РУБРИК

ПРИ ПОДДЕРЖКЕ ПРЕЗИДЕНТСКОГО ФОНДА КУЛЬТУРНЫХ ИНИЦИАТИВ

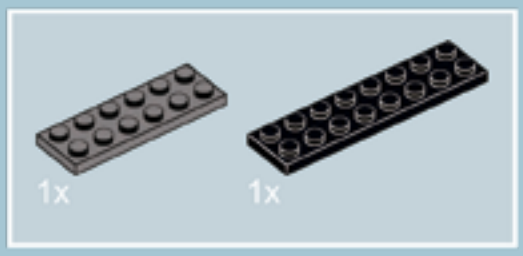
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РОСКОСМОС

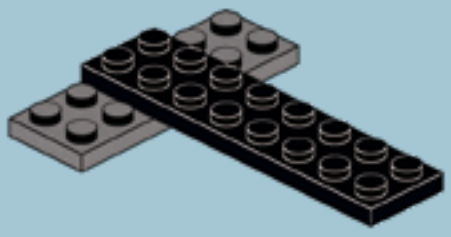


ЧАСТЬ 2

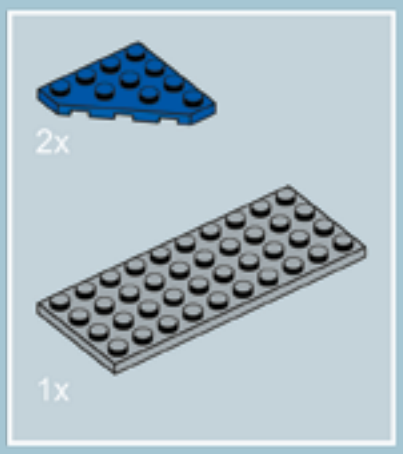
Вывоз ракеты традиционно производится рано, в 7 часов утра, чтобы на подготовку оставался целый день. А ты засёк время, когда начал собирать конструктор?



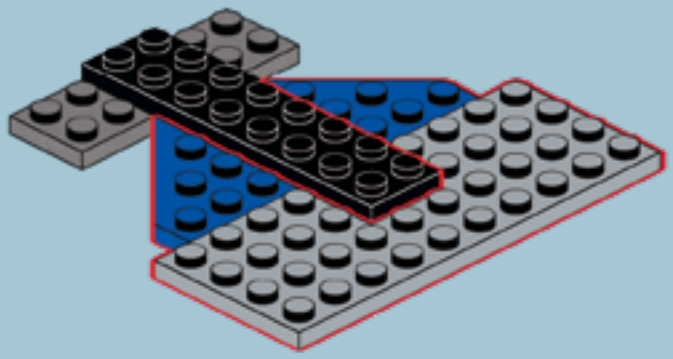
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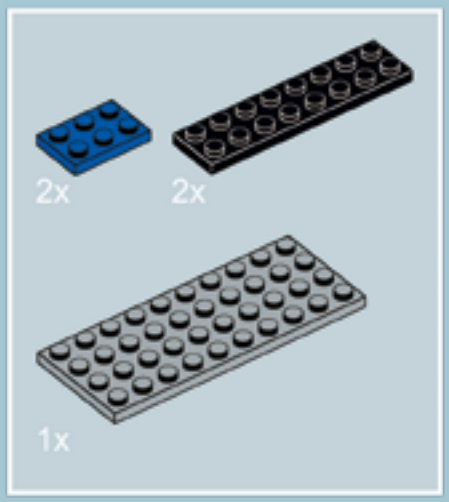




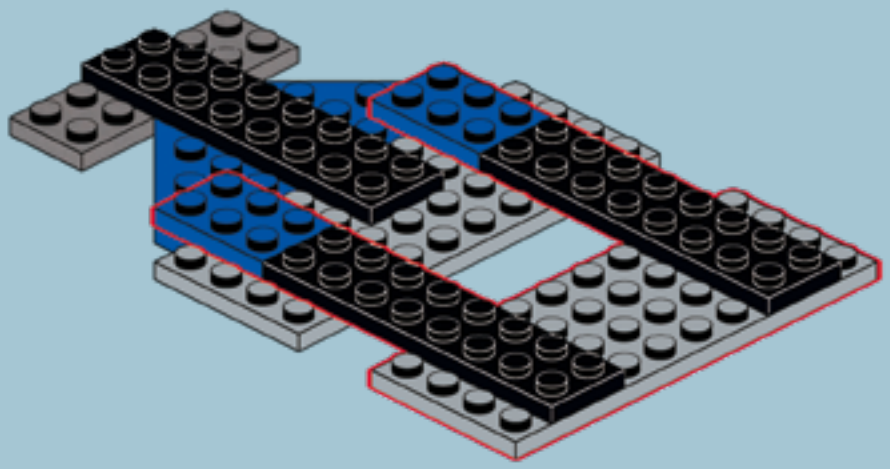


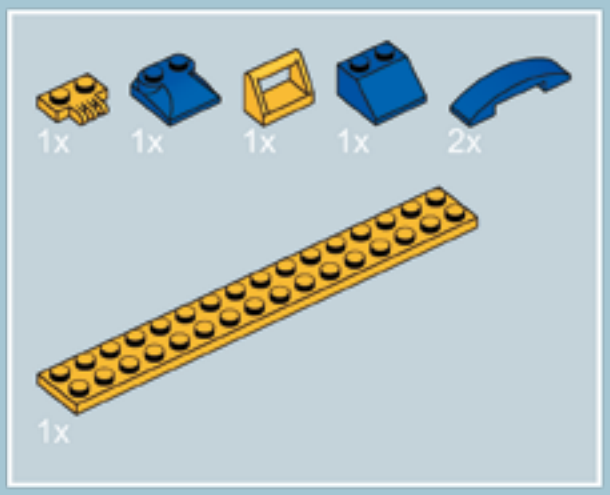
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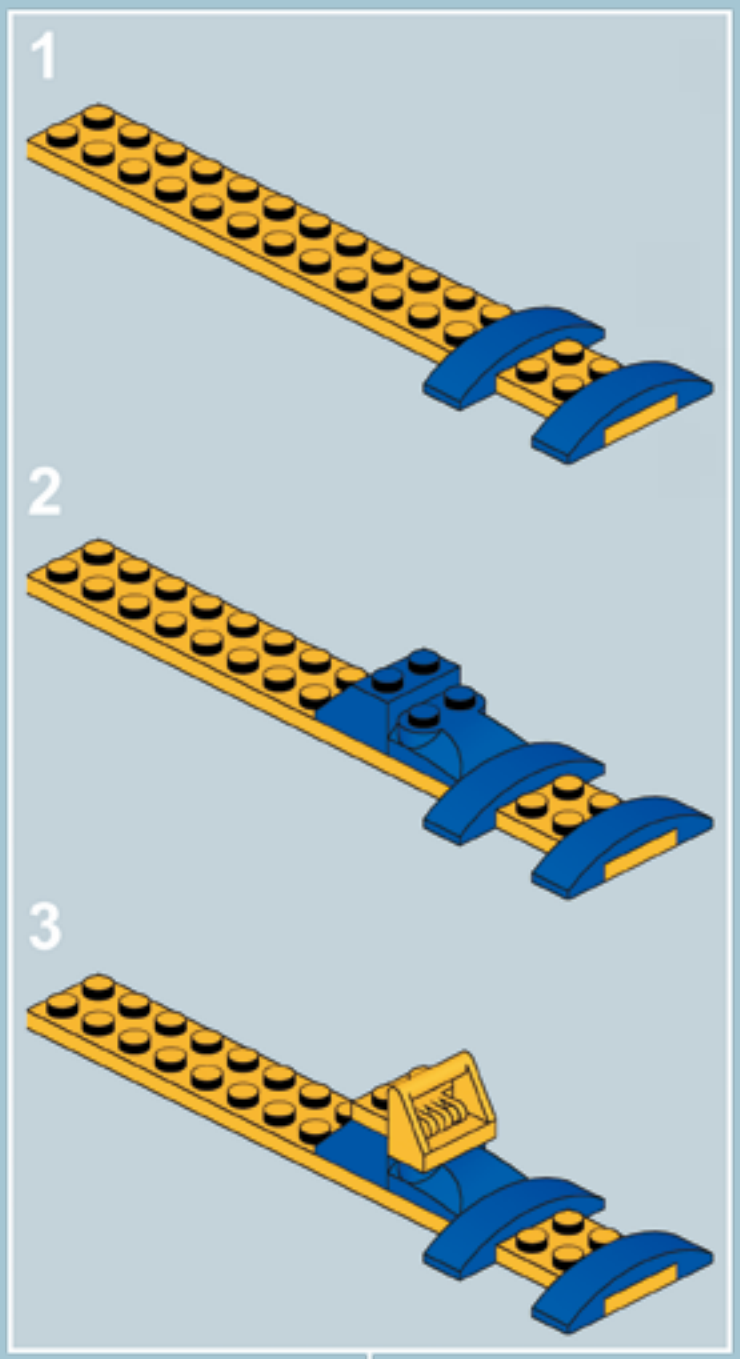


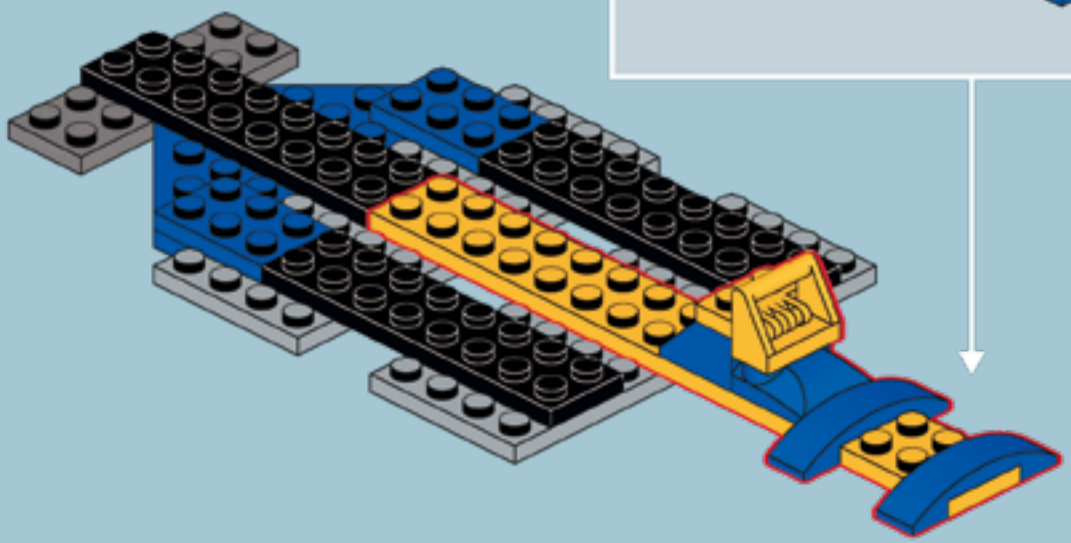
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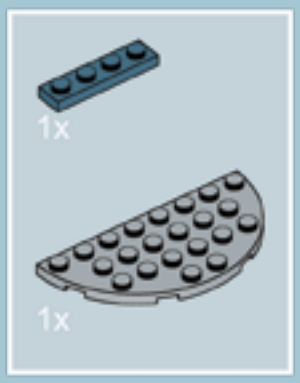


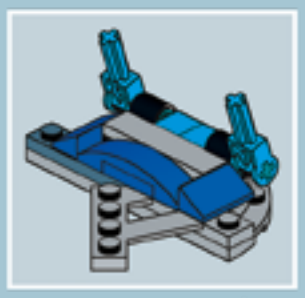


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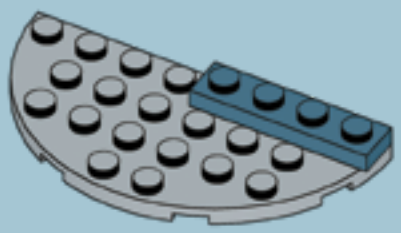






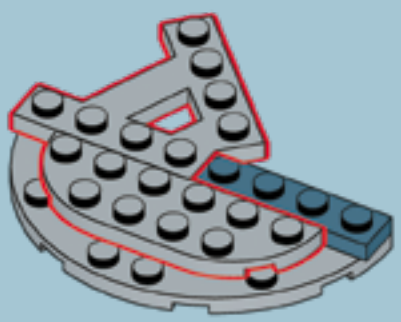


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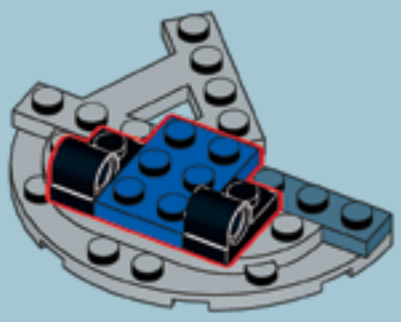


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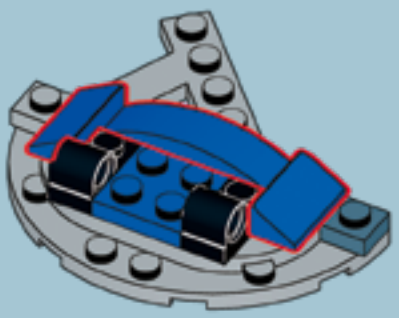


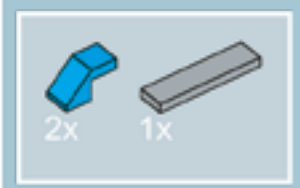
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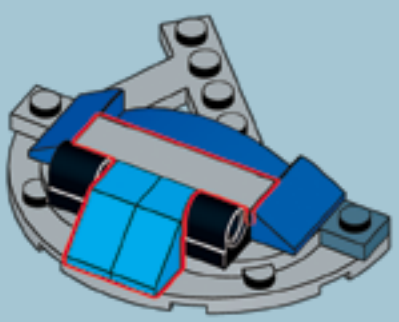


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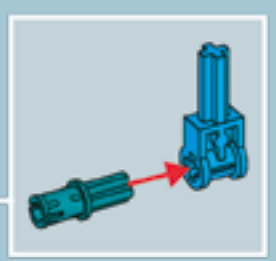




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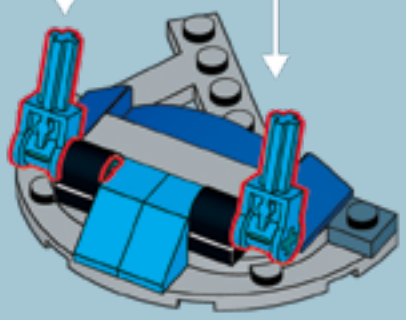






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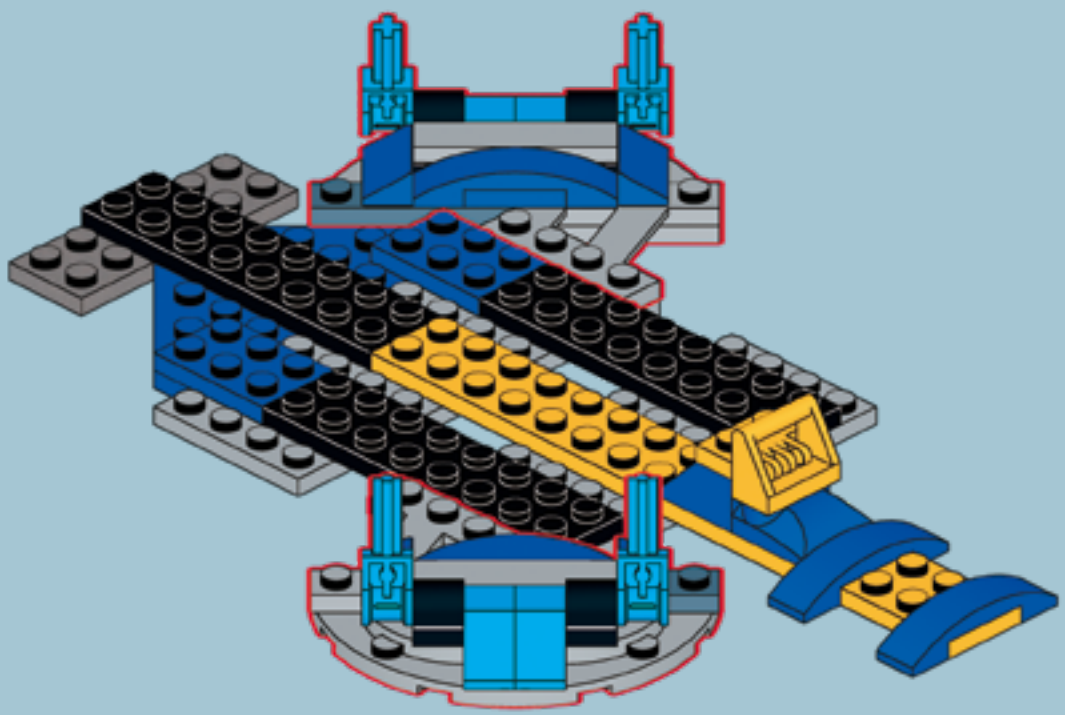
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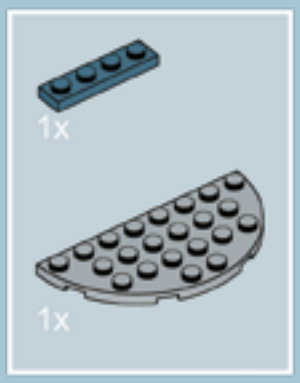


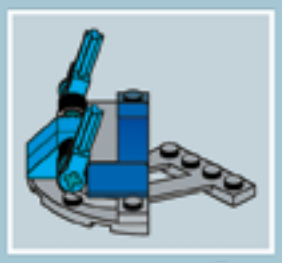
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Строим стартовую площадку!

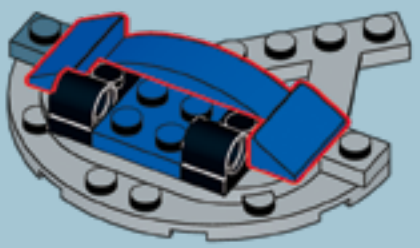


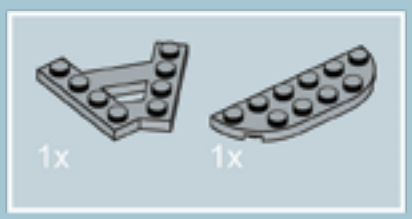




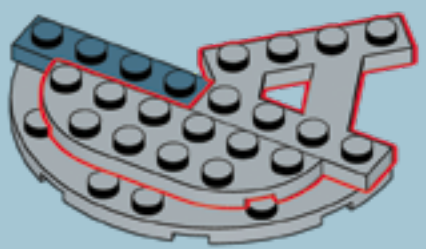
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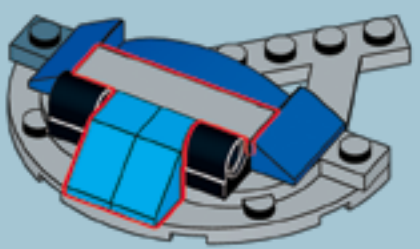






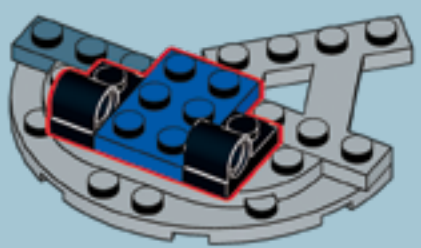
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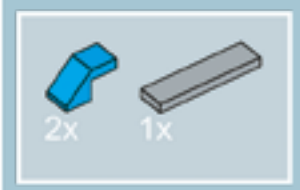






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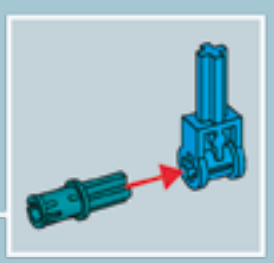


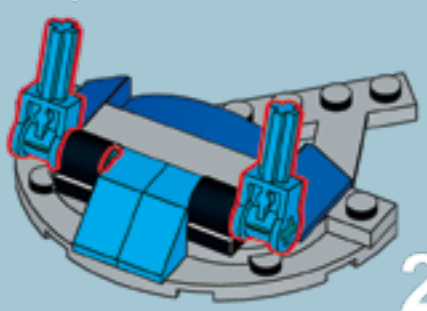


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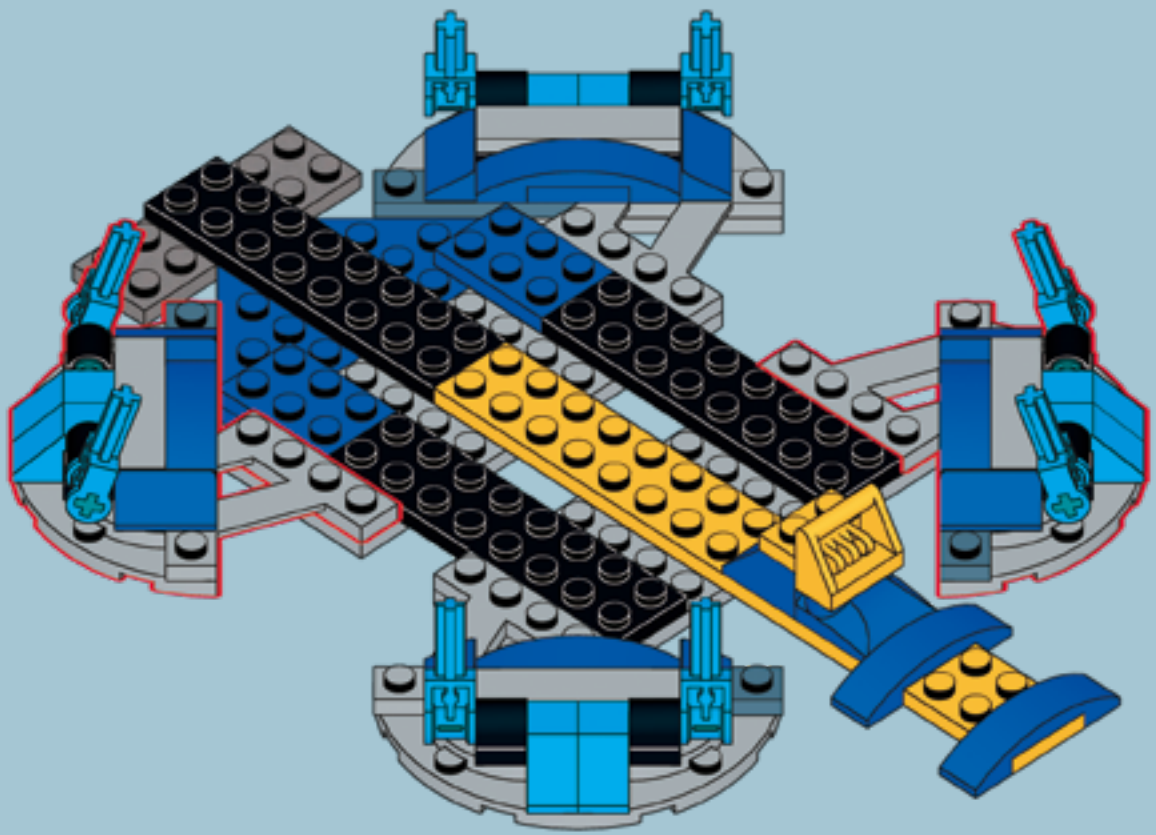


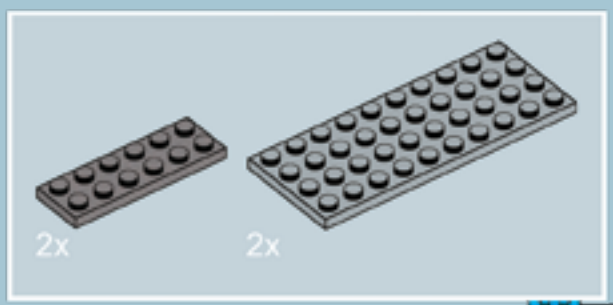




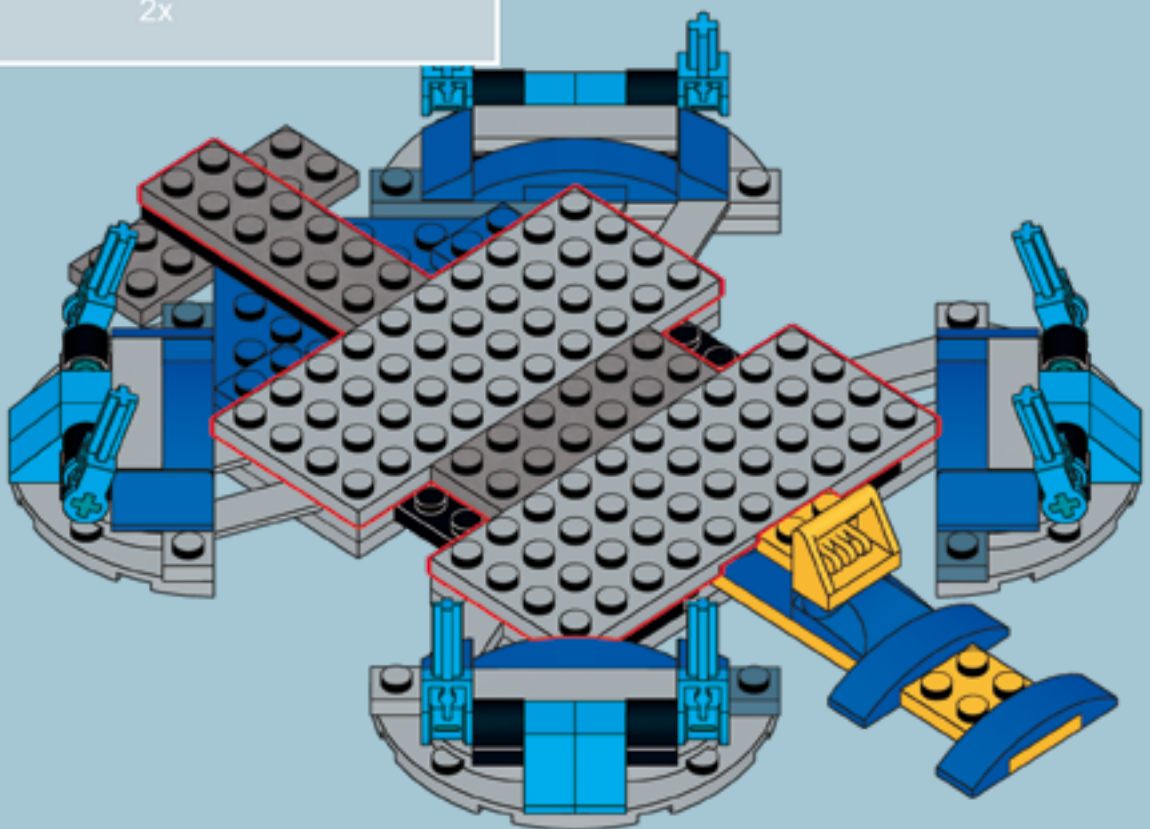
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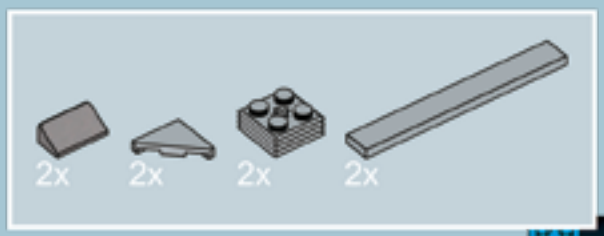
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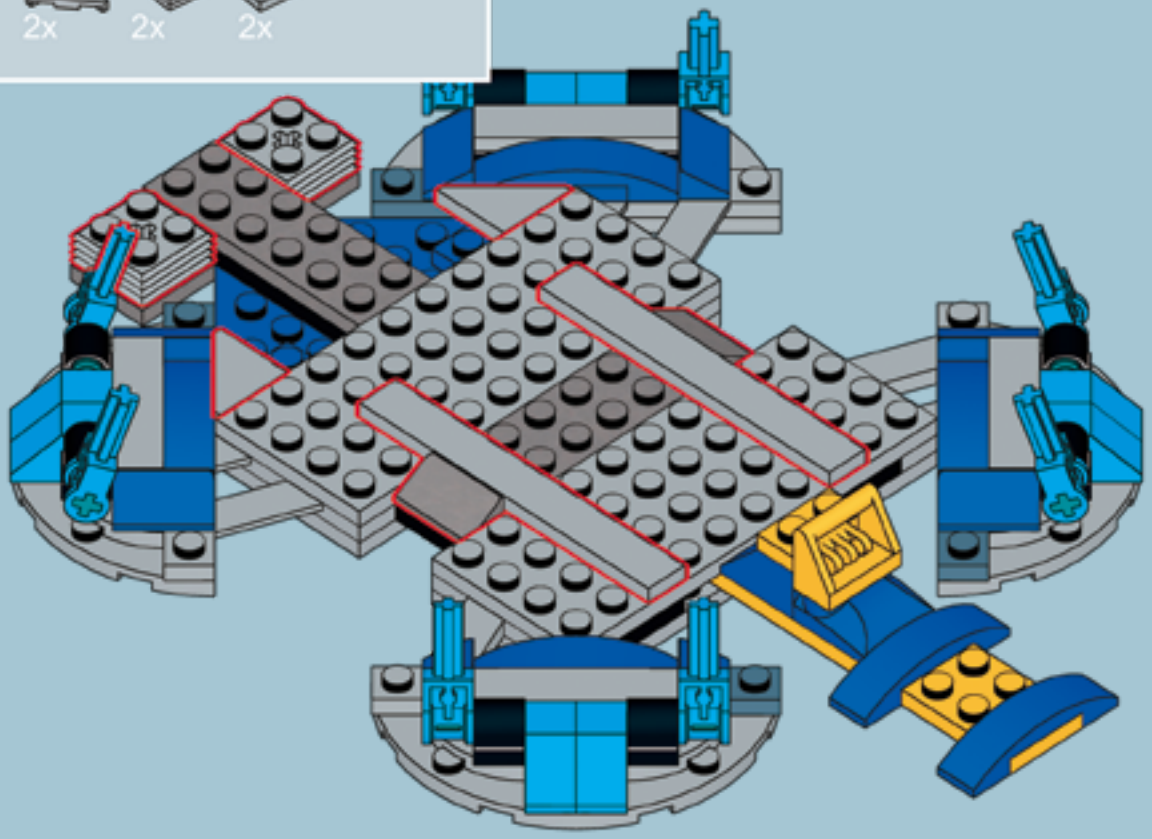


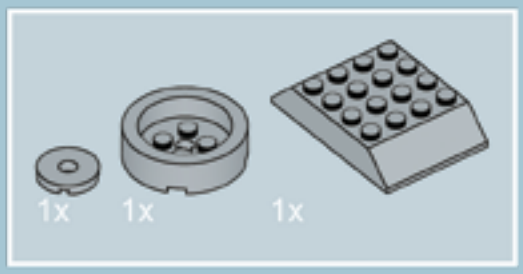
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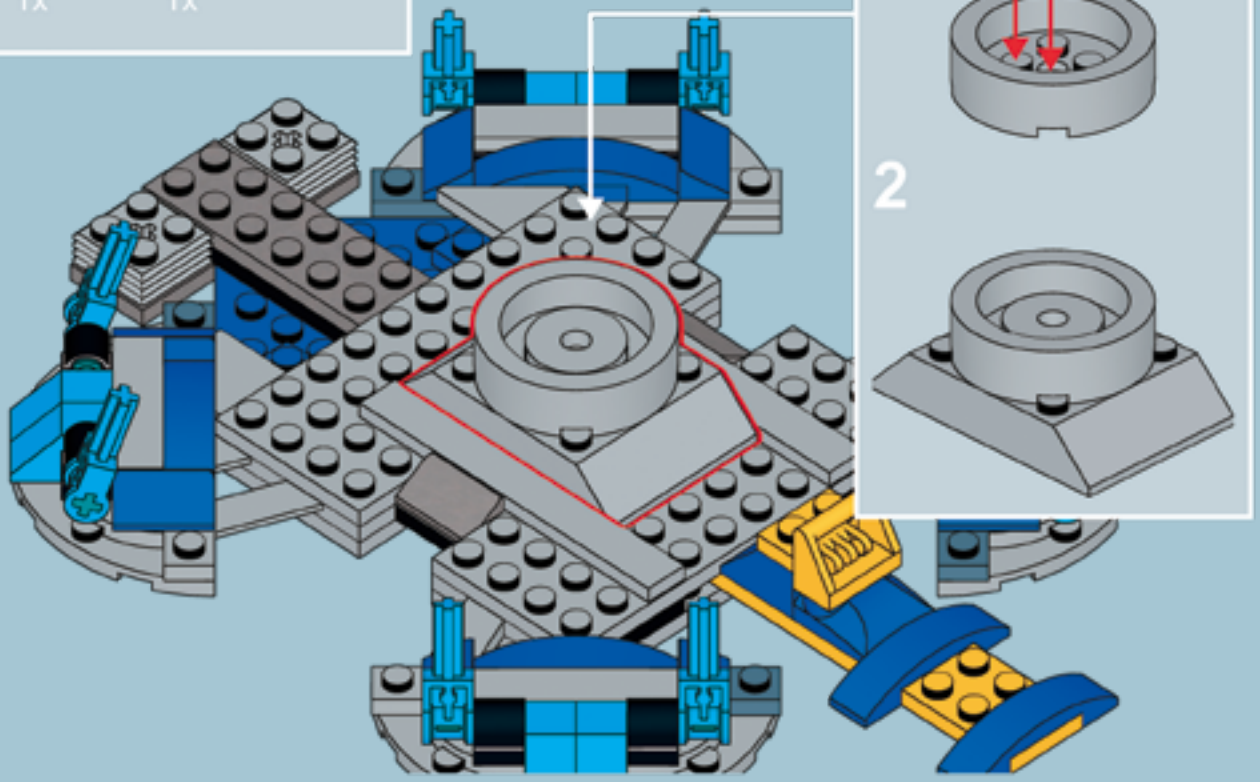


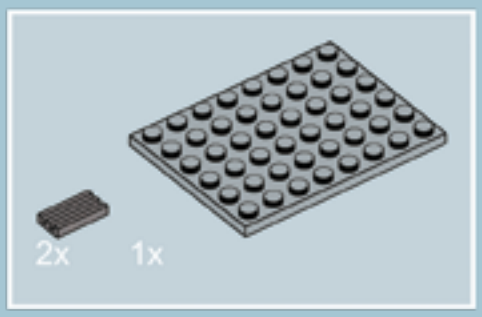
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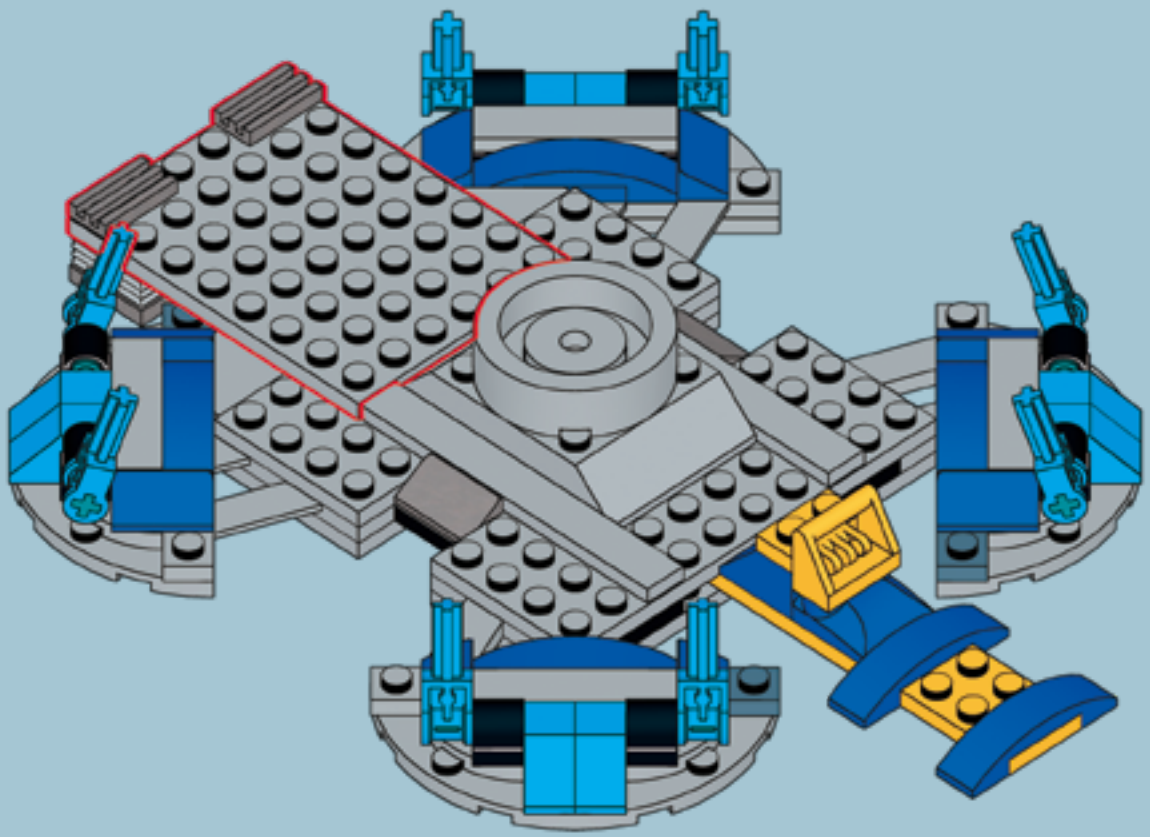
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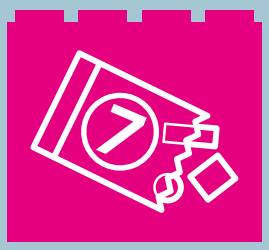


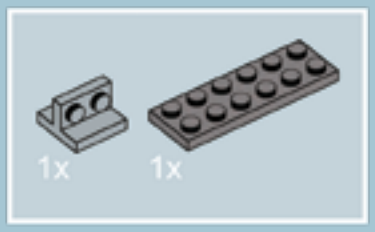


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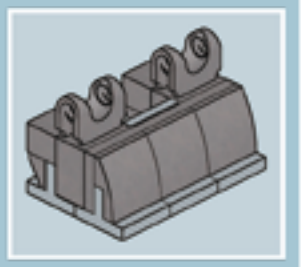
На стартовой площадке ракеты «Союз» на космодроме Байконур живёт лисичка Маня. Она не боится людей, а сотрудники подкармливают её. Как думаешь, живёт ли на Восточном настоящий амурский тигр?

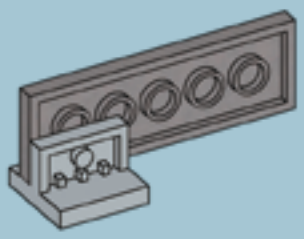


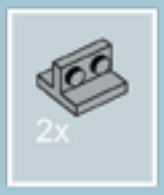




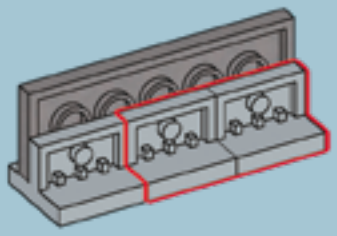
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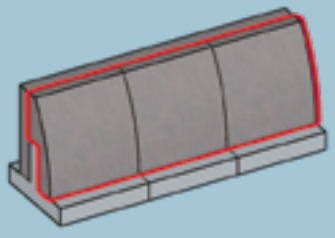


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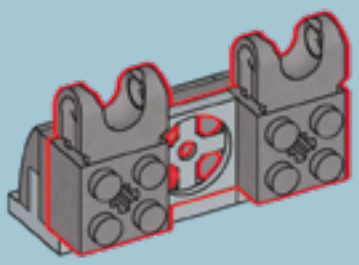
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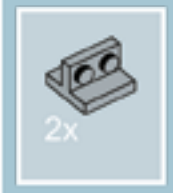




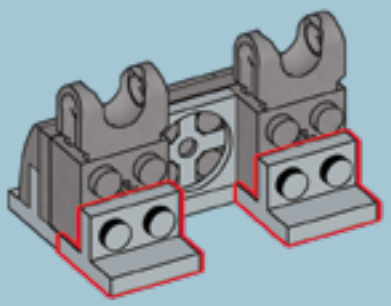


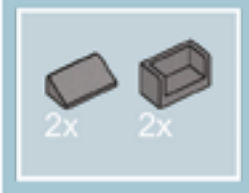
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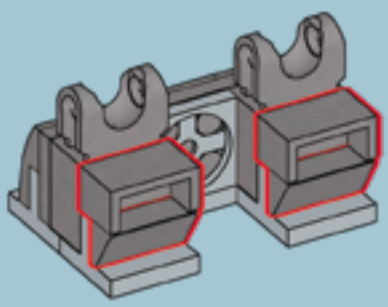


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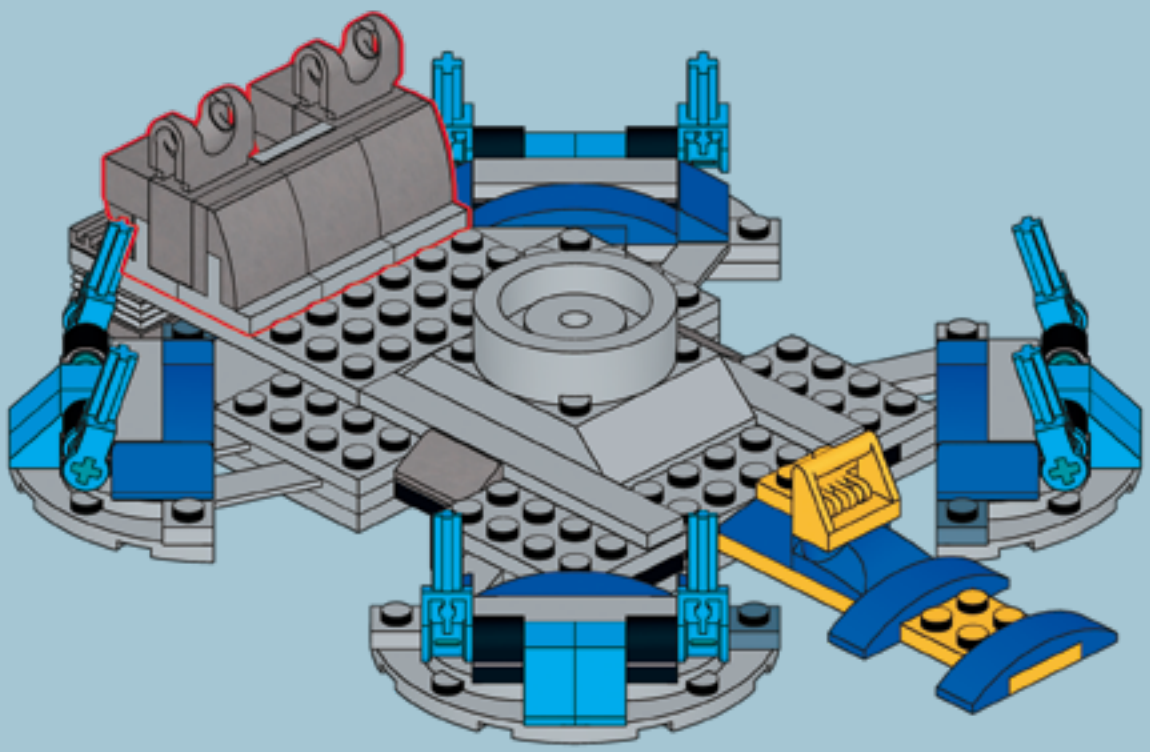




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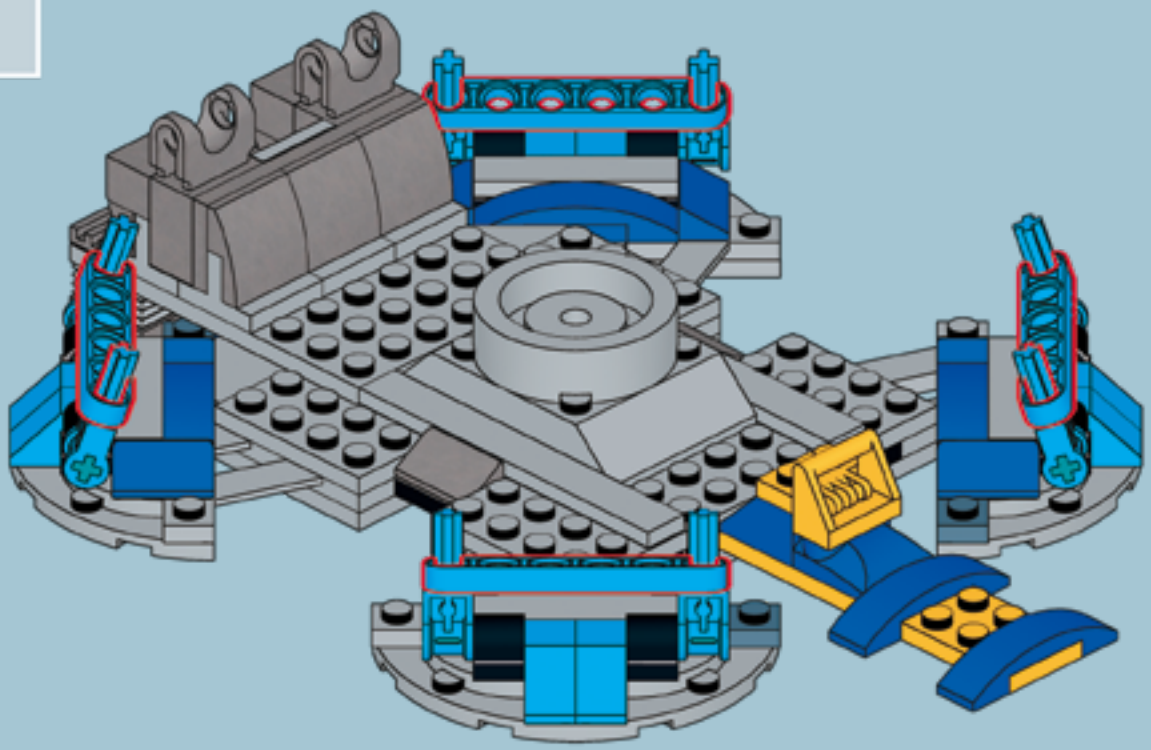


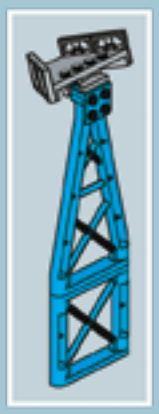
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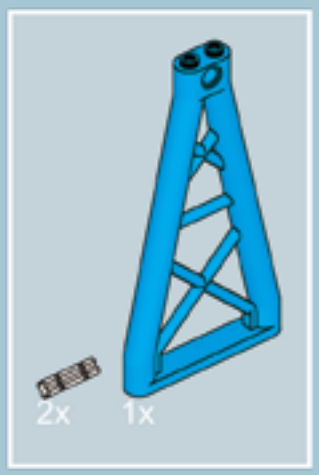


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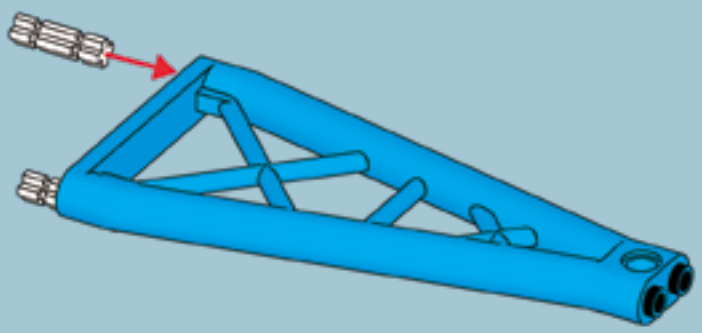


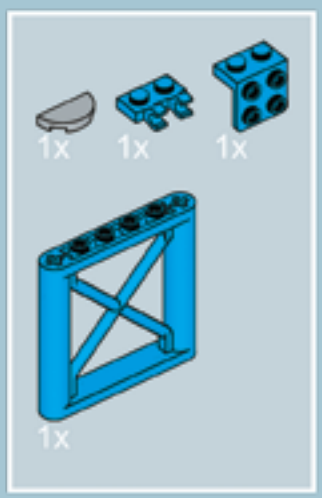


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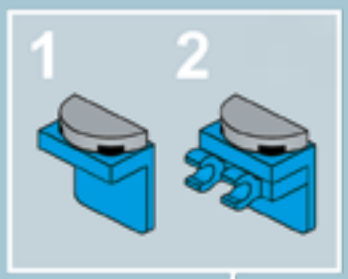


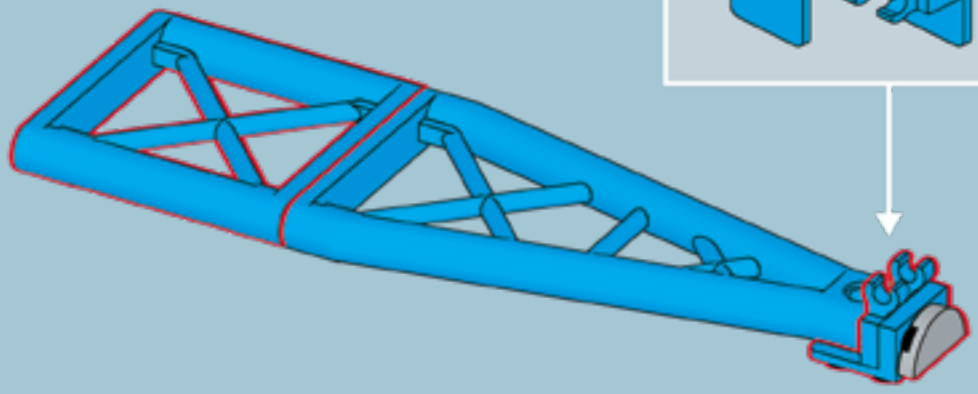
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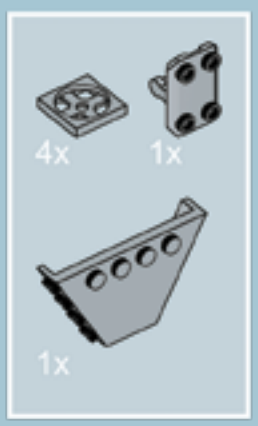




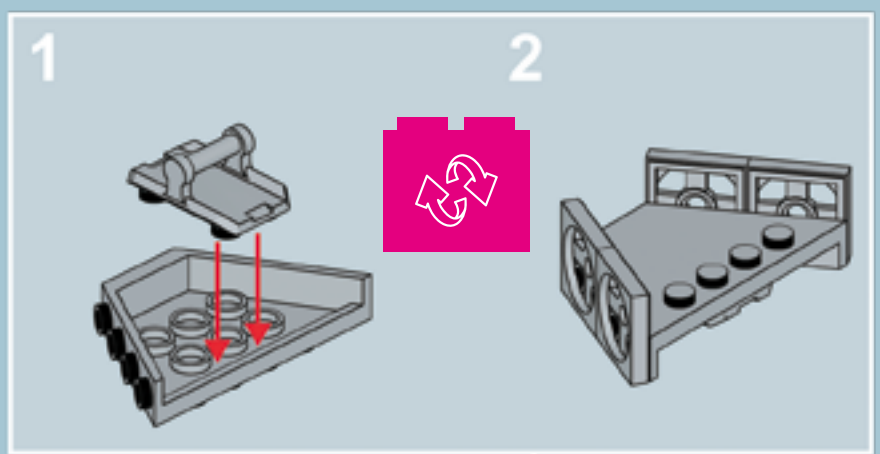
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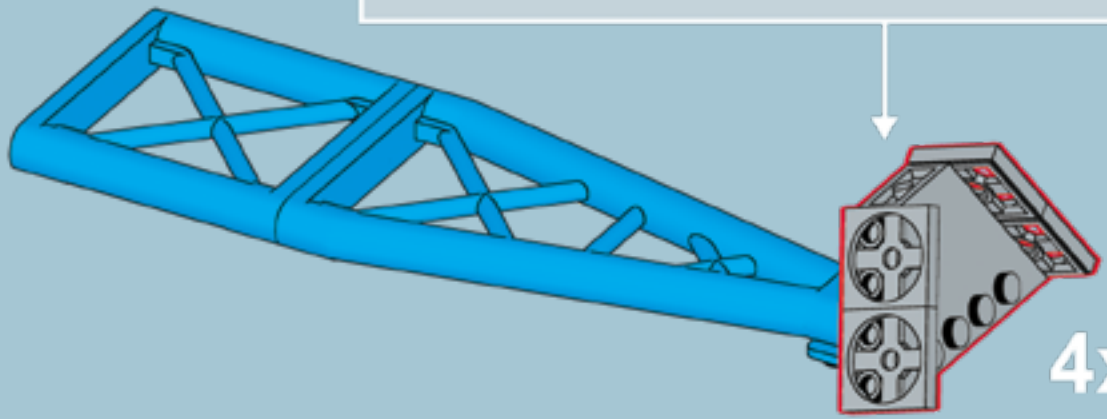






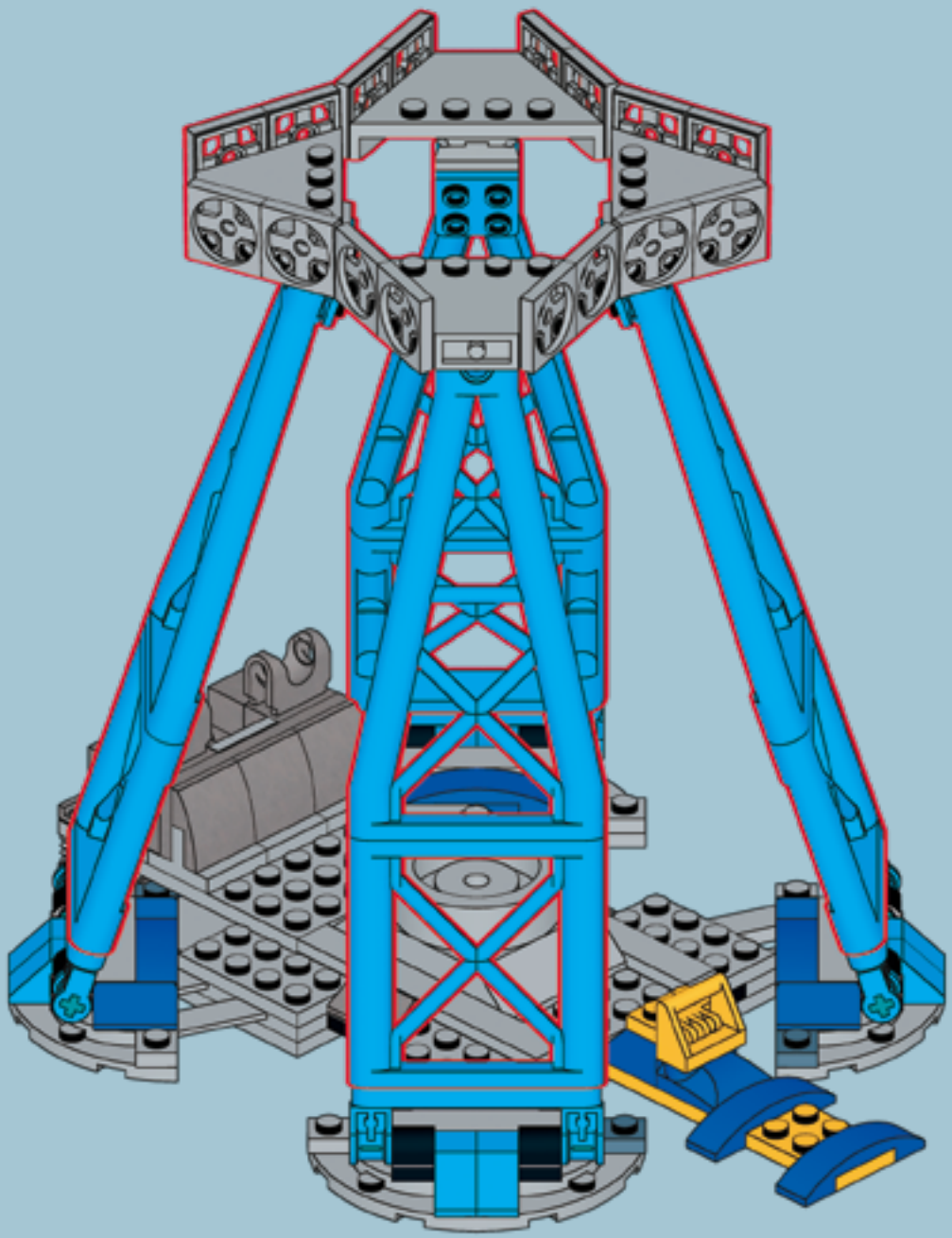
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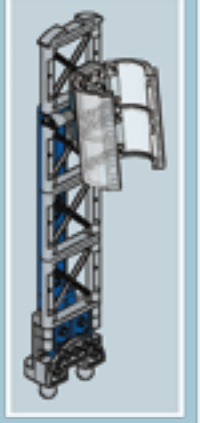
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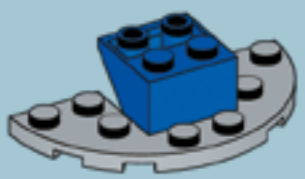
Только представь: для работы систем стартовой площадки «Союза-2» было проложено более 67 километров кабелей, но не стоит переживать: в детальках это чуть меньше.



1x 1x

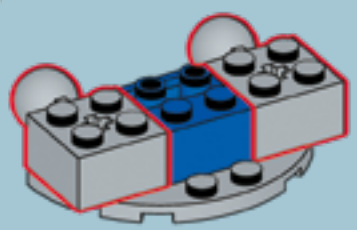
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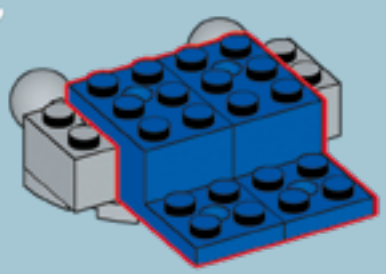
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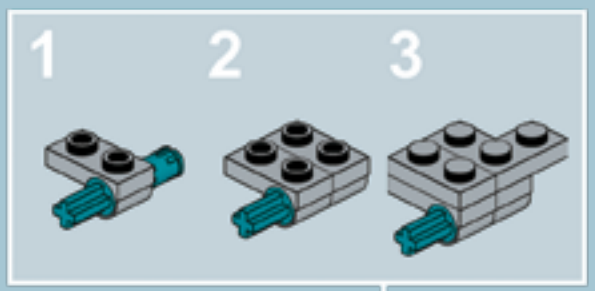
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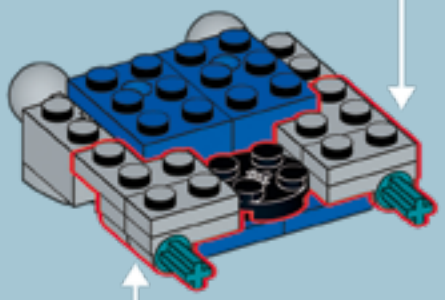
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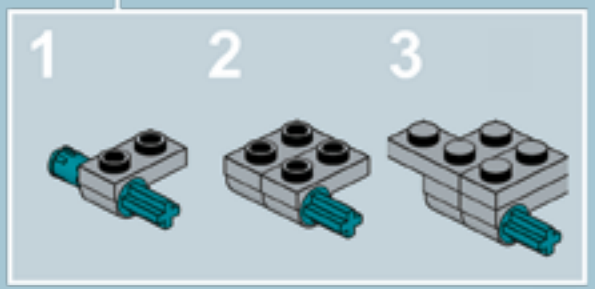


2x
4x
2x
1x
2x

38

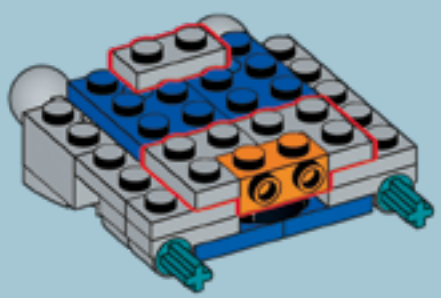






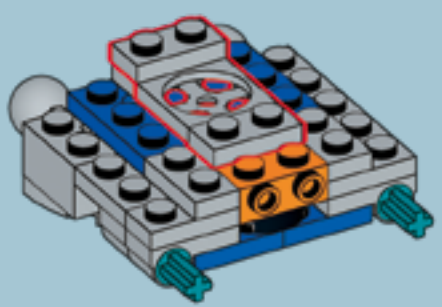
1x
2x
1x

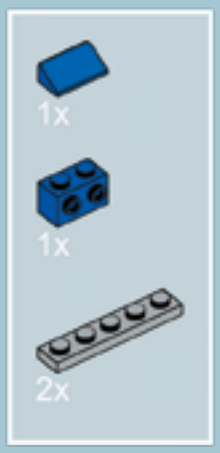
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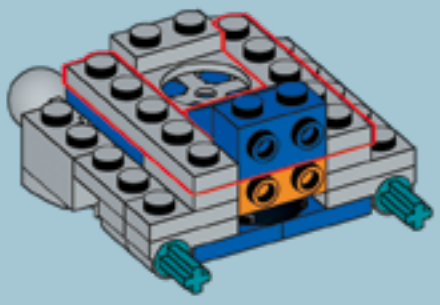
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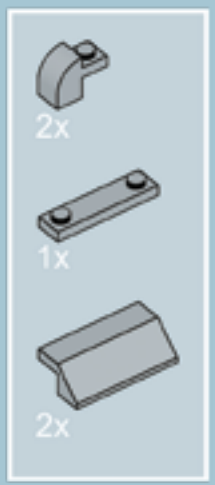
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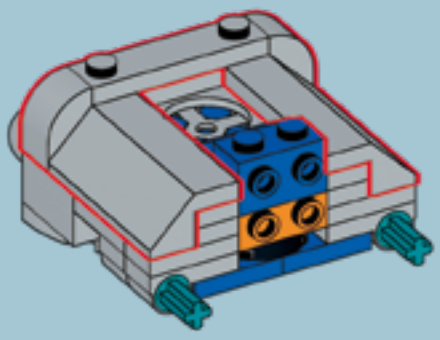


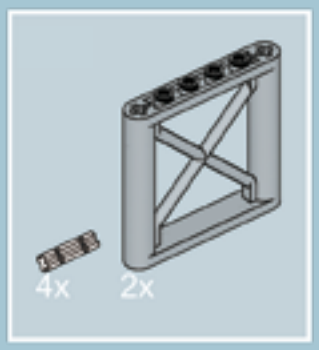
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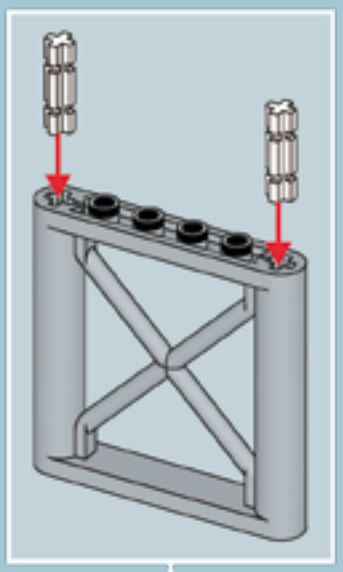


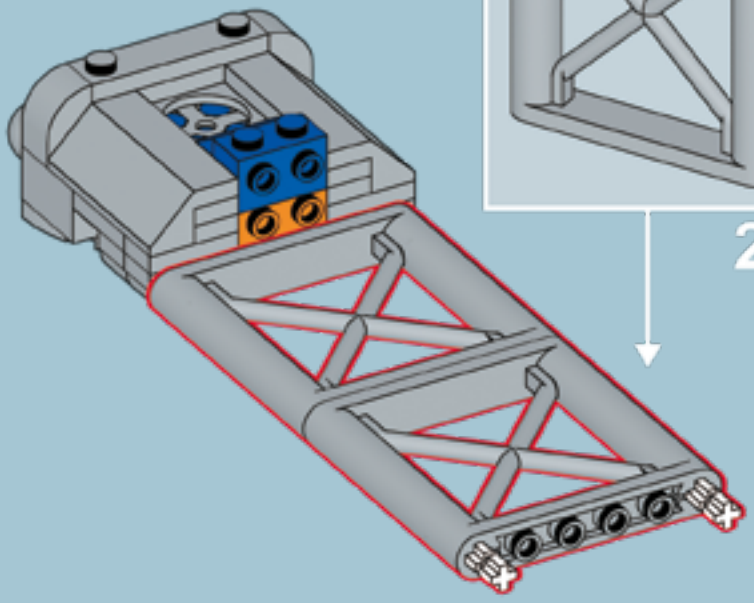
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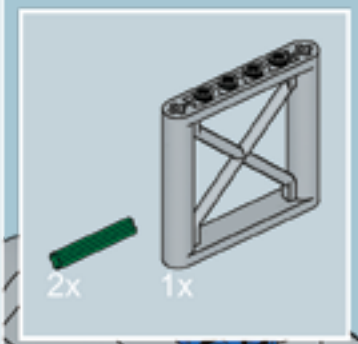




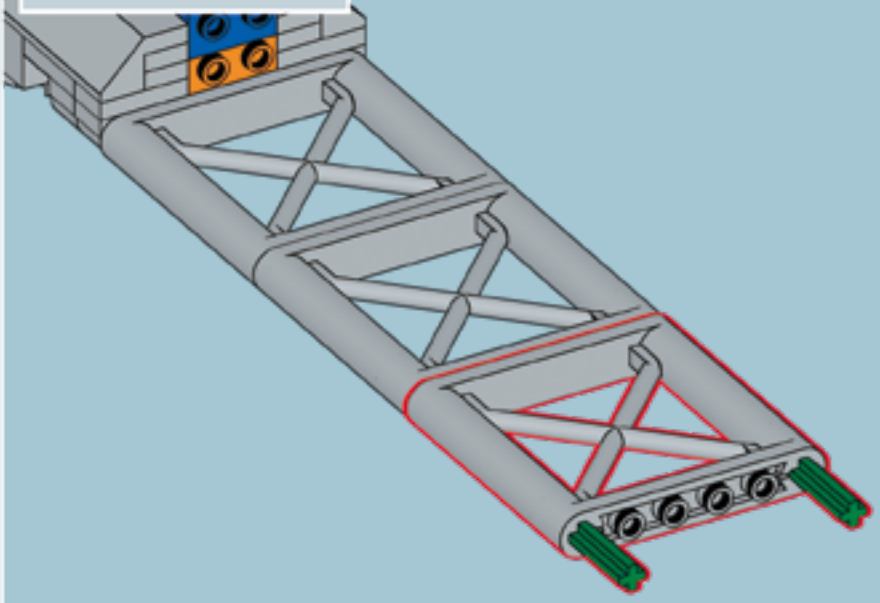
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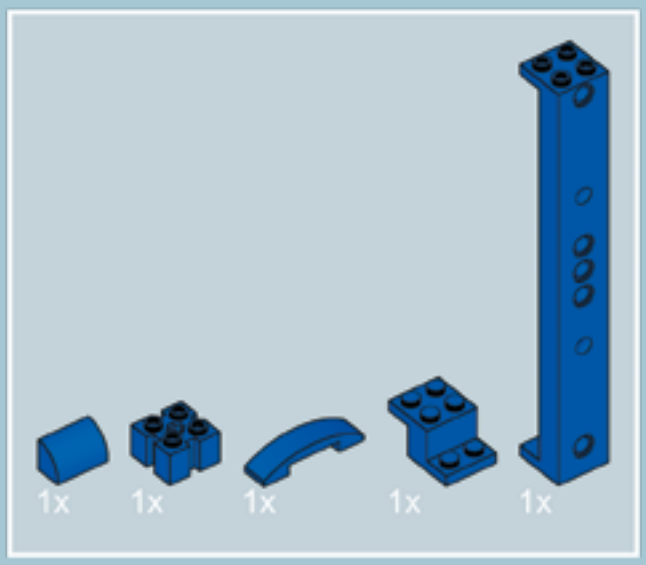




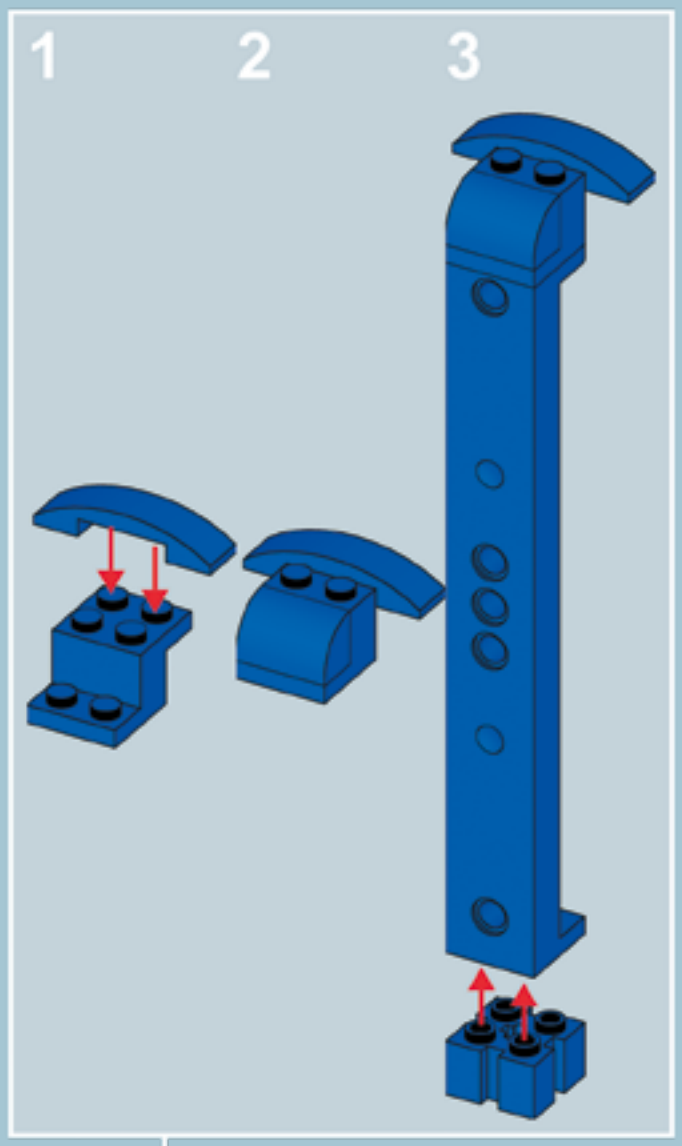


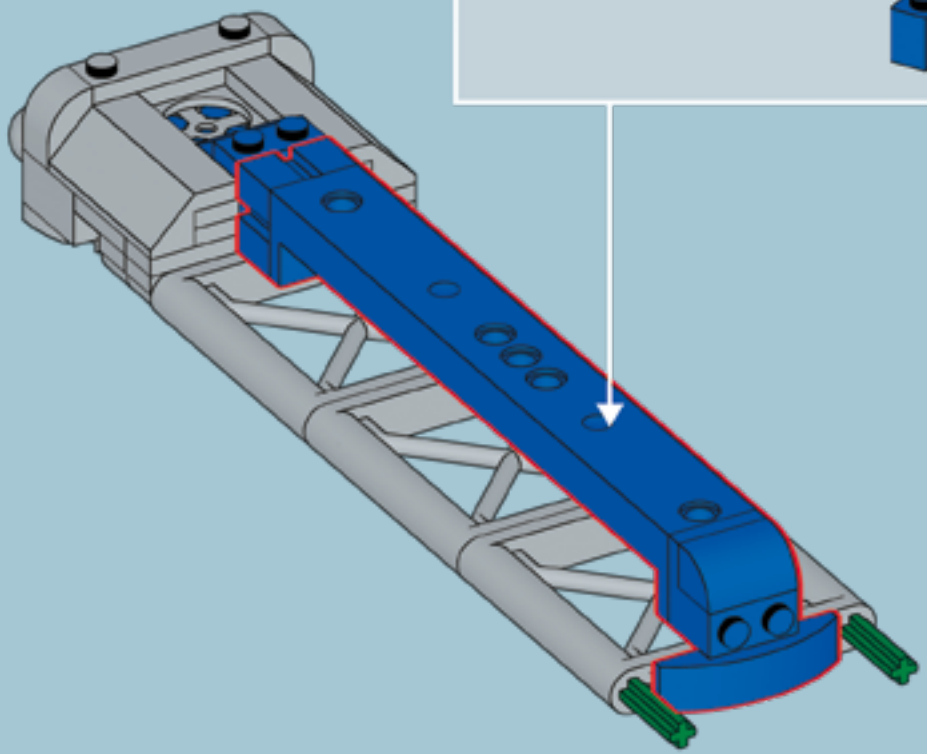
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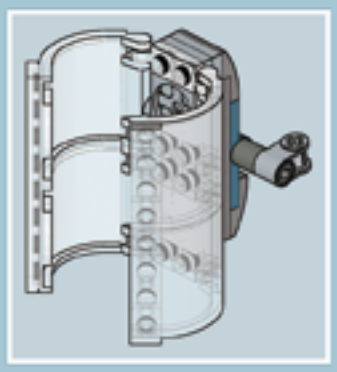
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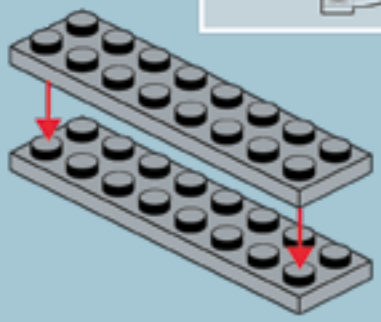


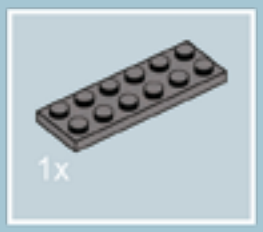




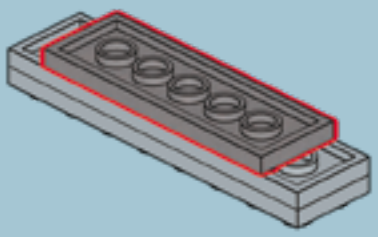
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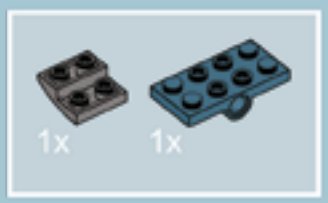




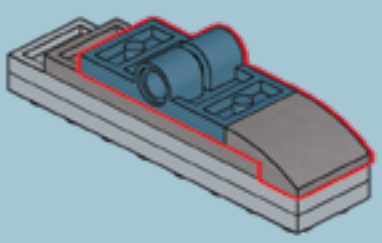


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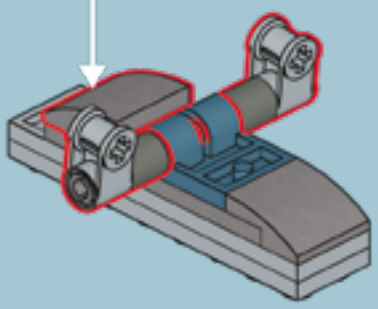




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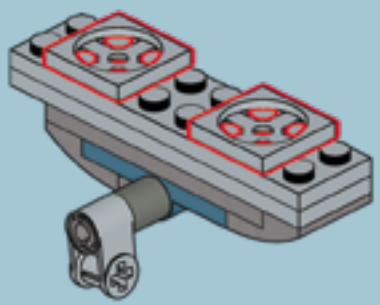


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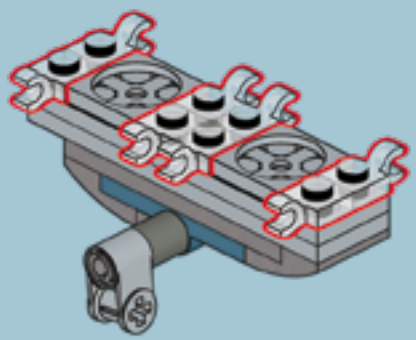


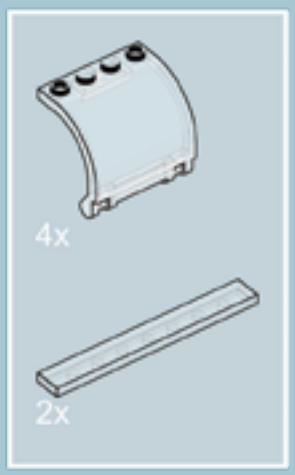
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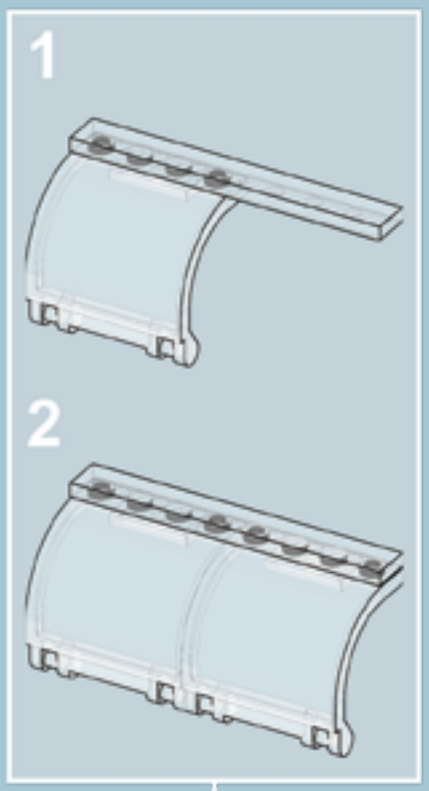


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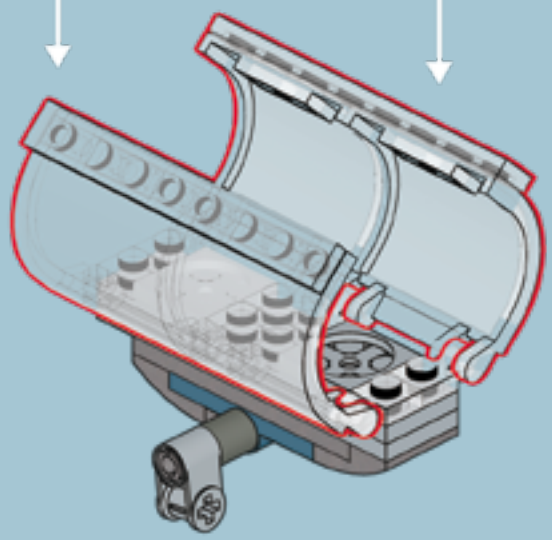




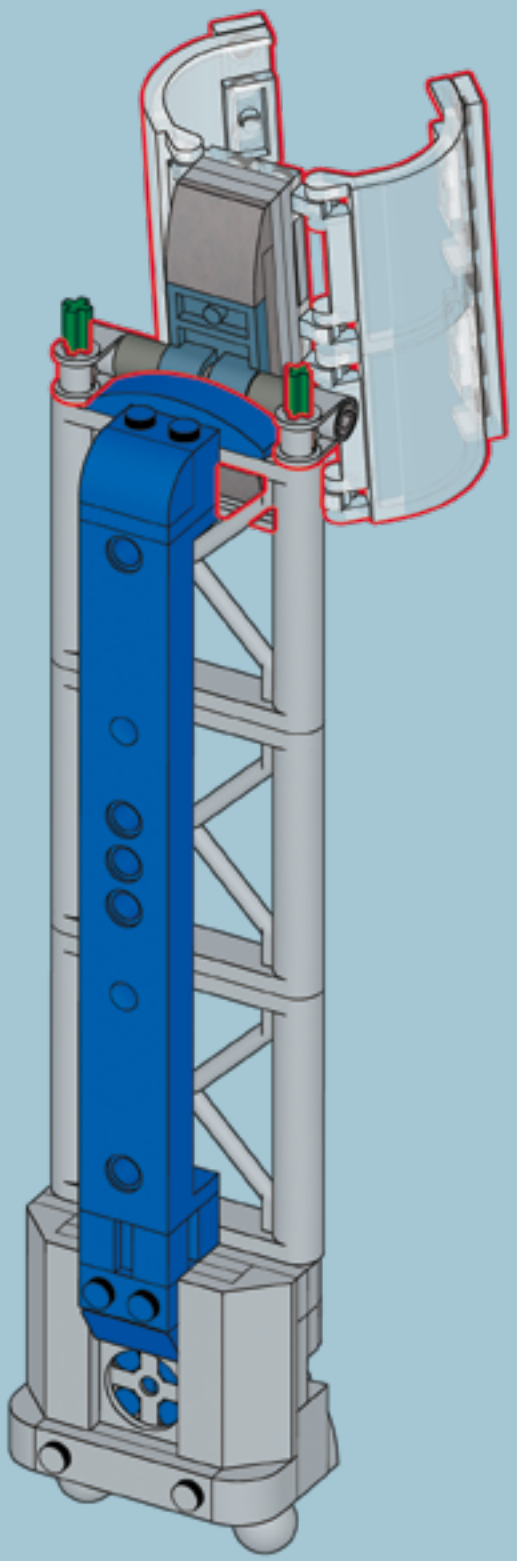
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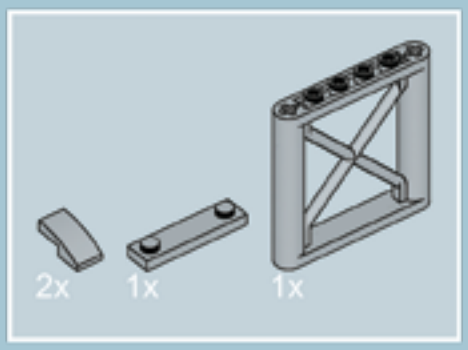


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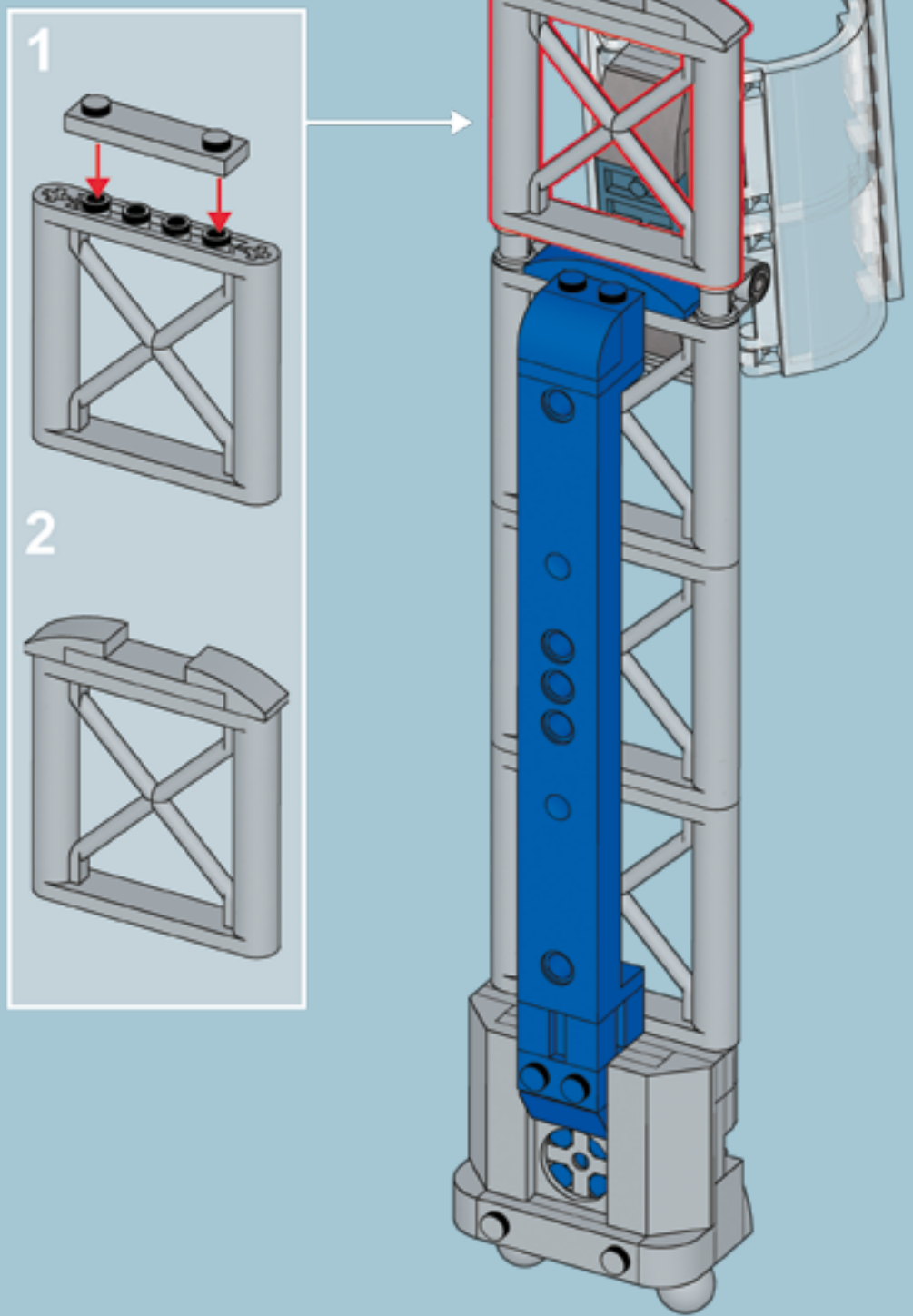


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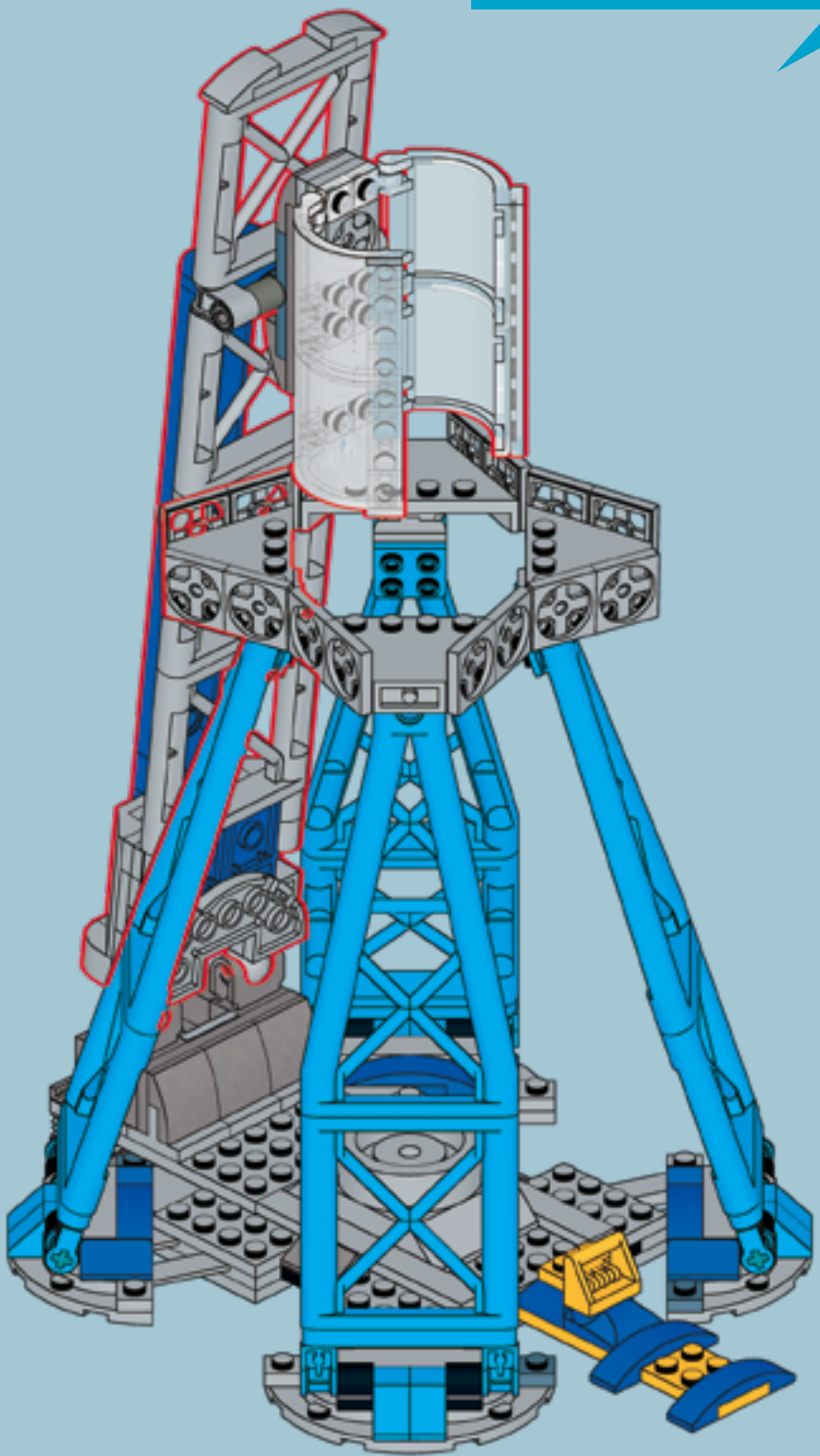


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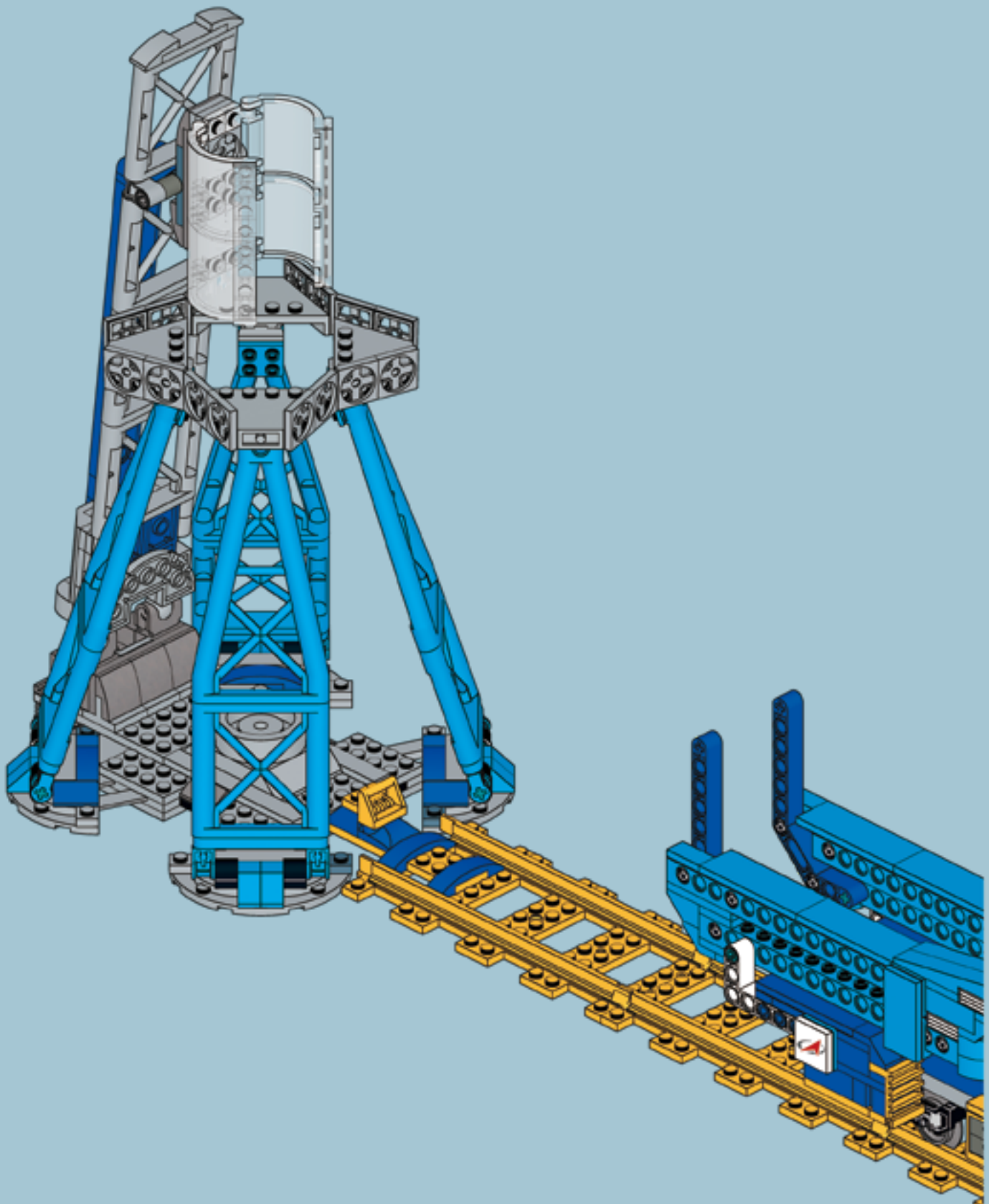


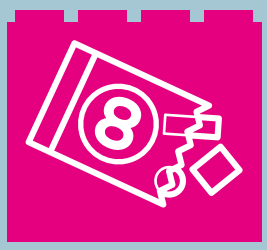
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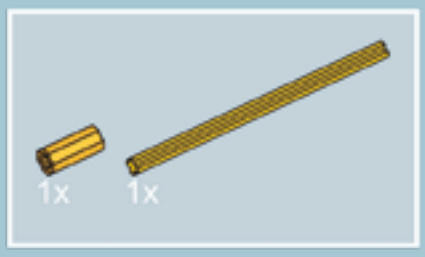
Чтобы поддерживать площадку в полной готовности, в 17 км от космодрома был построен целый аэропорт для перевозки самых разных космических аппаратов.



56

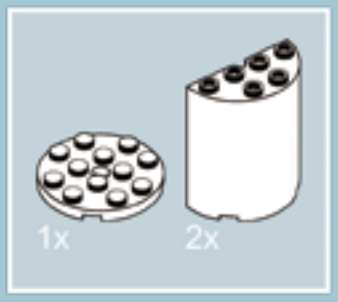






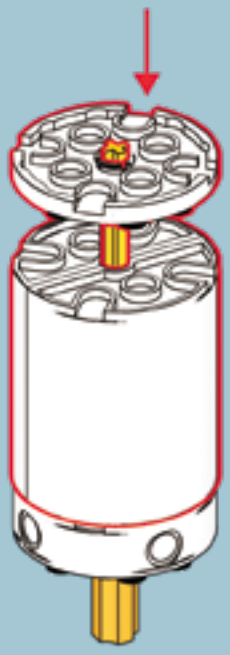
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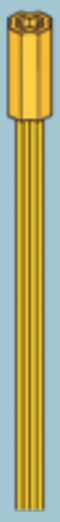




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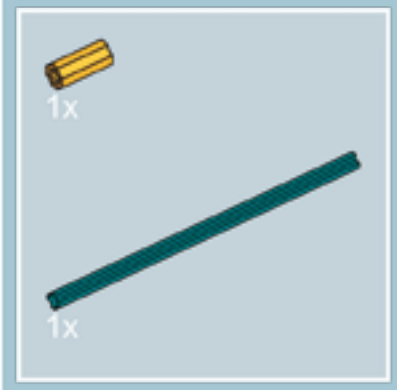




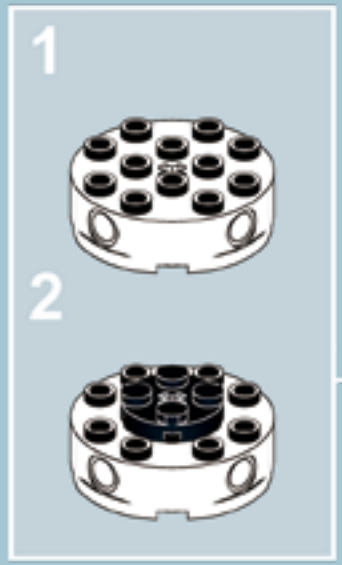


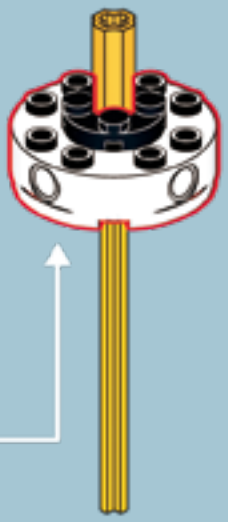
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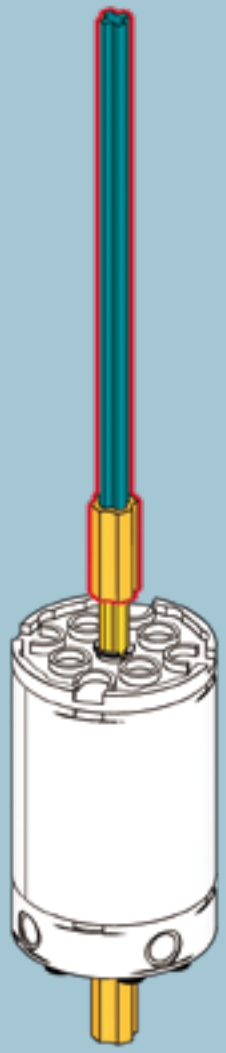
Перед тем как оказаться на космодроме, ракета проходит долгий путь!



60

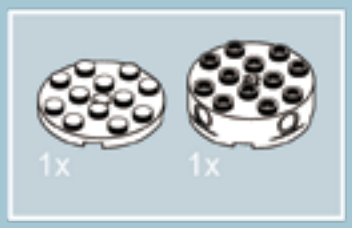








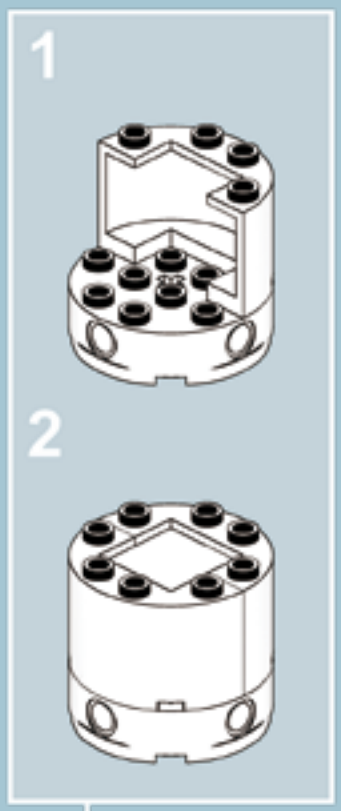
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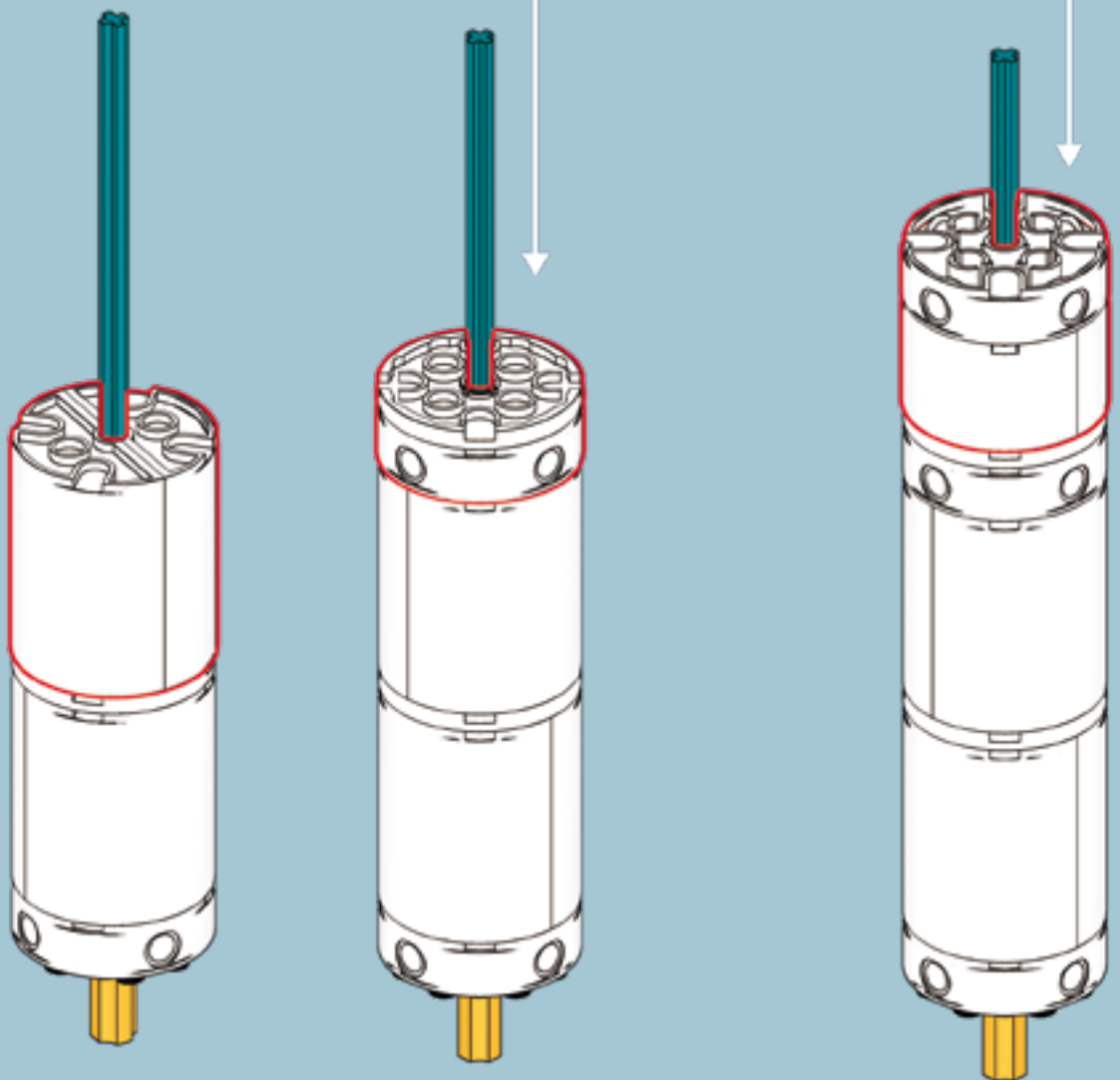
62



63









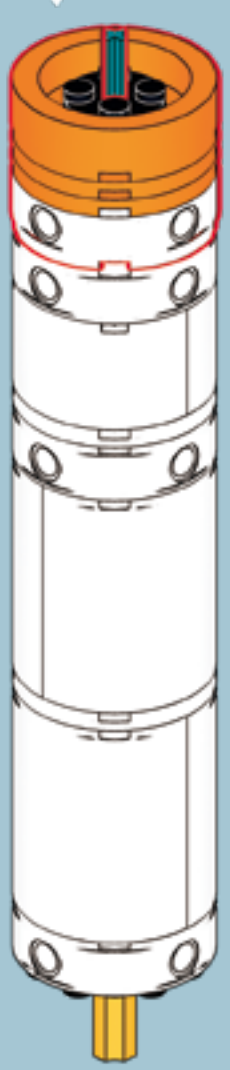
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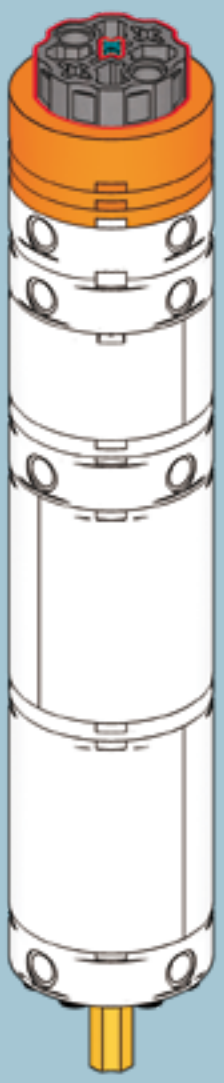


65



Сначала ракета собирается и тестируется в Самаре на предприятии «Прогресс». Затем её транспортируют по железной дороге через Уфу, Челябинск, Омск, Новосибирск и Красноярск. Весь маршрут занимает 18 дней и более 6400 км.



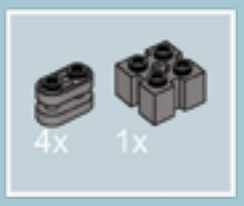




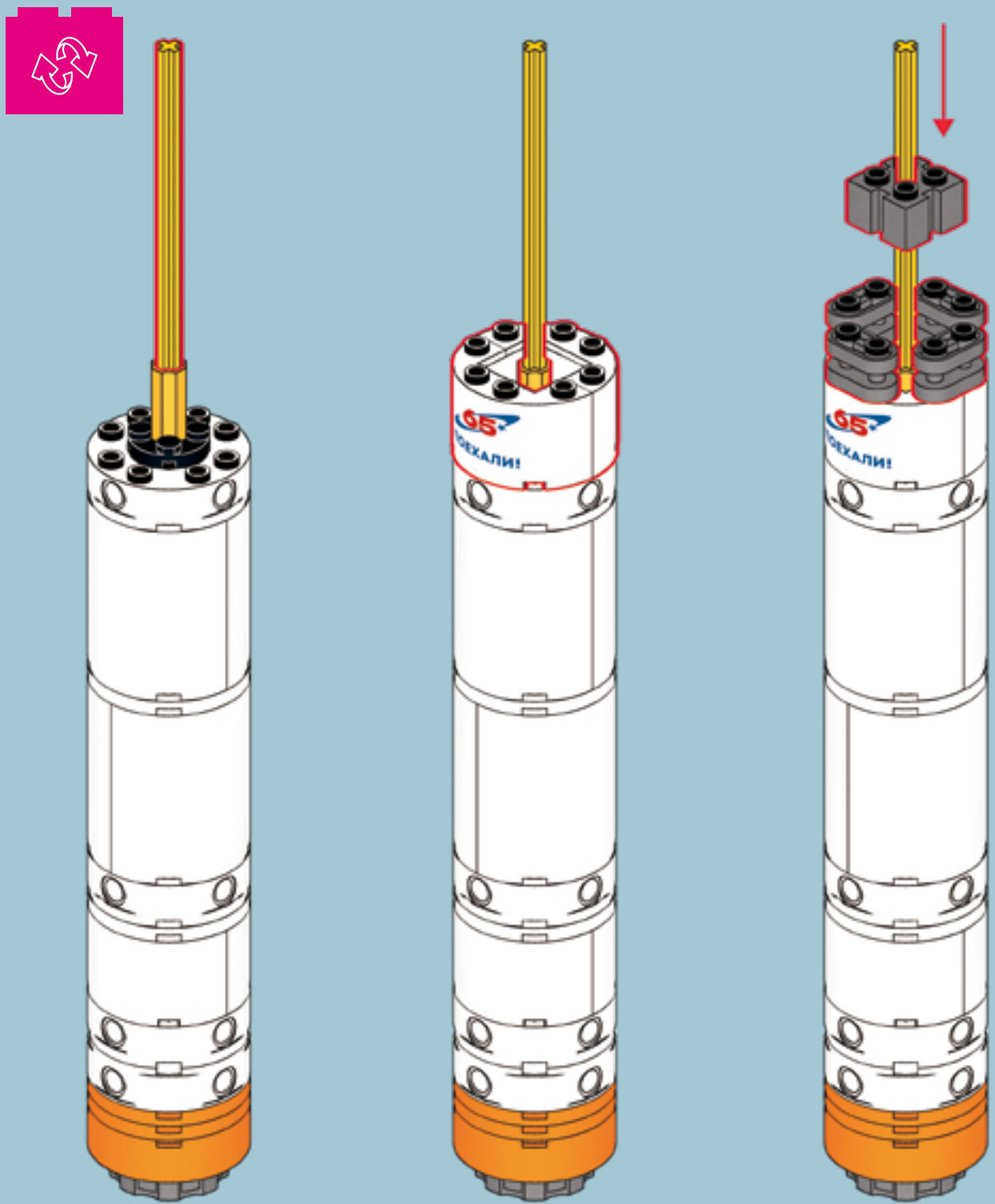
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67



68





69

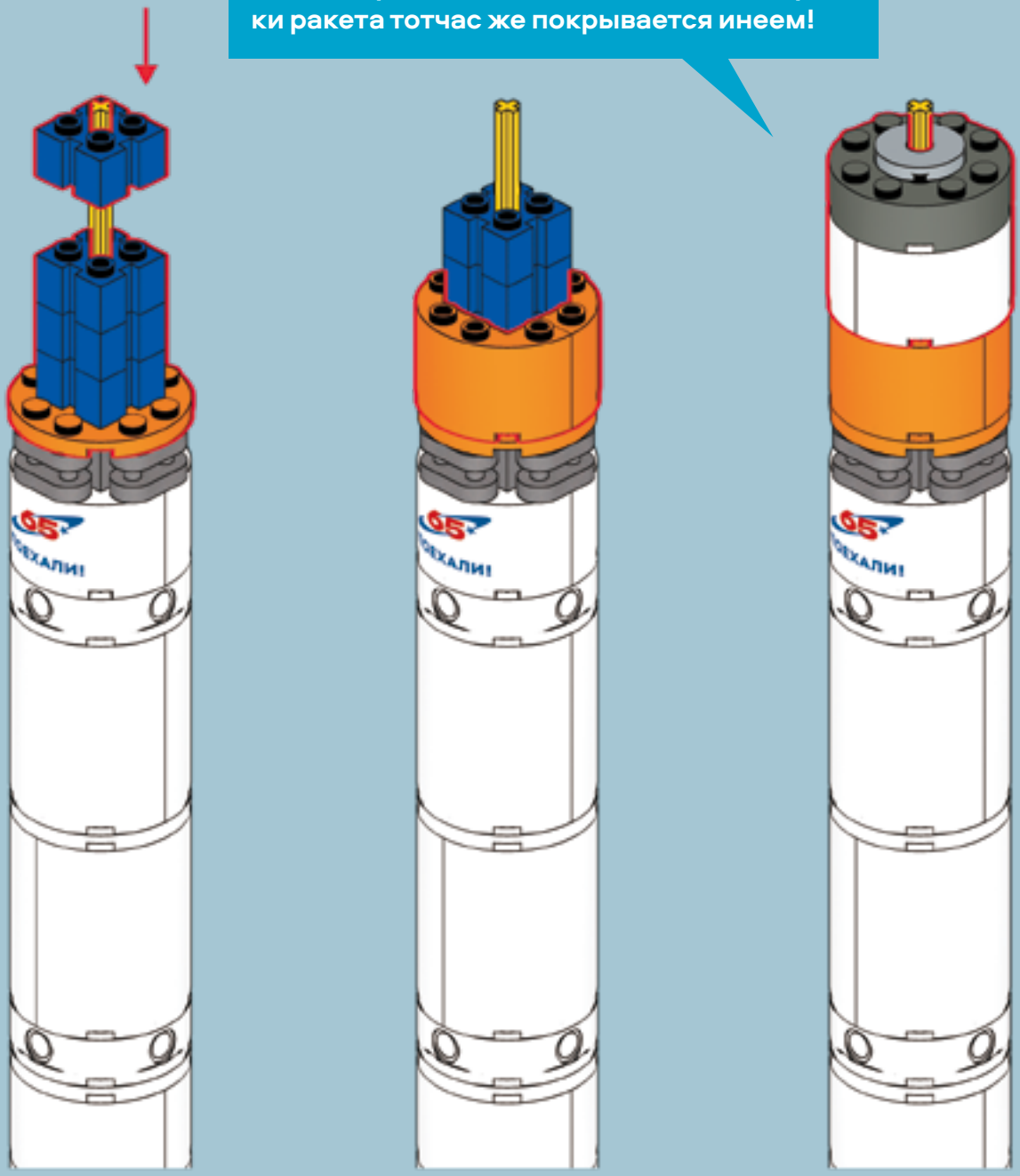


70



71

Знаешь, что общего между ракетами и хамелеонами? Они оба меняют цвет! Перед стартом ракета, которая изначально была серой, становится белой! Всё это благодаря жидкому кислороду — это окислитель для работы двигателей. После заправки ракета тотчас же покрывается инеем!



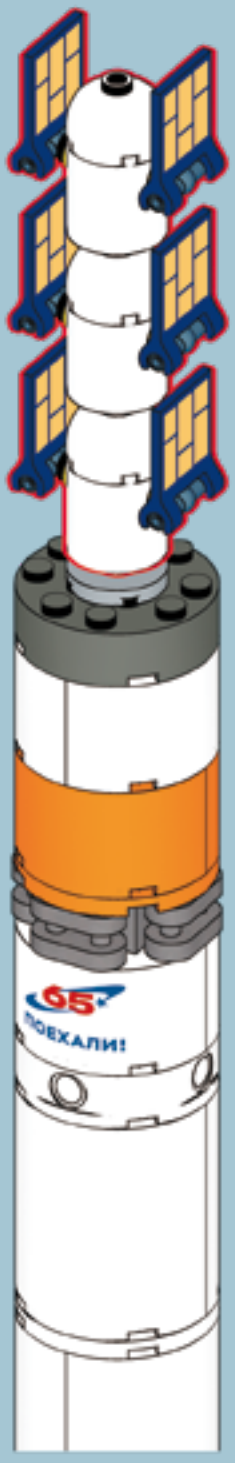


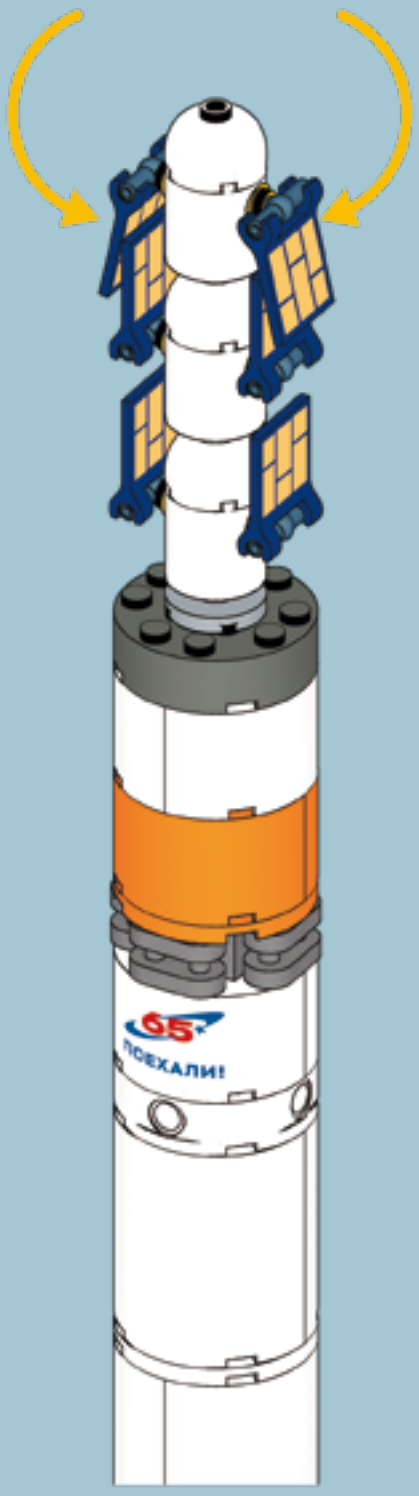
72

Собираем спутники! Спутник — это беспилотный космический аппарат, который может выполнять в космосе самые разные задачи: обеспечивать связь, транслировать теле- и радиосигналы, собирать данные для исследований и многое другое.



3x







74

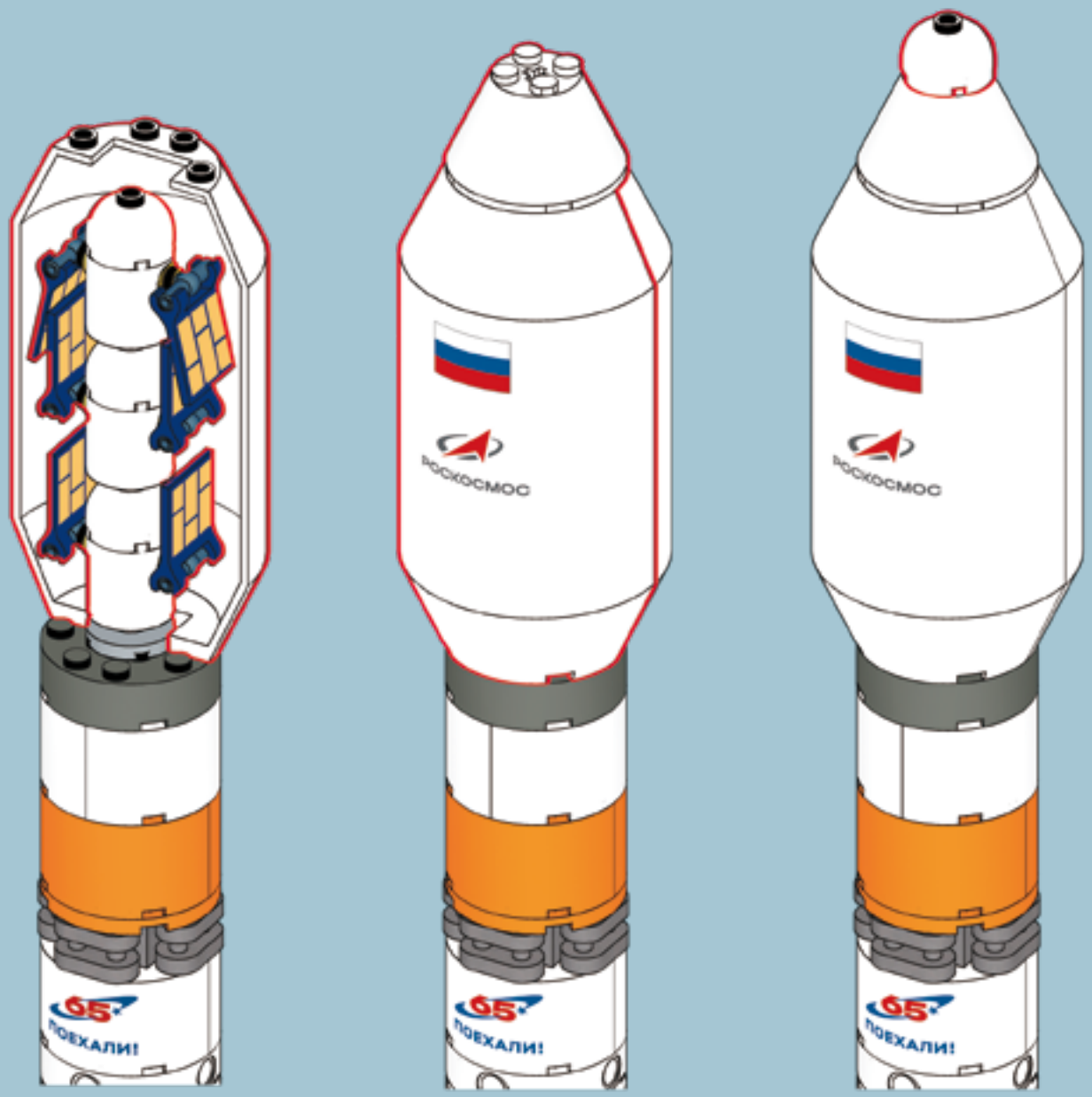


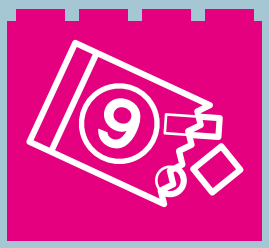
75



76

Наша ракета белая, а значит, окислитель уже внутри. Будь осторожен: после заправки поверхность баков о-о-очень холодная!







77



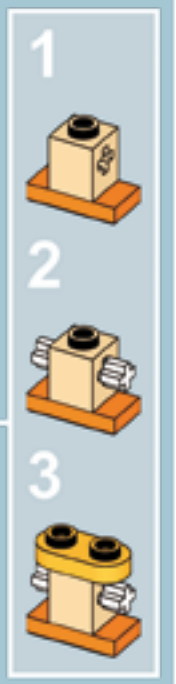


4x



78







79





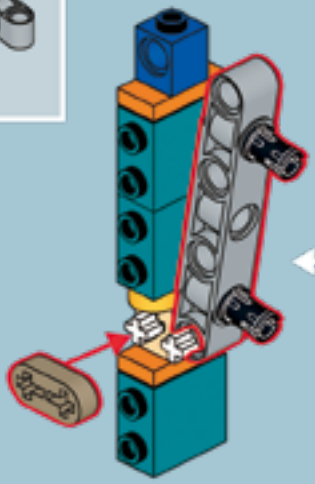
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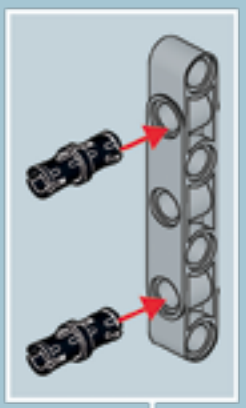






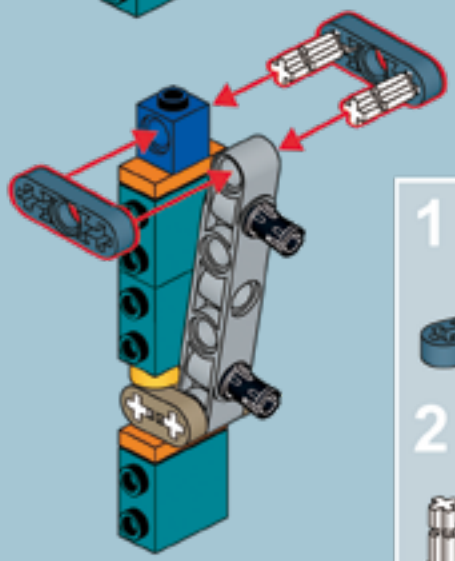
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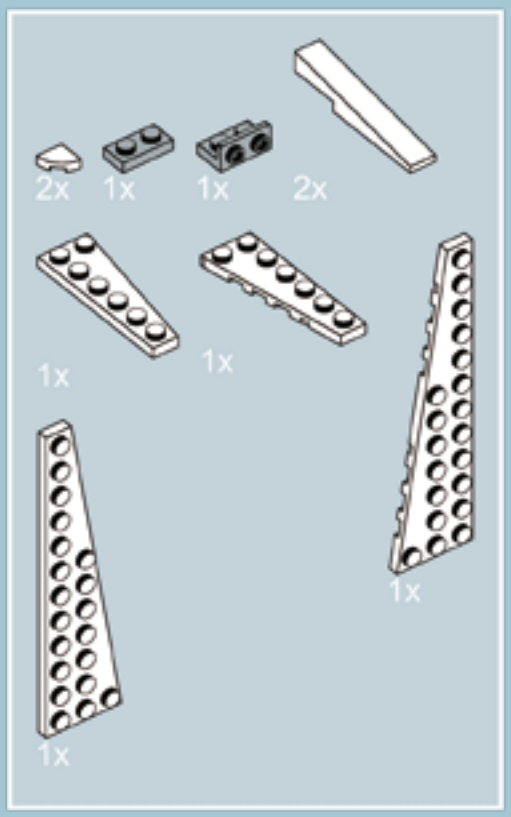




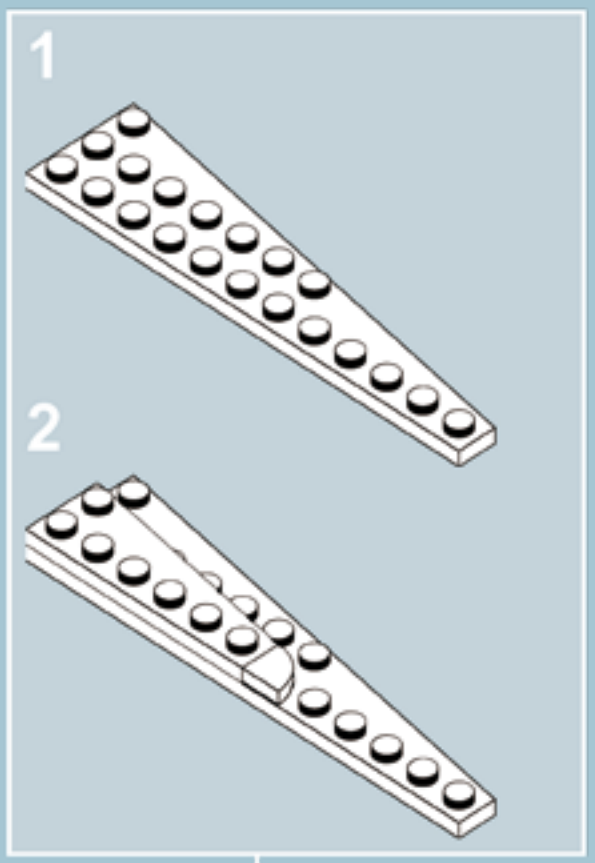
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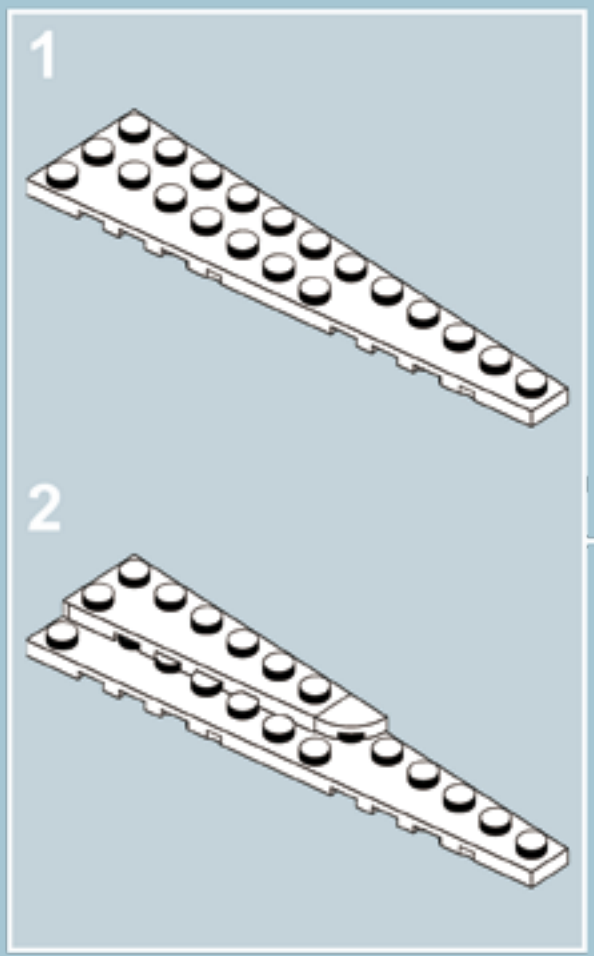


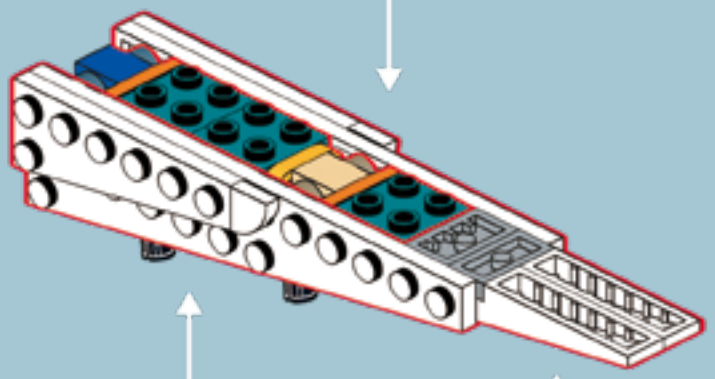


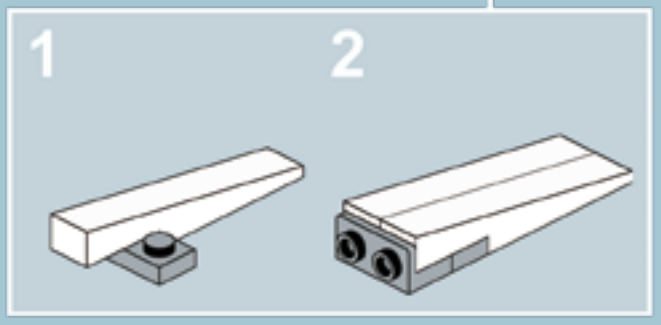


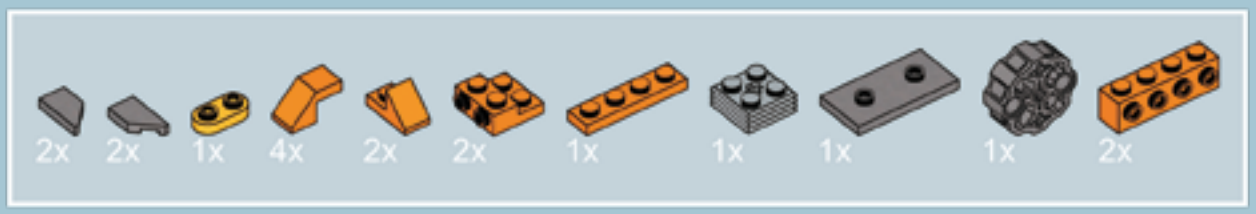
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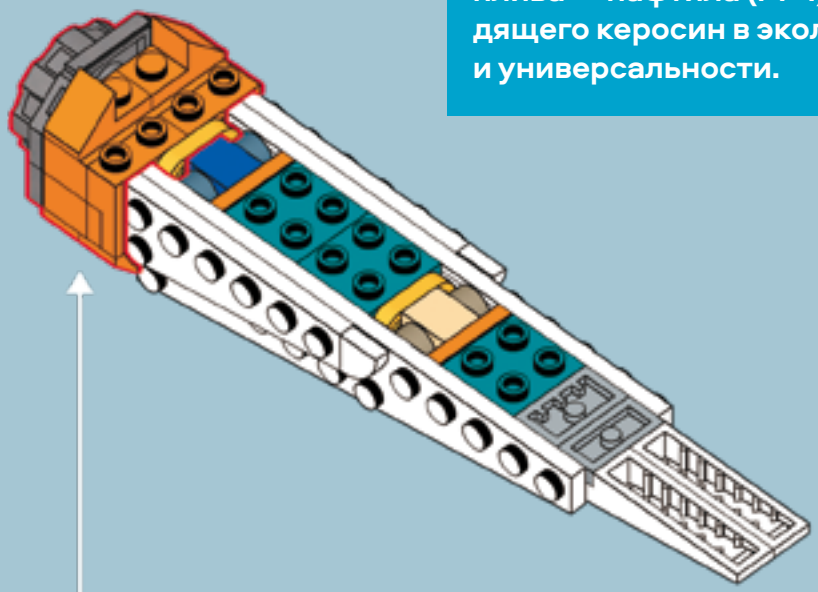


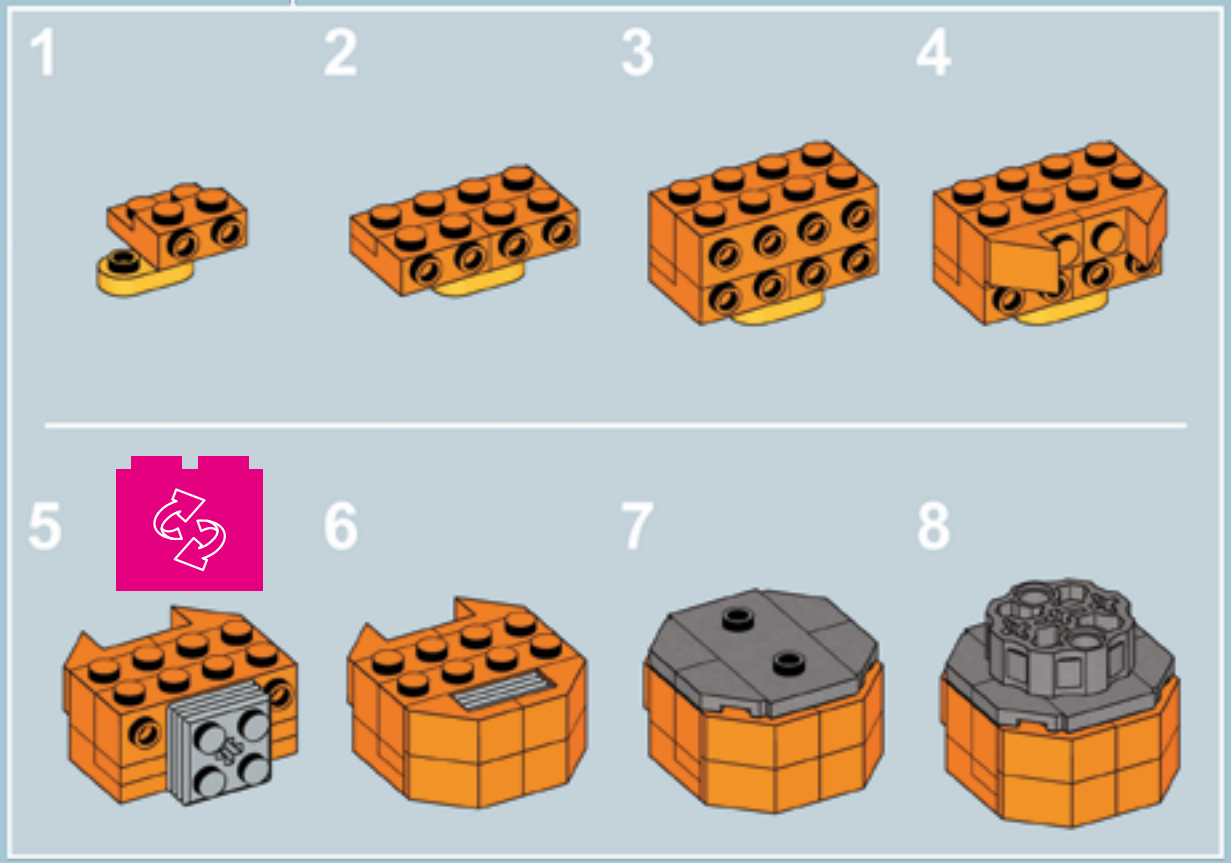


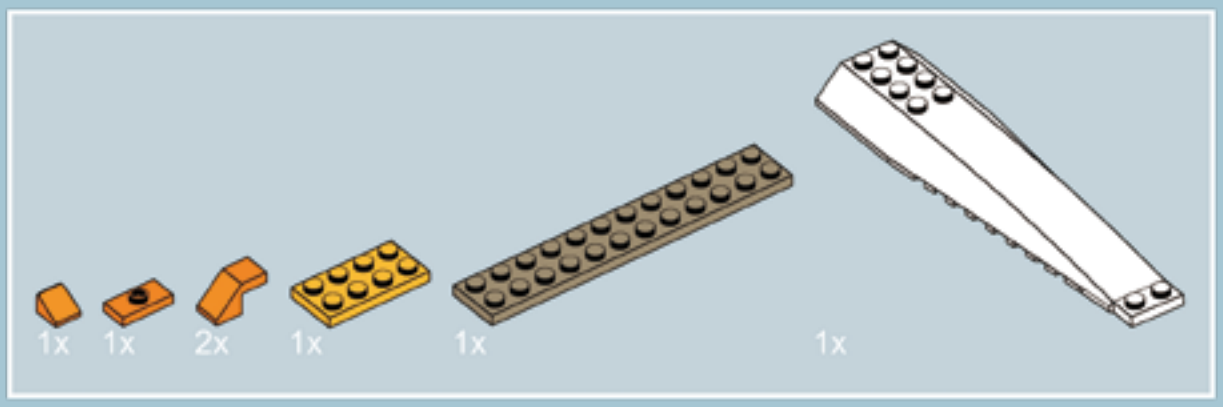


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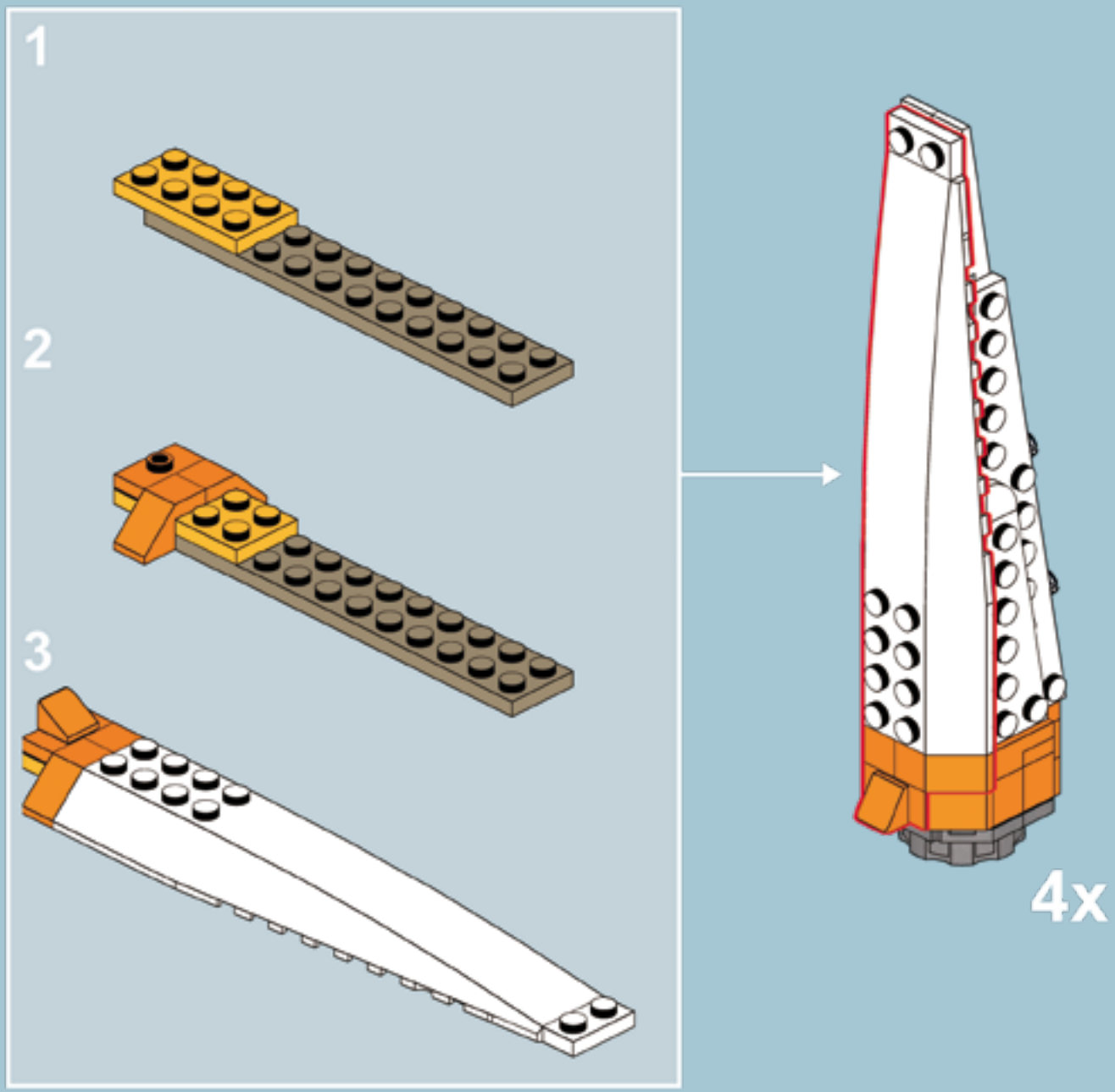
С 2016 по 2022 год Роскосмос перевёл стартовый комплекс «Союз-2» на использование современного топлива — нафтила (РГ-1), превосходящего керосин в экологичности и универсальности.





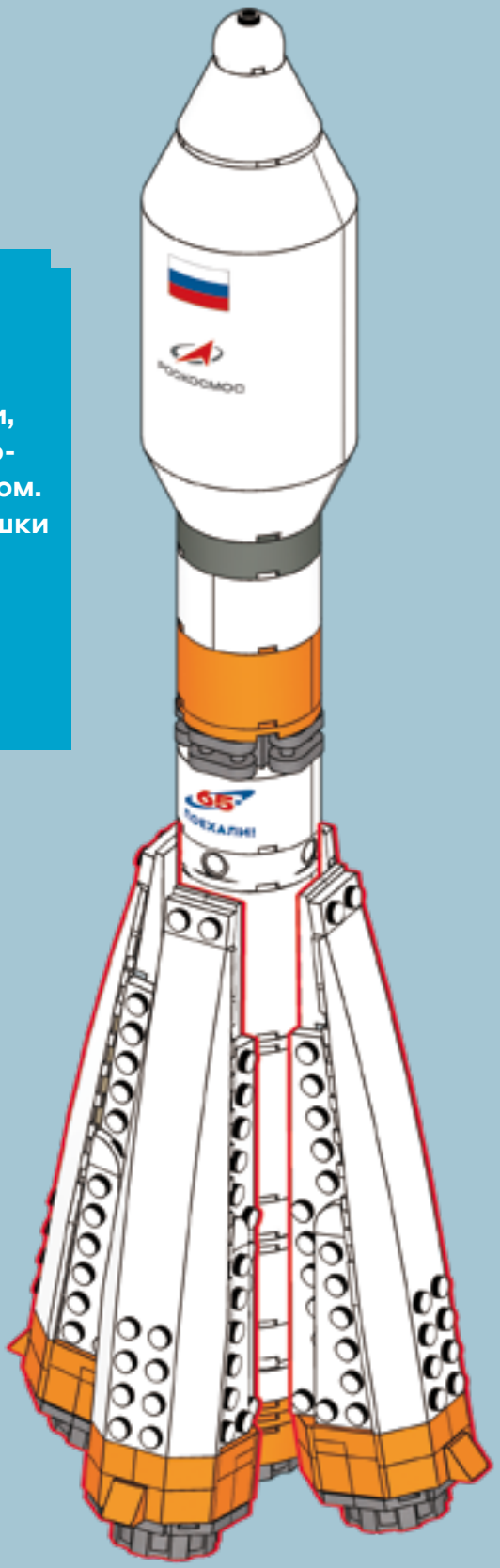


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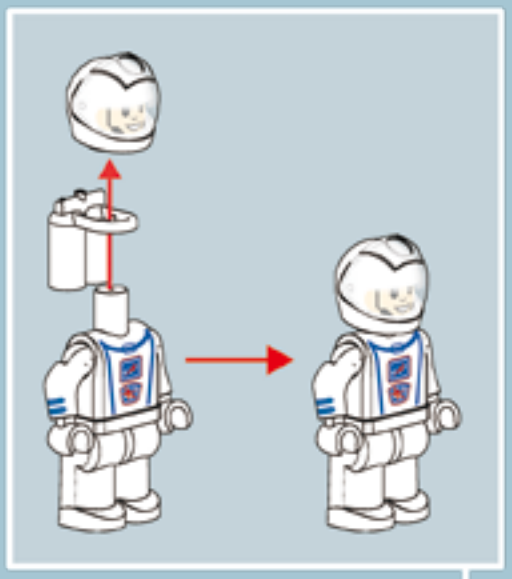


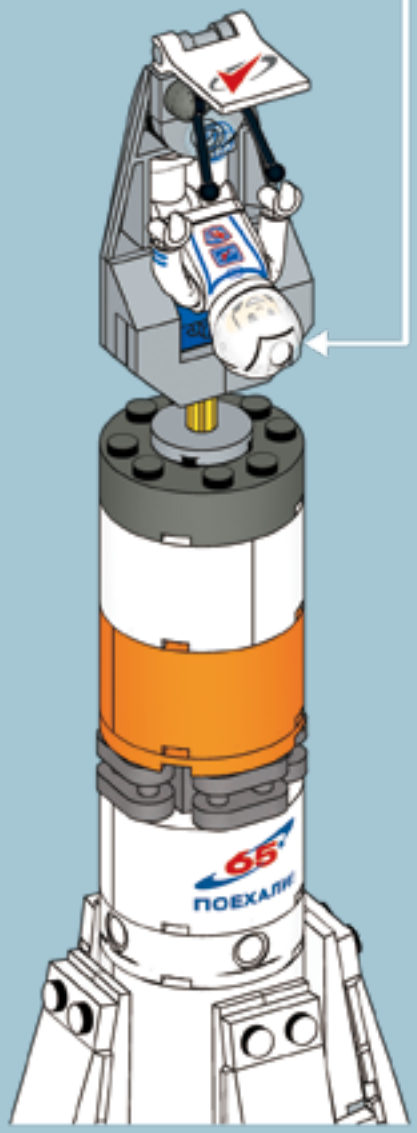
86

Интересный факт! В запуске ракет участвуют обычные деревья! 32 берёзовые палки устанавливаются в двигатели, на каждую крепятся две пиротехнические шашки с датчиком. По команде «зажигание» шашки воспламеняются, а датчик передаёт сигнал, что нужная температура достигнута и можно продолжать запуск двигателя.



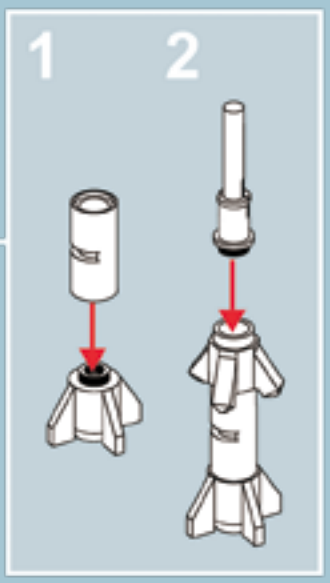
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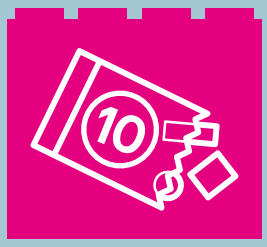


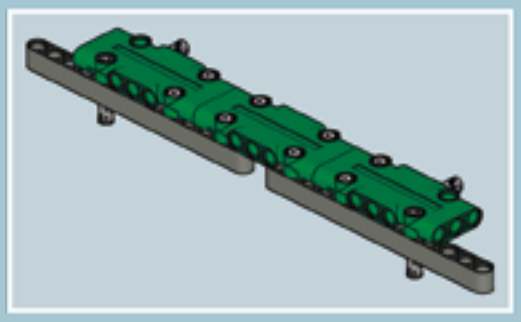
88

Устанавливаем систему аварийного спасения (САС). Она позволяет сохранить жизни экипажу в случае возникновения аварийной ситуации. САС отстреливает аппарат с экипажем от ракеты, уводит его в сторону и обеспечивает мягкую посадку с помощью парашютной системы.

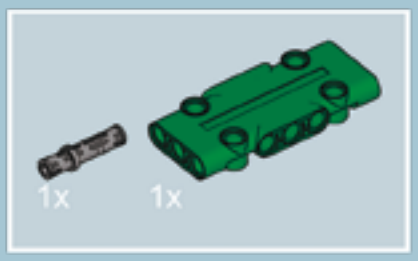




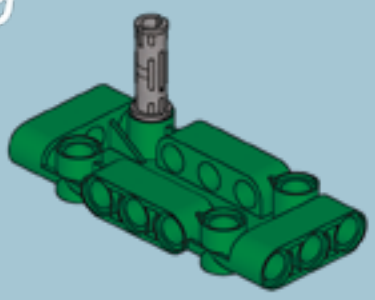




2x

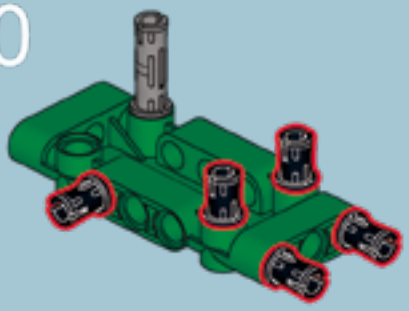


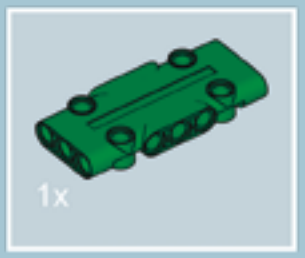
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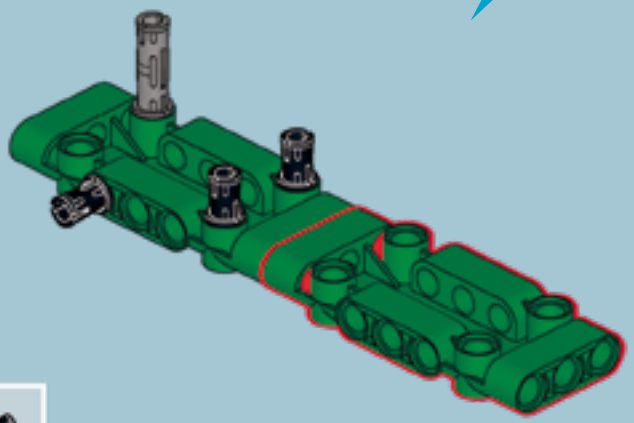
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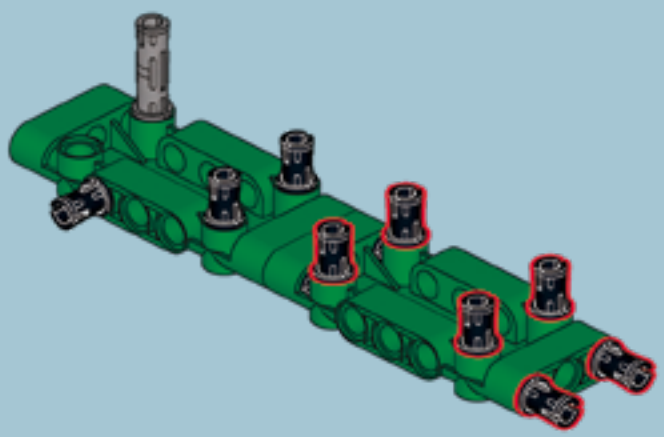
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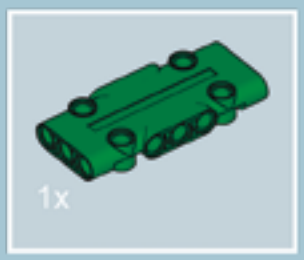
Начинаем собирать мобильную башню! Это уникальное сооружение космодрома Восточный. Таких нет на других российских космодромах — Байконуре и Плесецке.



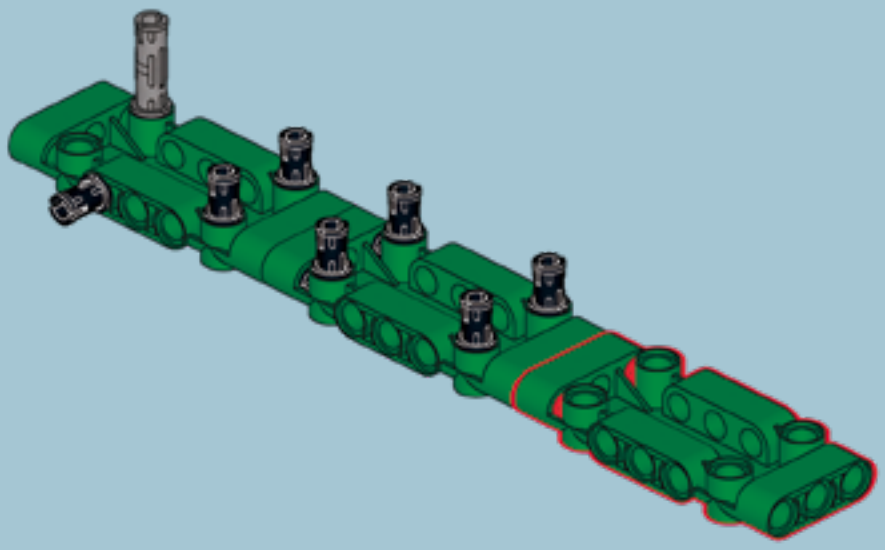


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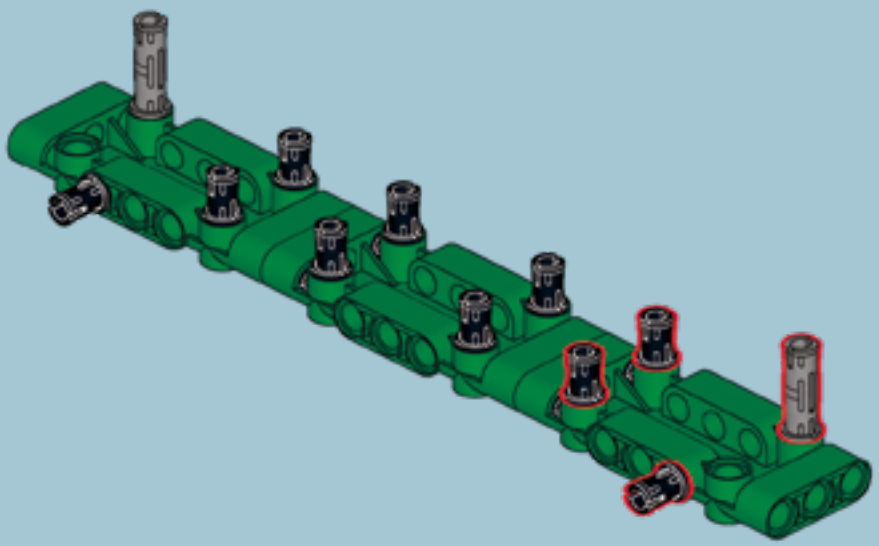


93



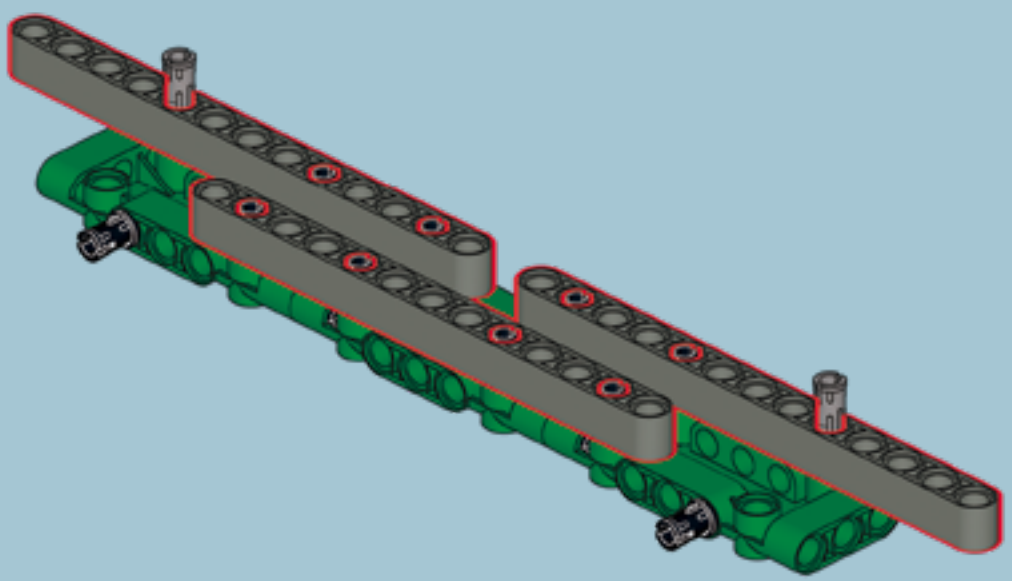


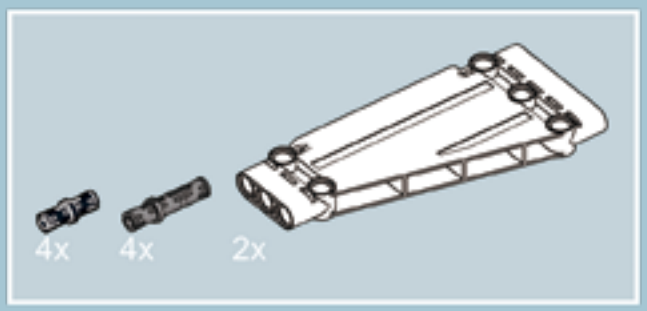
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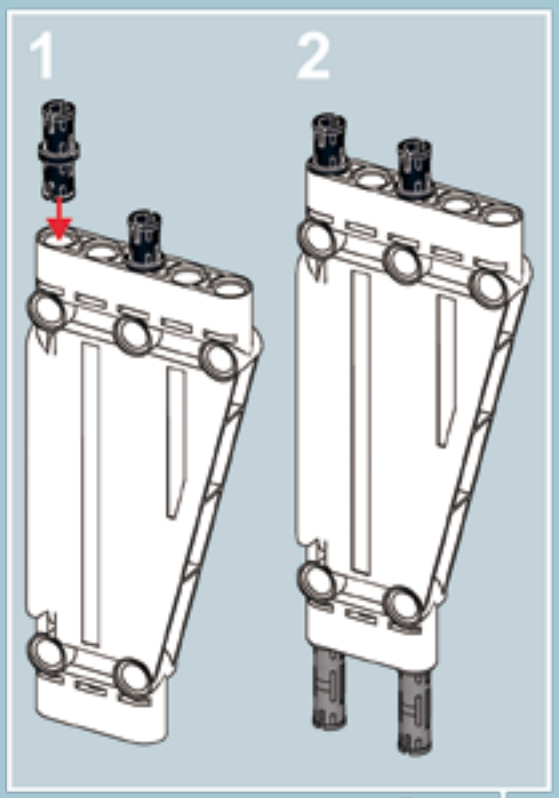


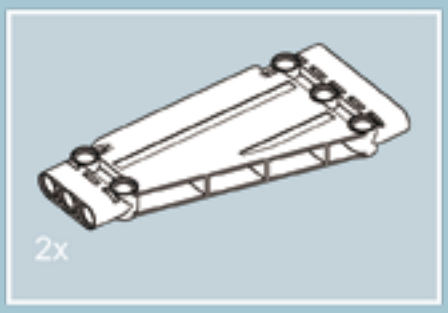
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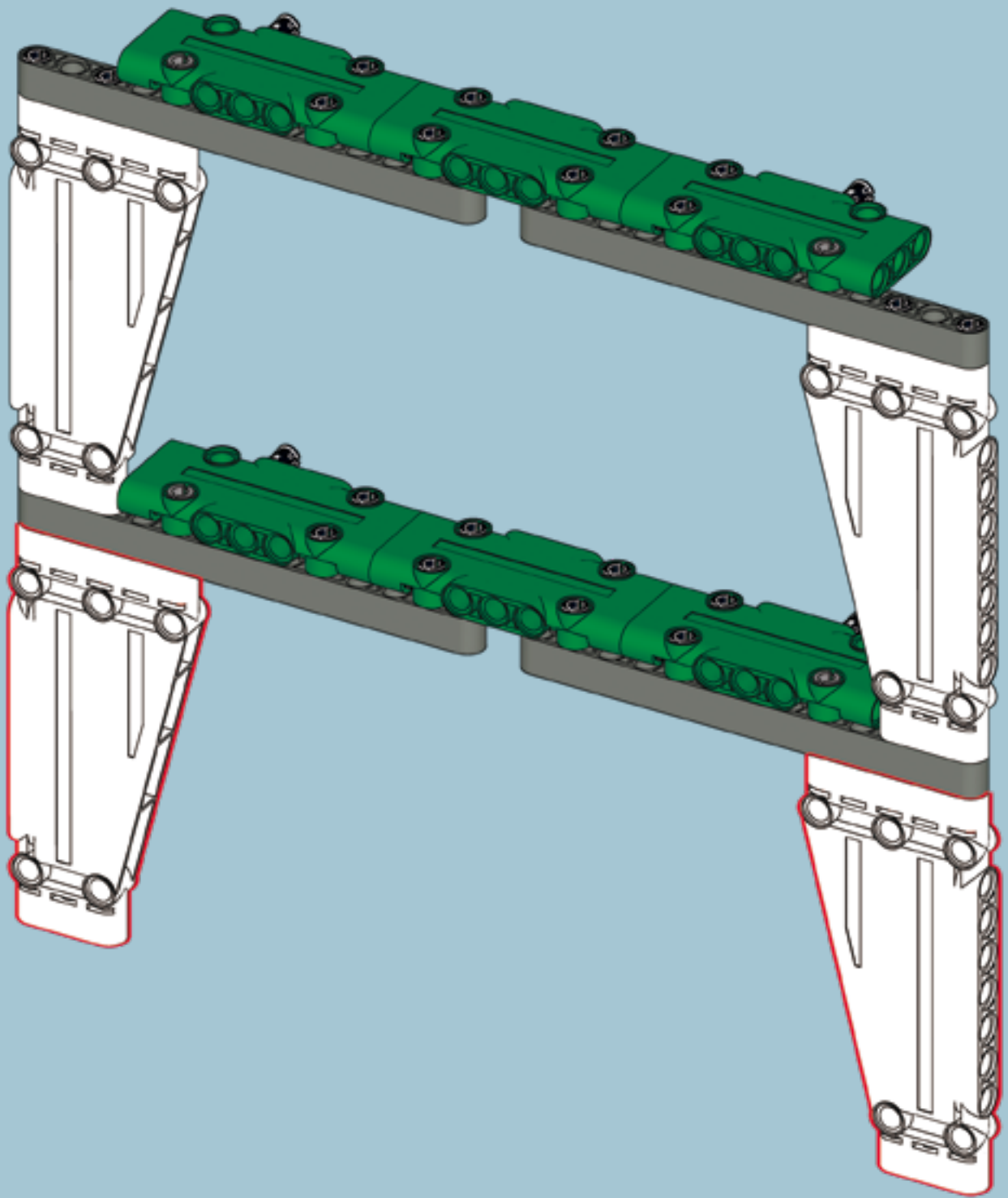
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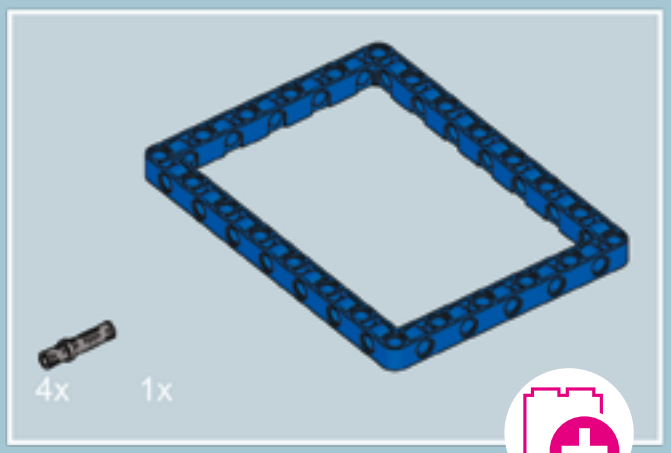




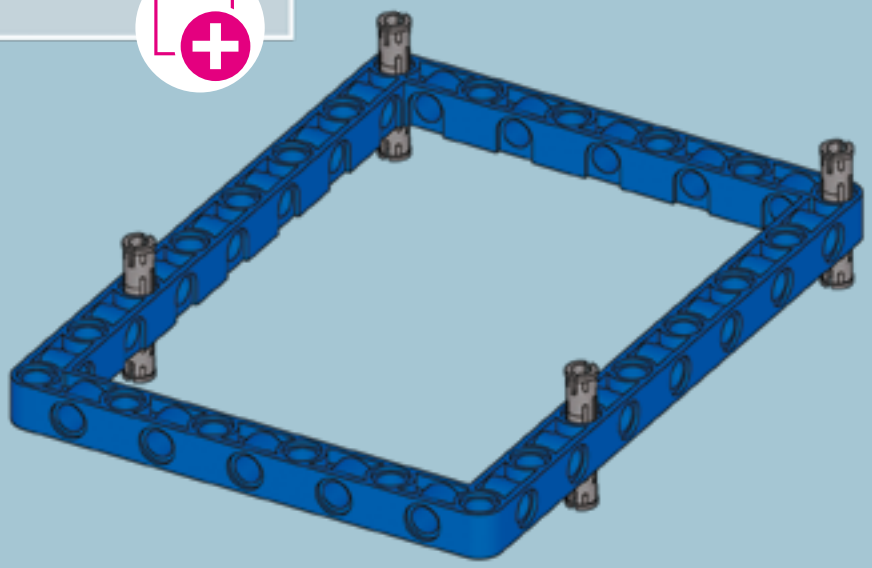
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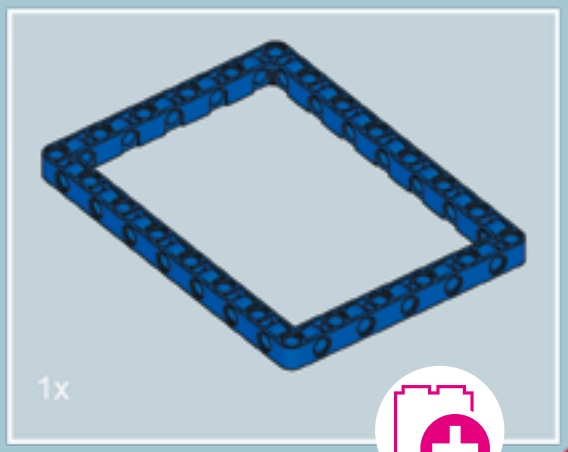
Мобильная башня создана для того, чтобы обеспечить комфортный доступ к любой части ракеты в любых погодных условиях! Так что если во время сборки внезапно пойдёт дождь, ты знаешь, куда спрятать сотрудников твоего космодрома!



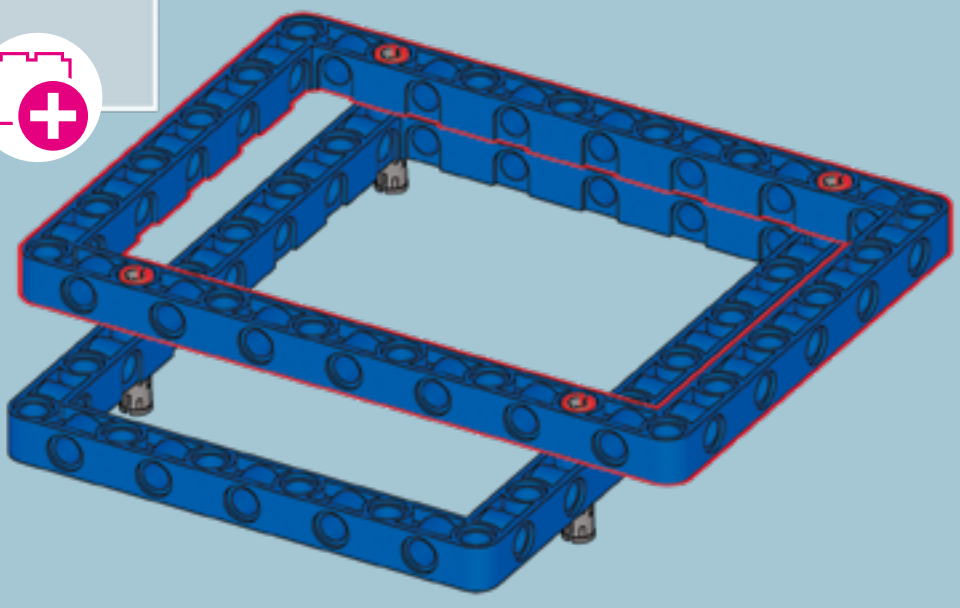


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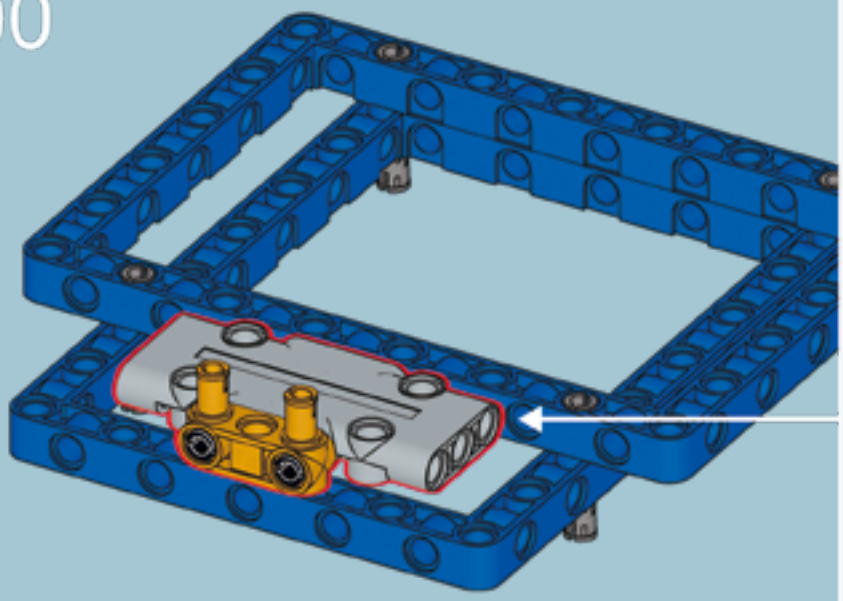


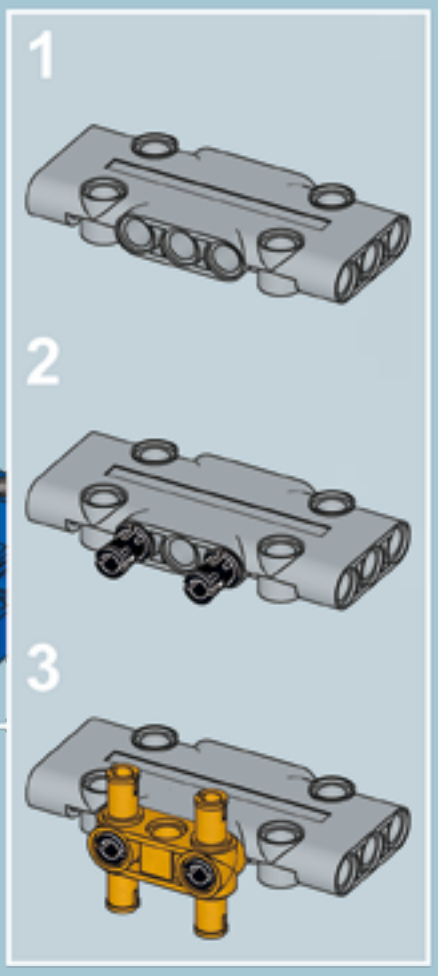
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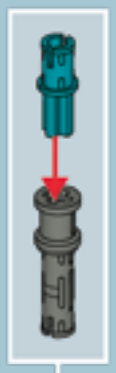
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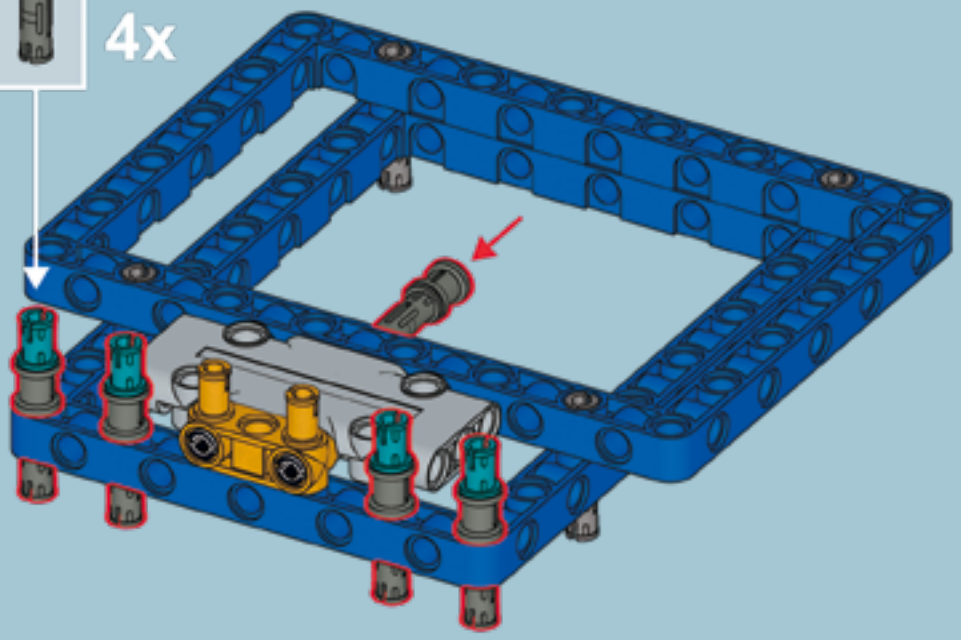


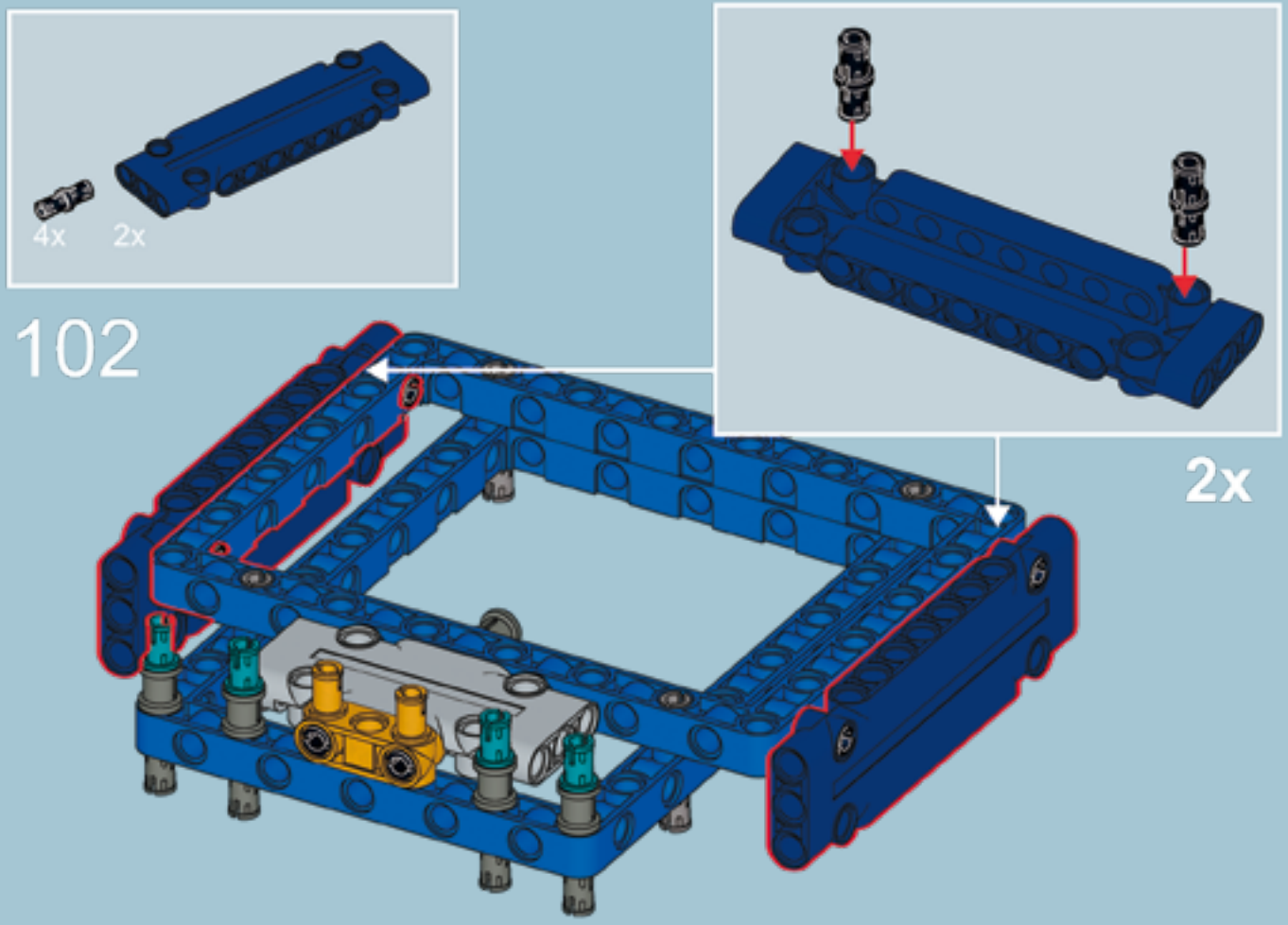


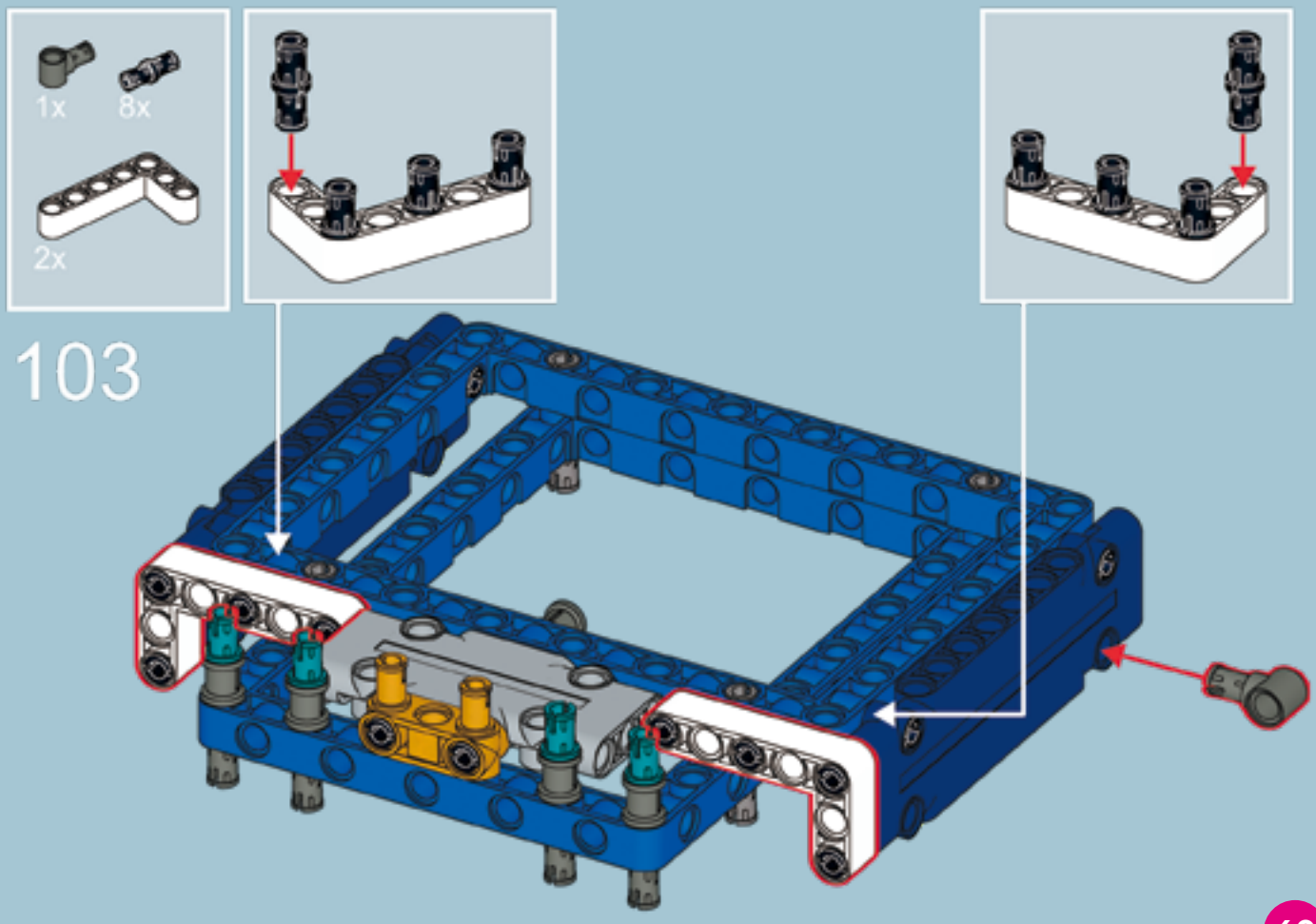
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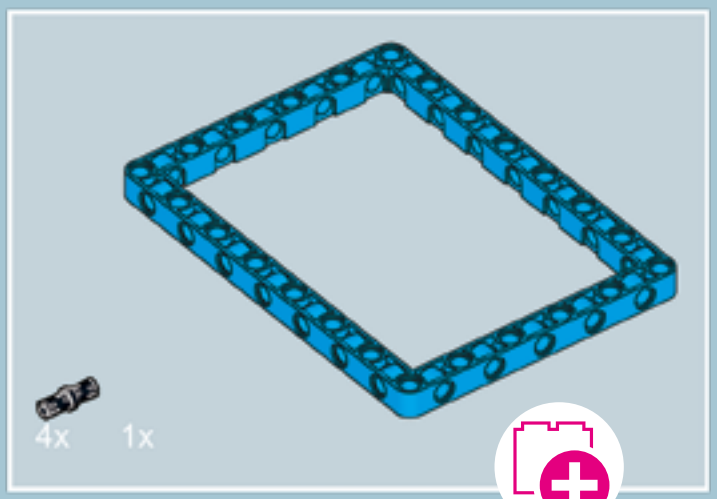


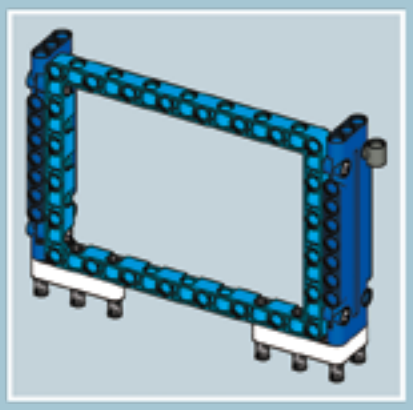
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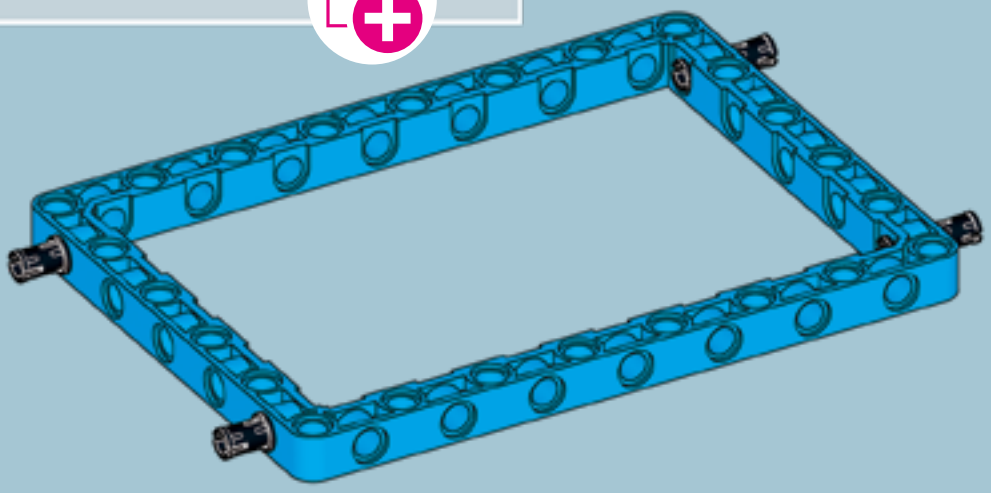

4x
2x
102
2x

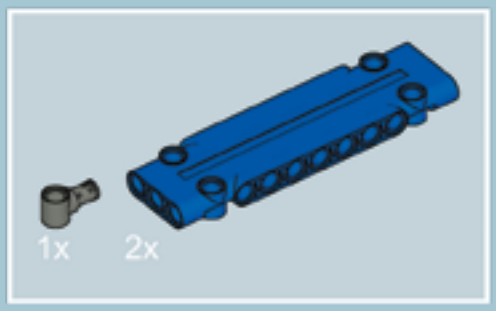

1x
8x
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103



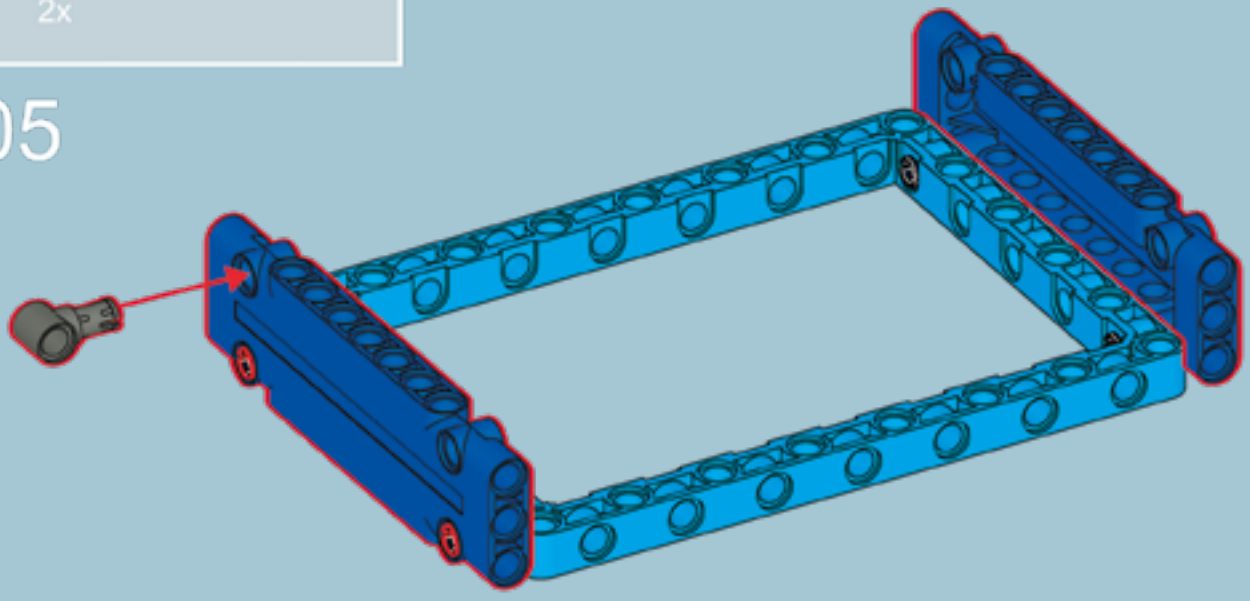


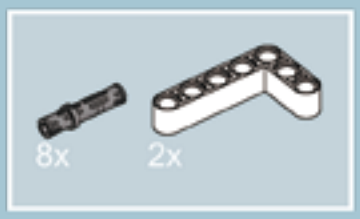
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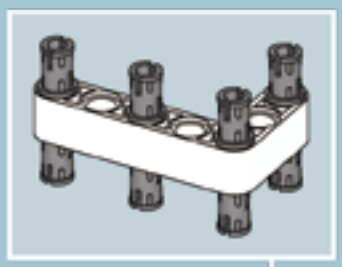




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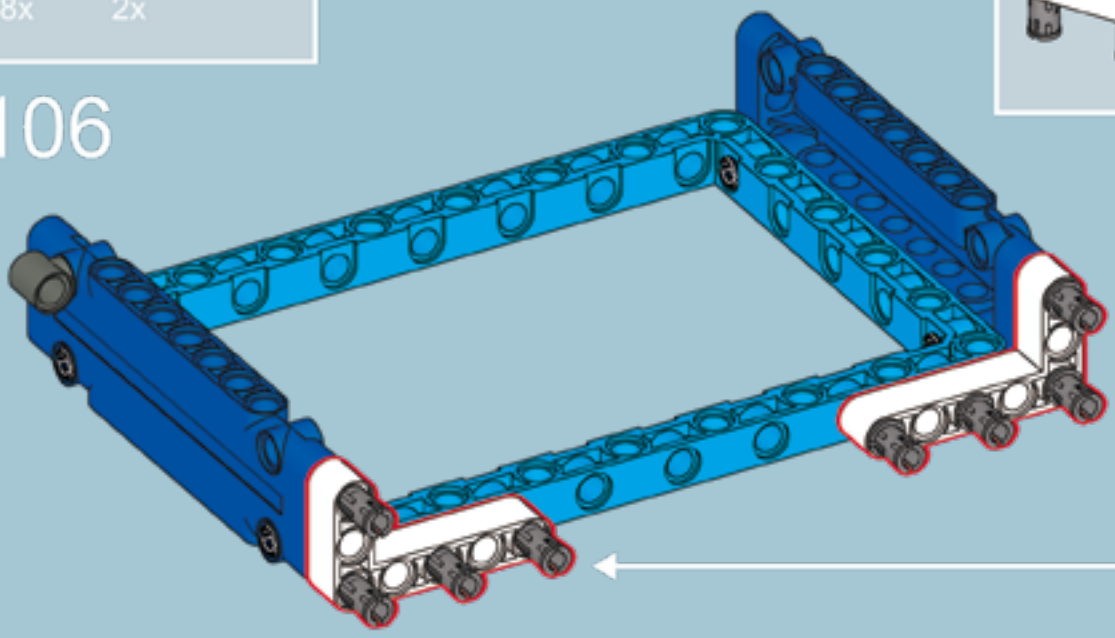




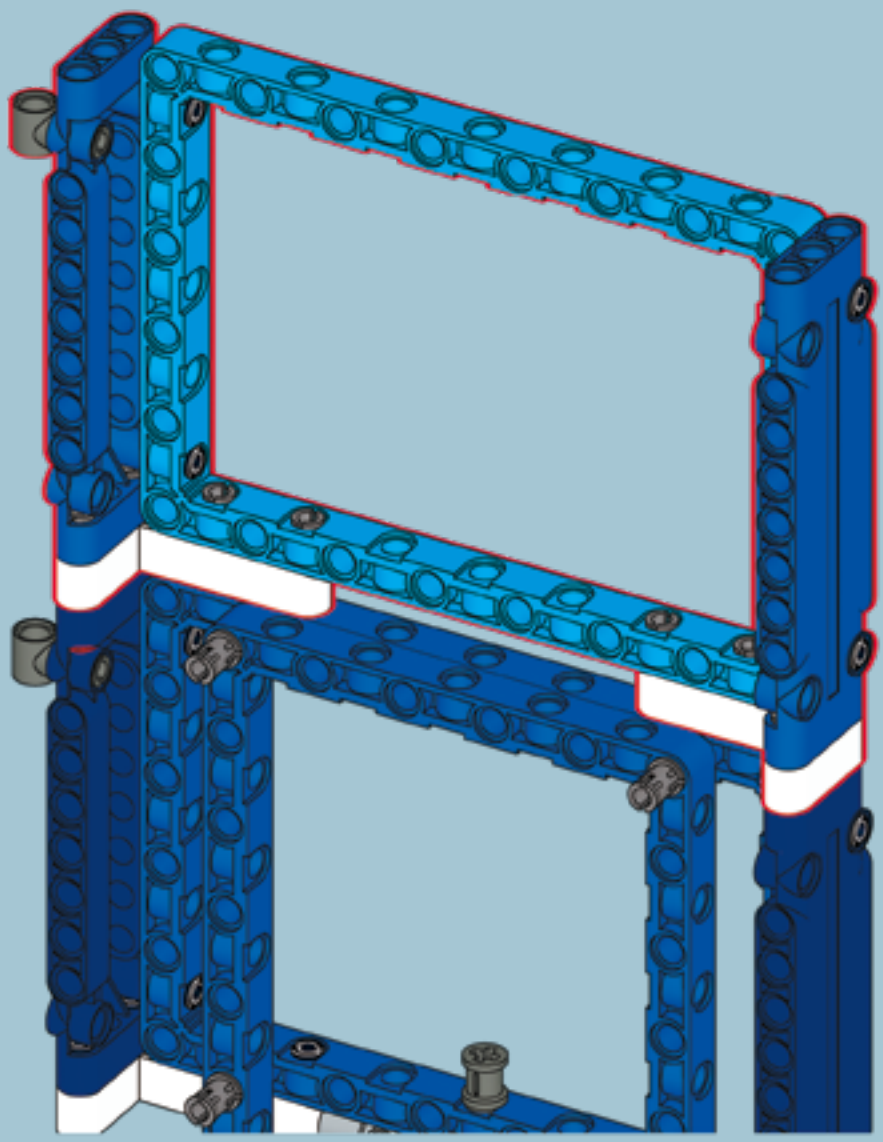


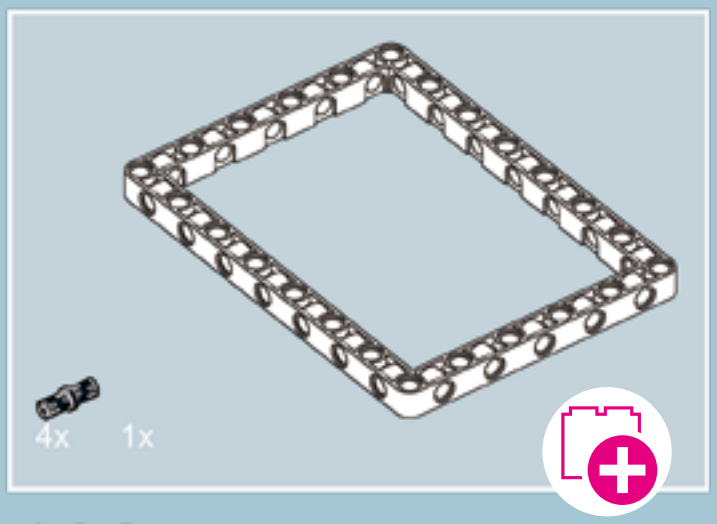
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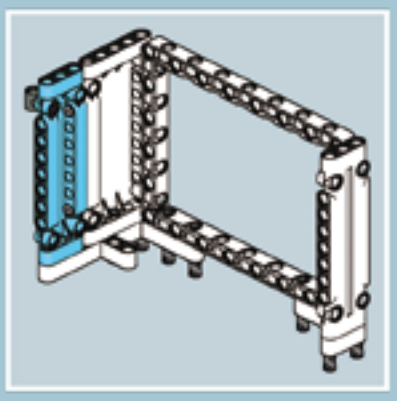
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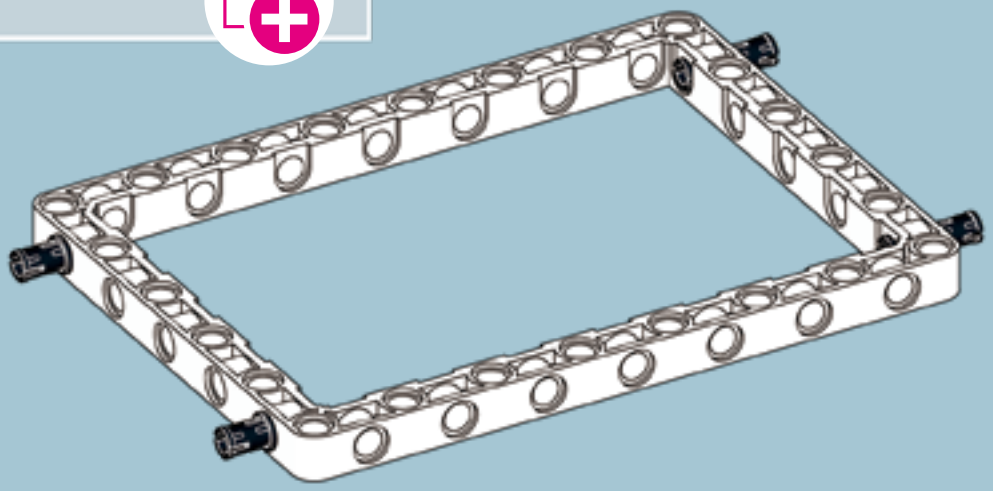
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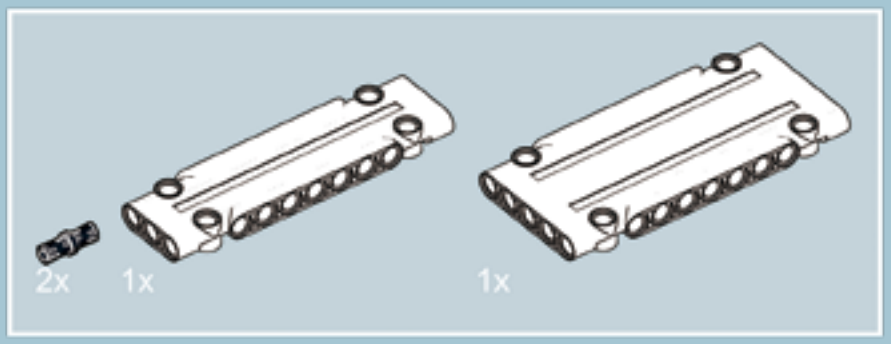




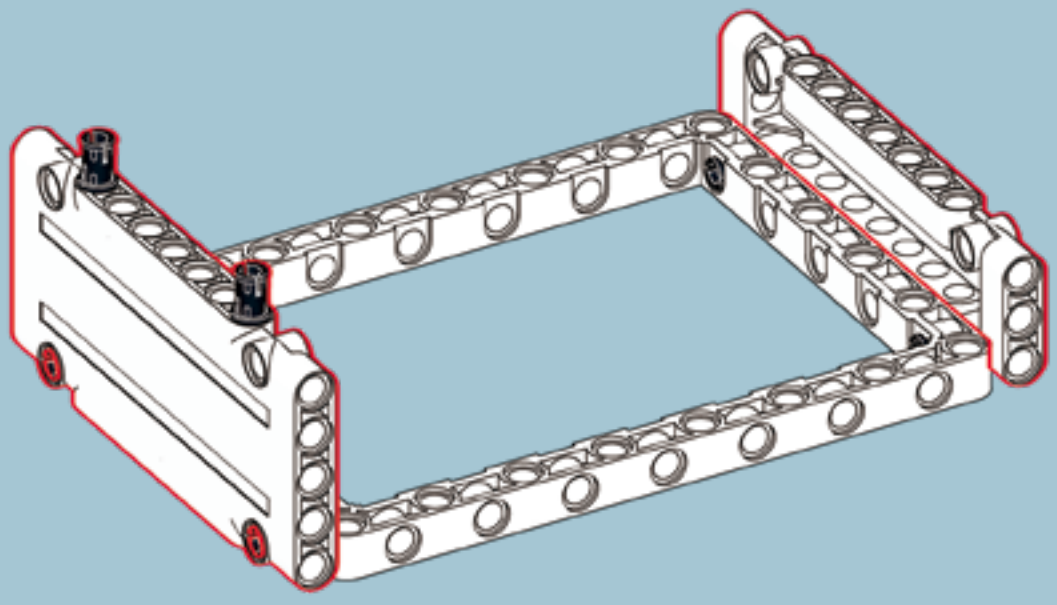


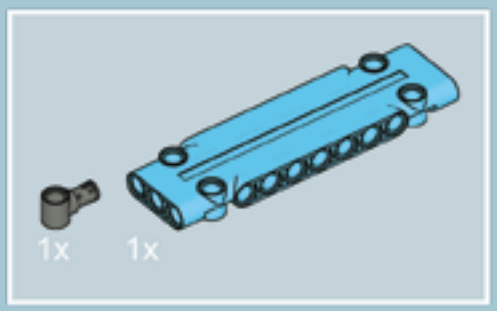
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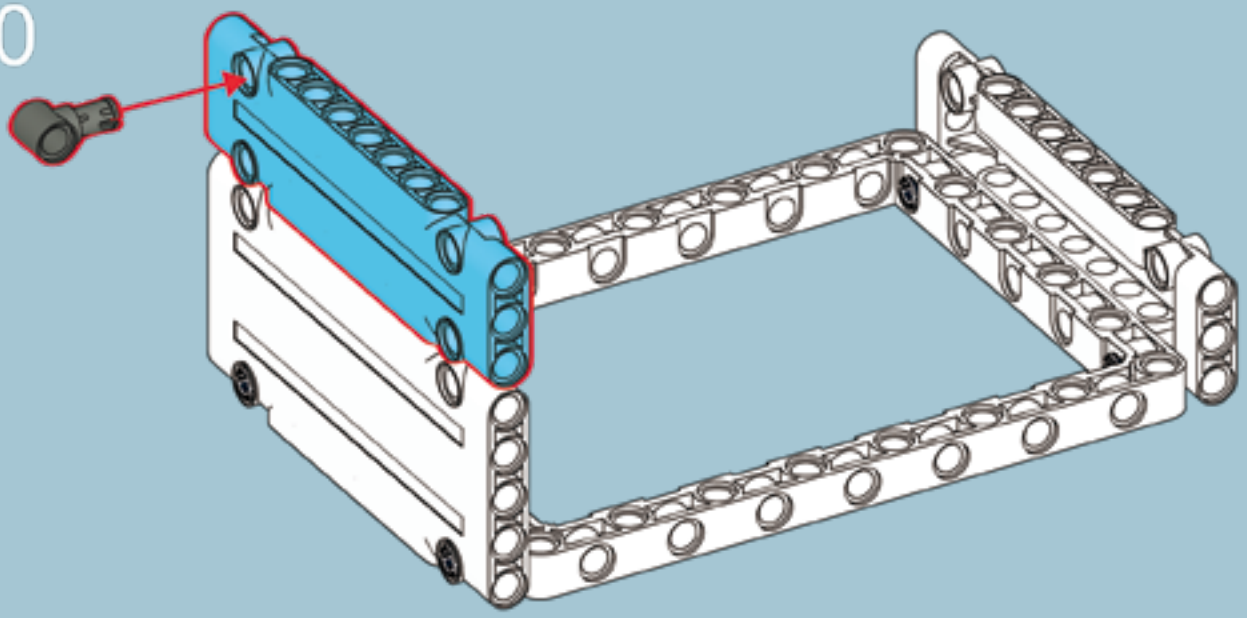


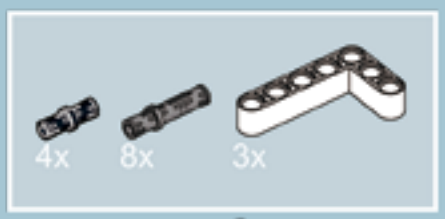
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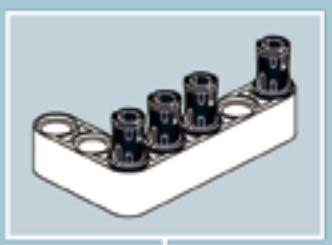




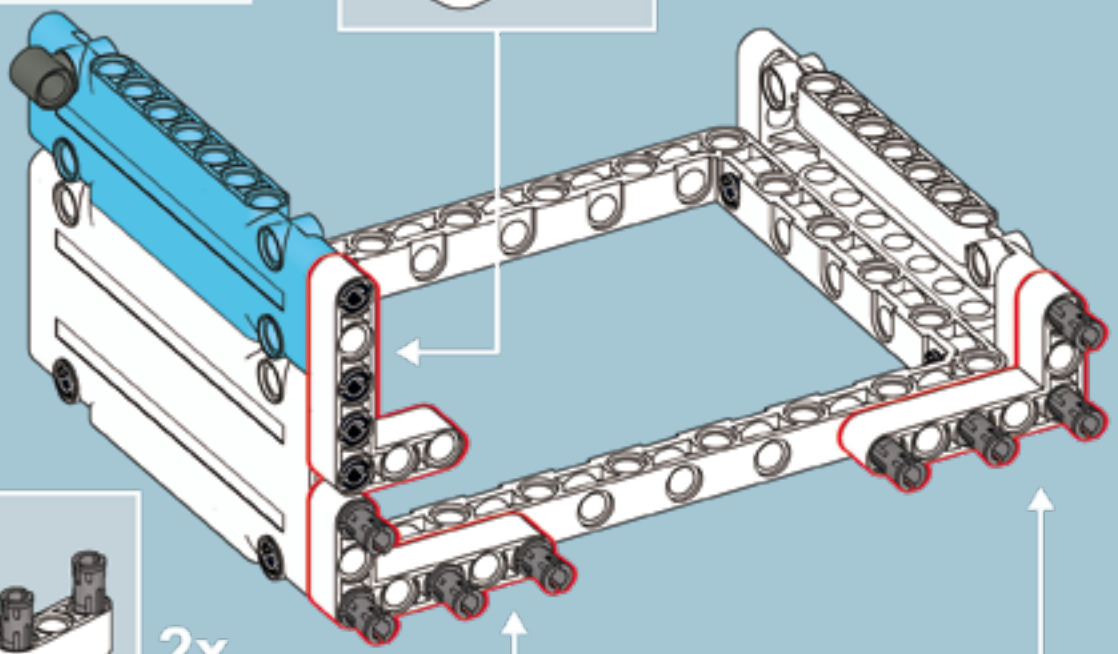
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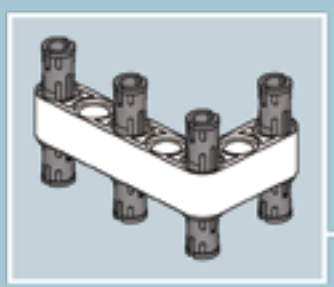






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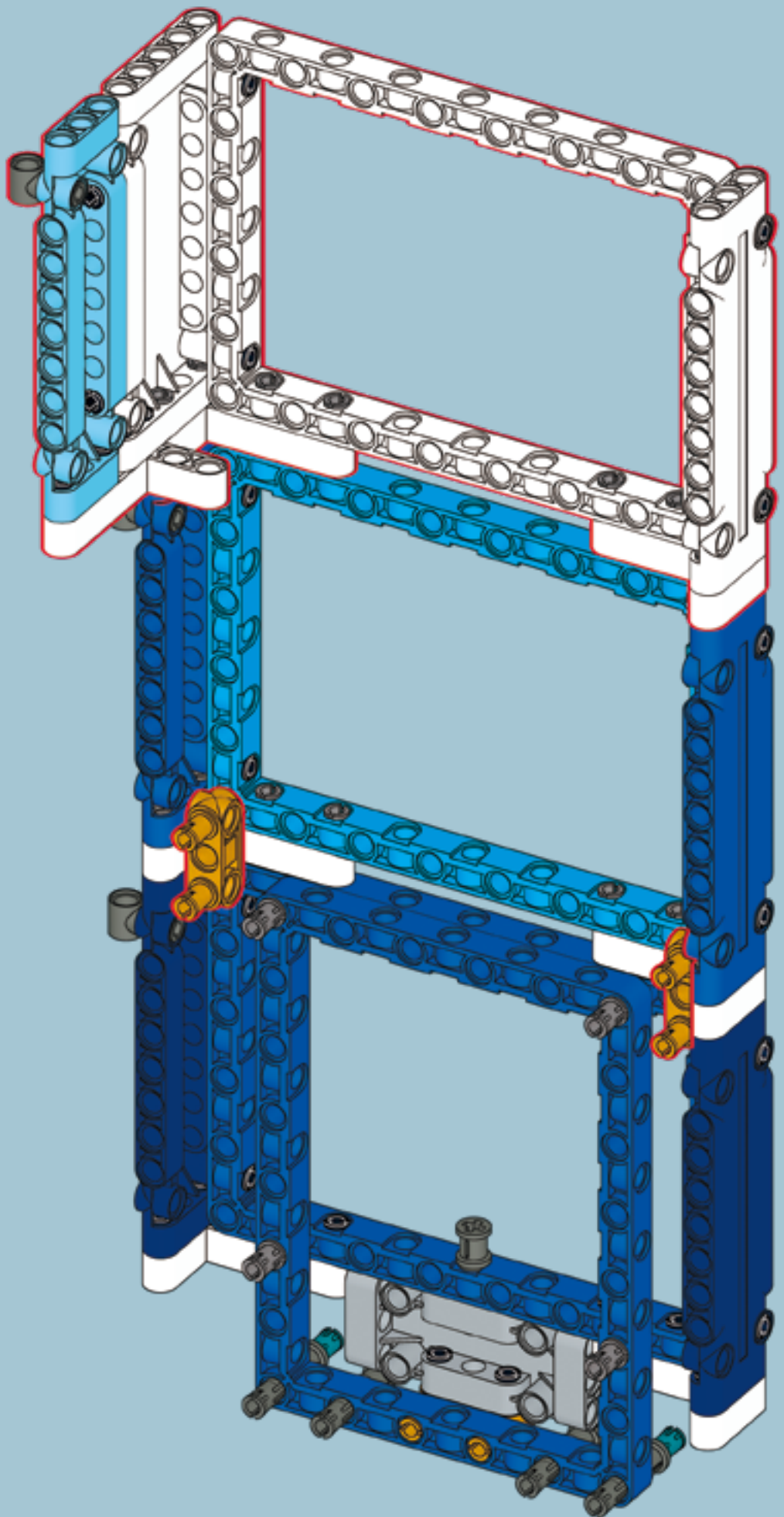


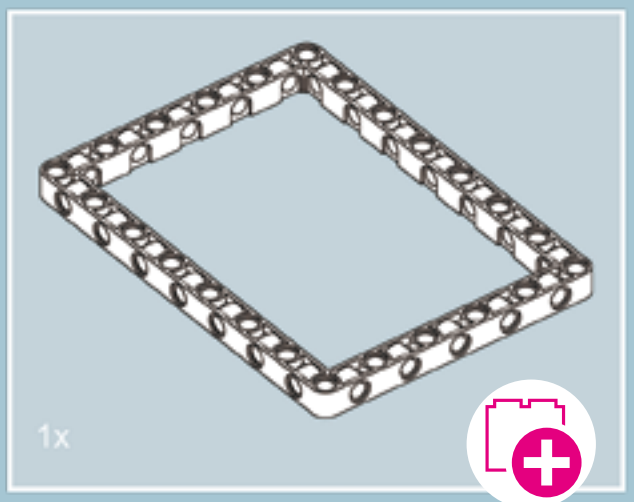


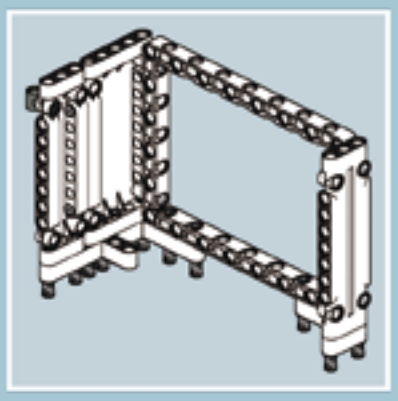
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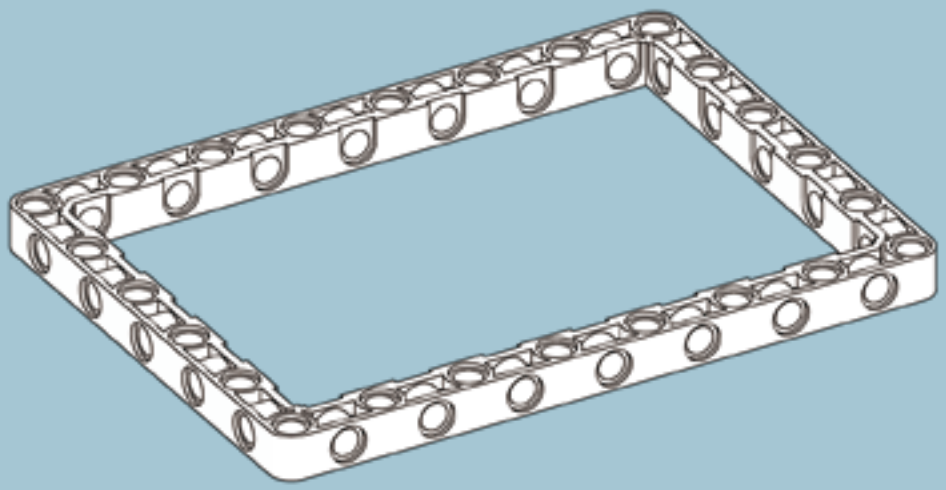
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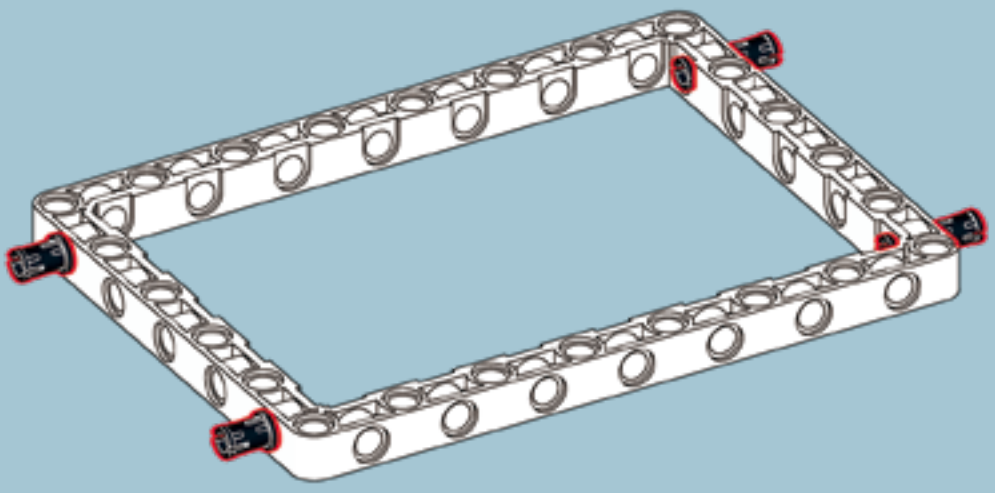


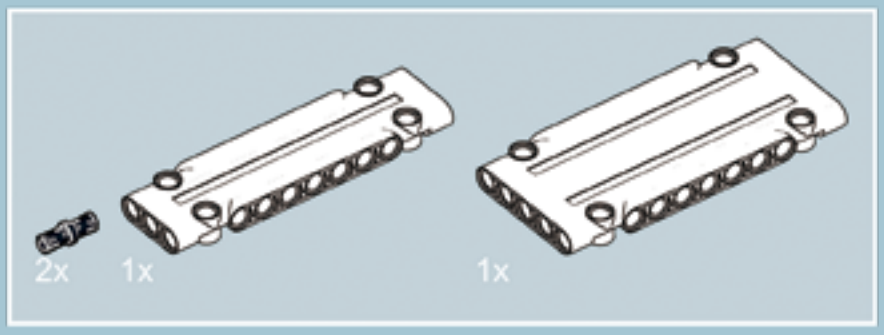
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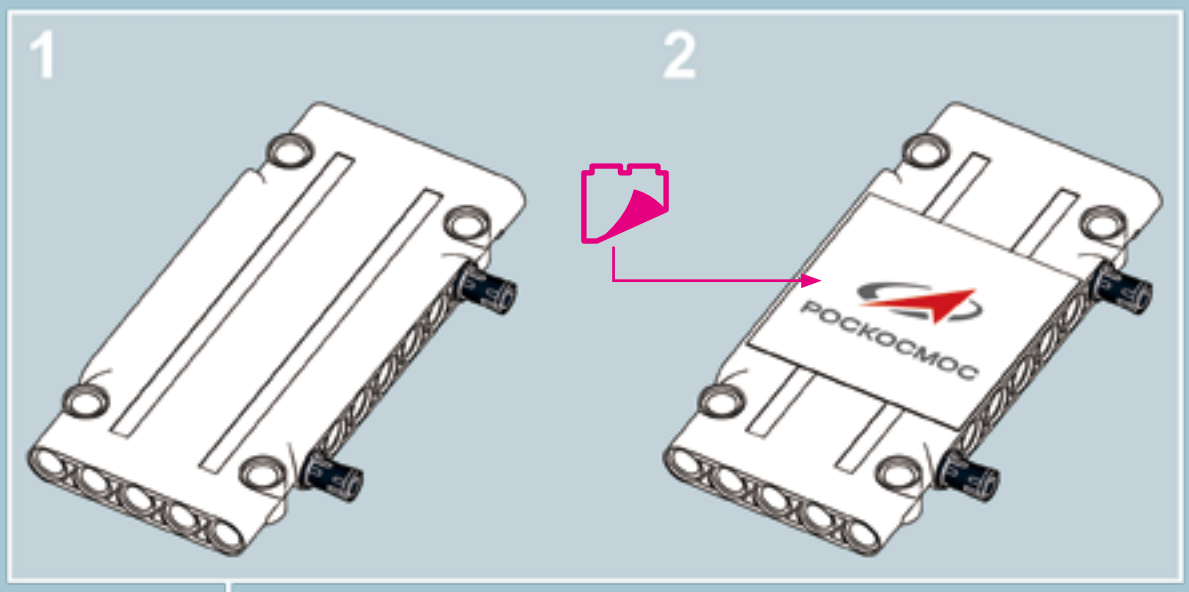


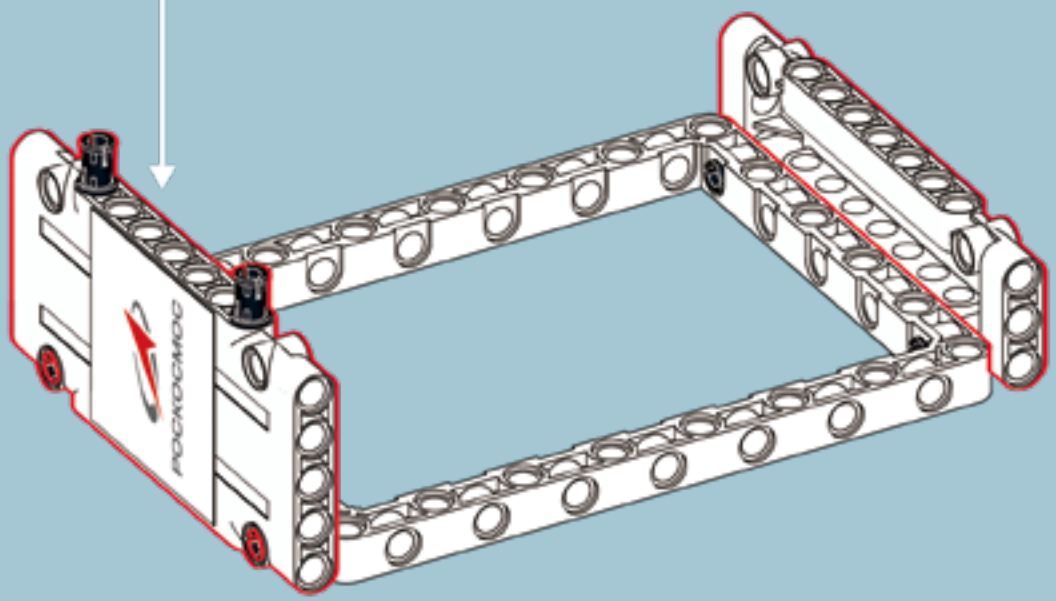
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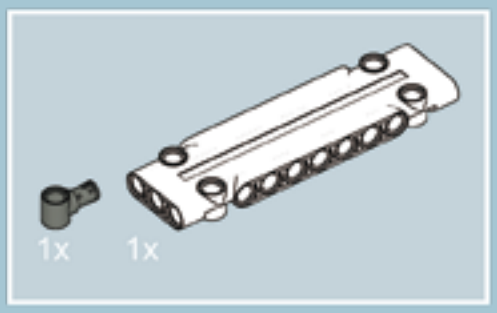




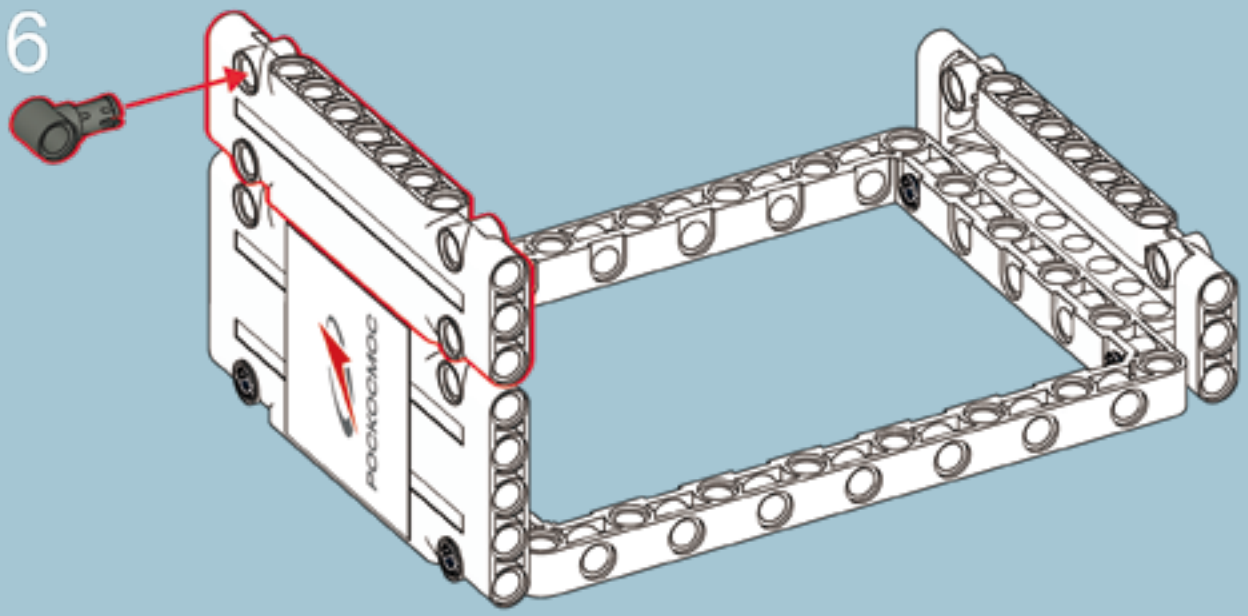
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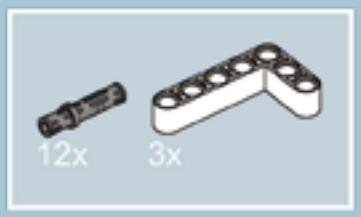


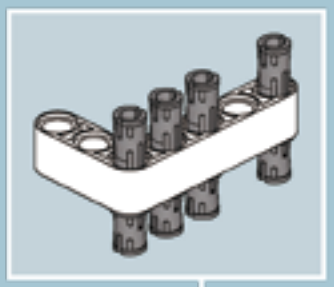




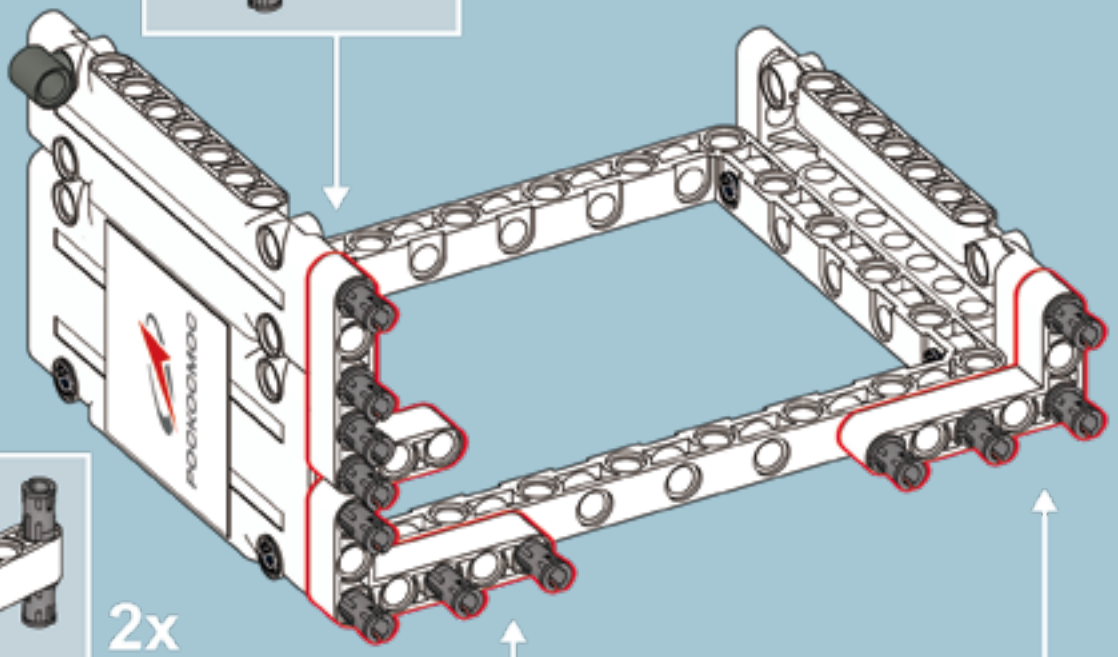
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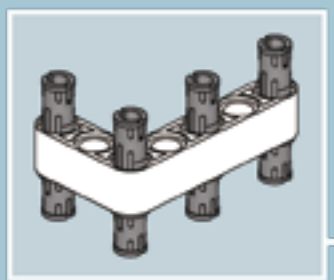






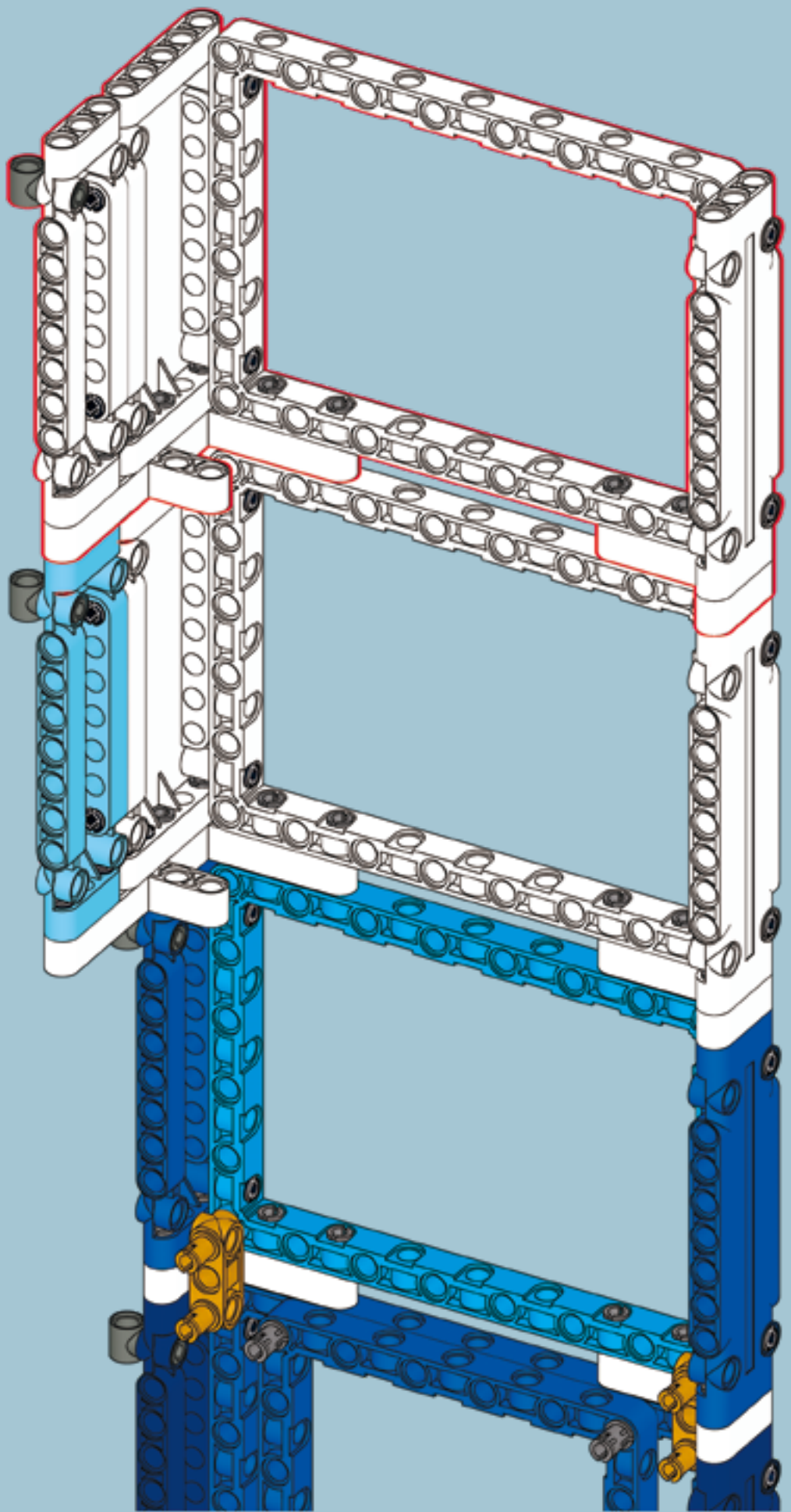
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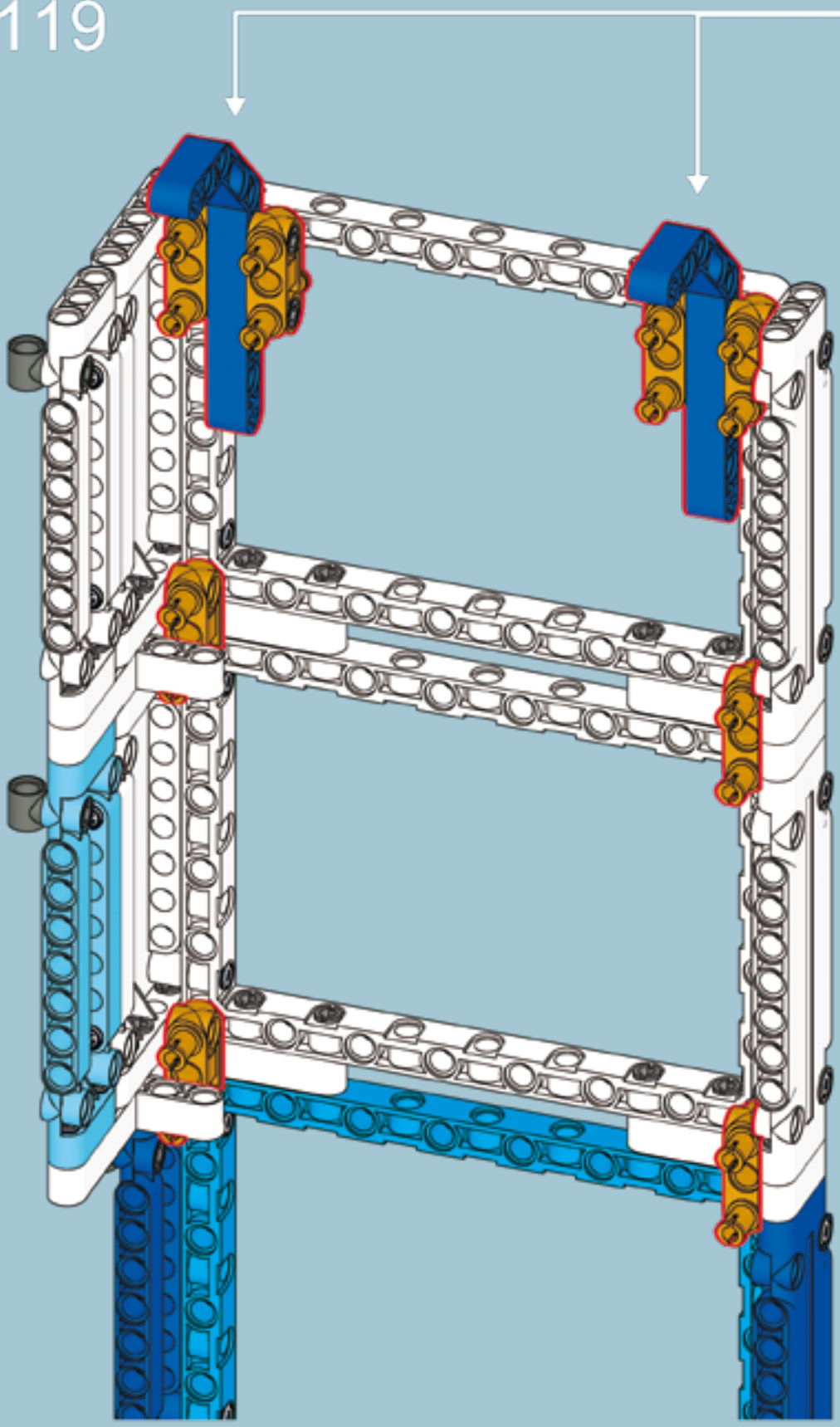
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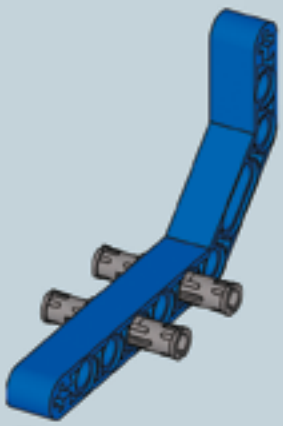




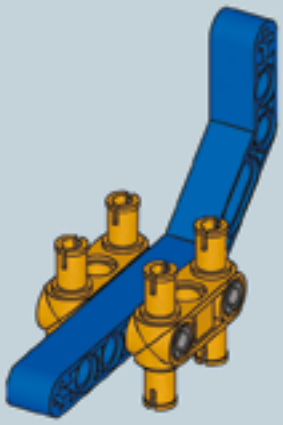
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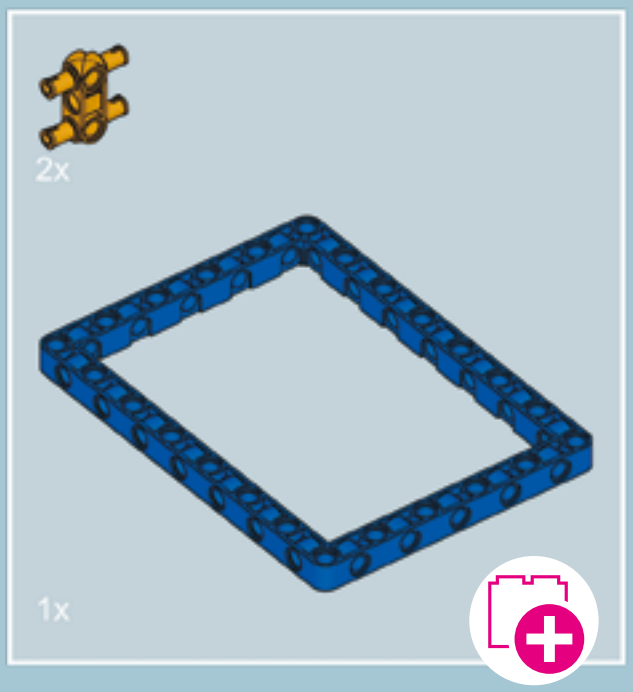
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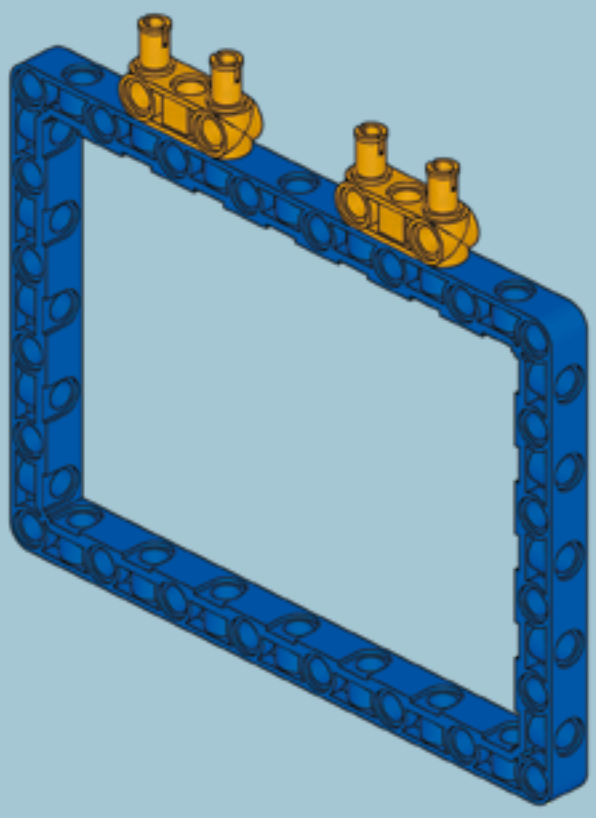
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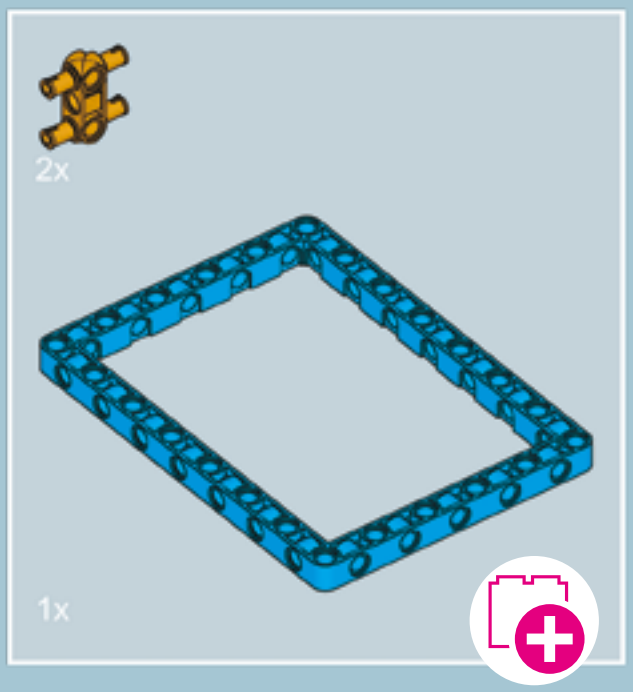


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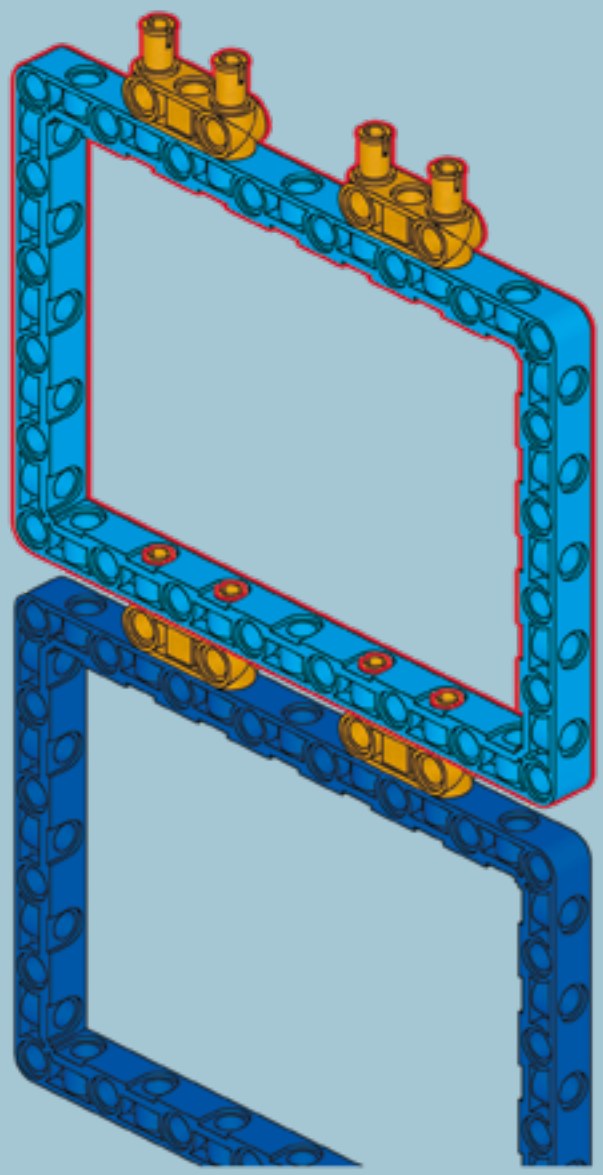


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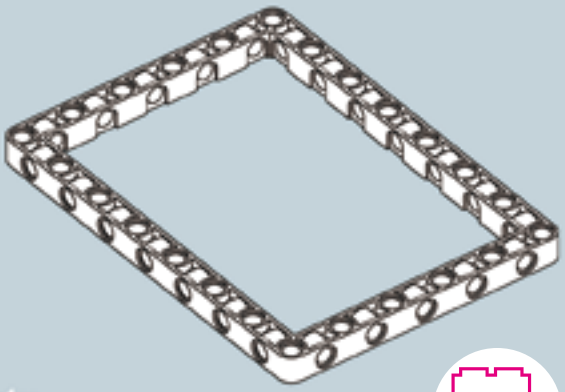


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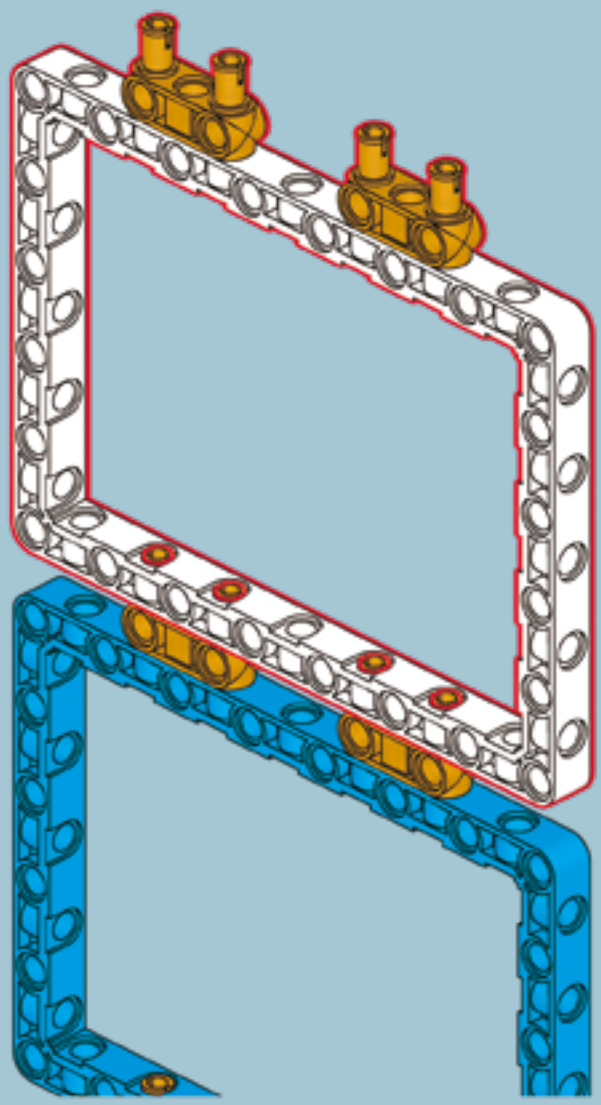


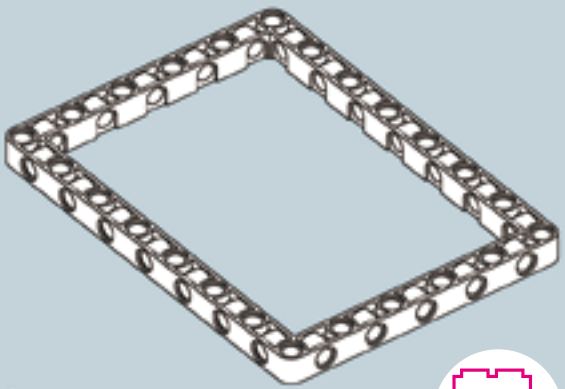
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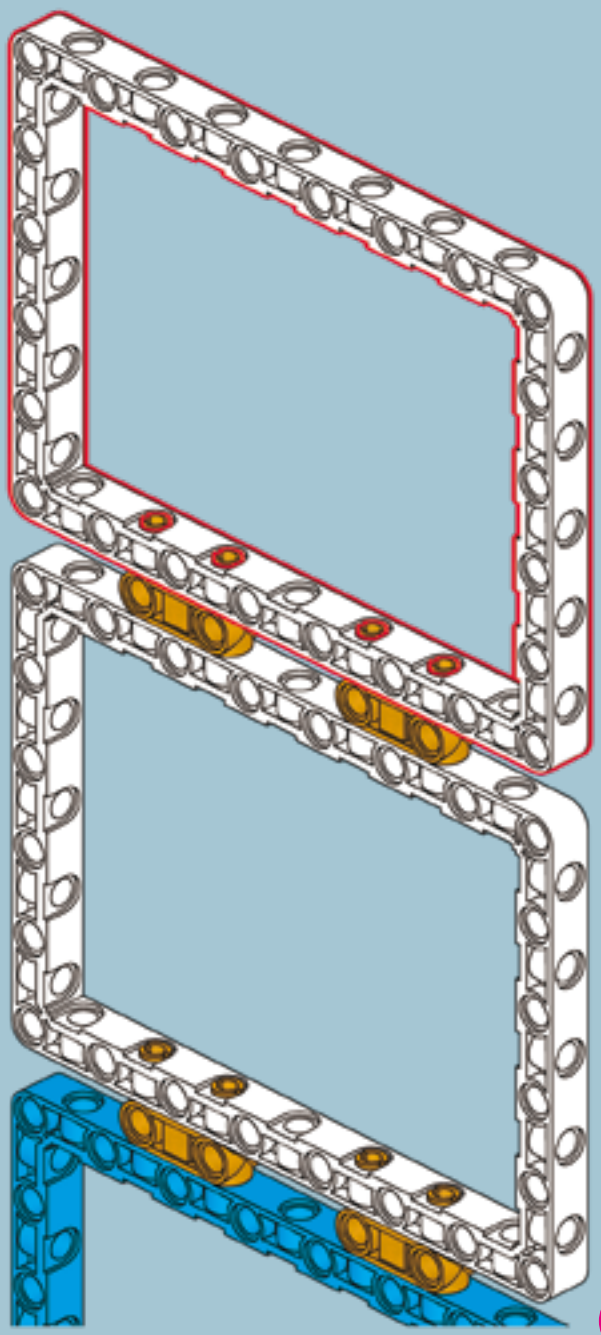
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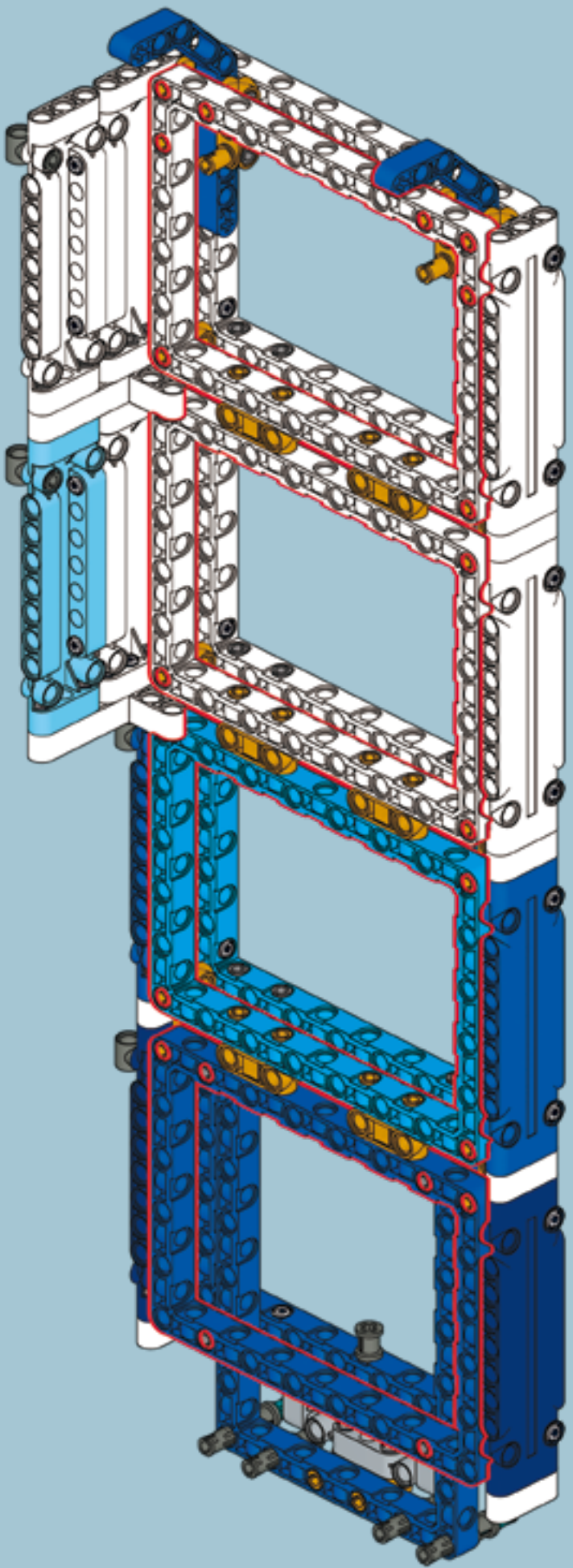


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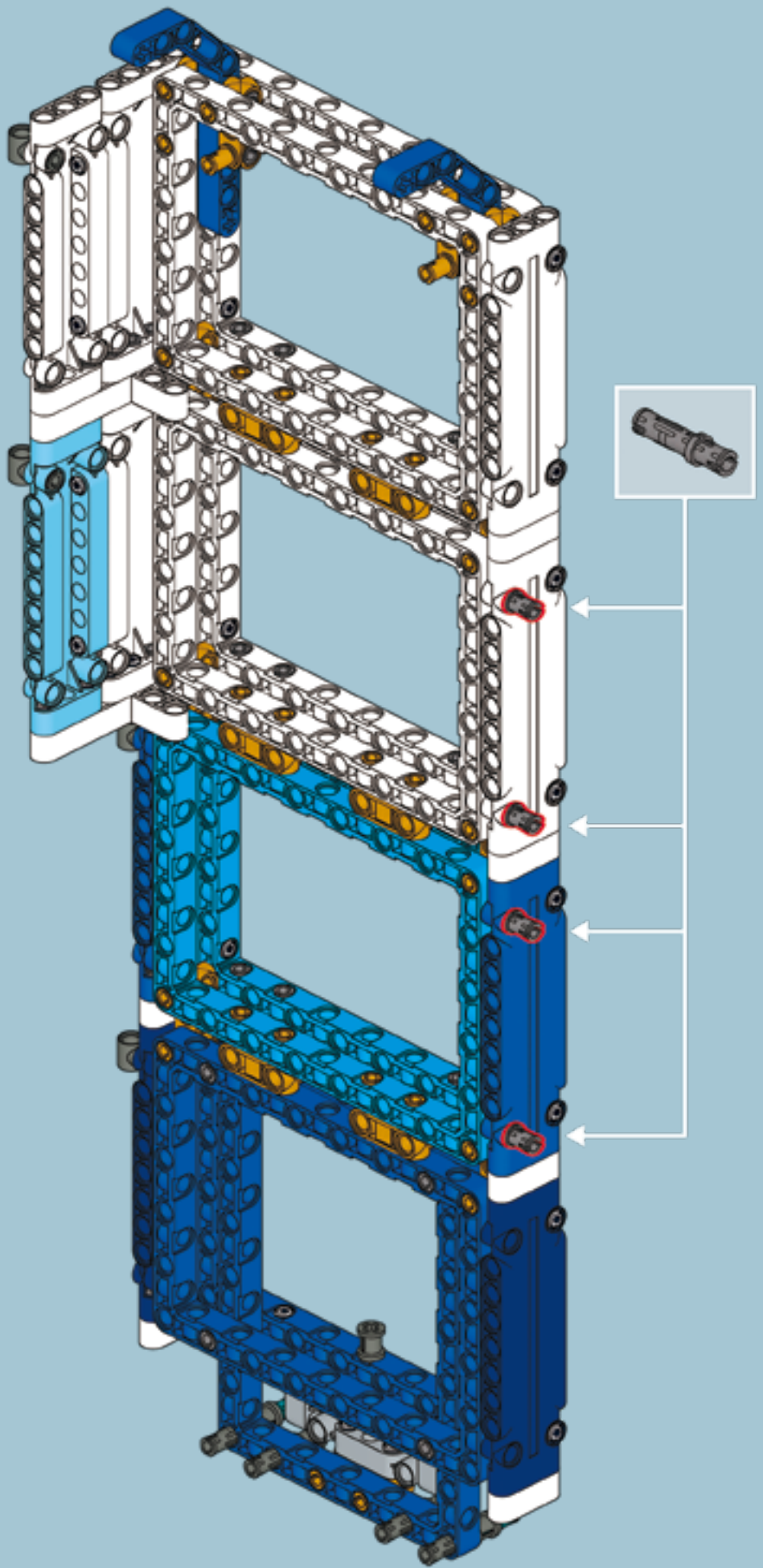


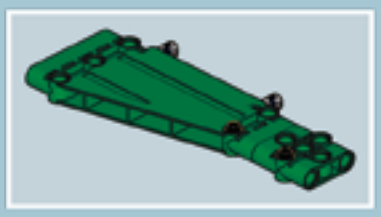
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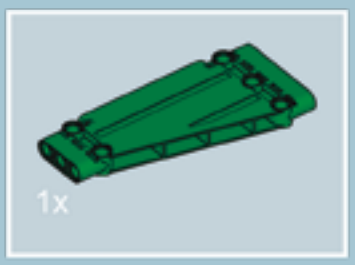


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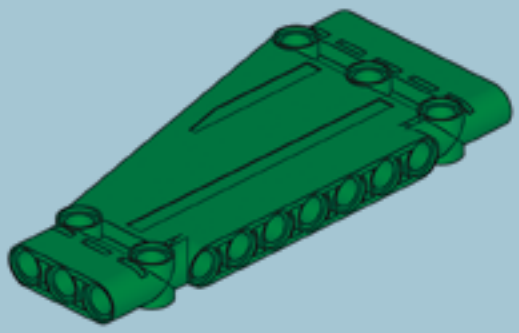




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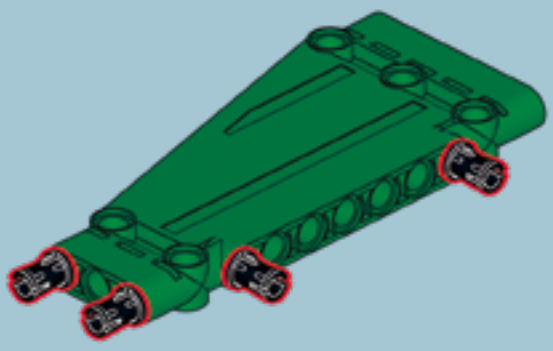


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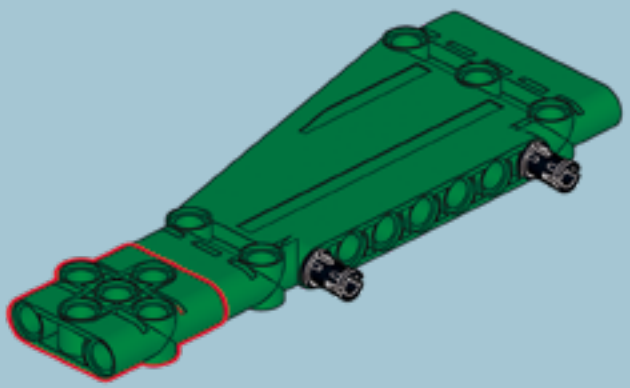


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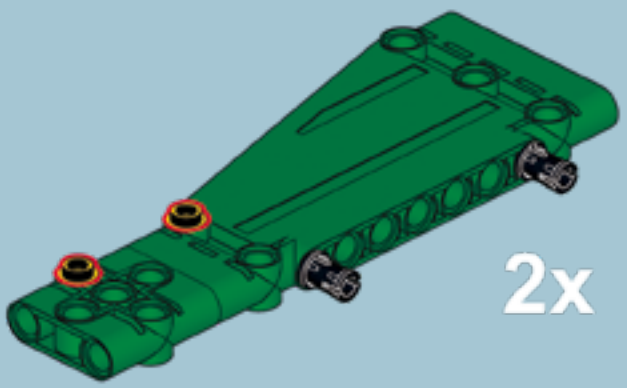


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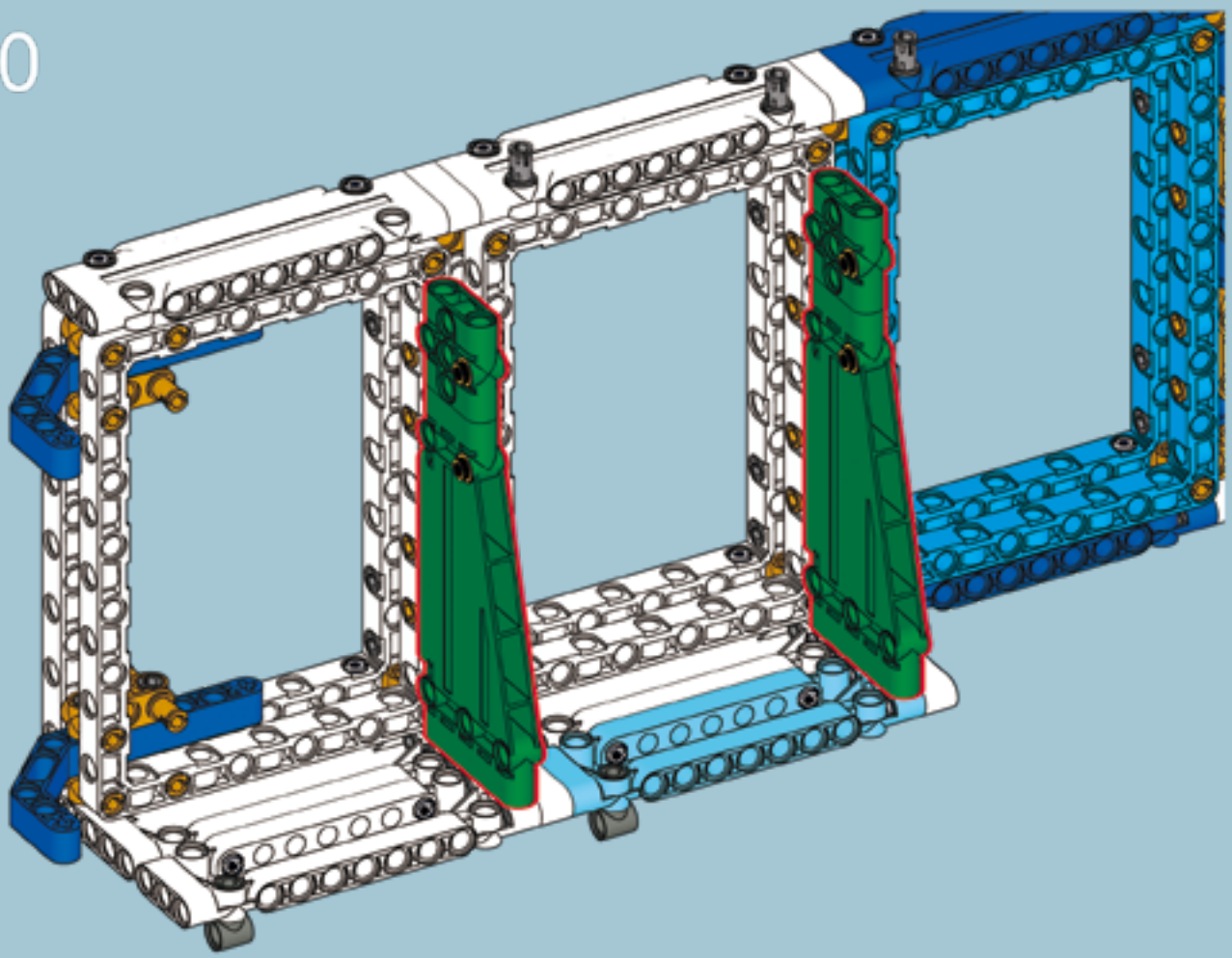


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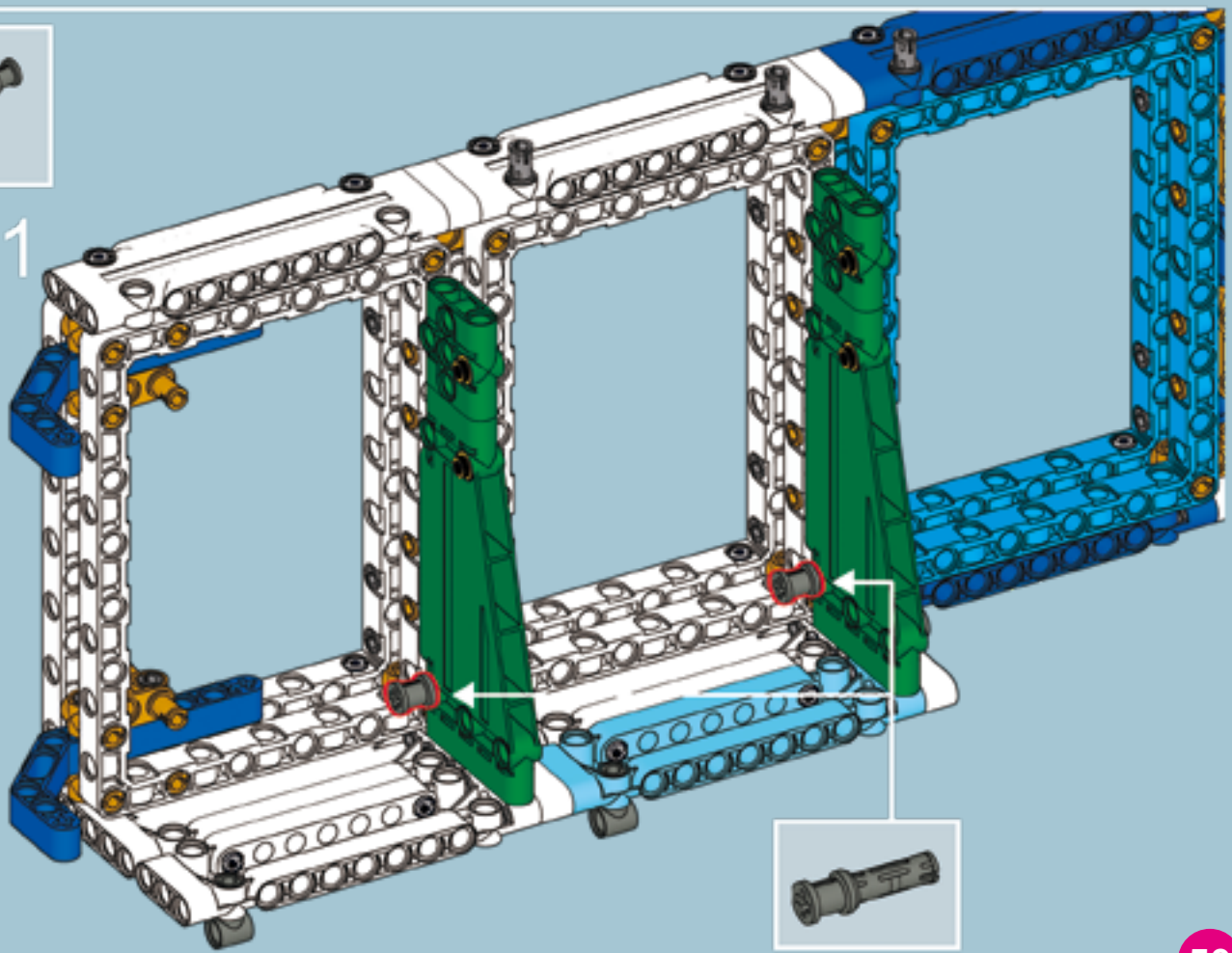
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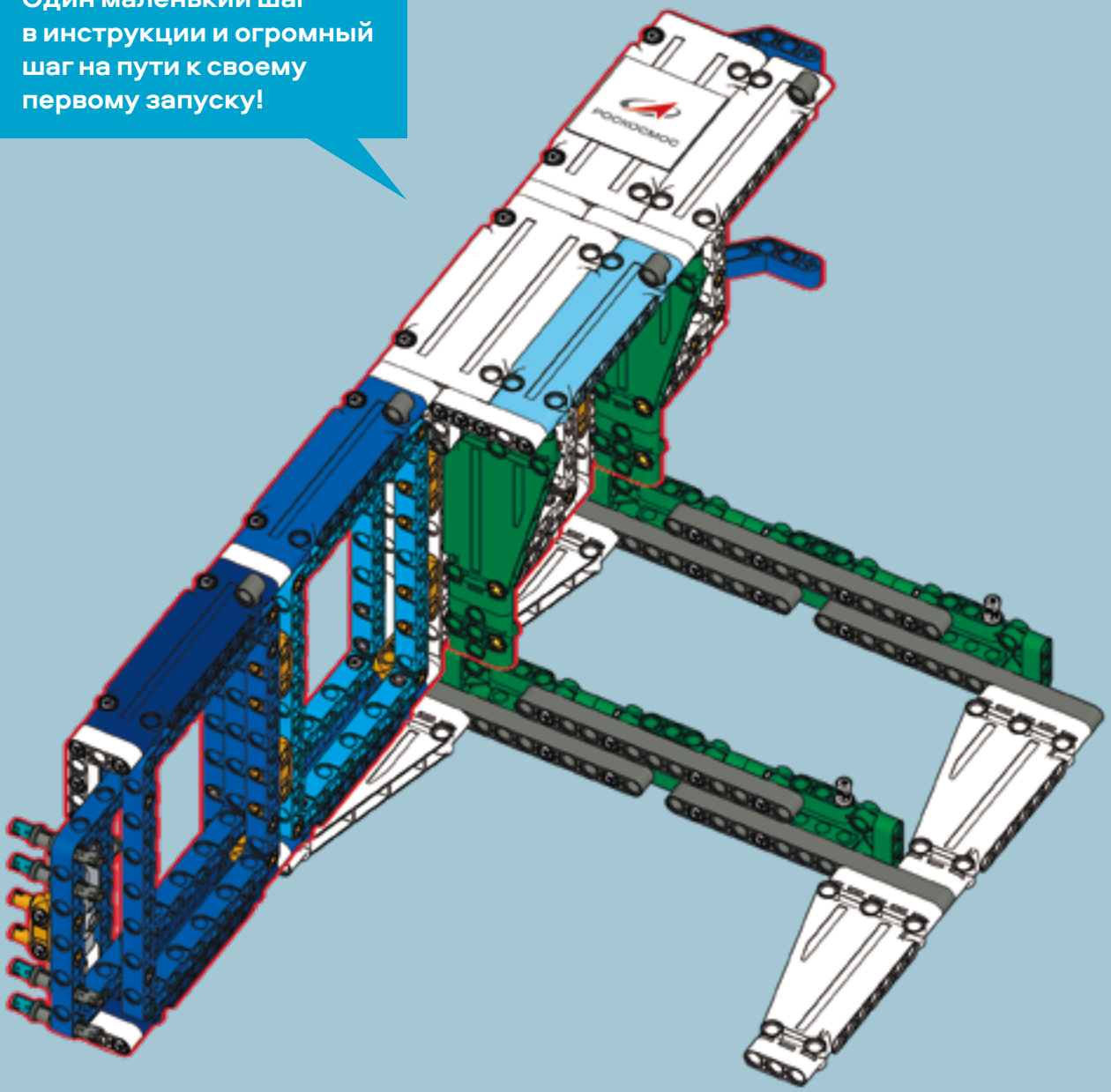


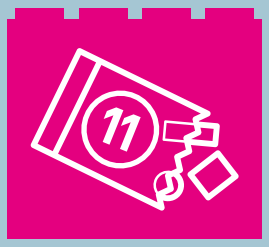
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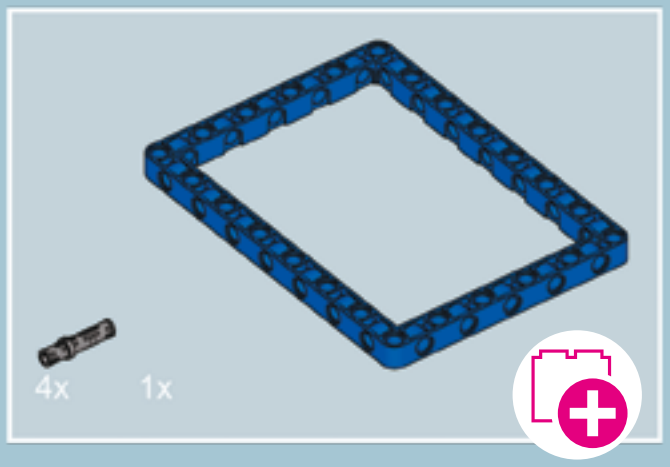
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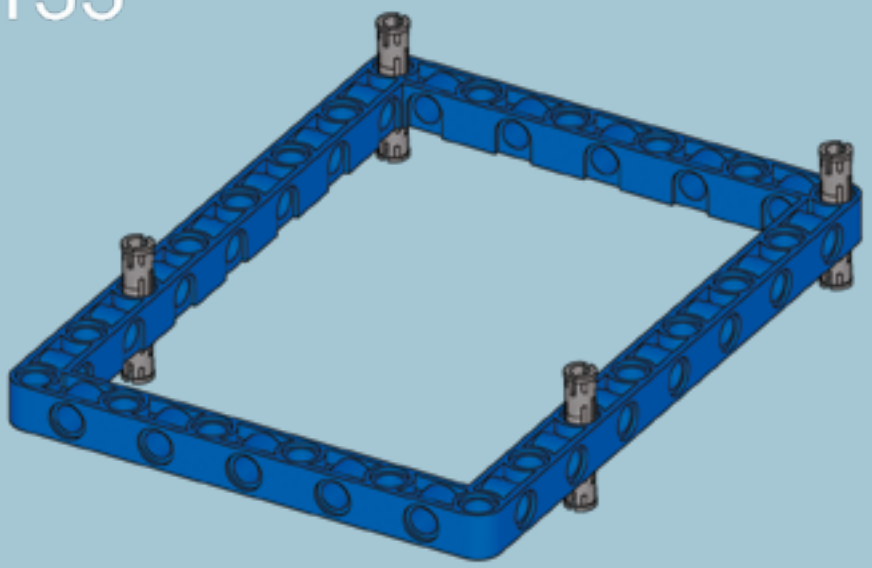
Один маленький шаг в инструкции и огромный шаг на пути к своему первому запуску!

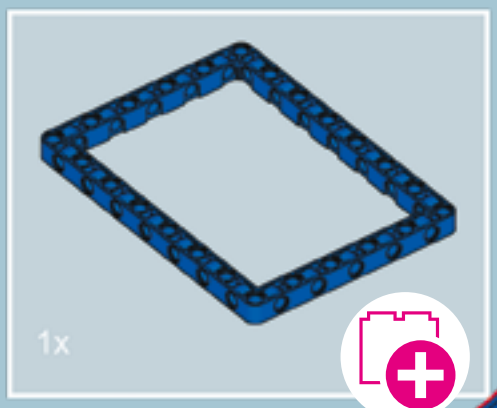




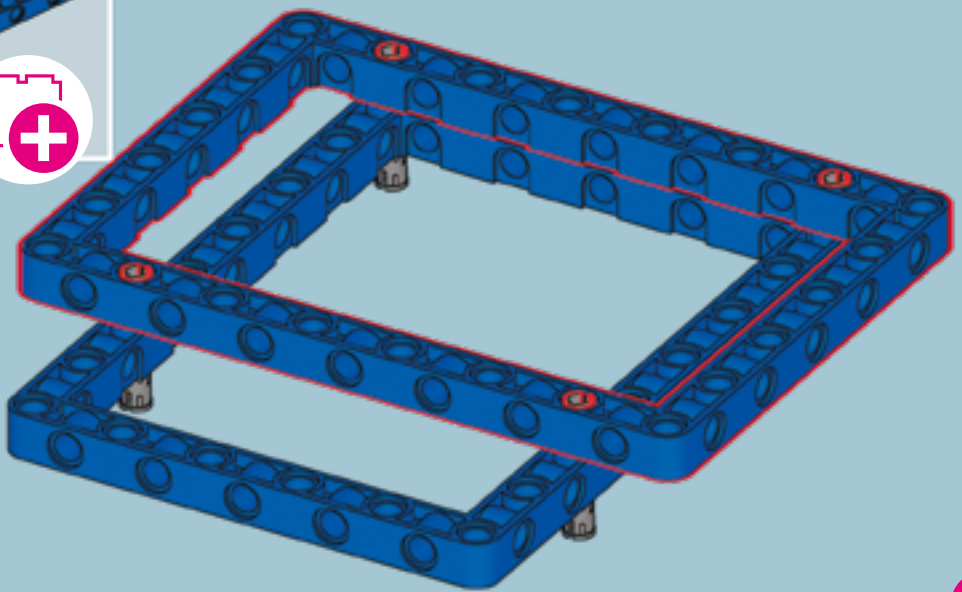


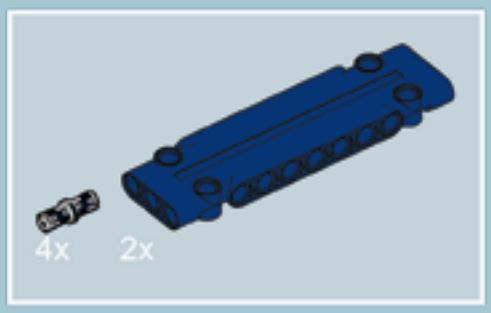
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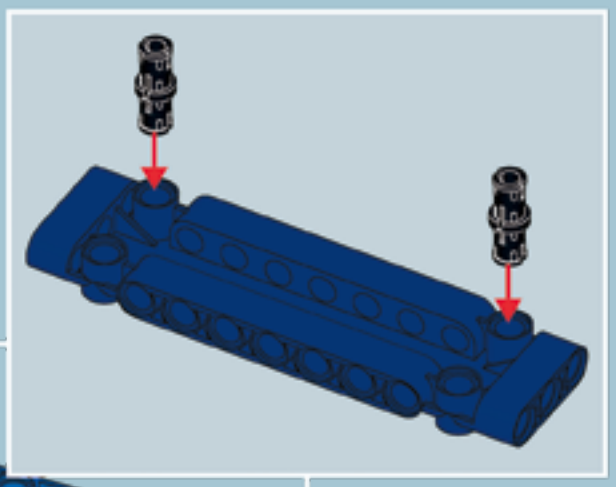


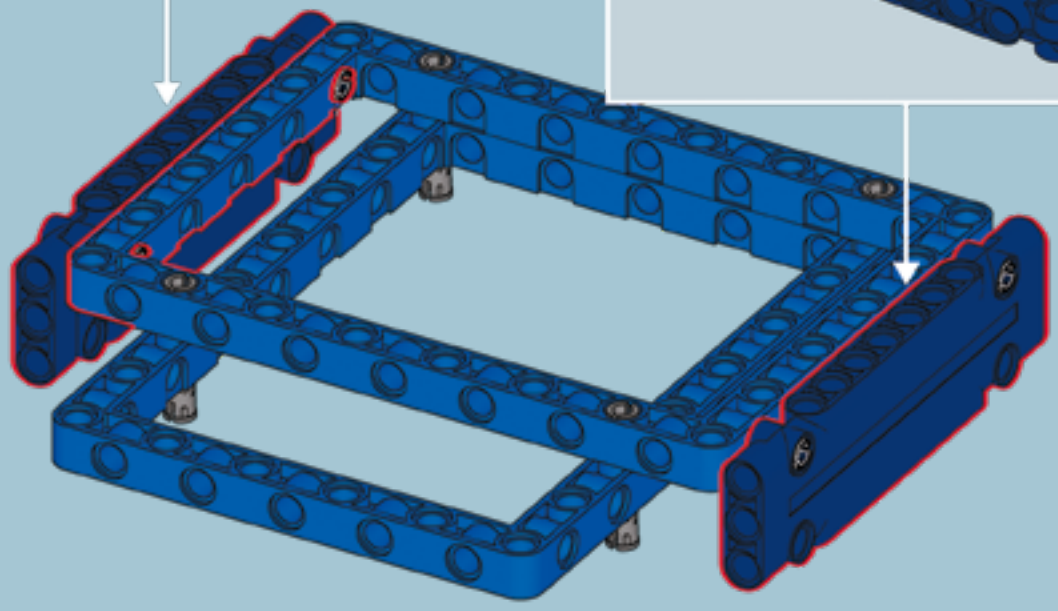
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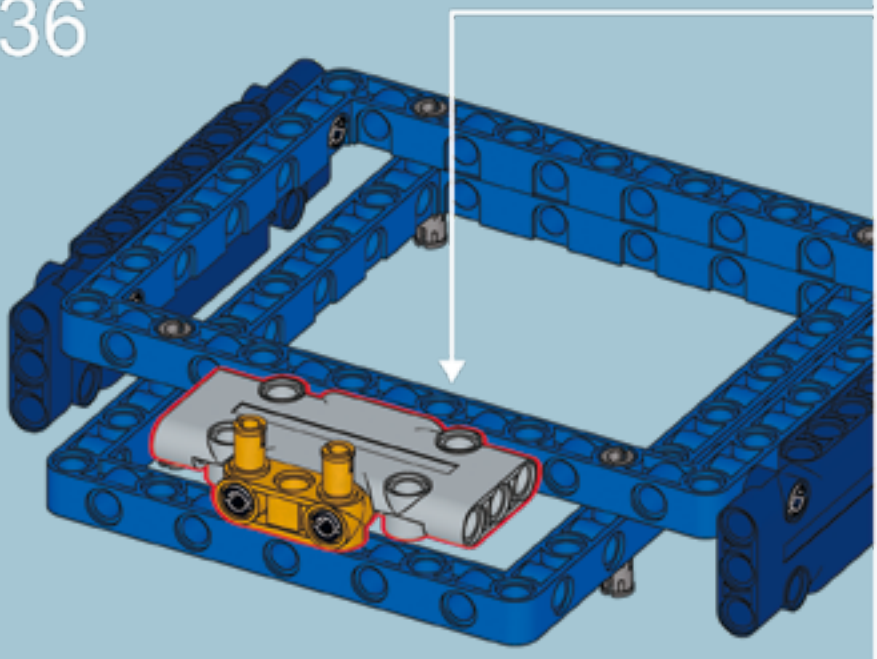
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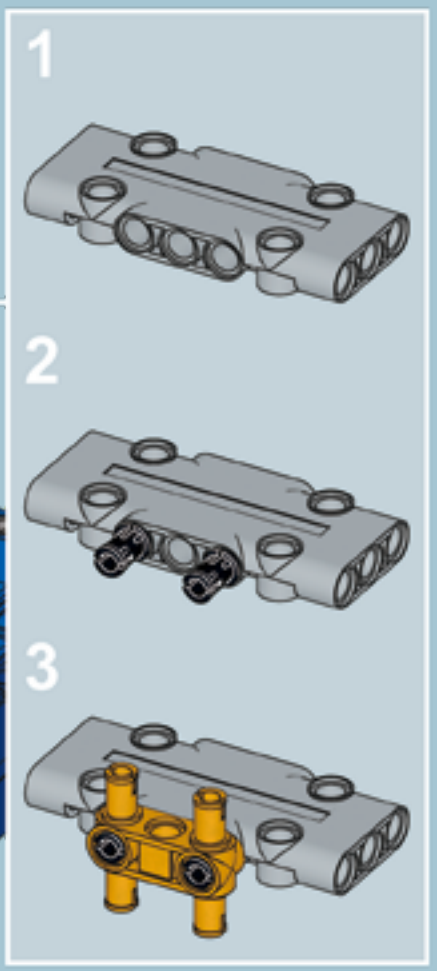






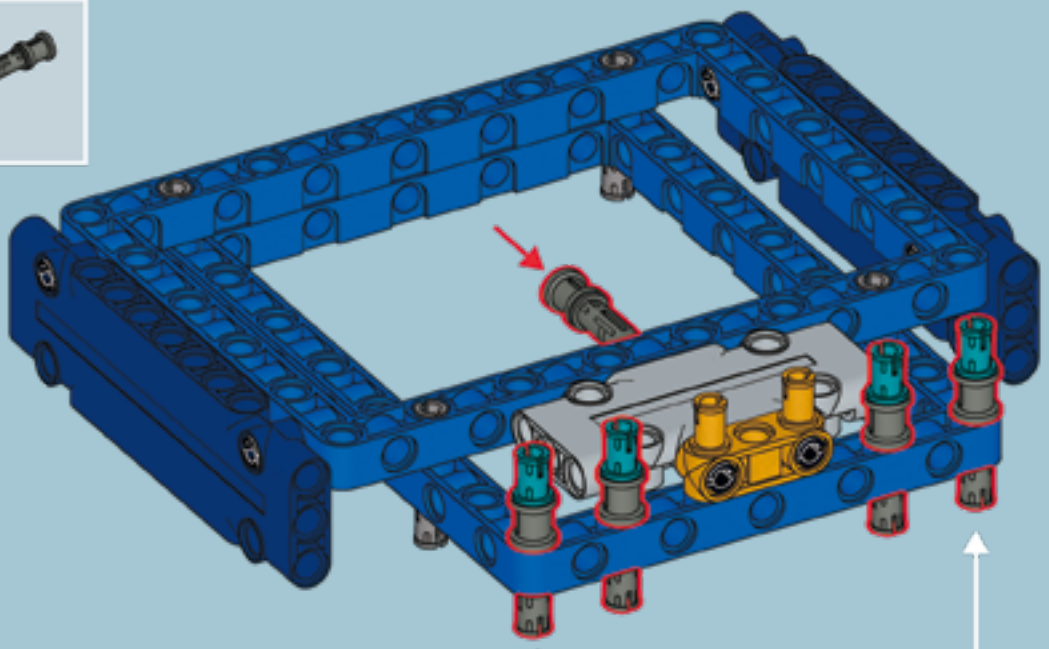
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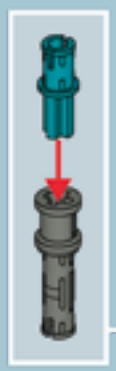




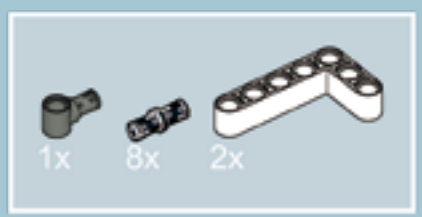


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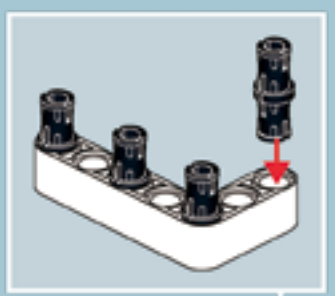


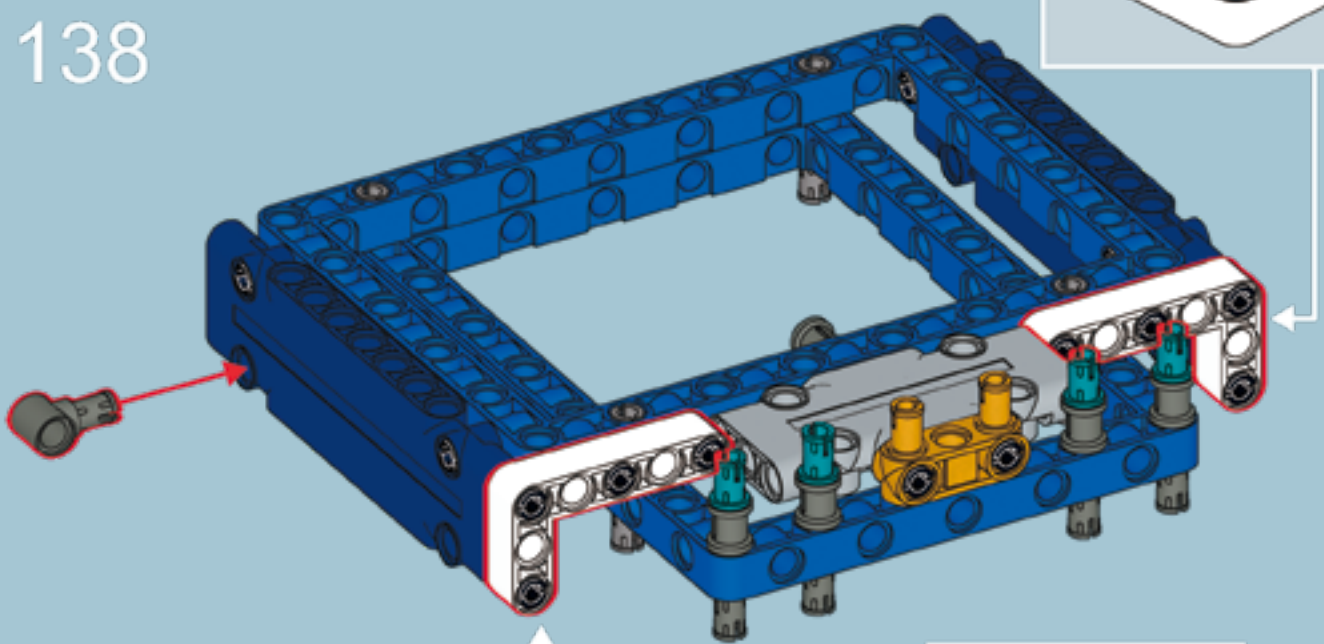


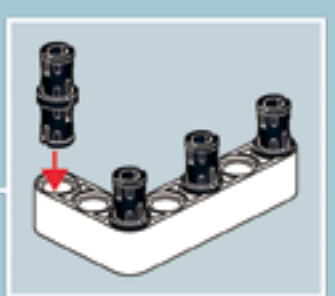
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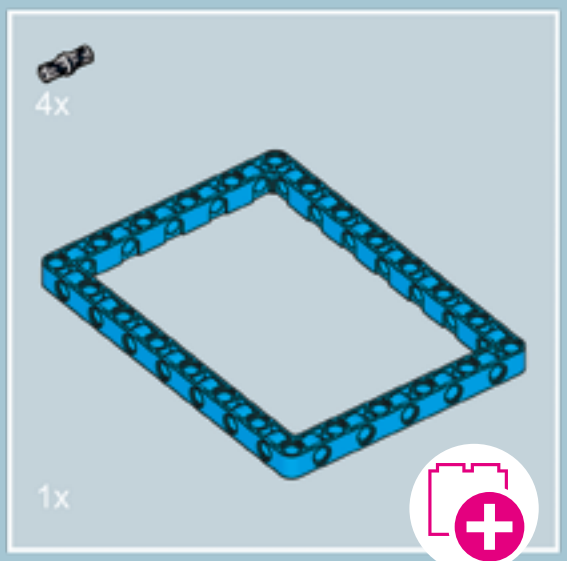


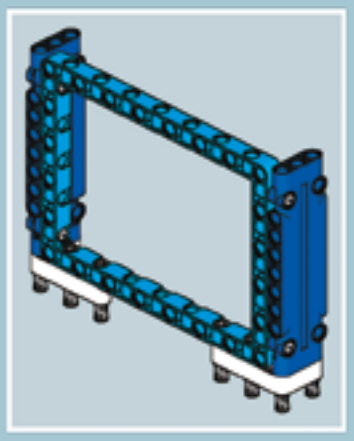
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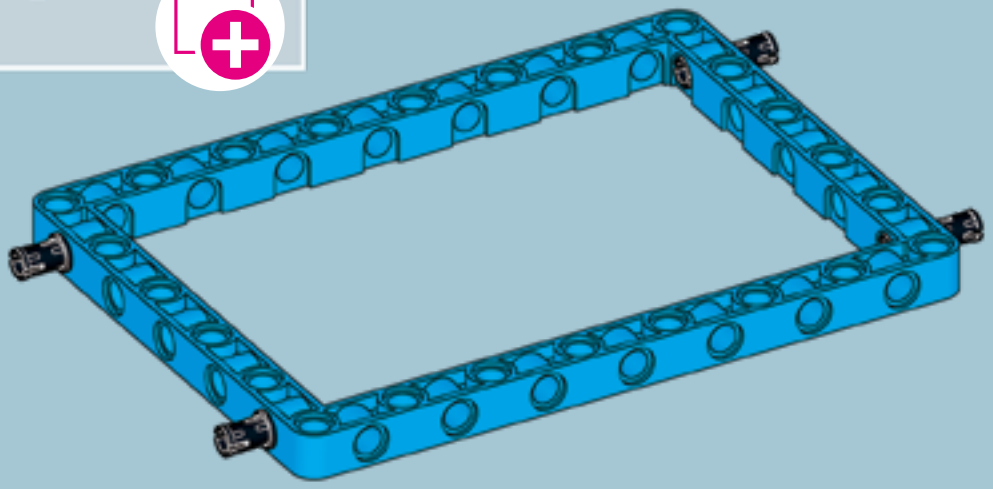


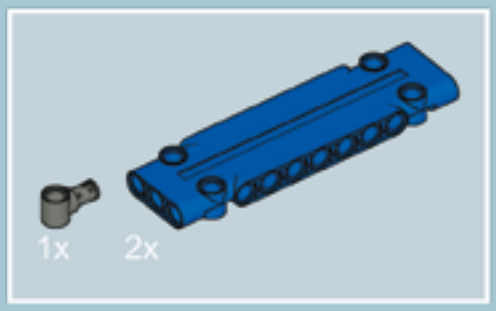




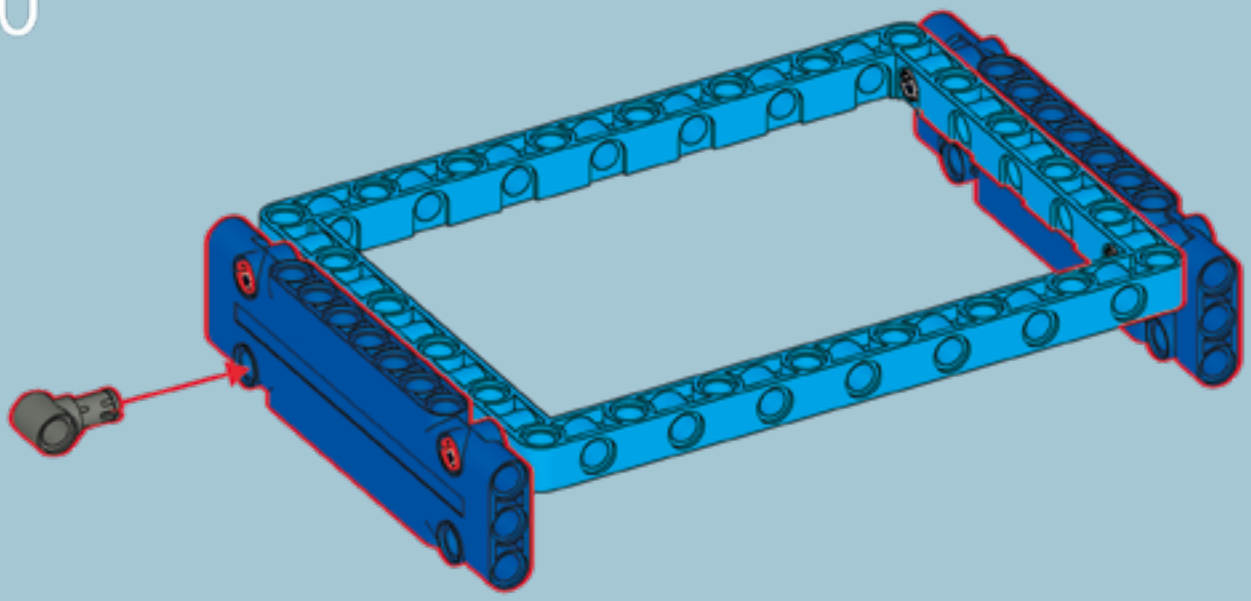


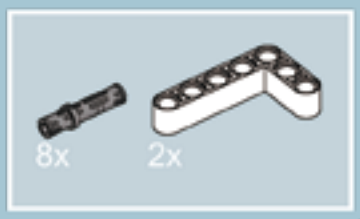
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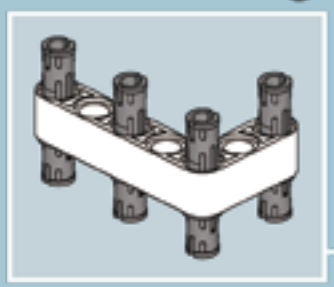


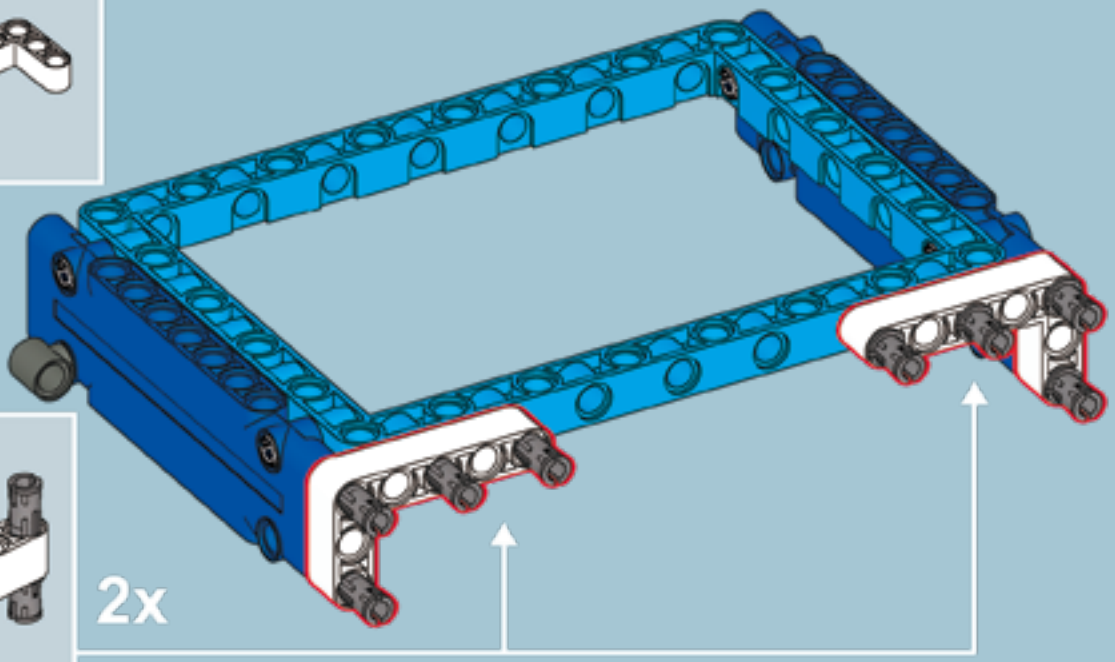
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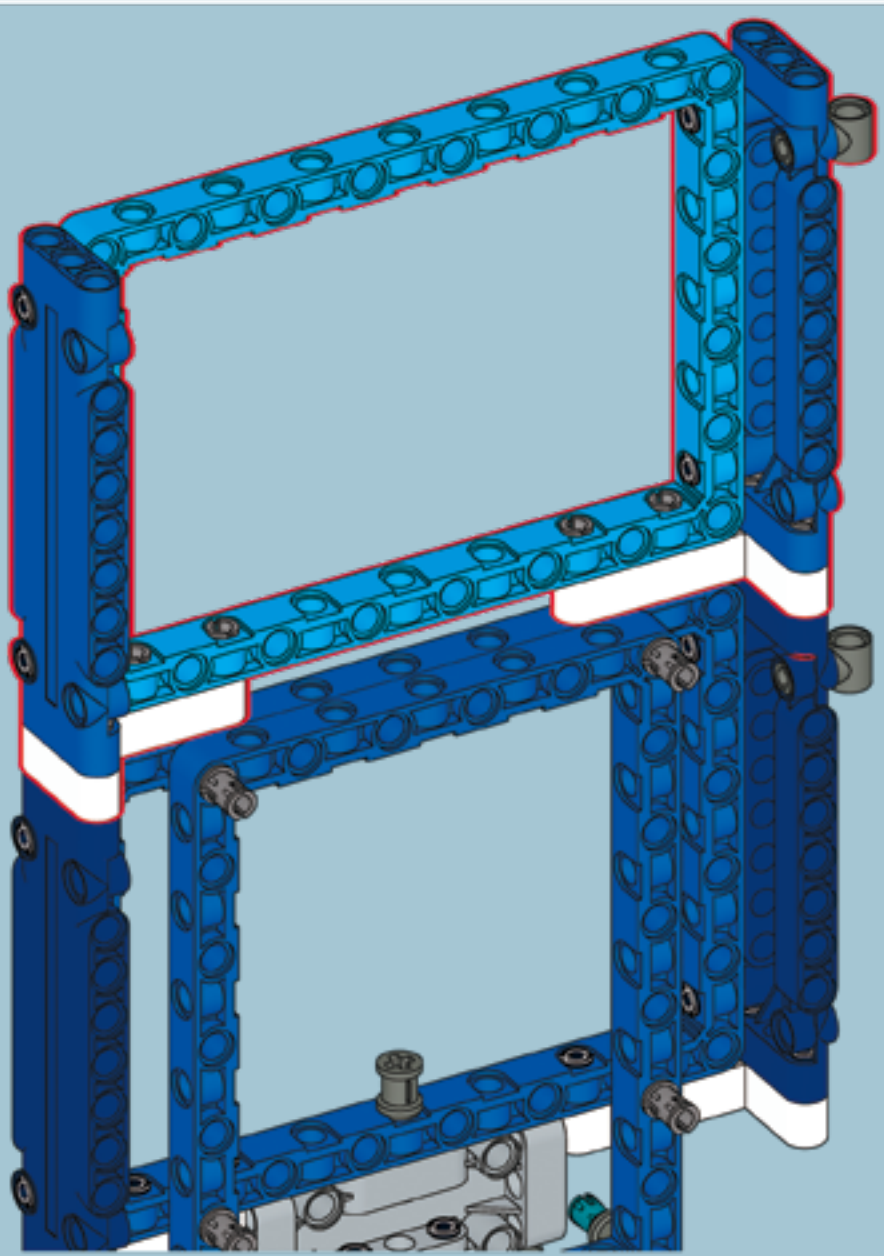


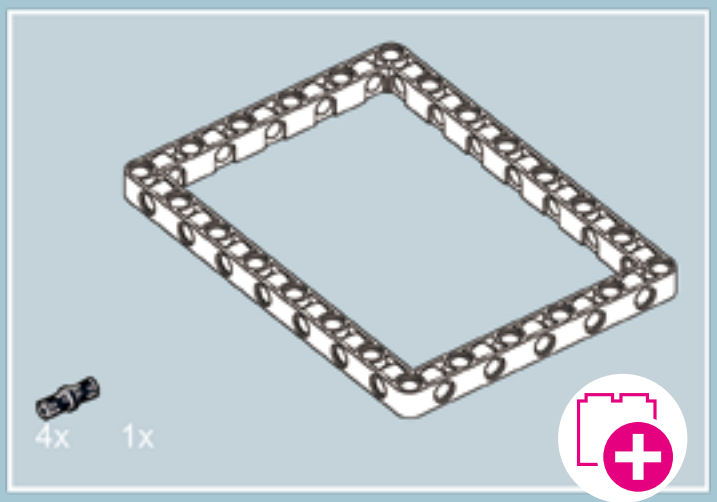
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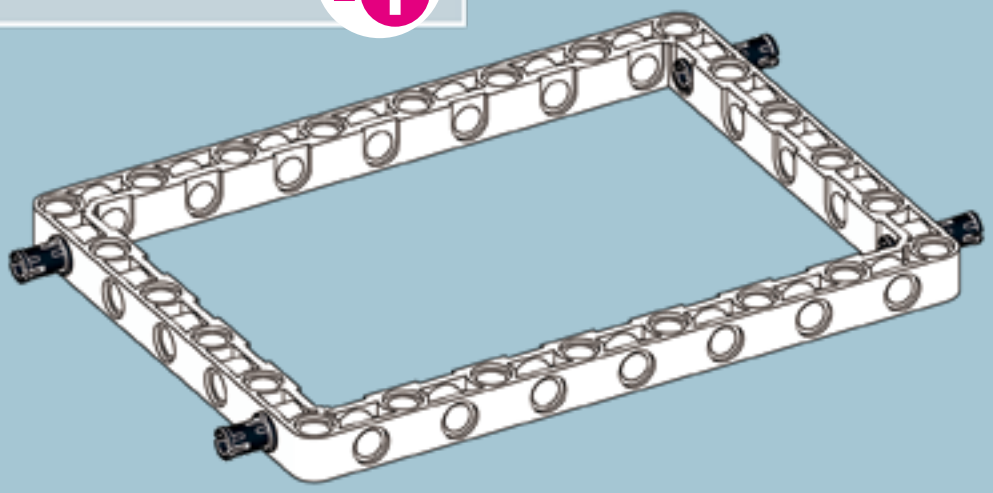


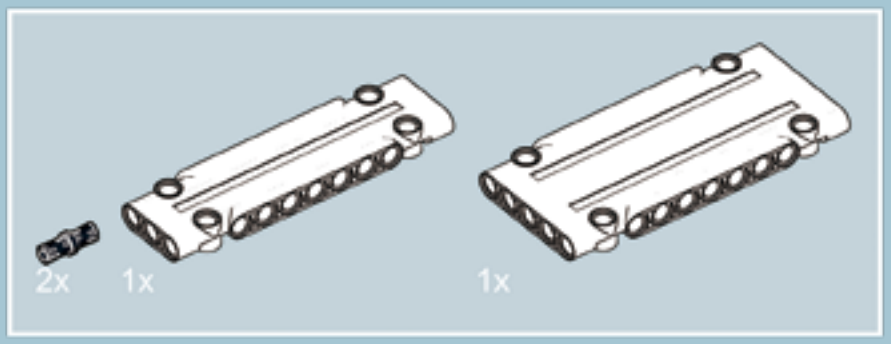
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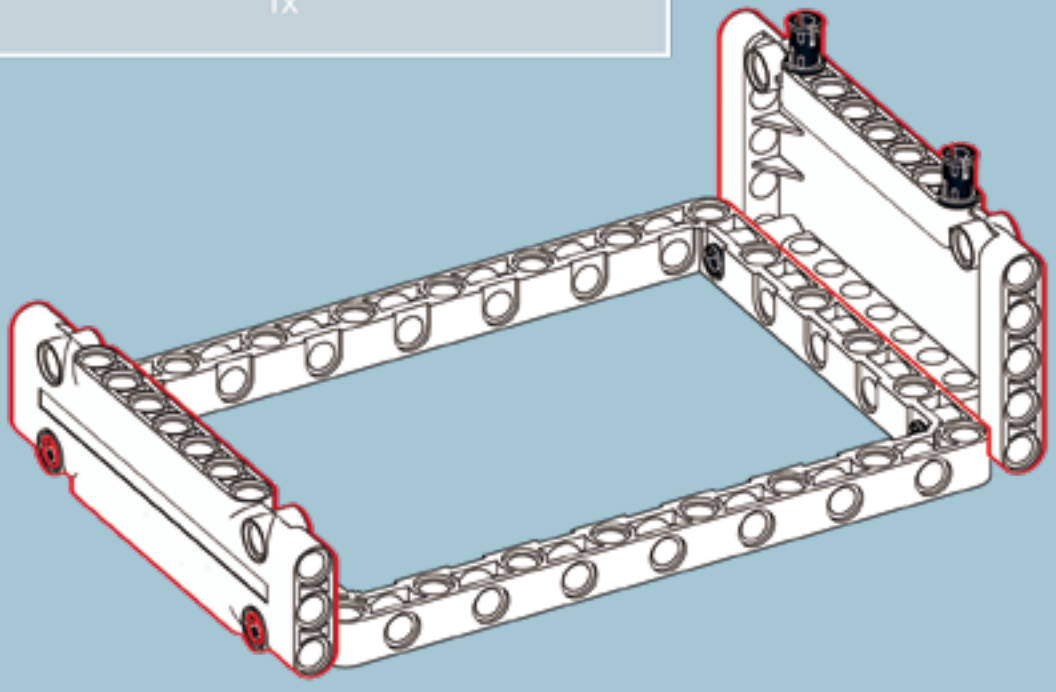


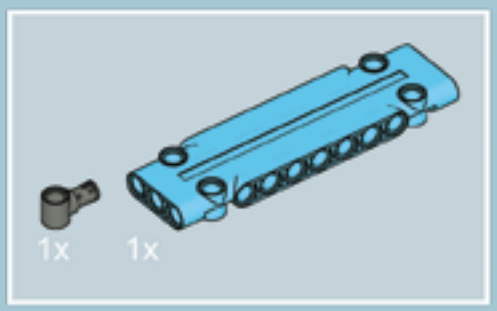
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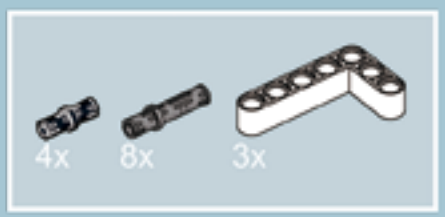


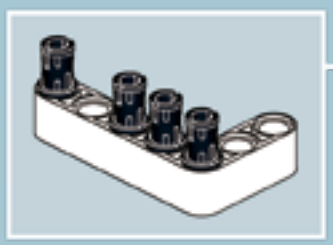
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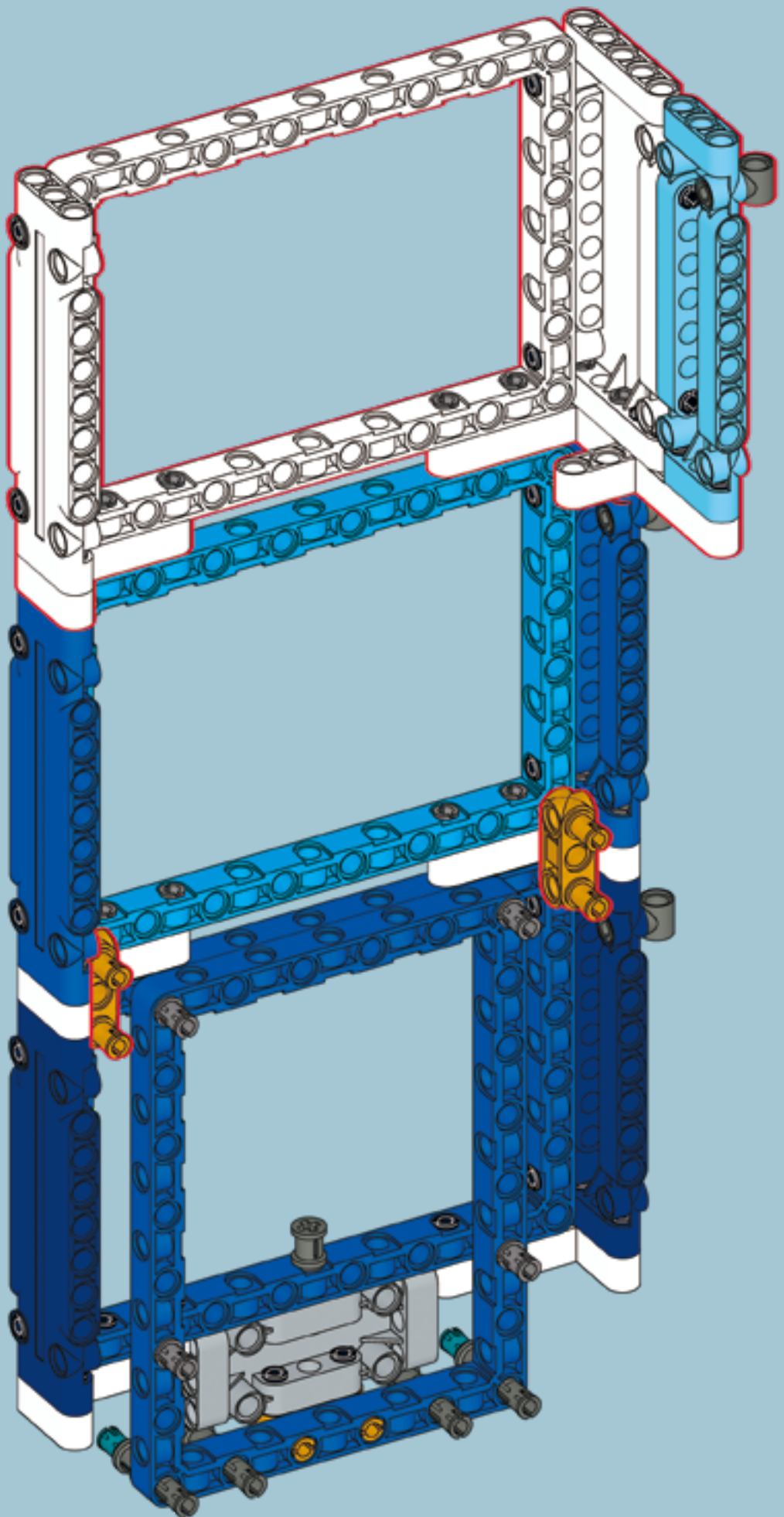


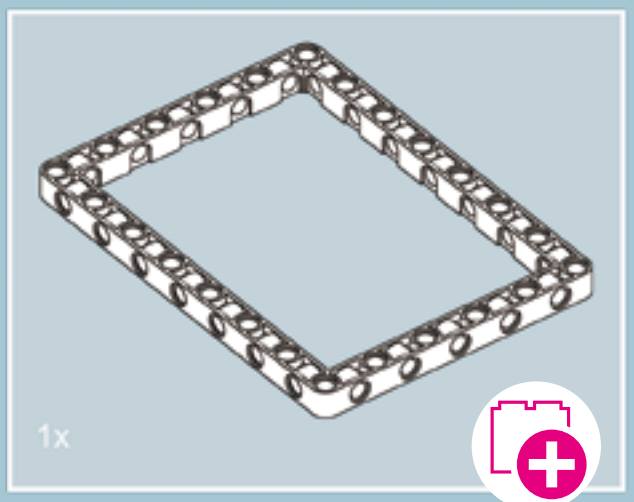


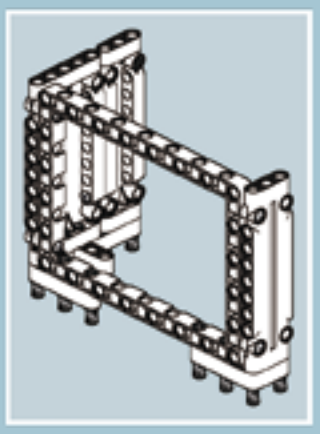
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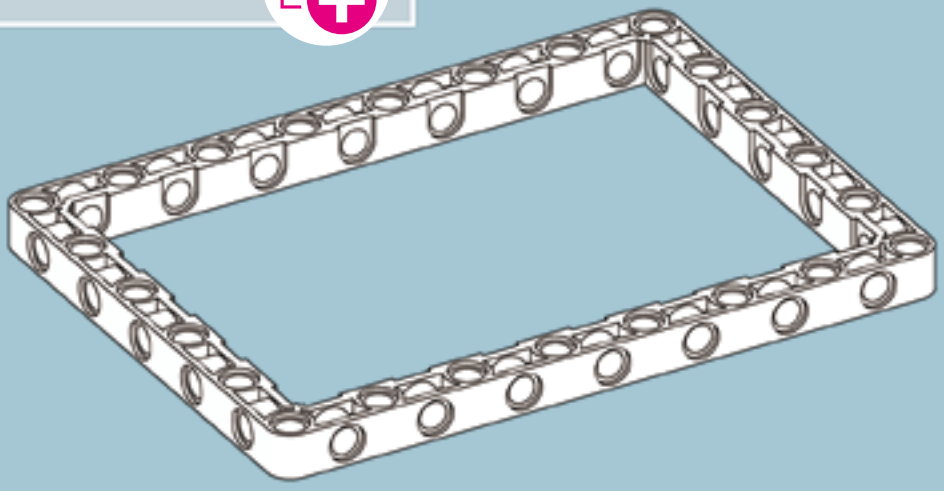
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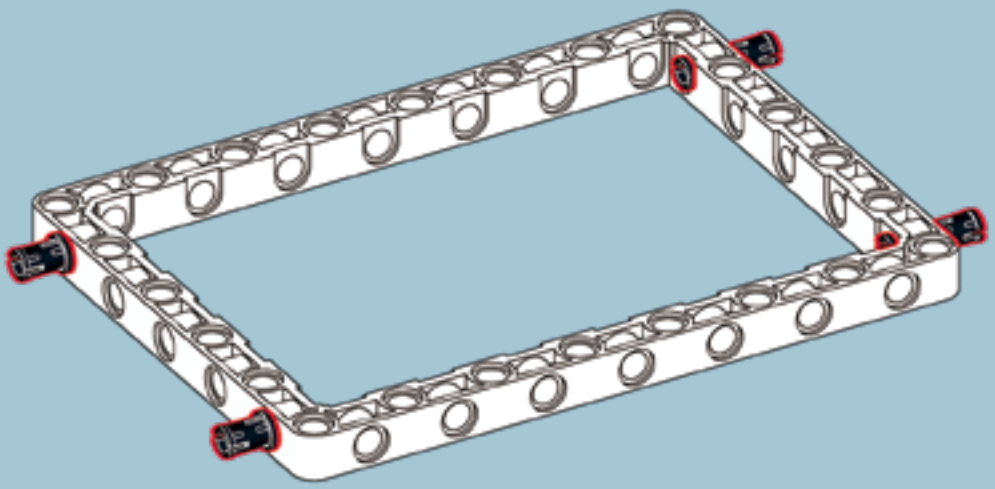
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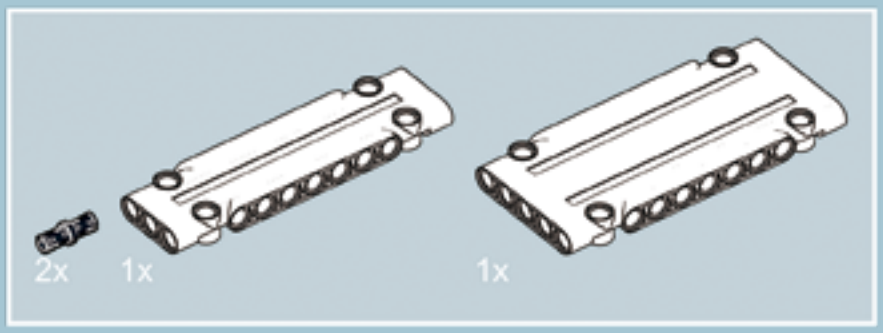




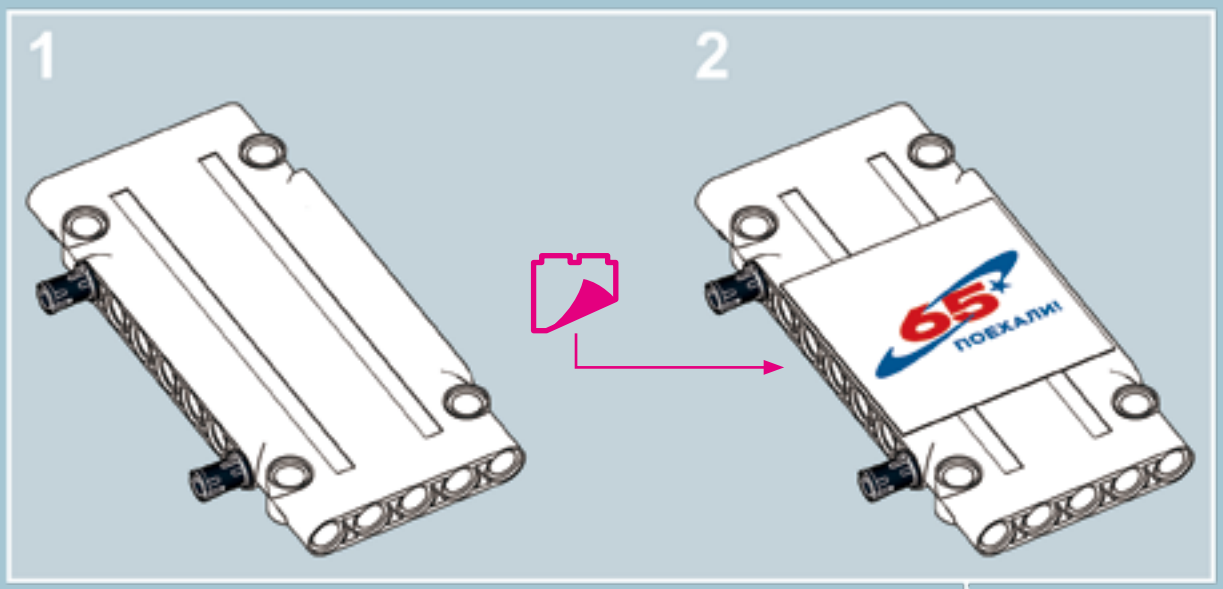
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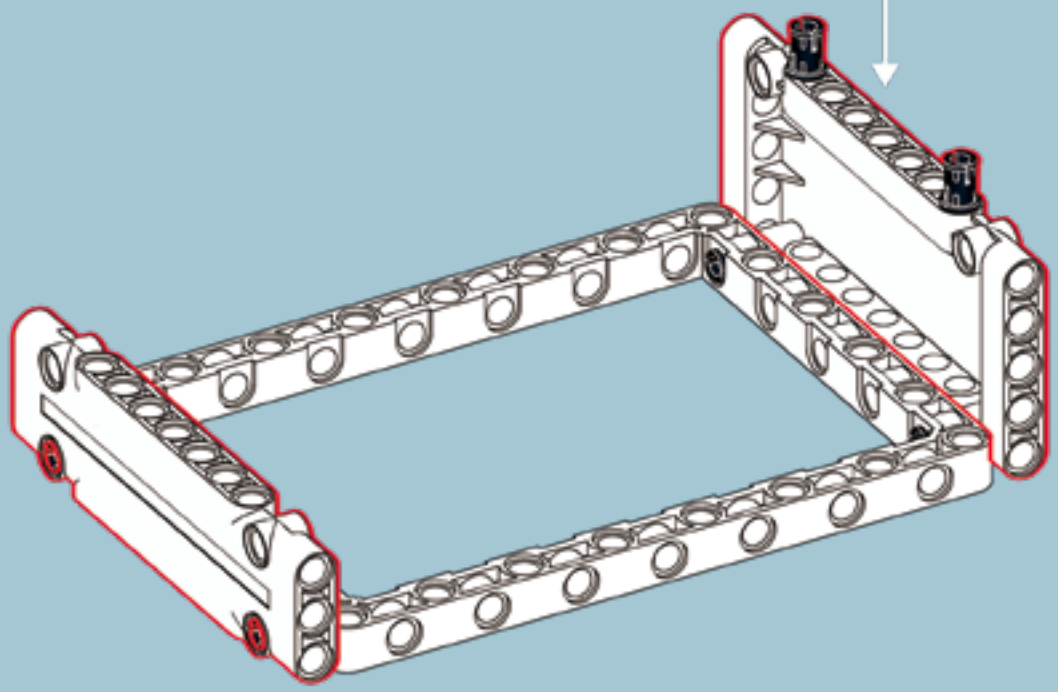
Через 95 шагов ты будешь зачислен в отряд превосходных сборщиков конструктора!

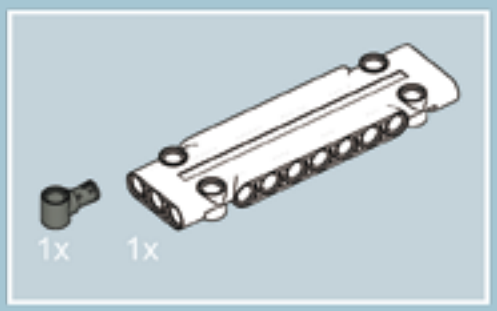




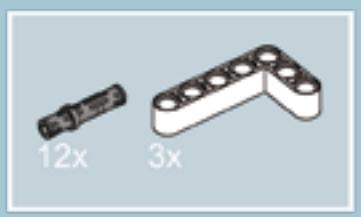
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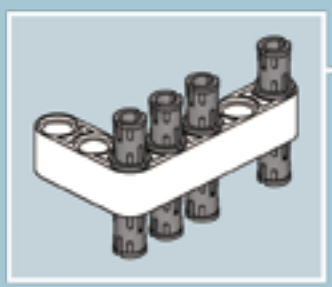




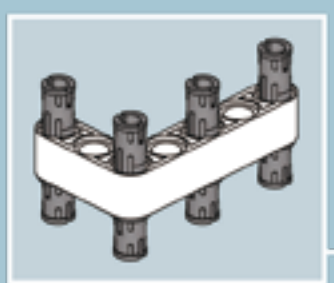


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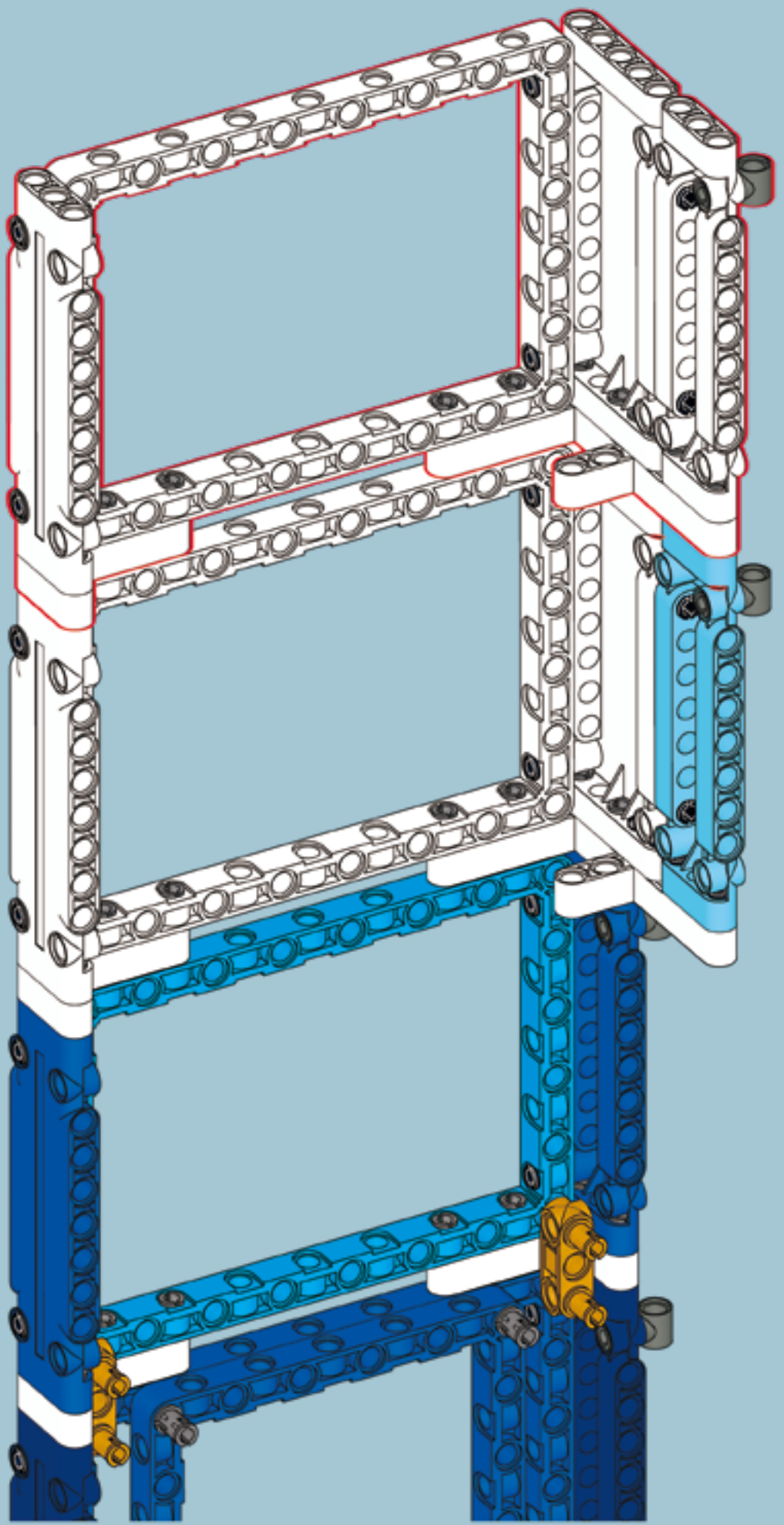




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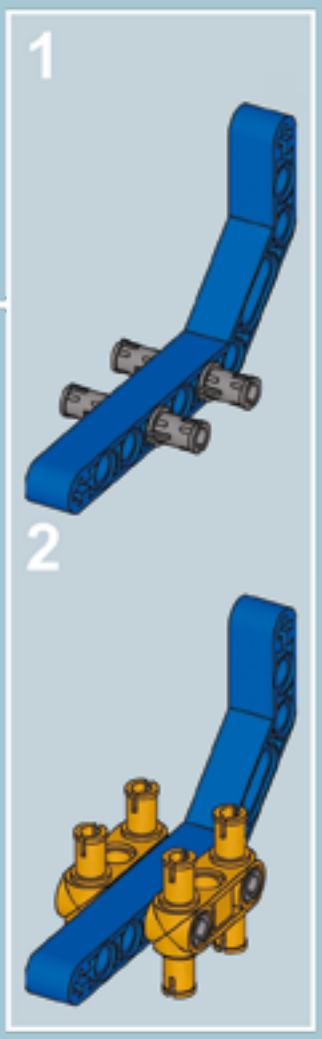


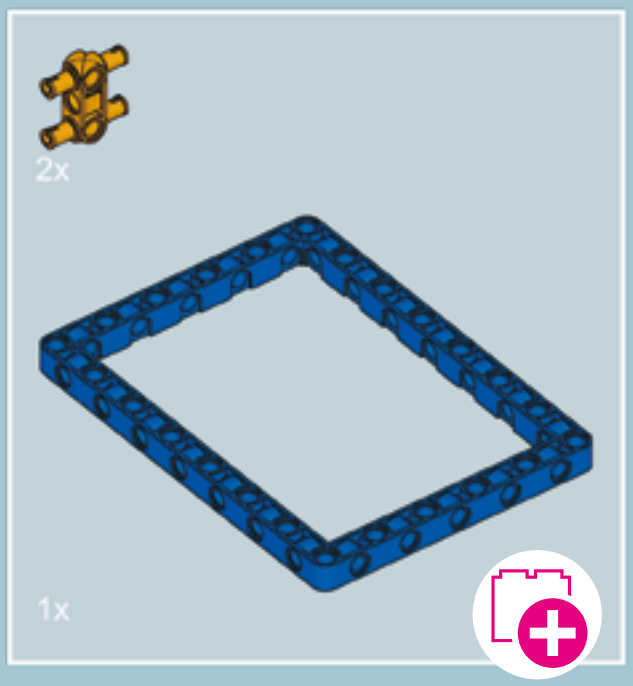
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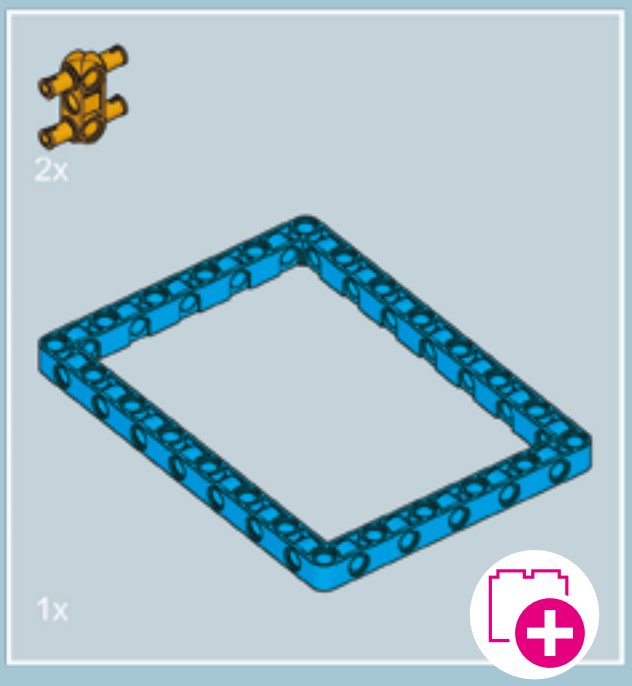


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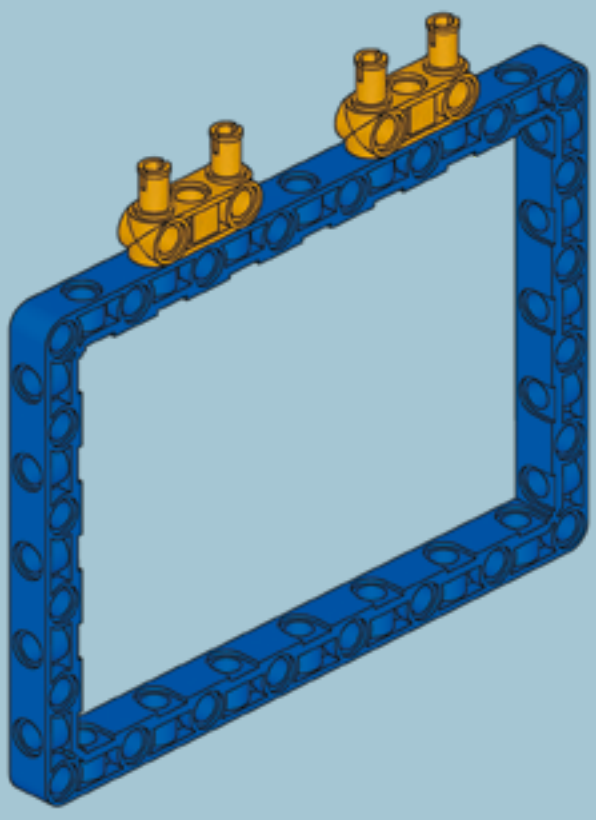


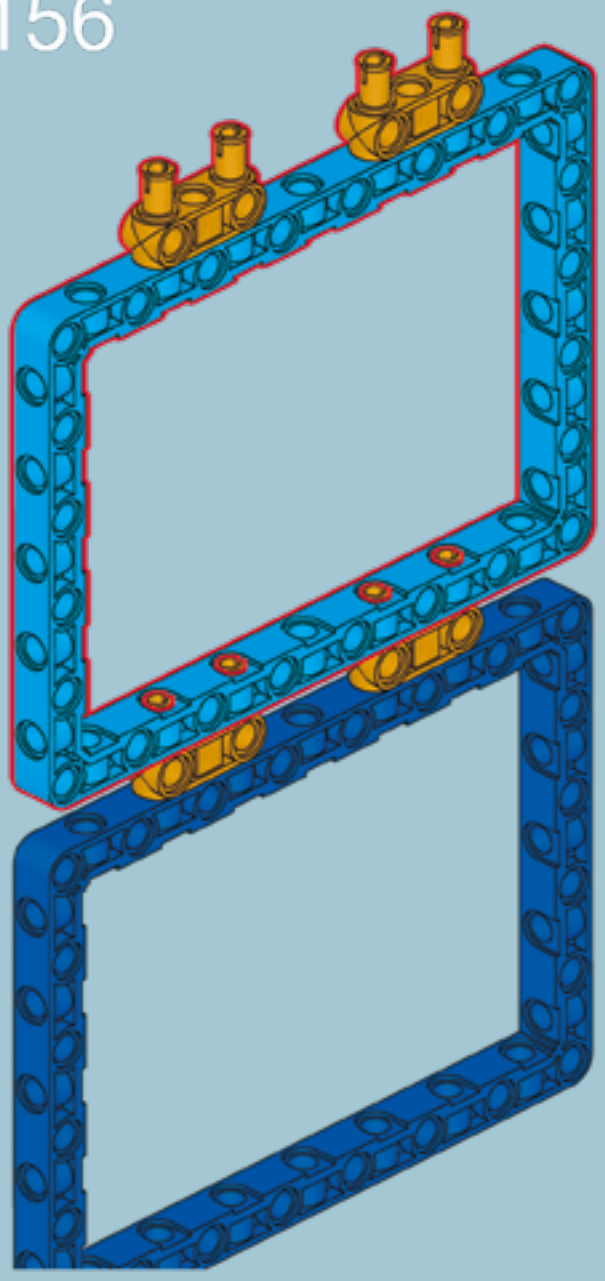


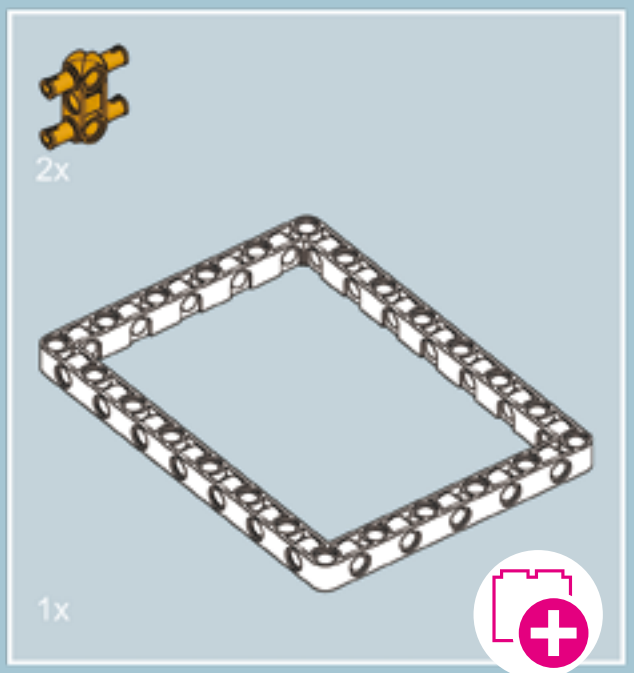
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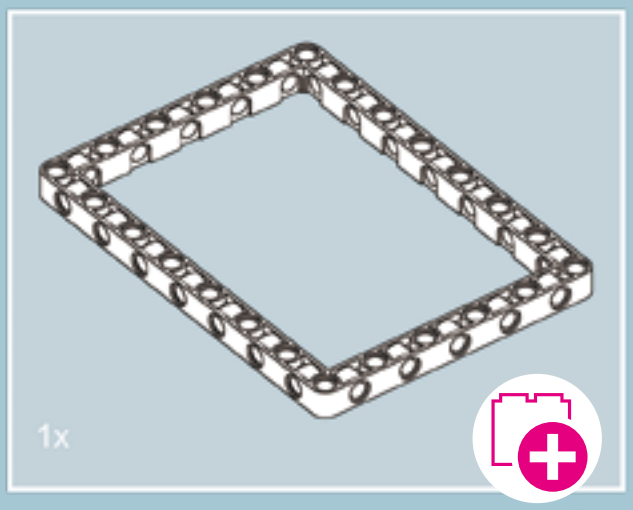
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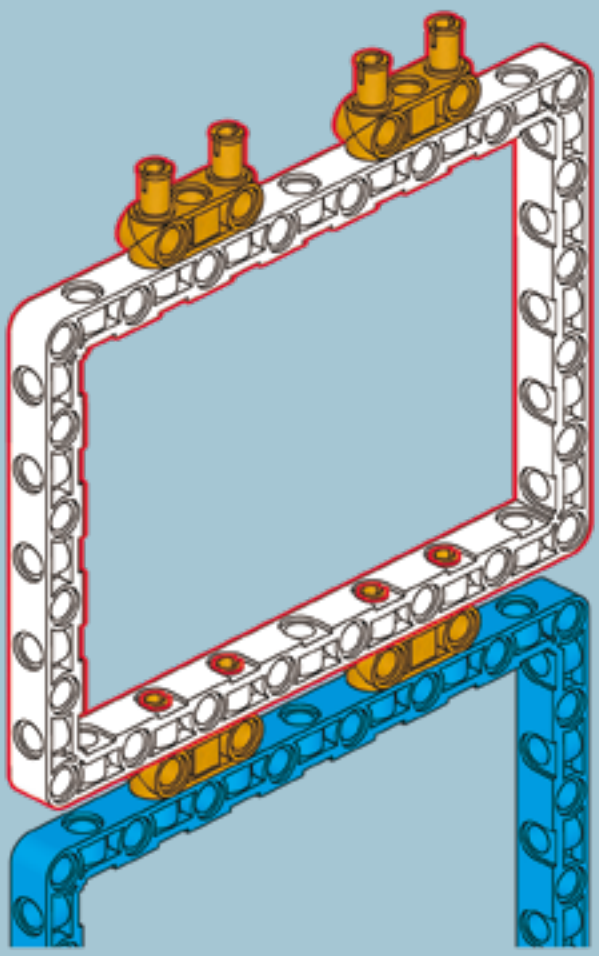


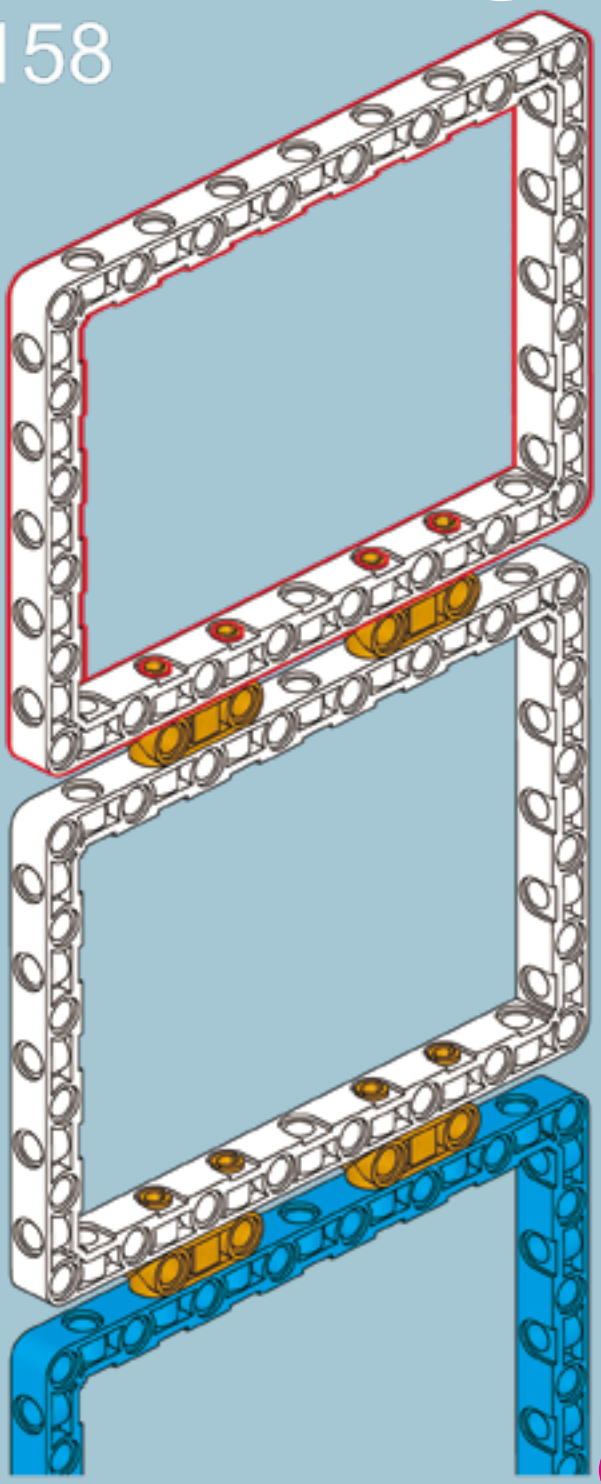


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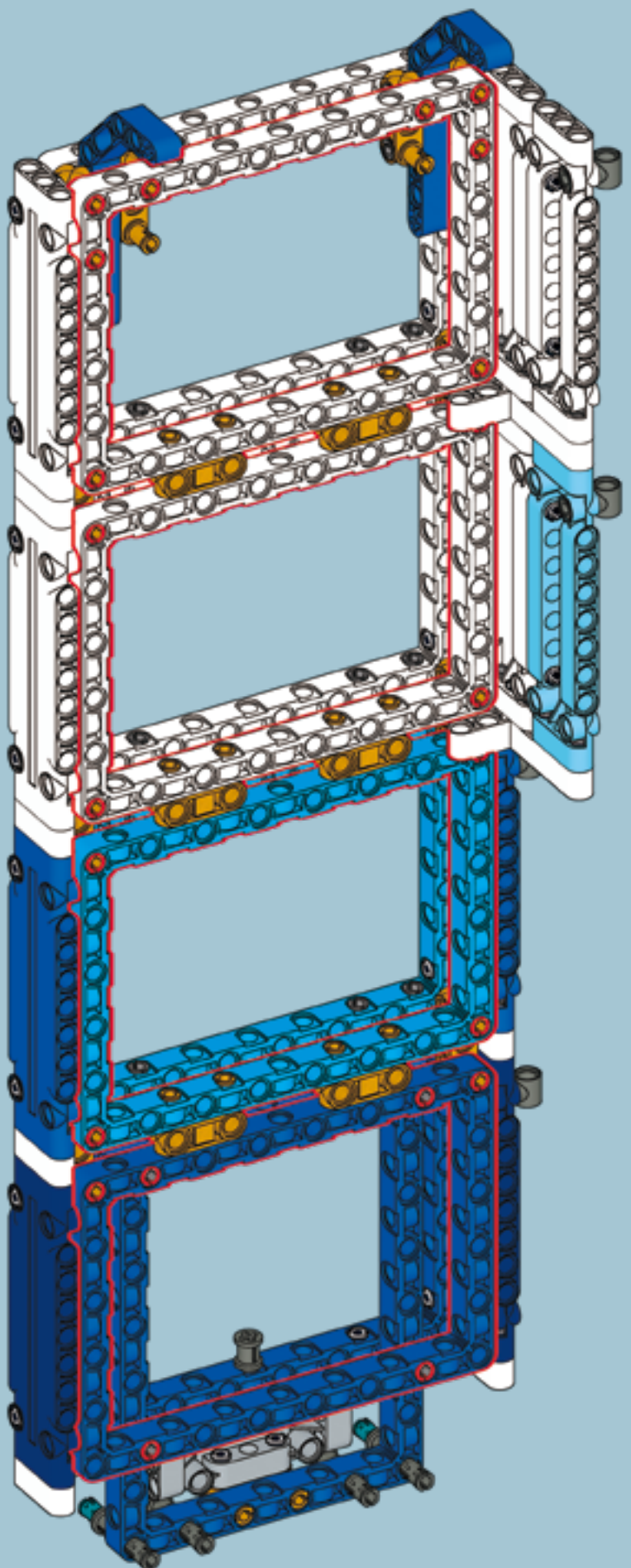


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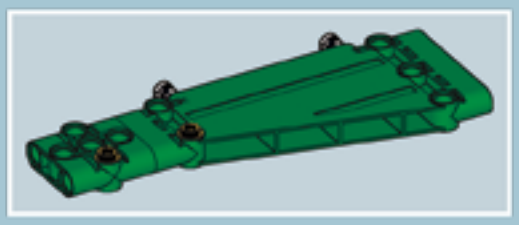
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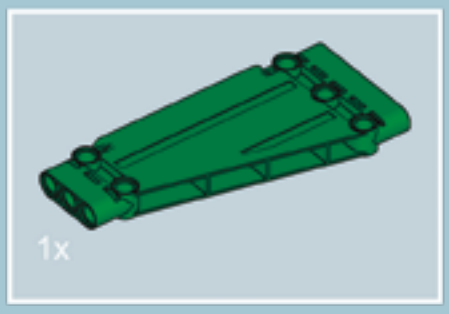


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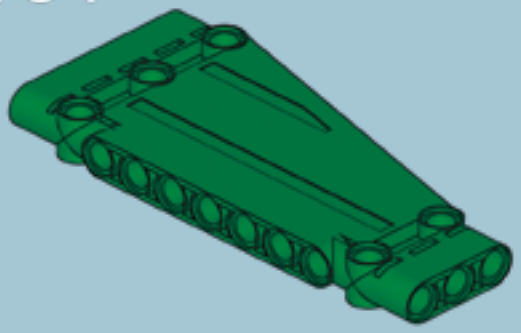


2x



1x

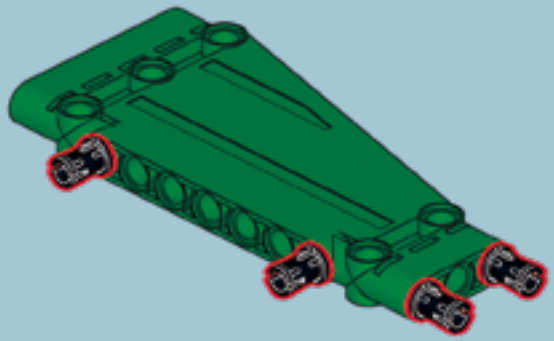
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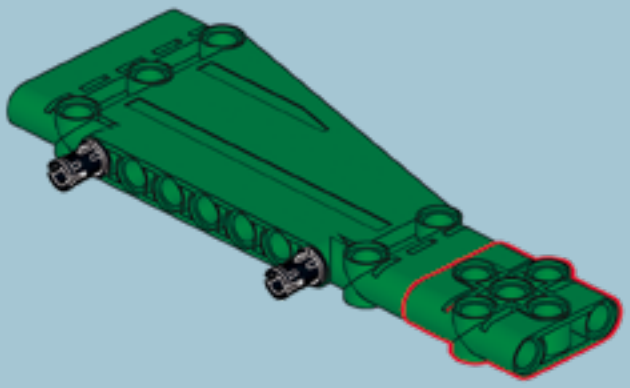
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1x

163

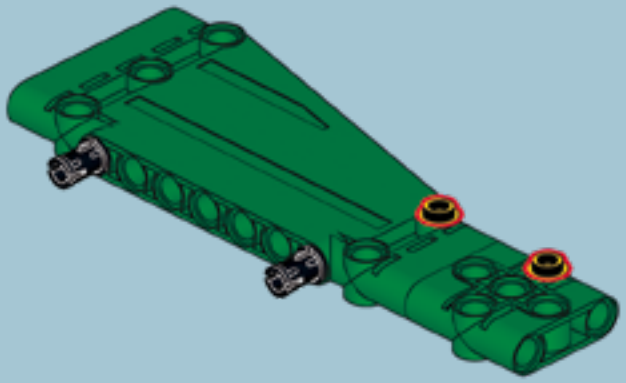




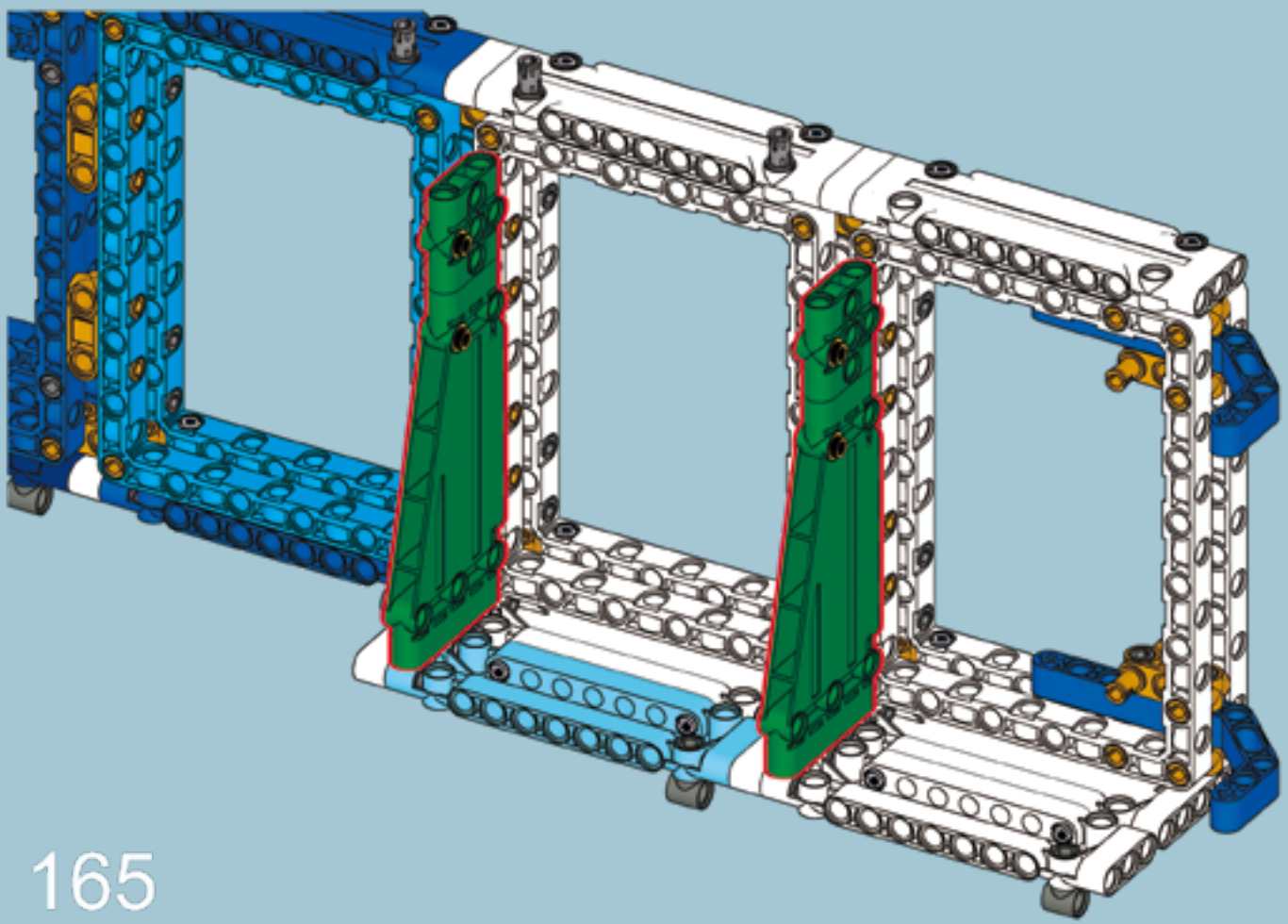
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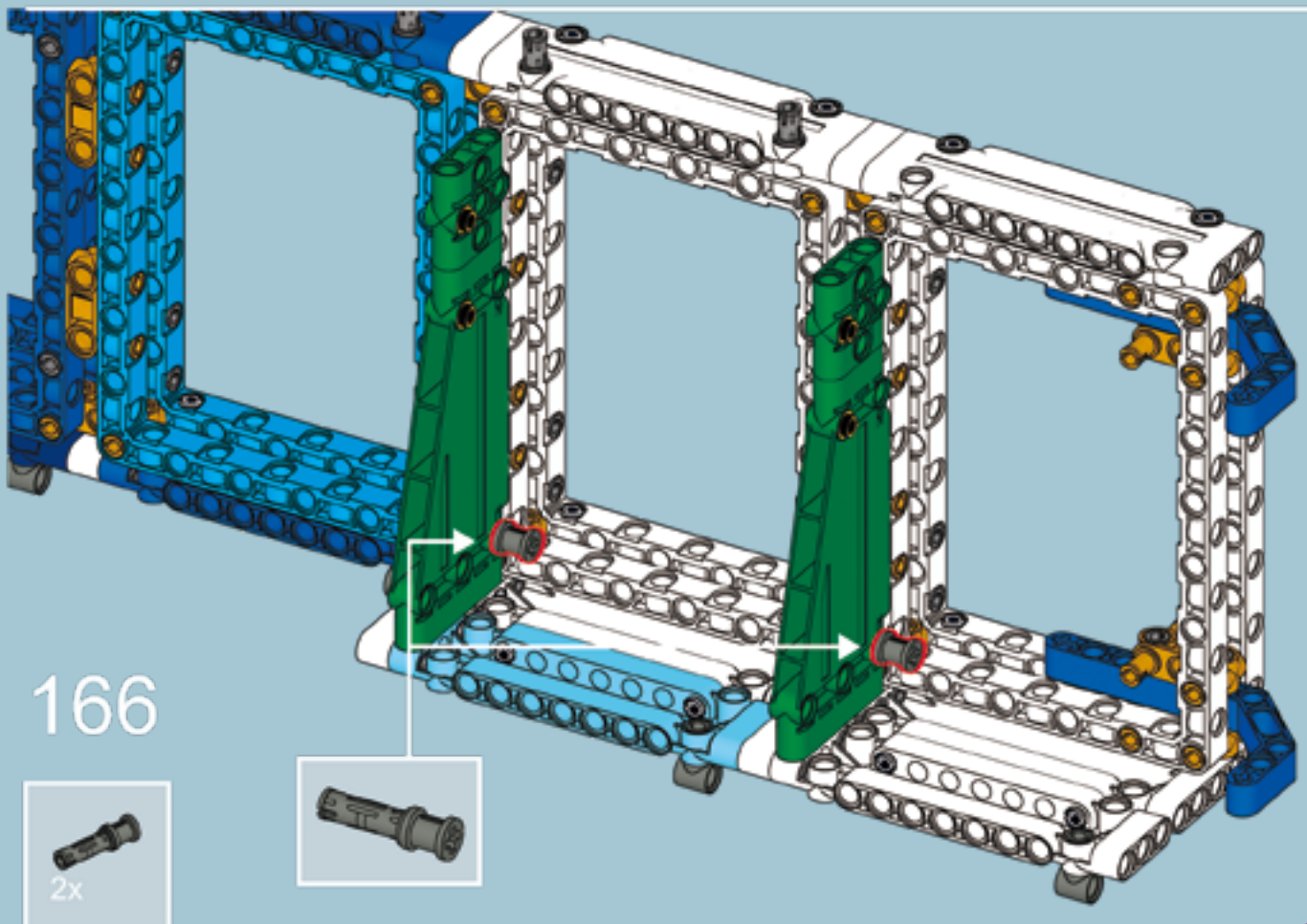
С космодрома Восточный стартовало 400 спутников! В конце сборки будет уже 403!



2x

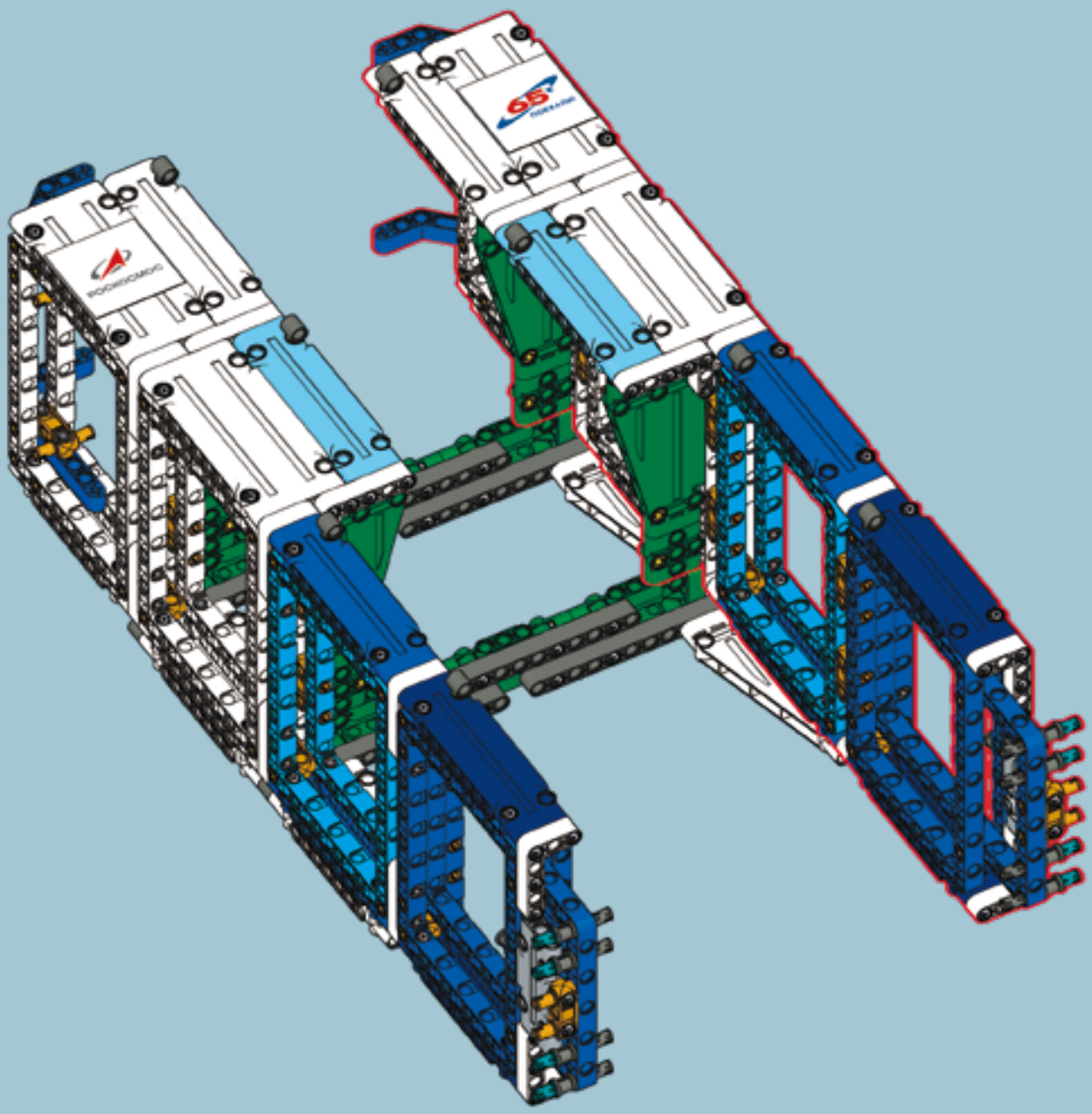


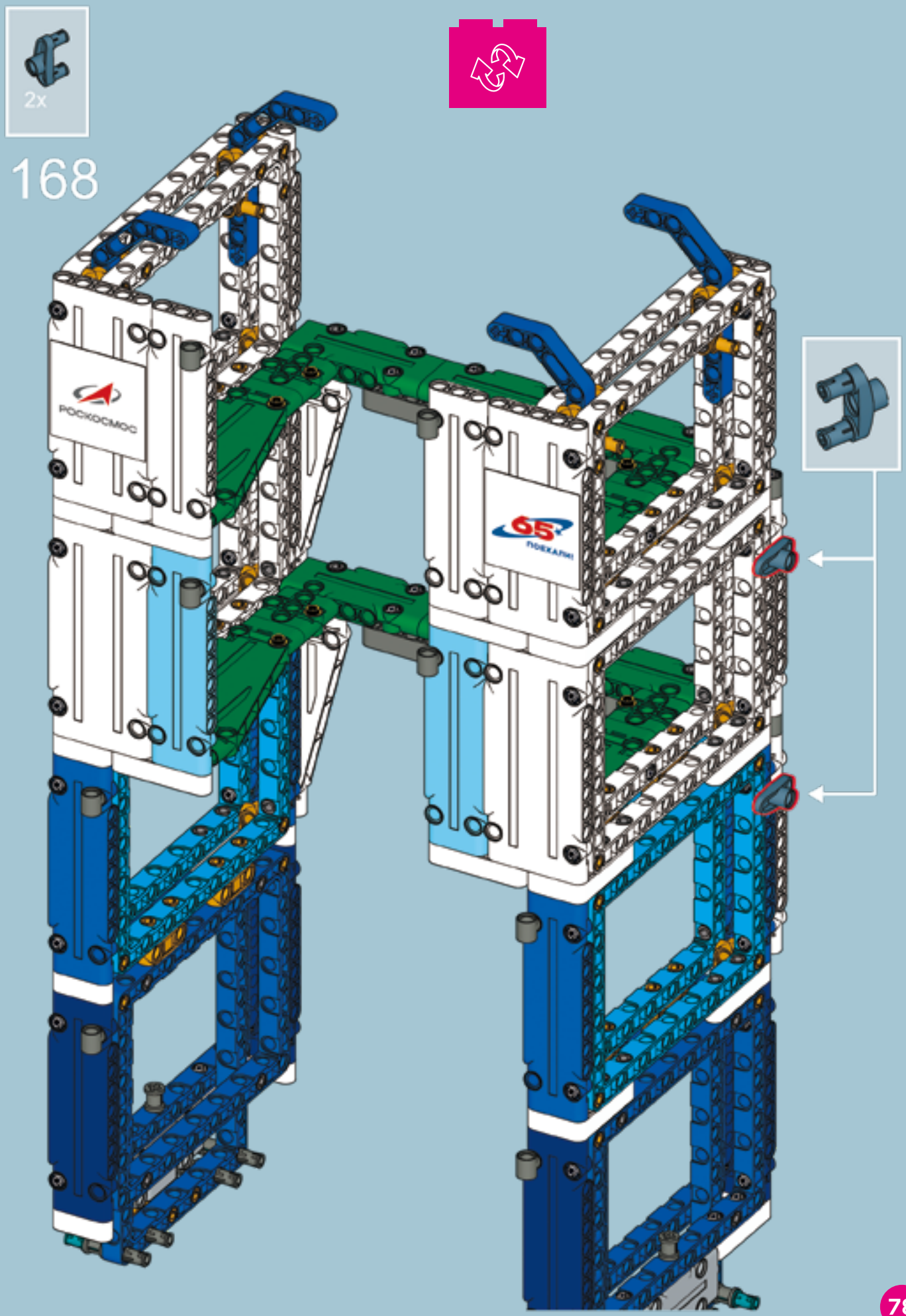
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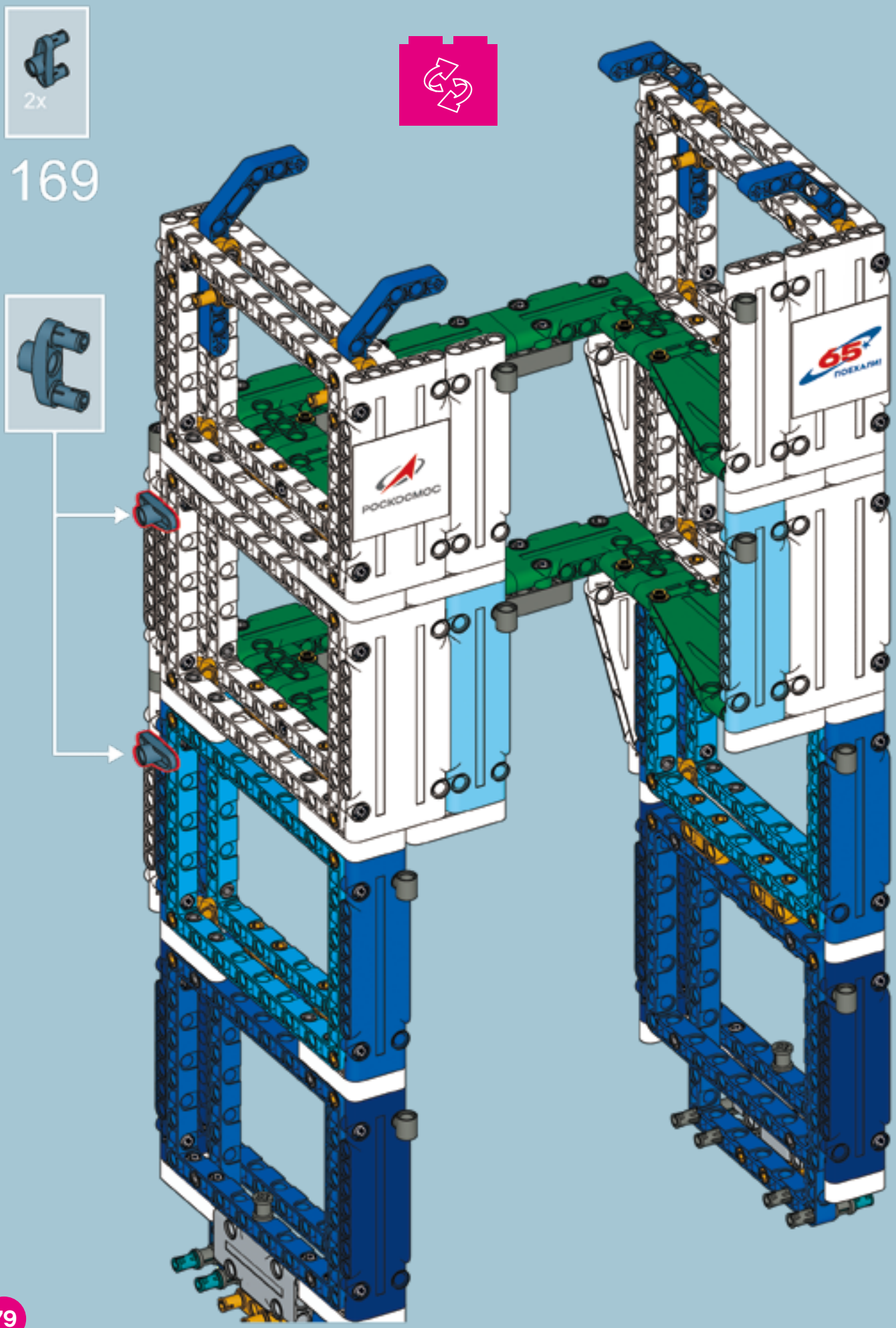


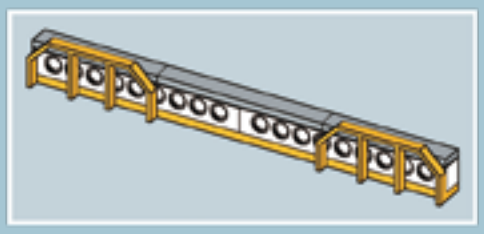
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167

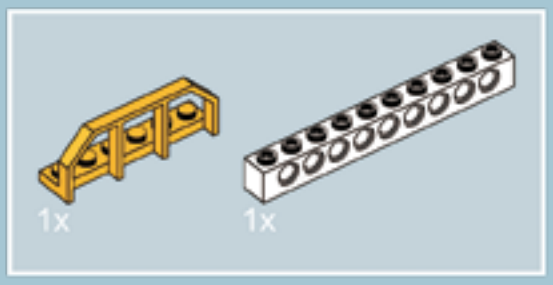



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168
РОСКОСМОС
65
ПОБЕДИМ

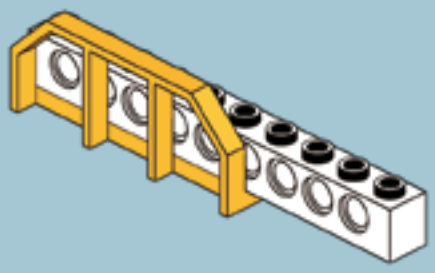

2x
169
РОСКОСМОС
65
ПОЕХАЛИ!



2x

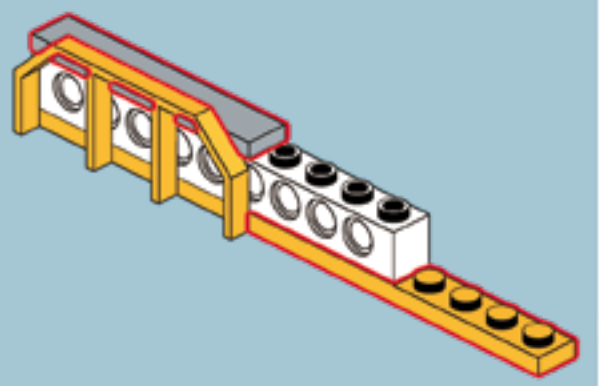


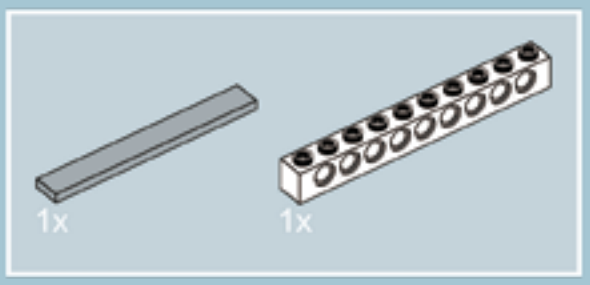
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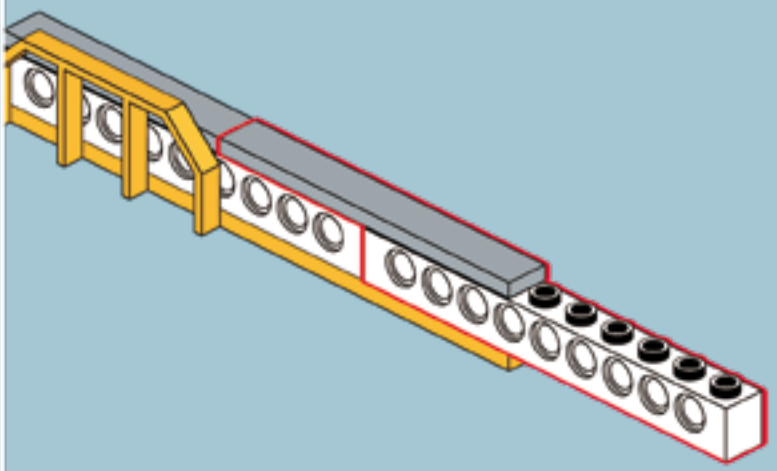


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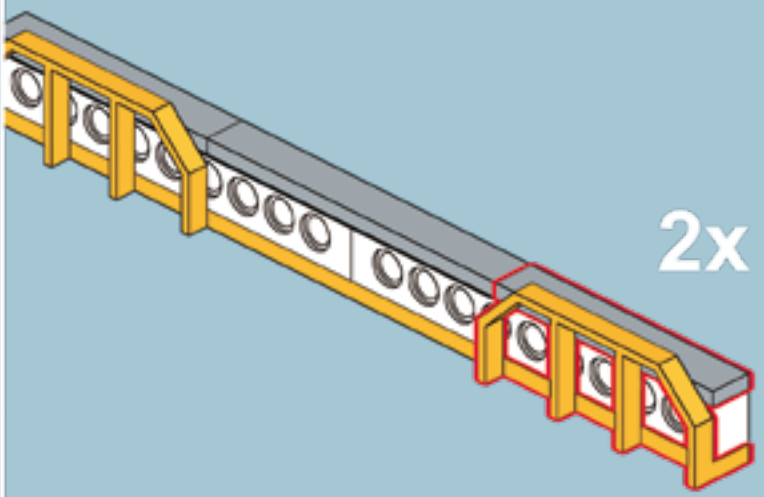


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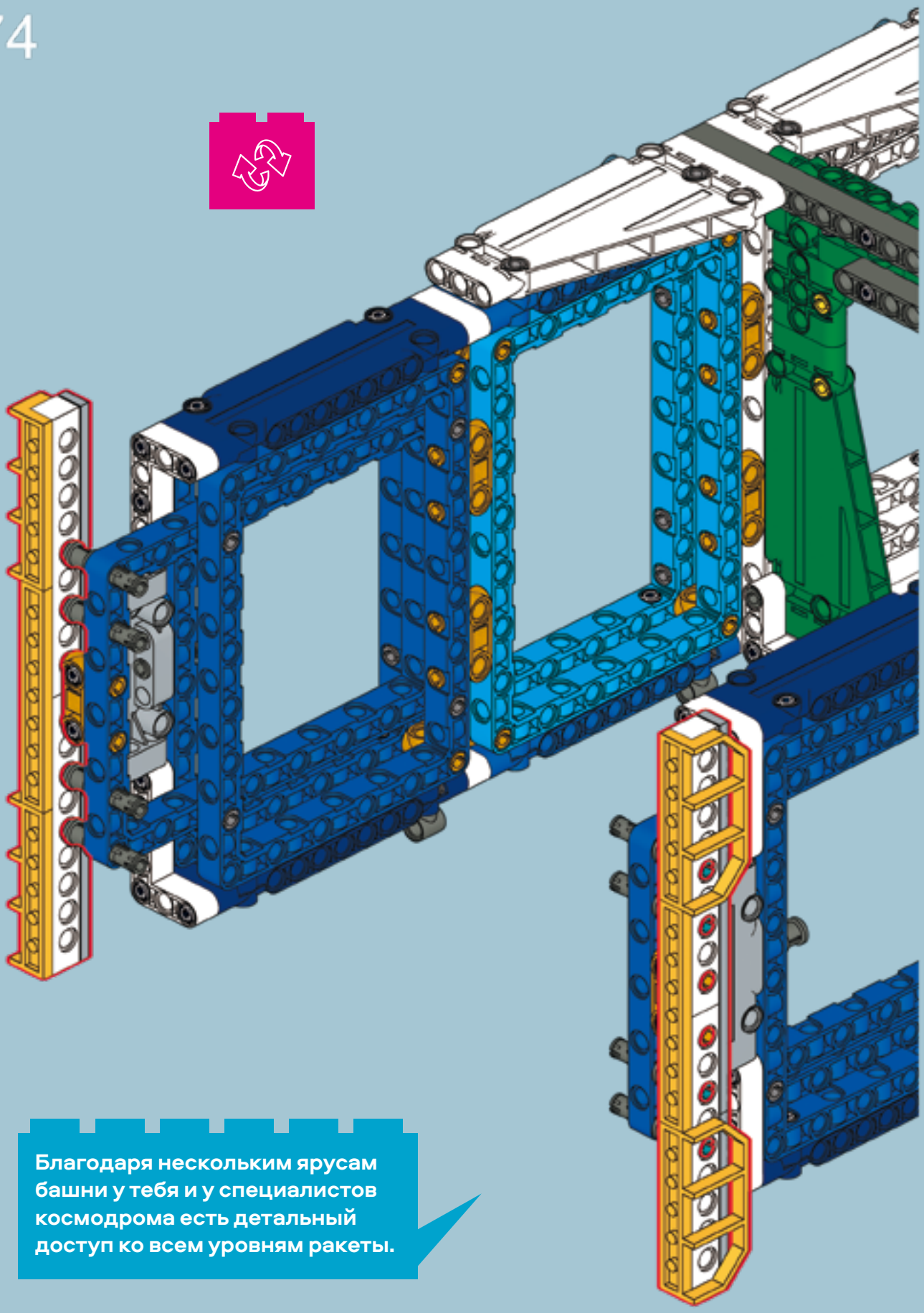




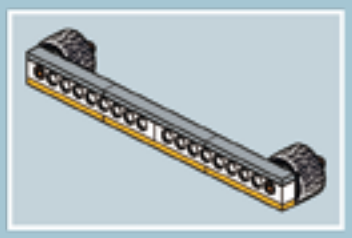
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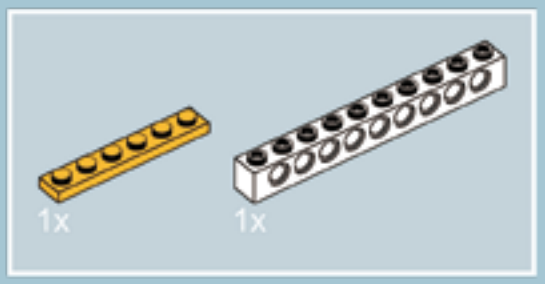
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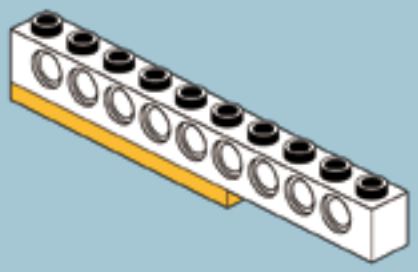
Благодаря нескольким ярусам башни у тебя и у специалистов космодрома есть детальный доступ ко всем уровням ракеты.



2x

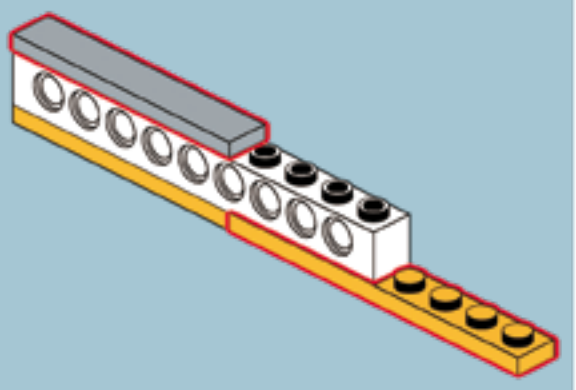


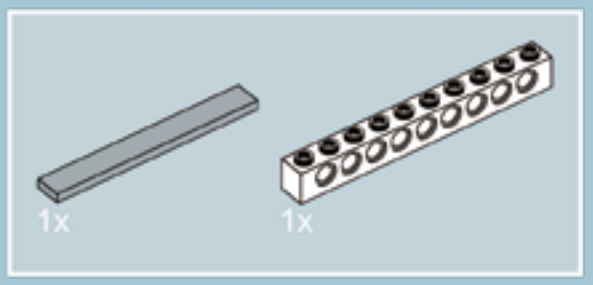
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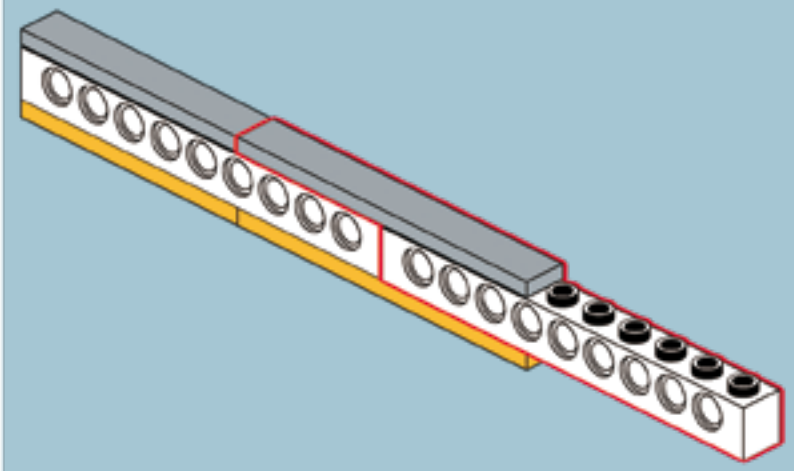


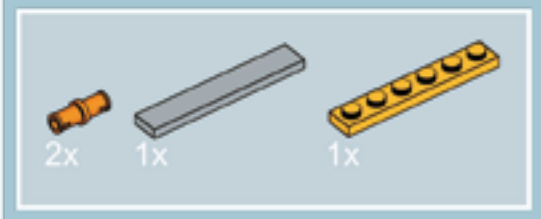
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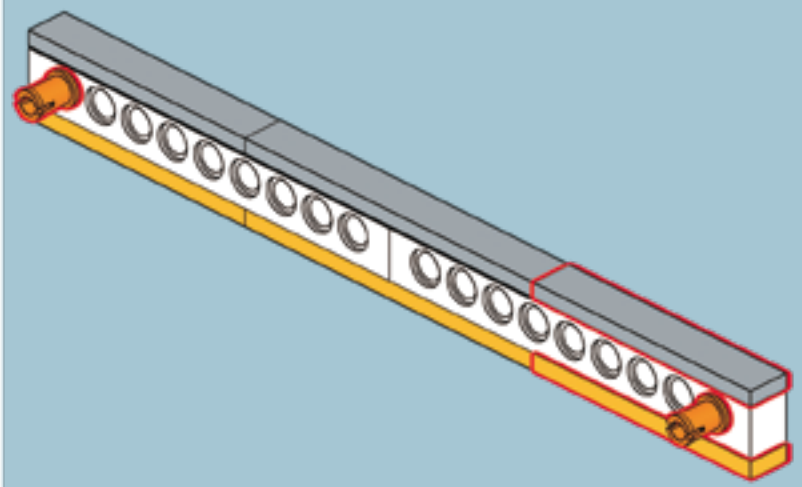


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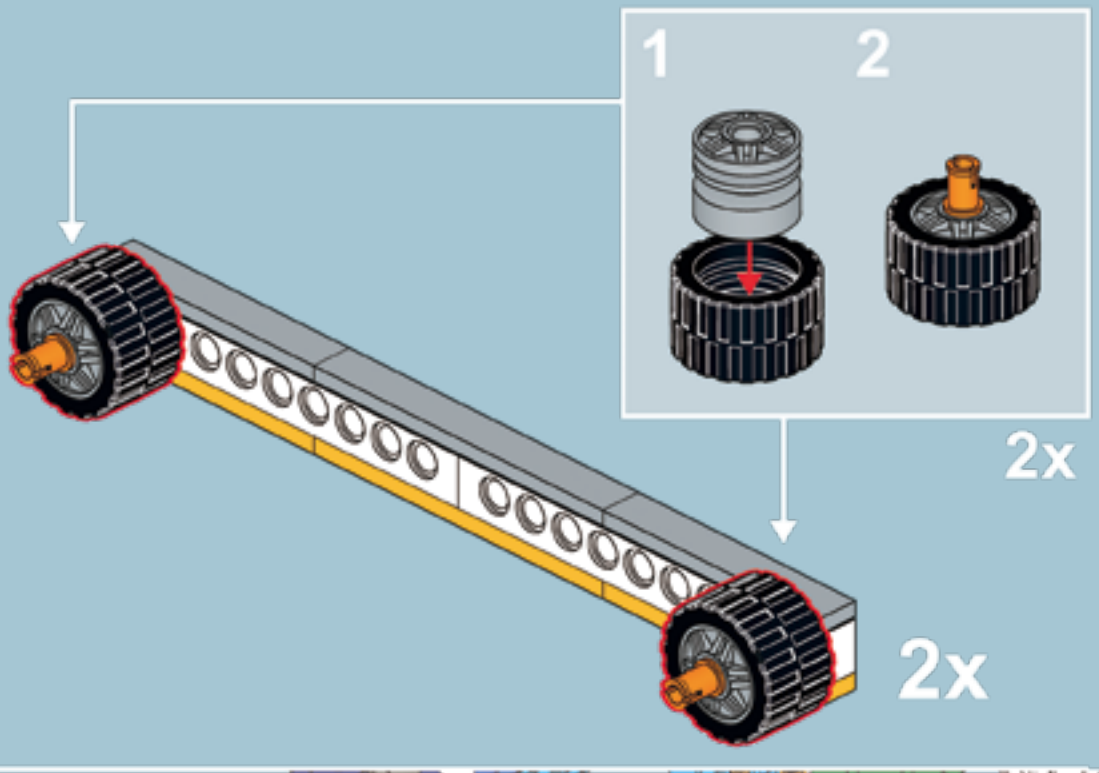


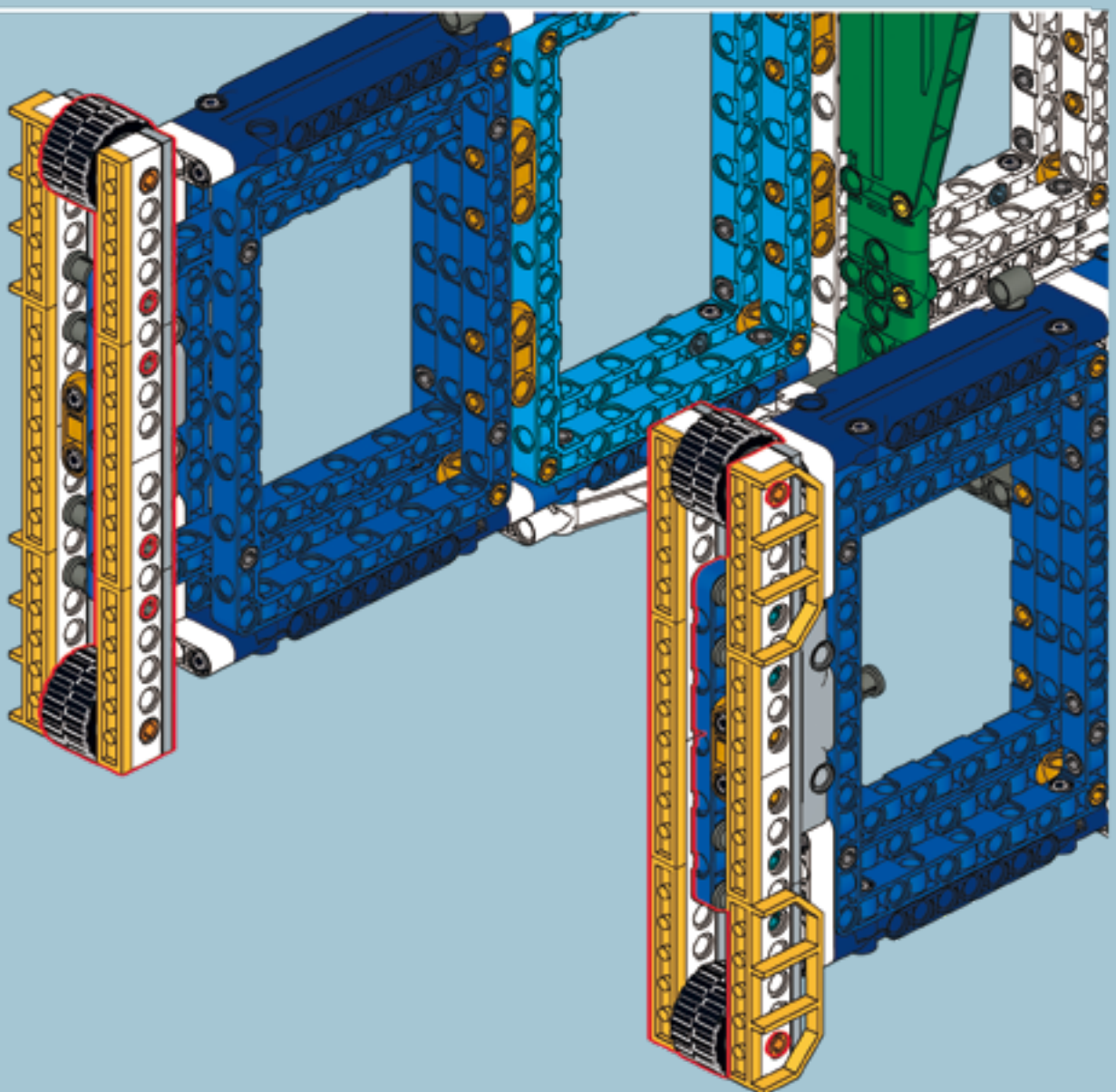
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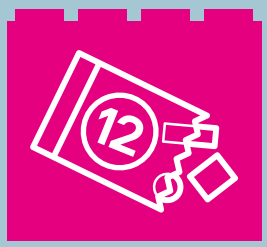


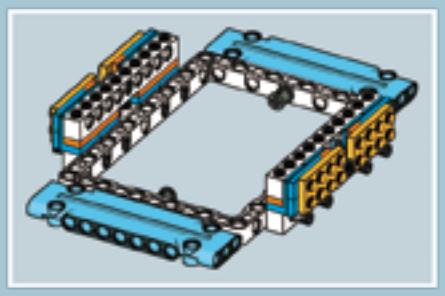
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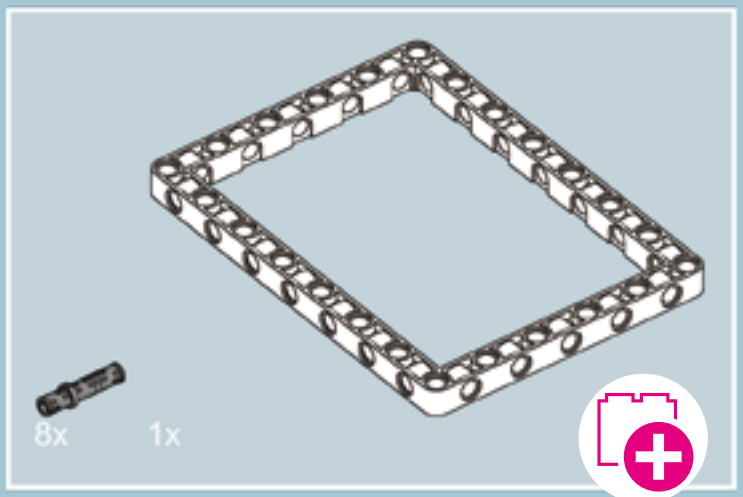




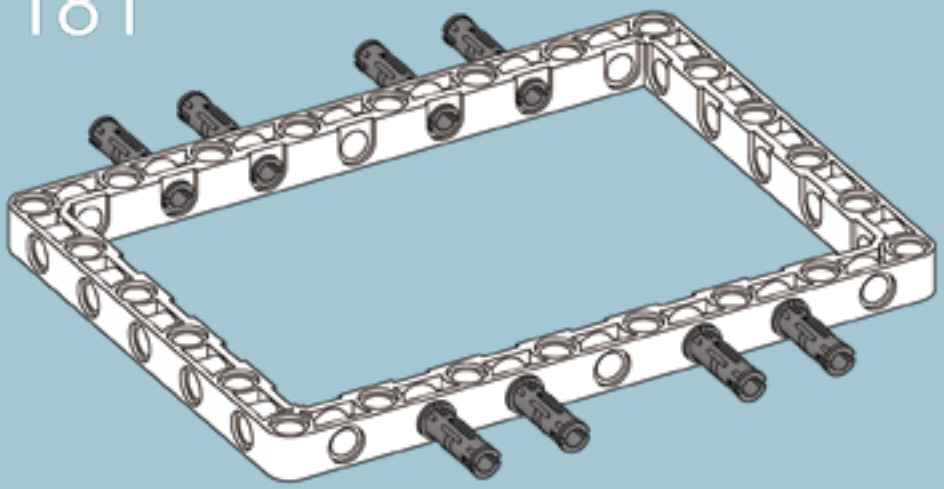
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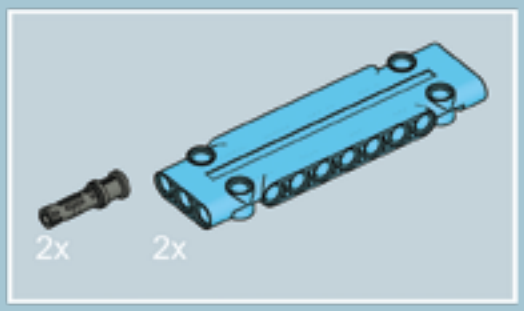




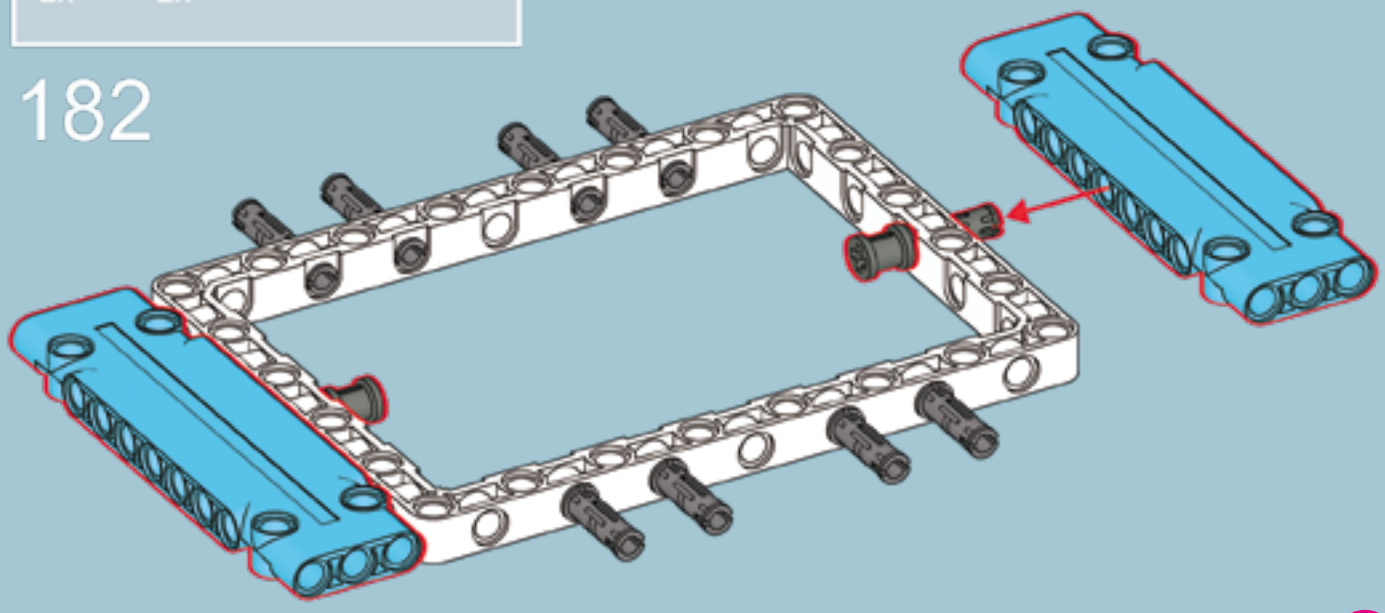


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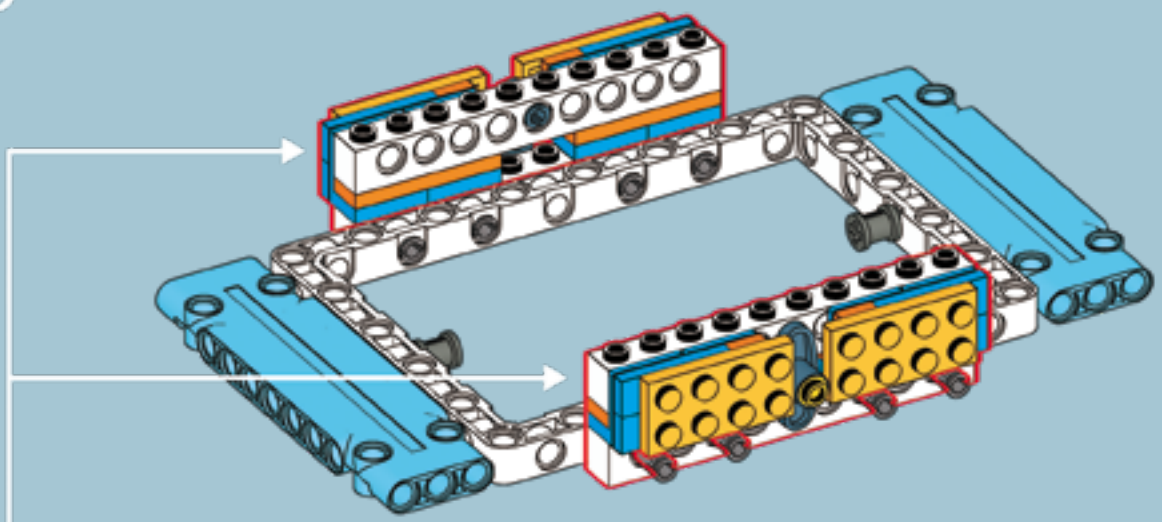


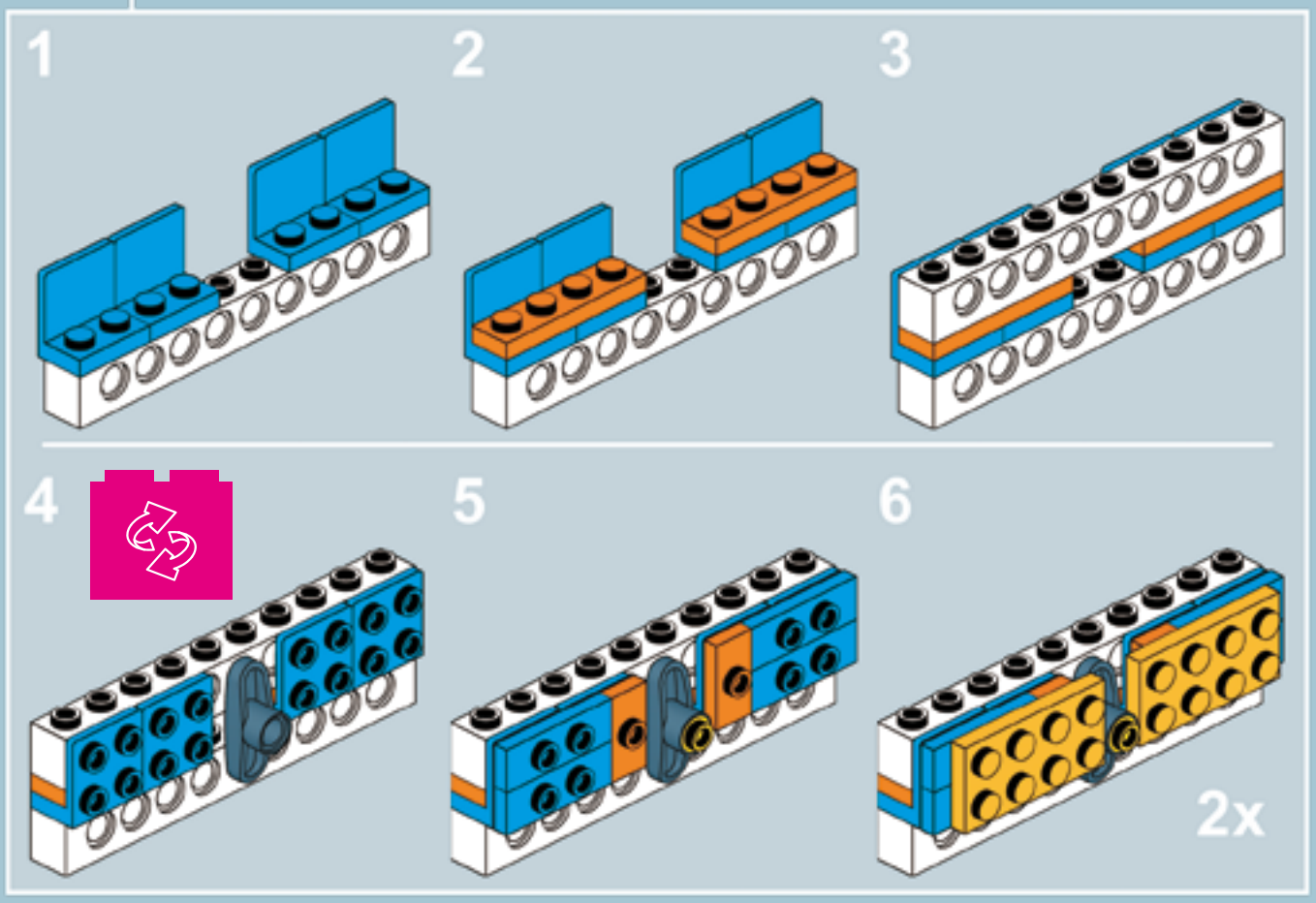
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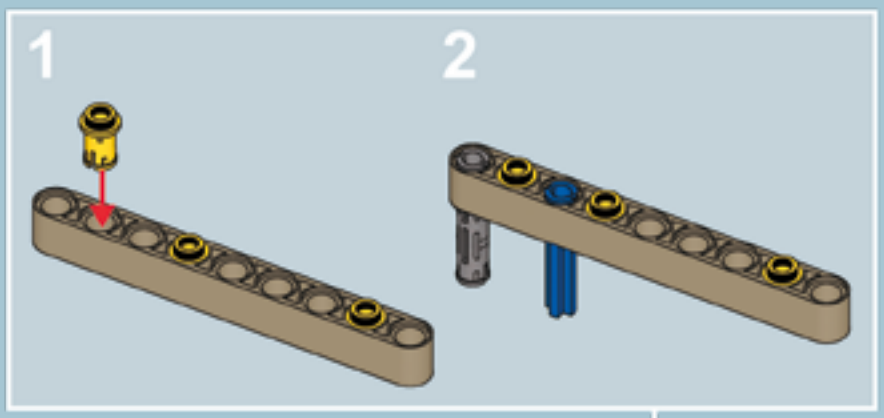


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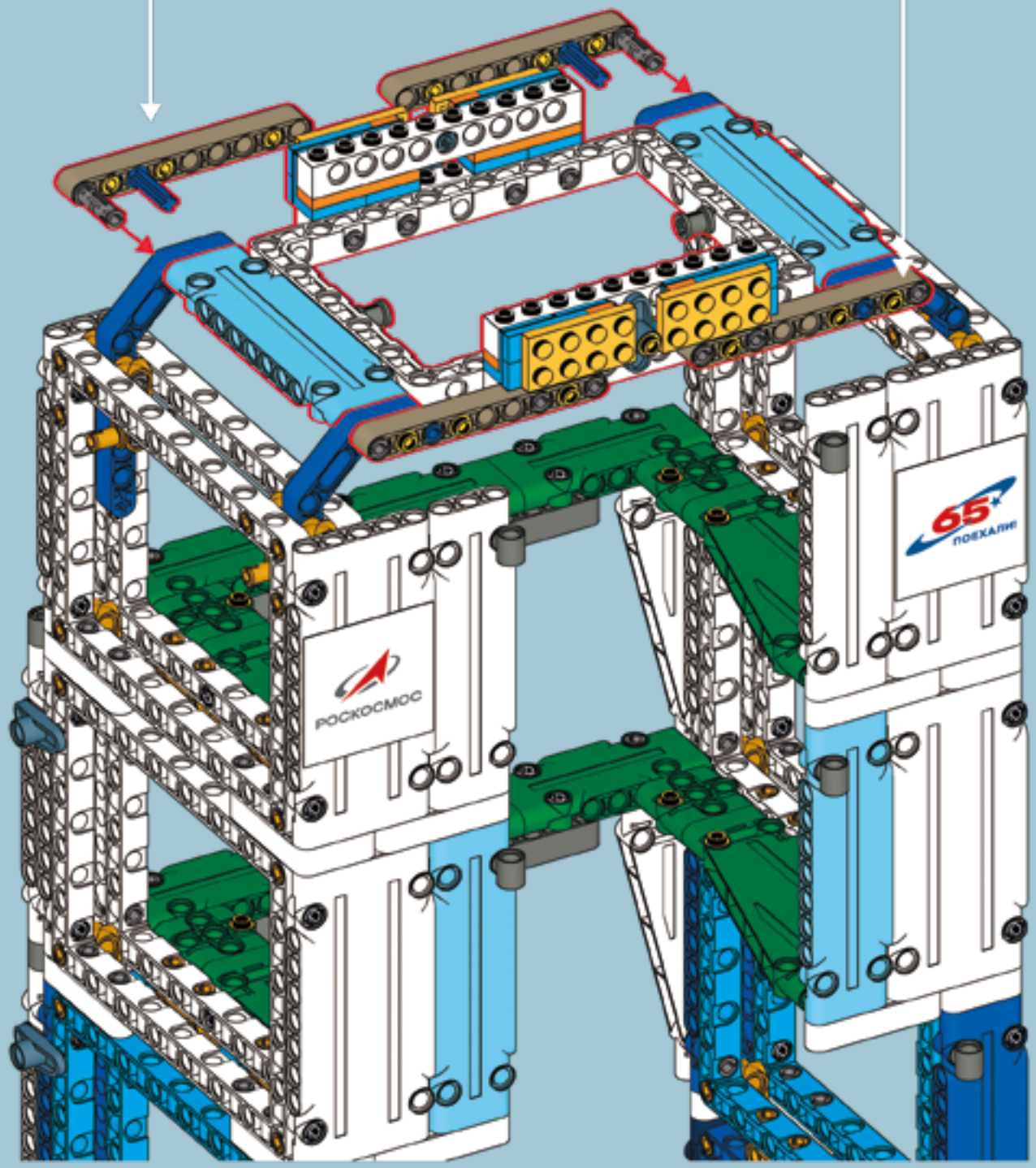


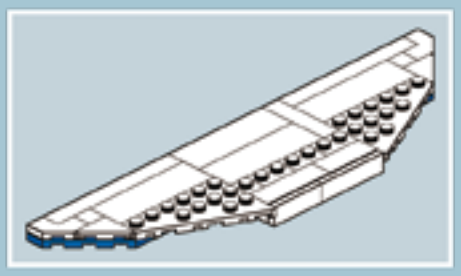




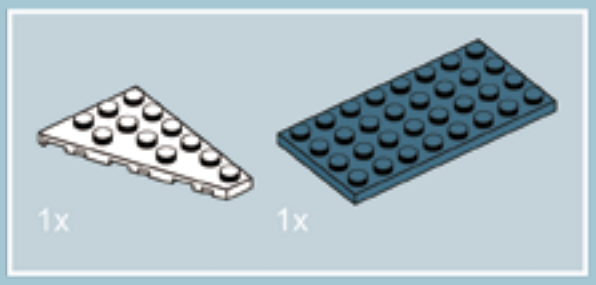
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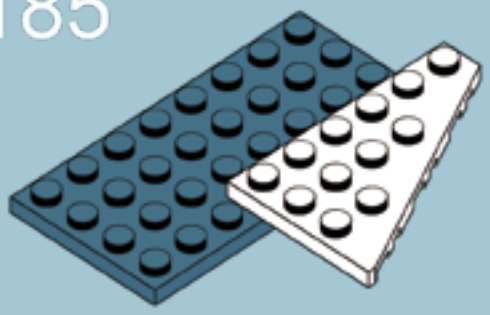




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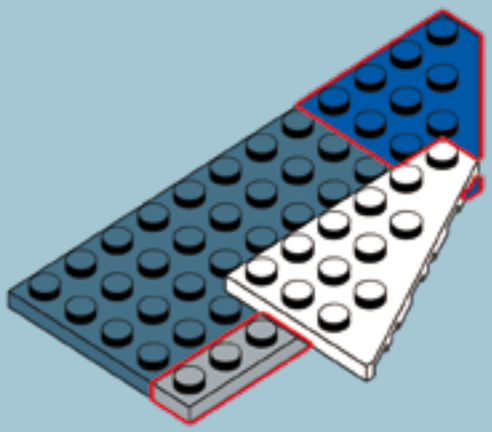


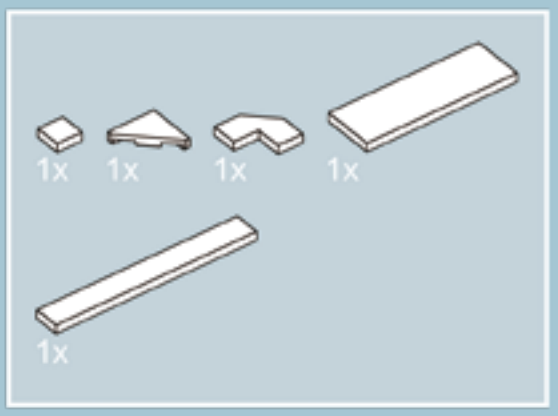
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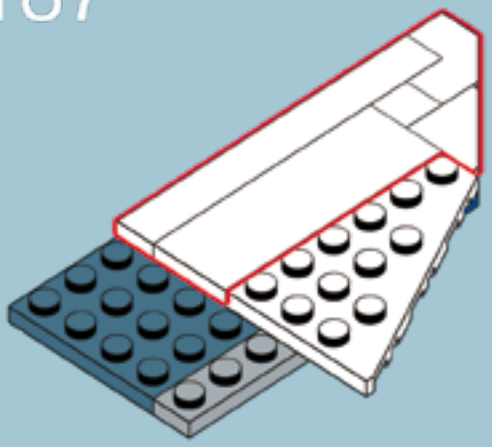


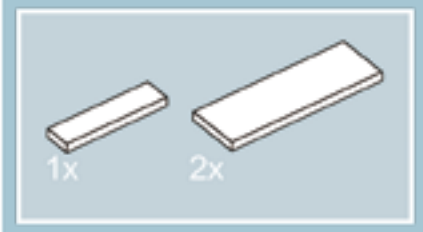
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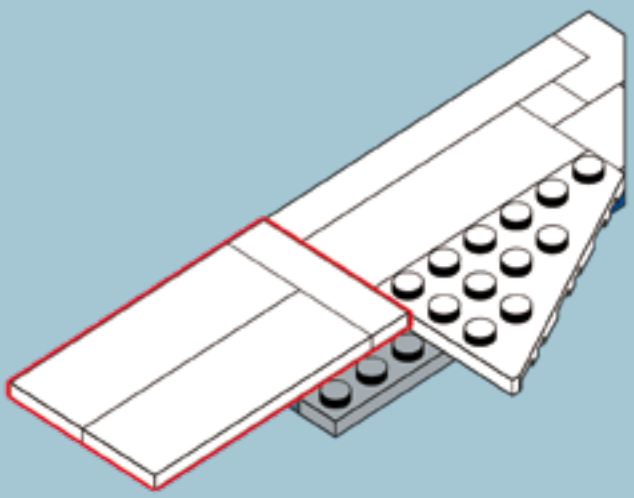


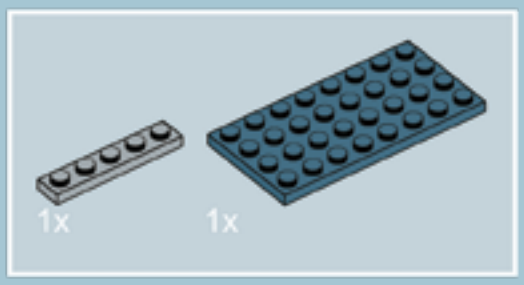
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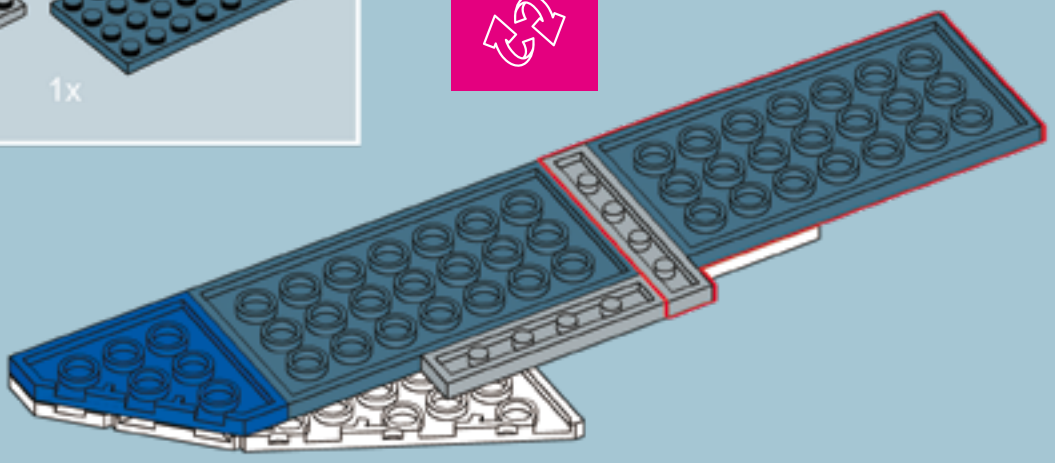


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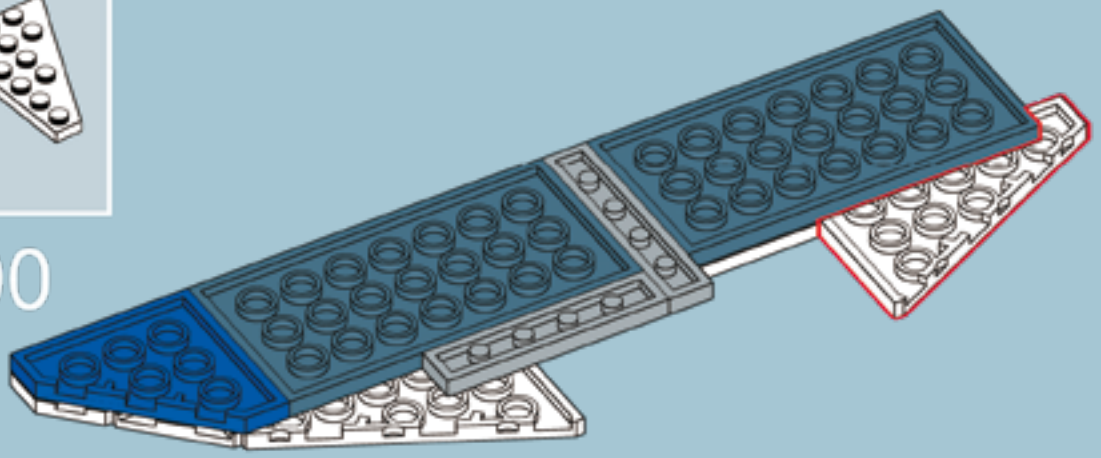


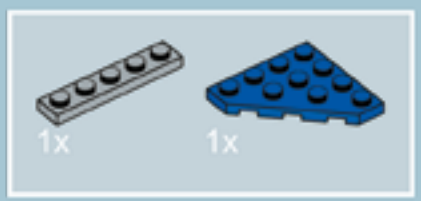
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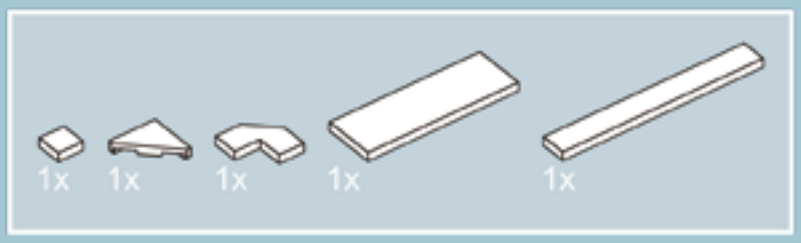


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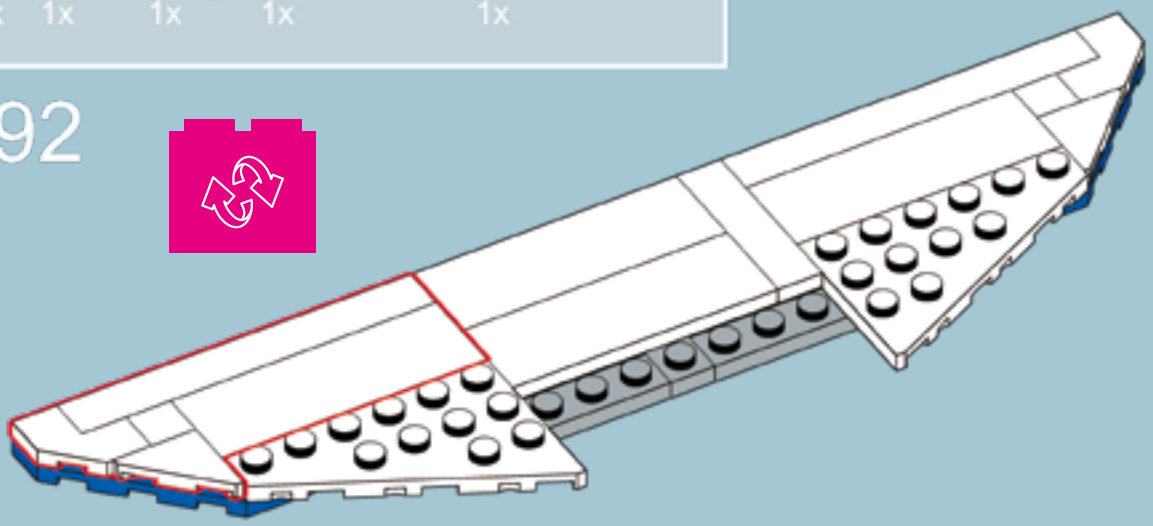


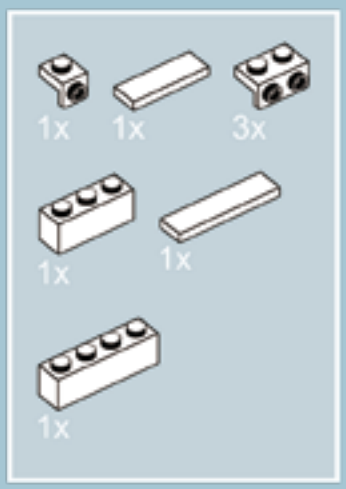


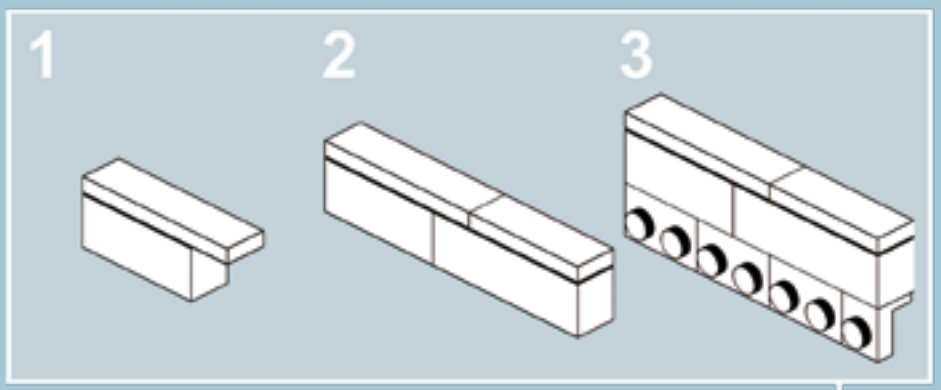
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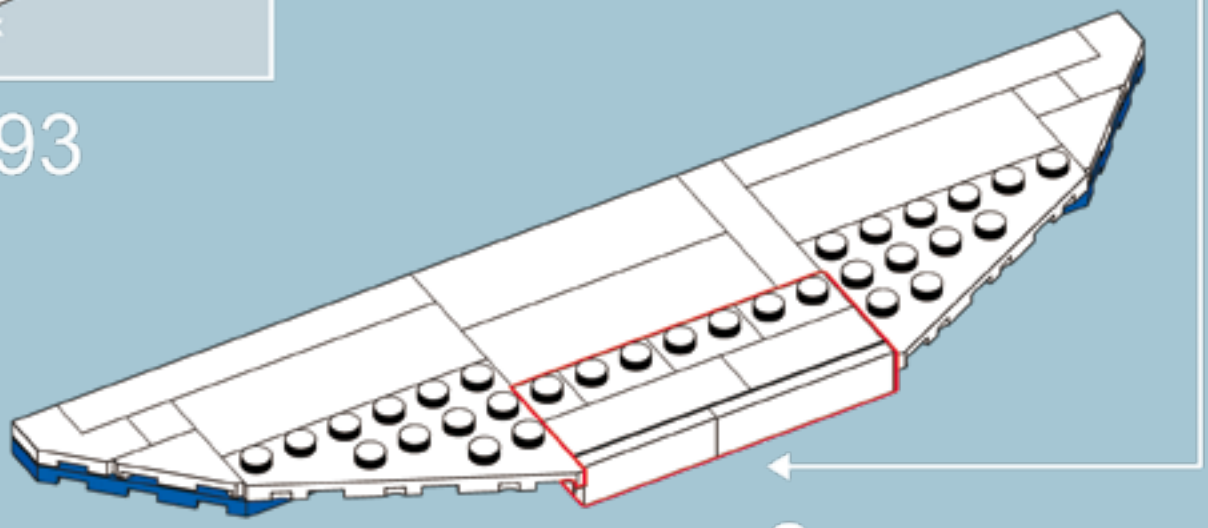
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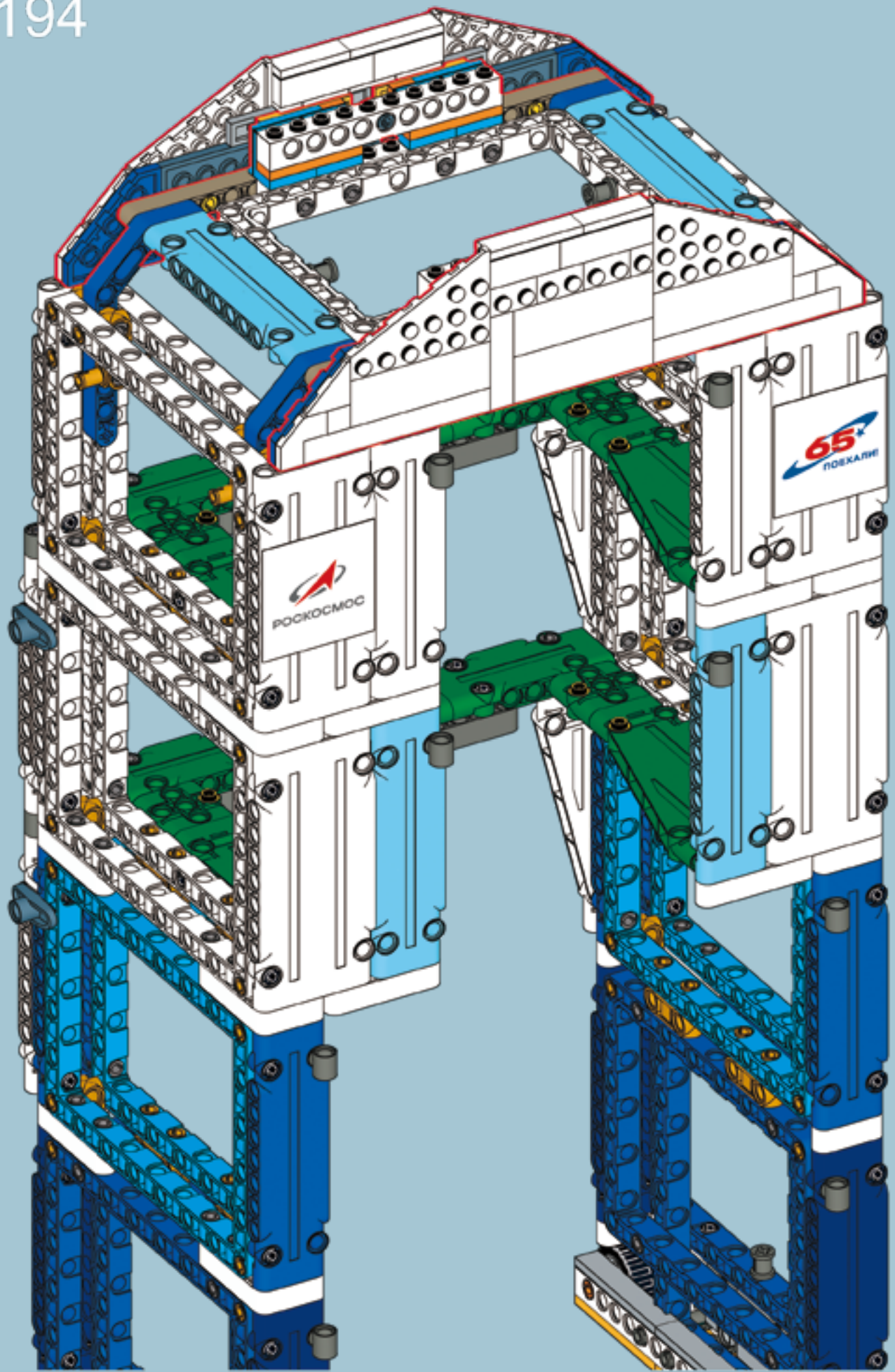


193



2x

194



13

1x
1x

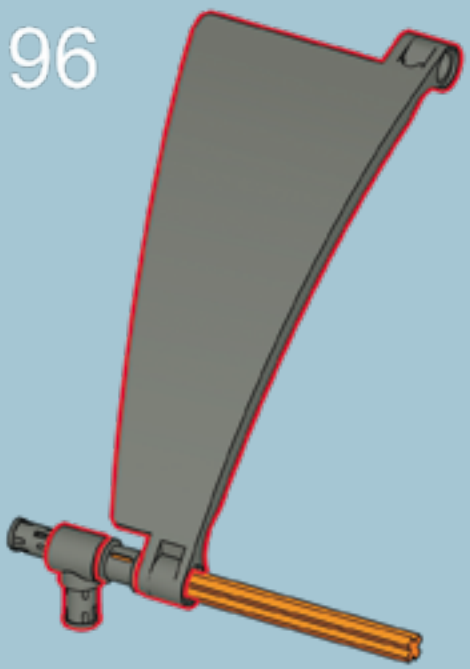
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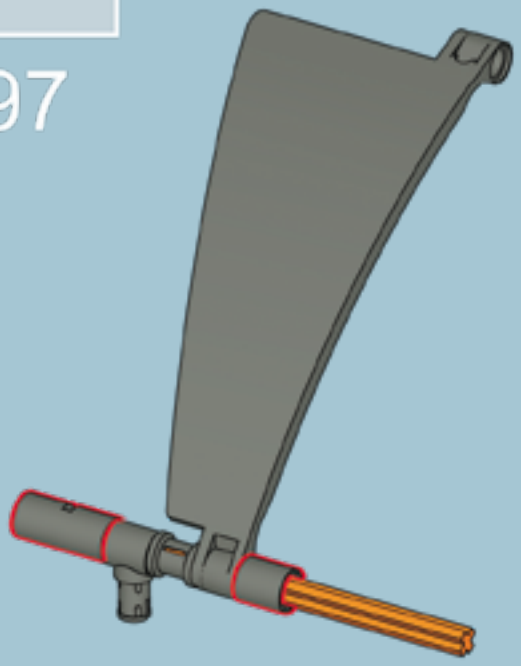
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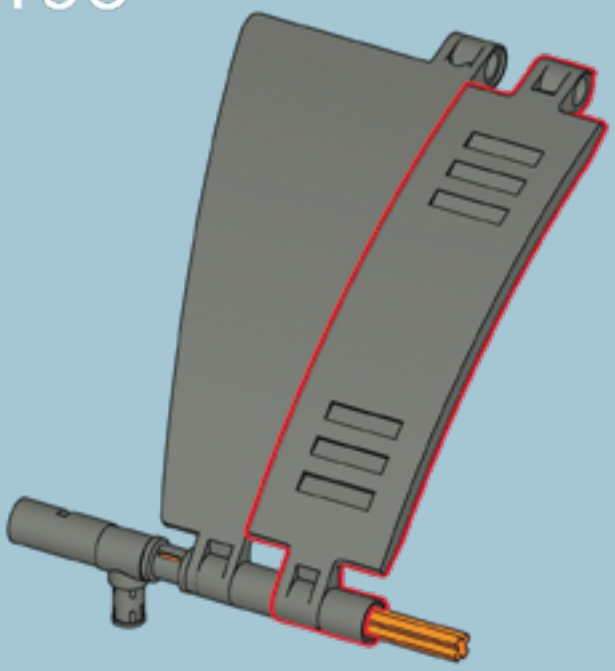
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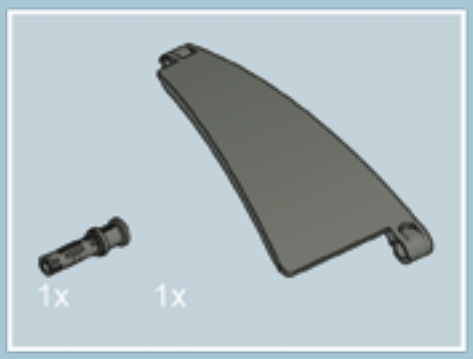
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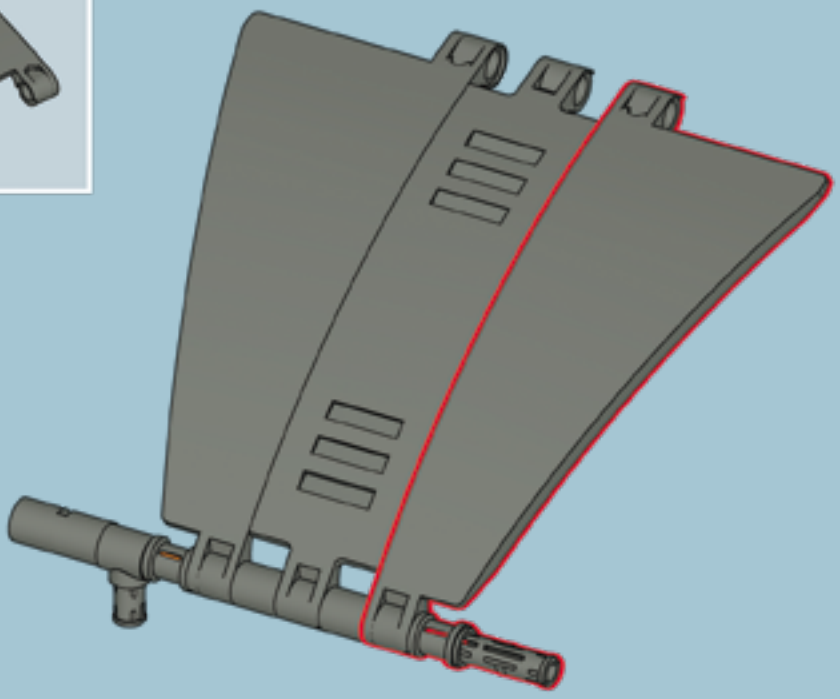
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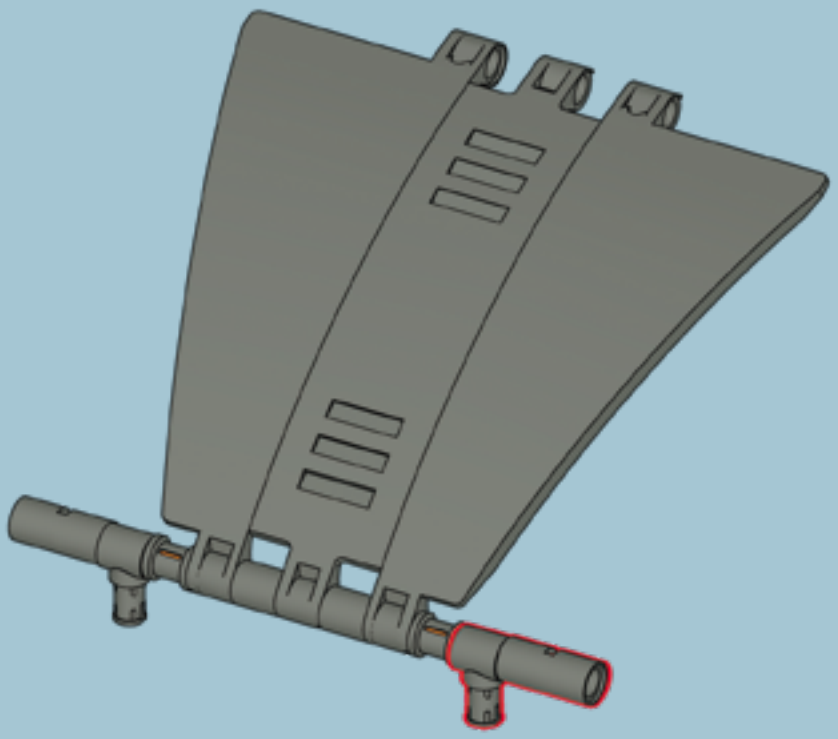


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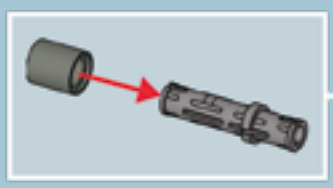


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201



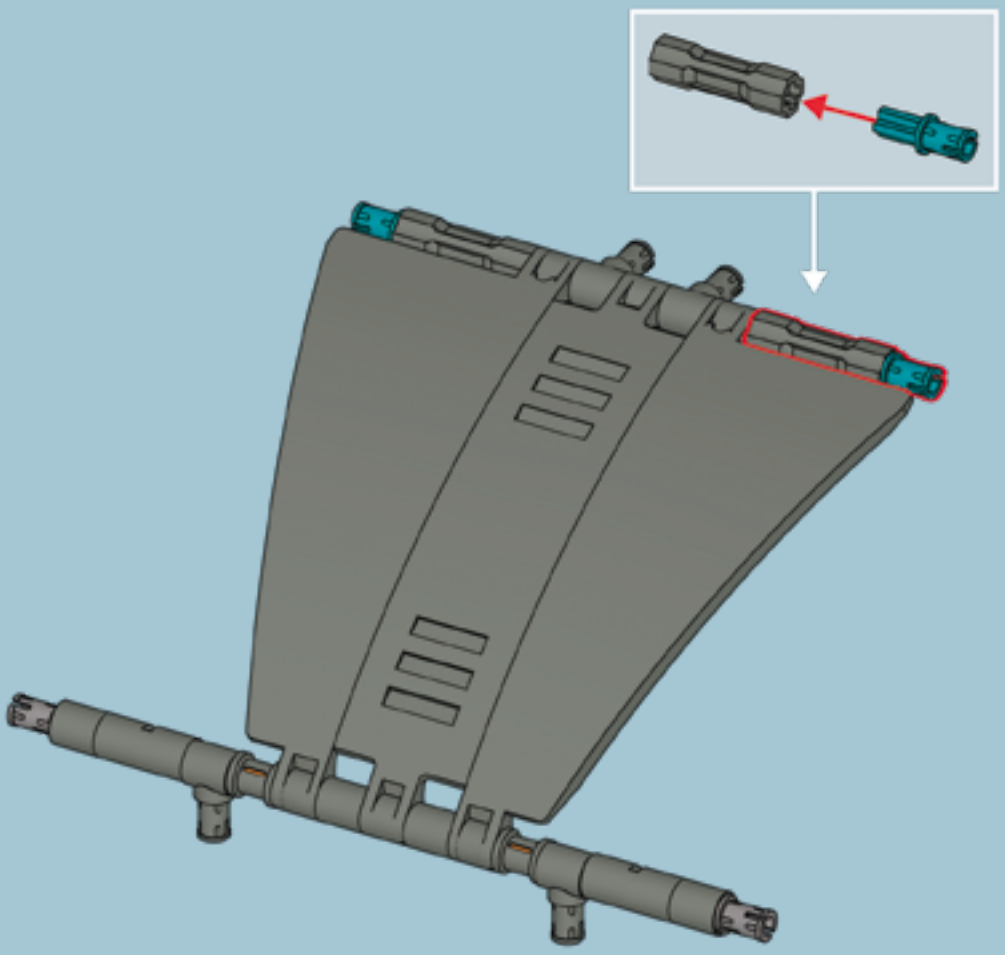
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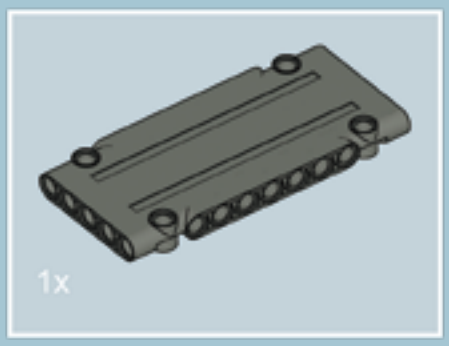


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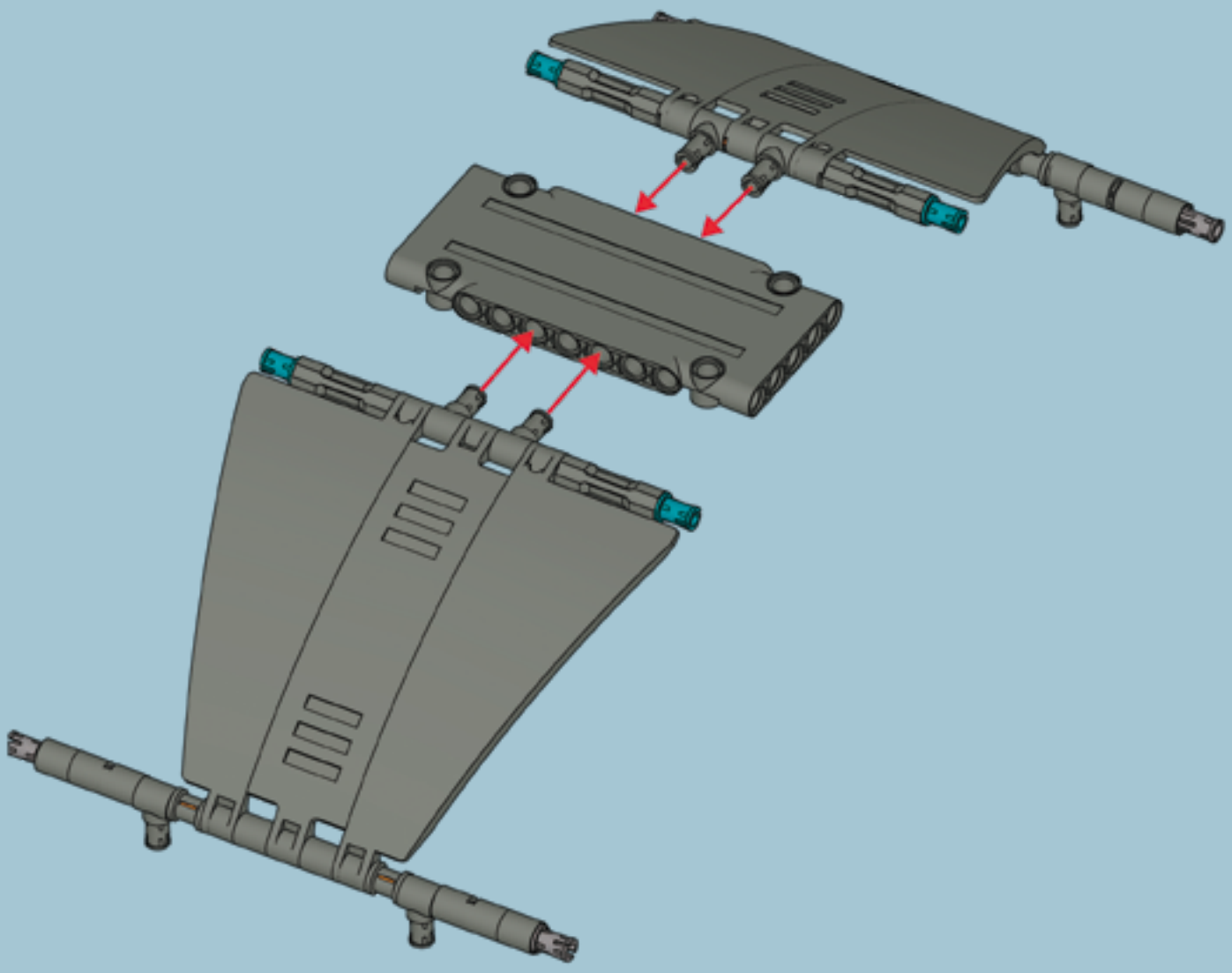
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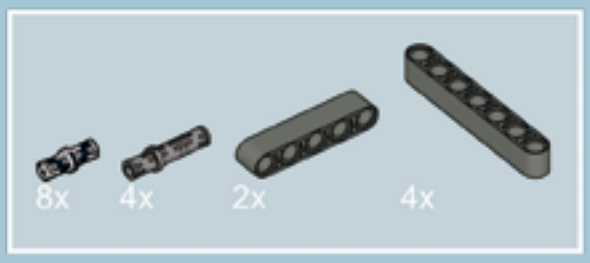
Остерегайся космических туманностей и чёрных дыр: важно не потерять ни одной детали!



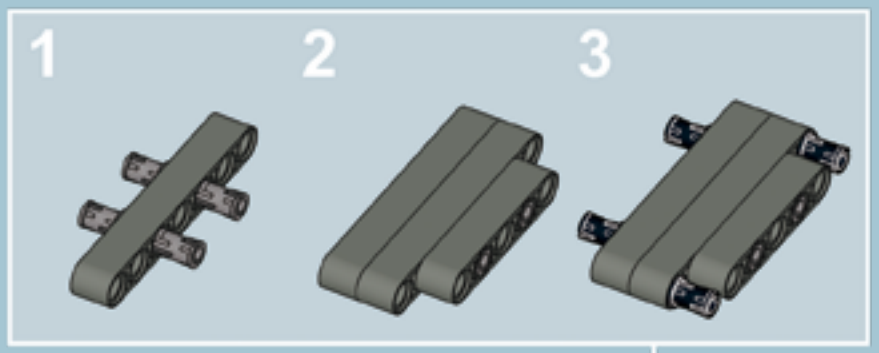


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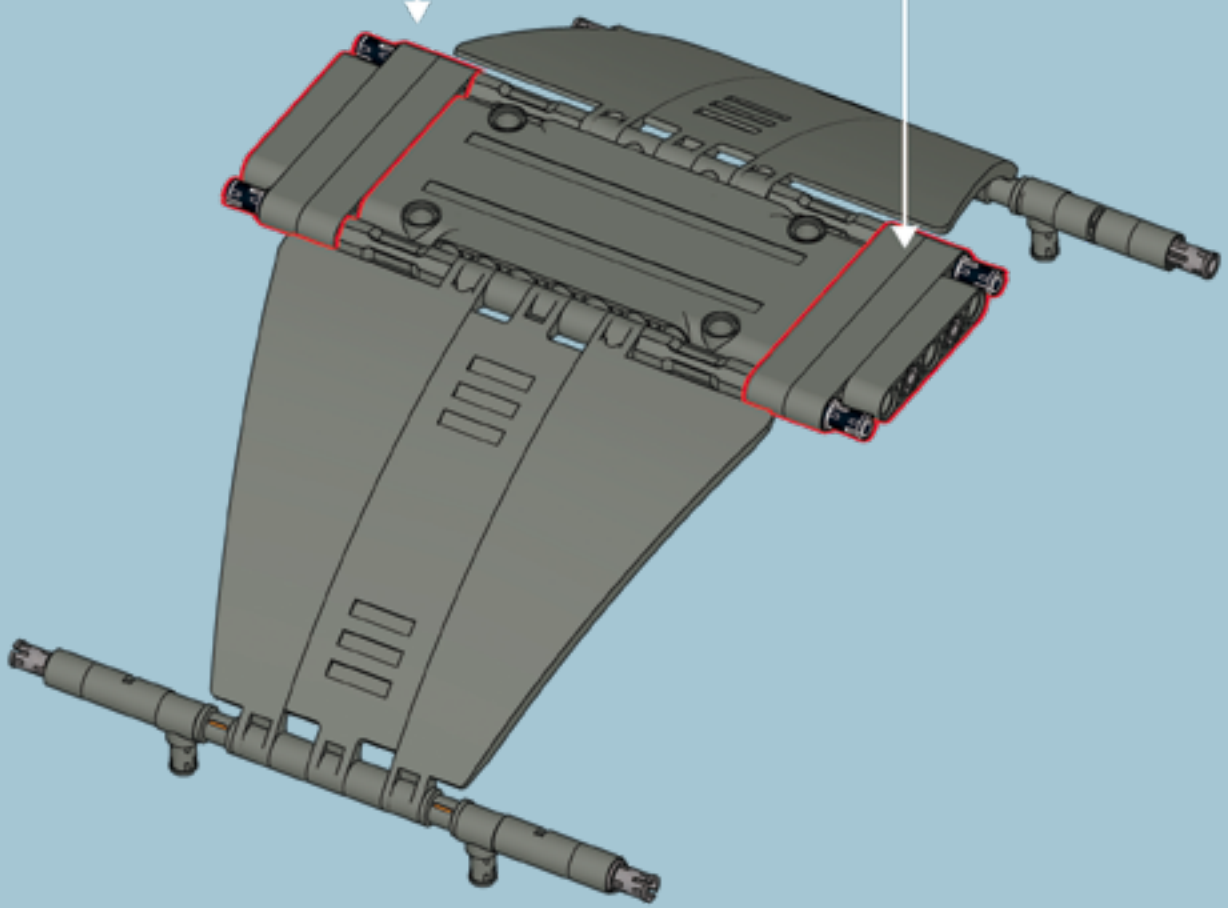




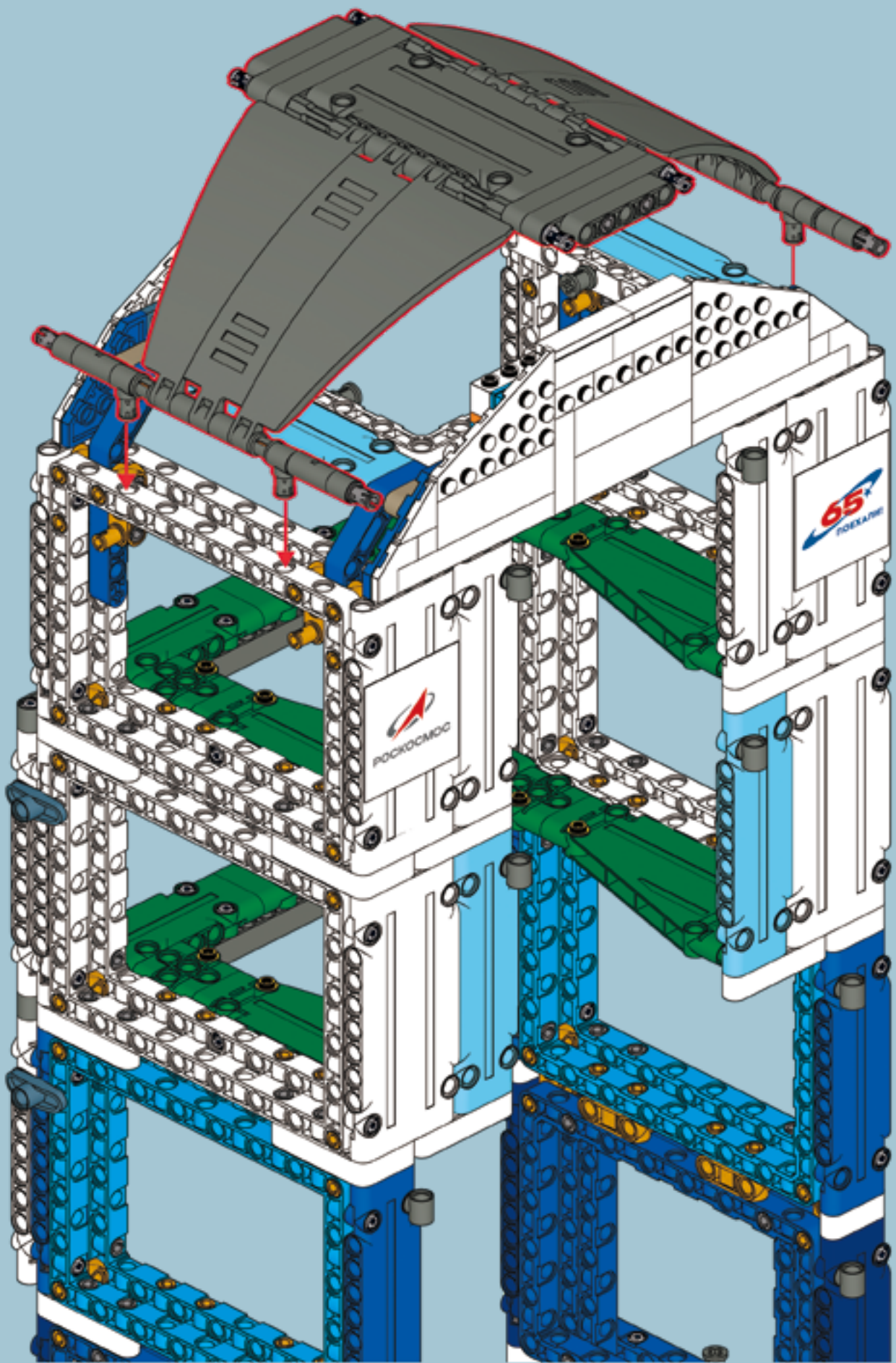
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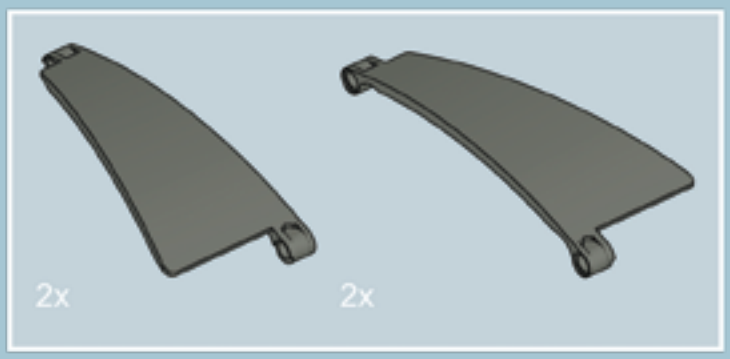


2x



206

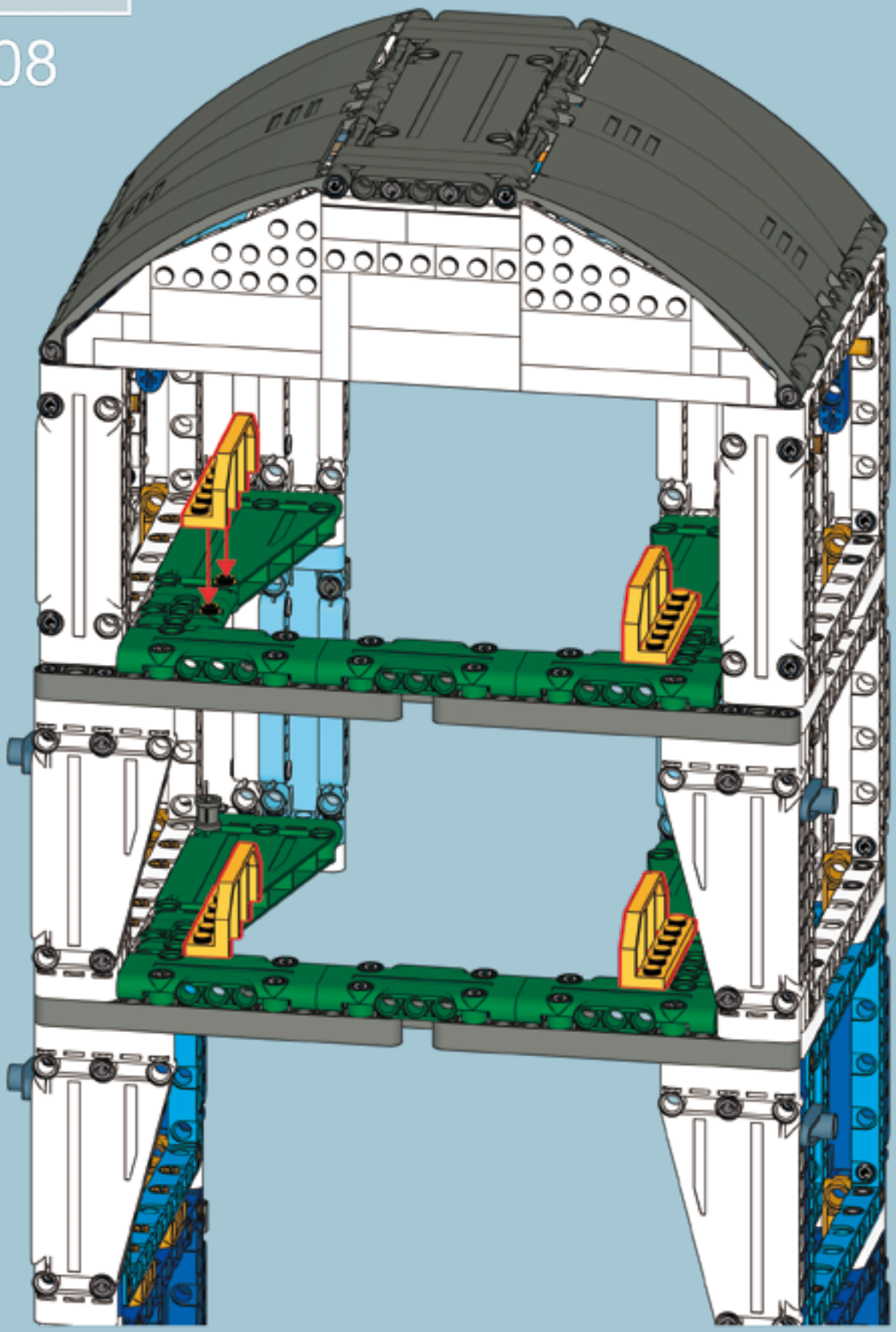


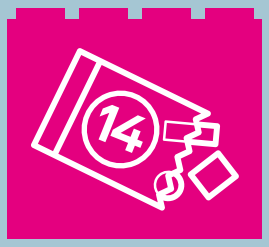


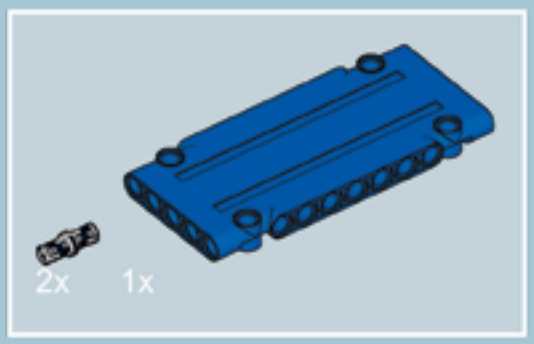
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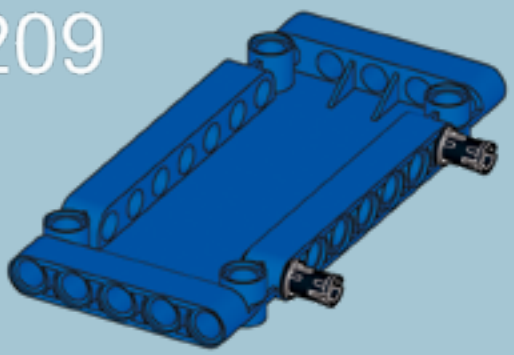
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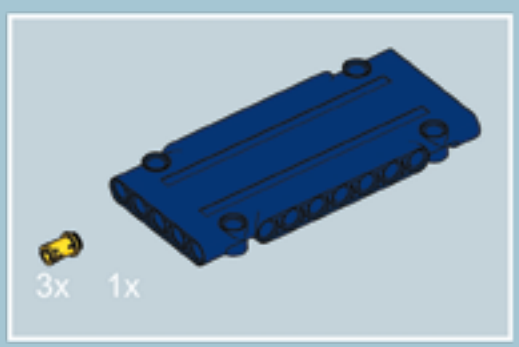




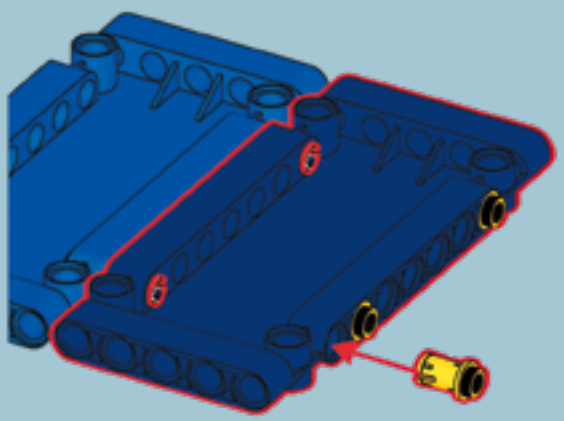


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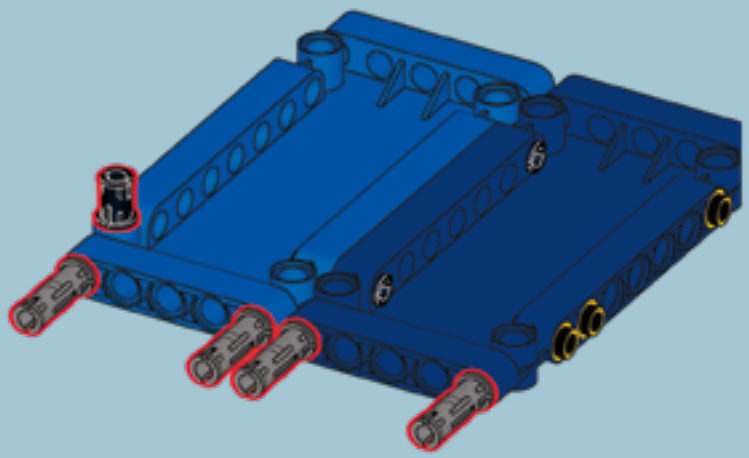


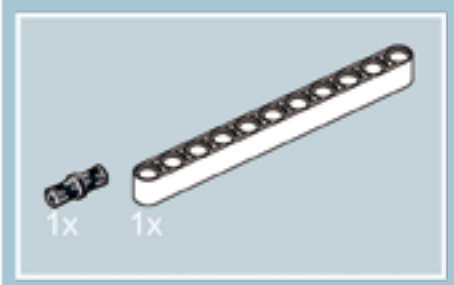
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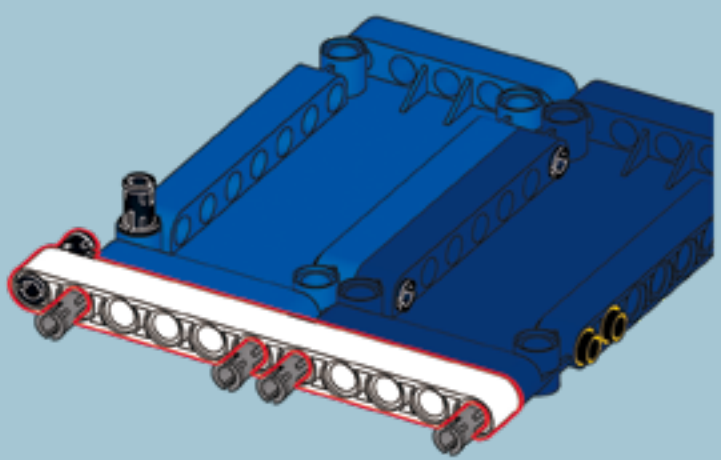


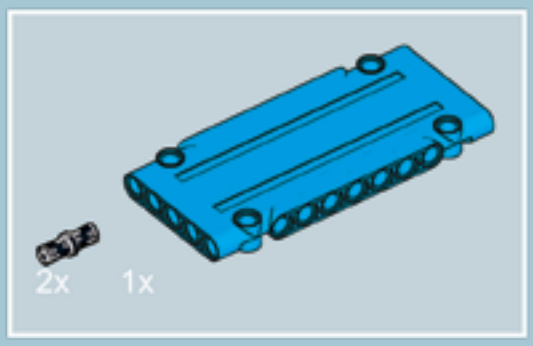
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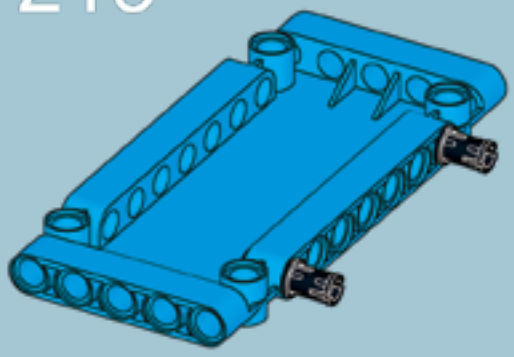


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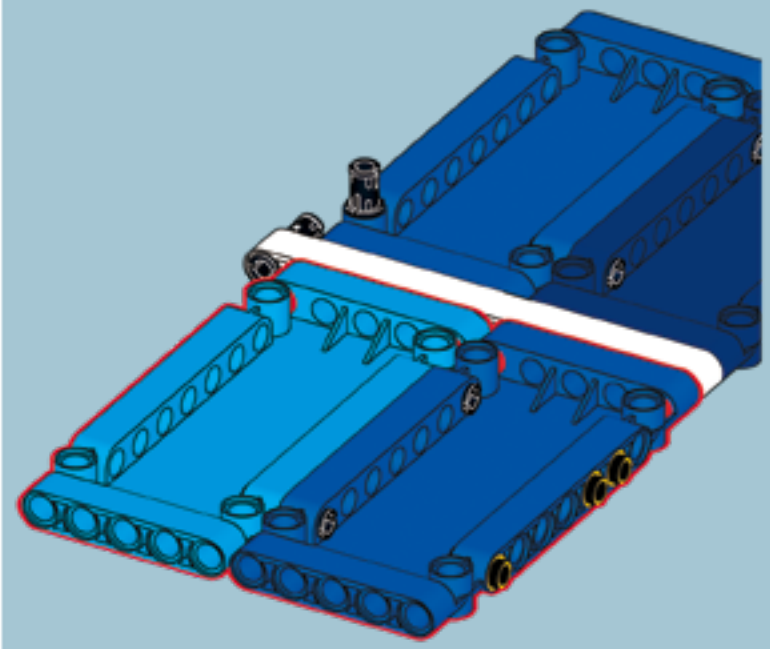


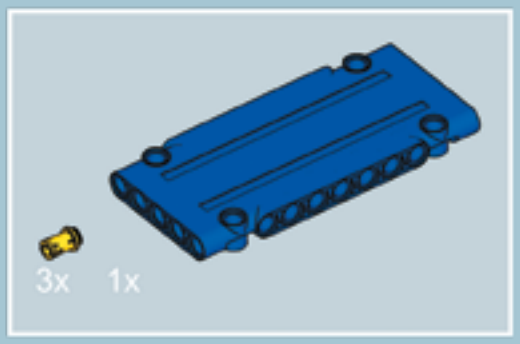


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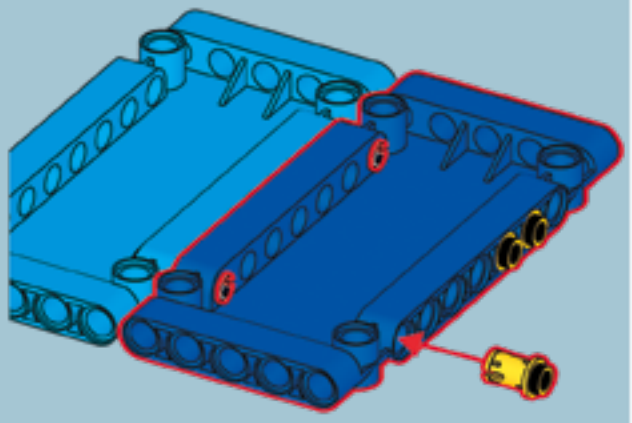


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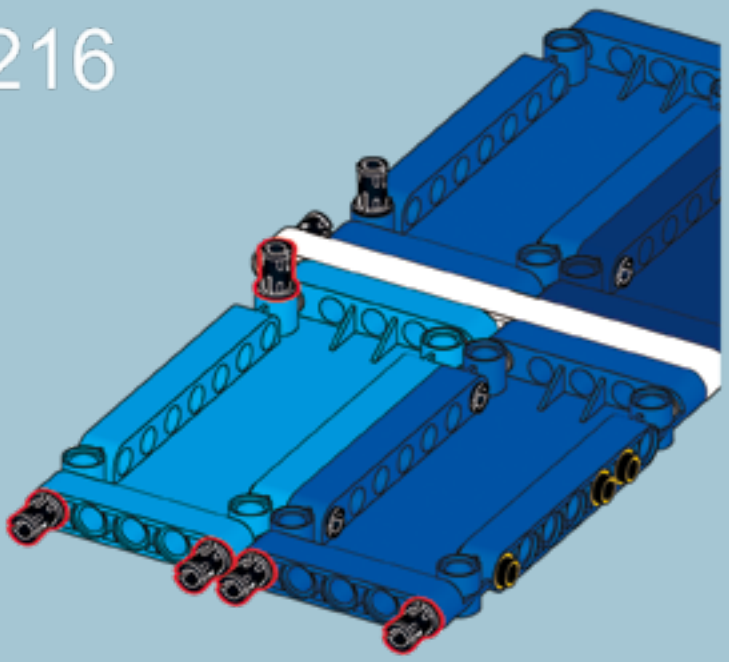


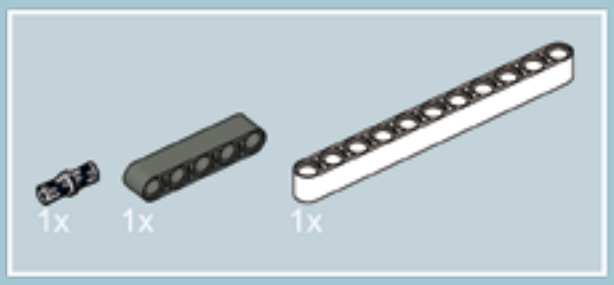
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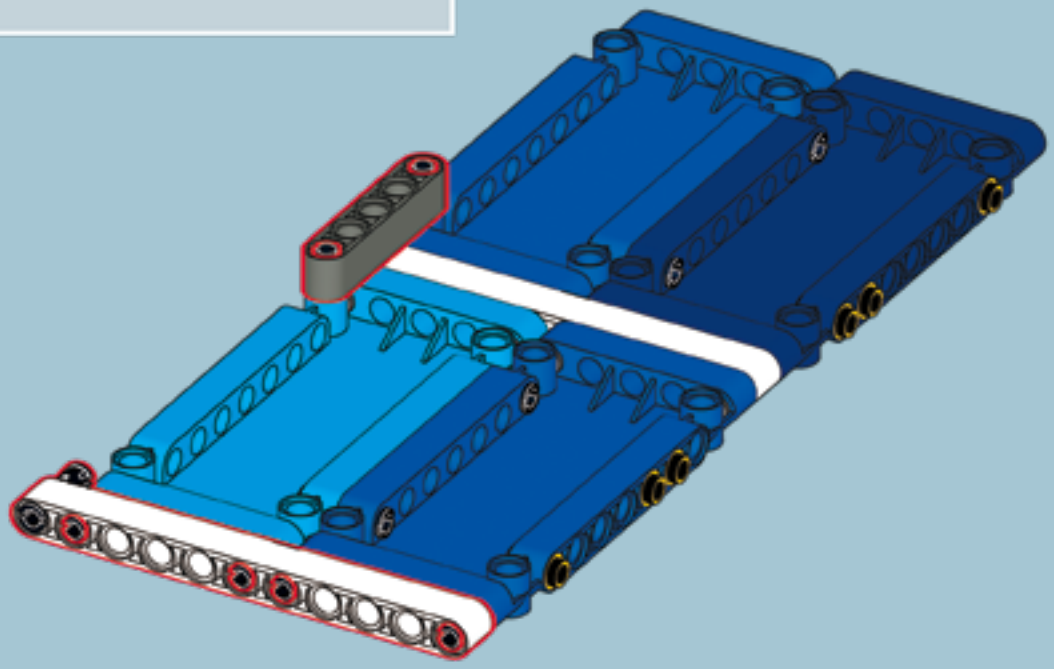


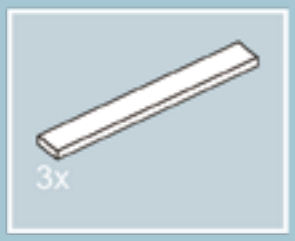
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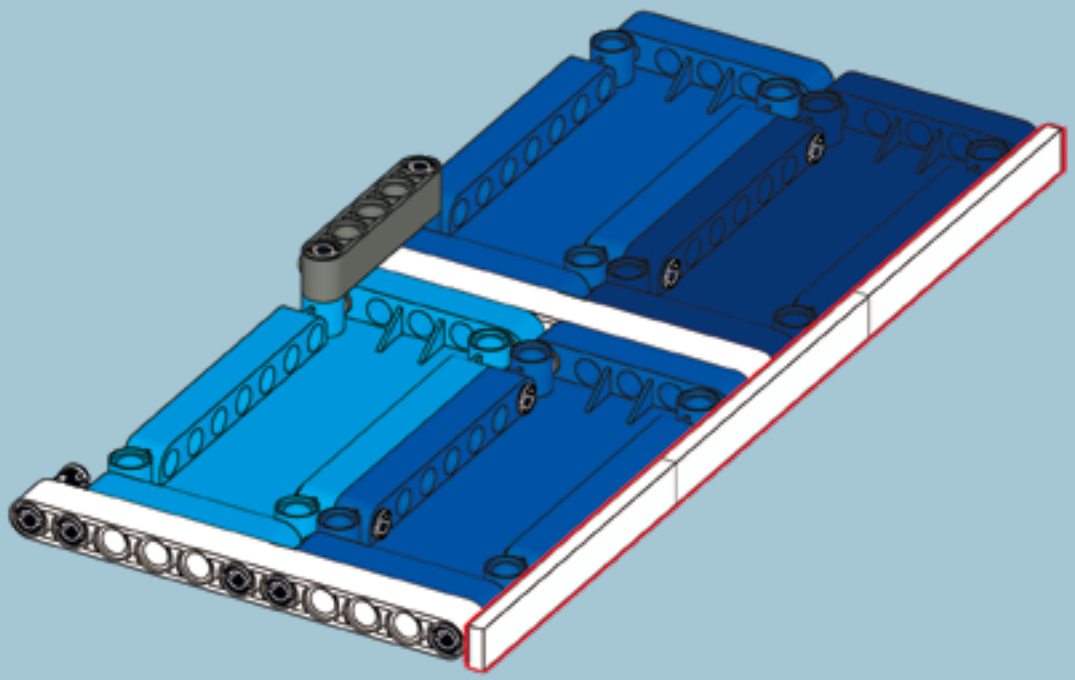


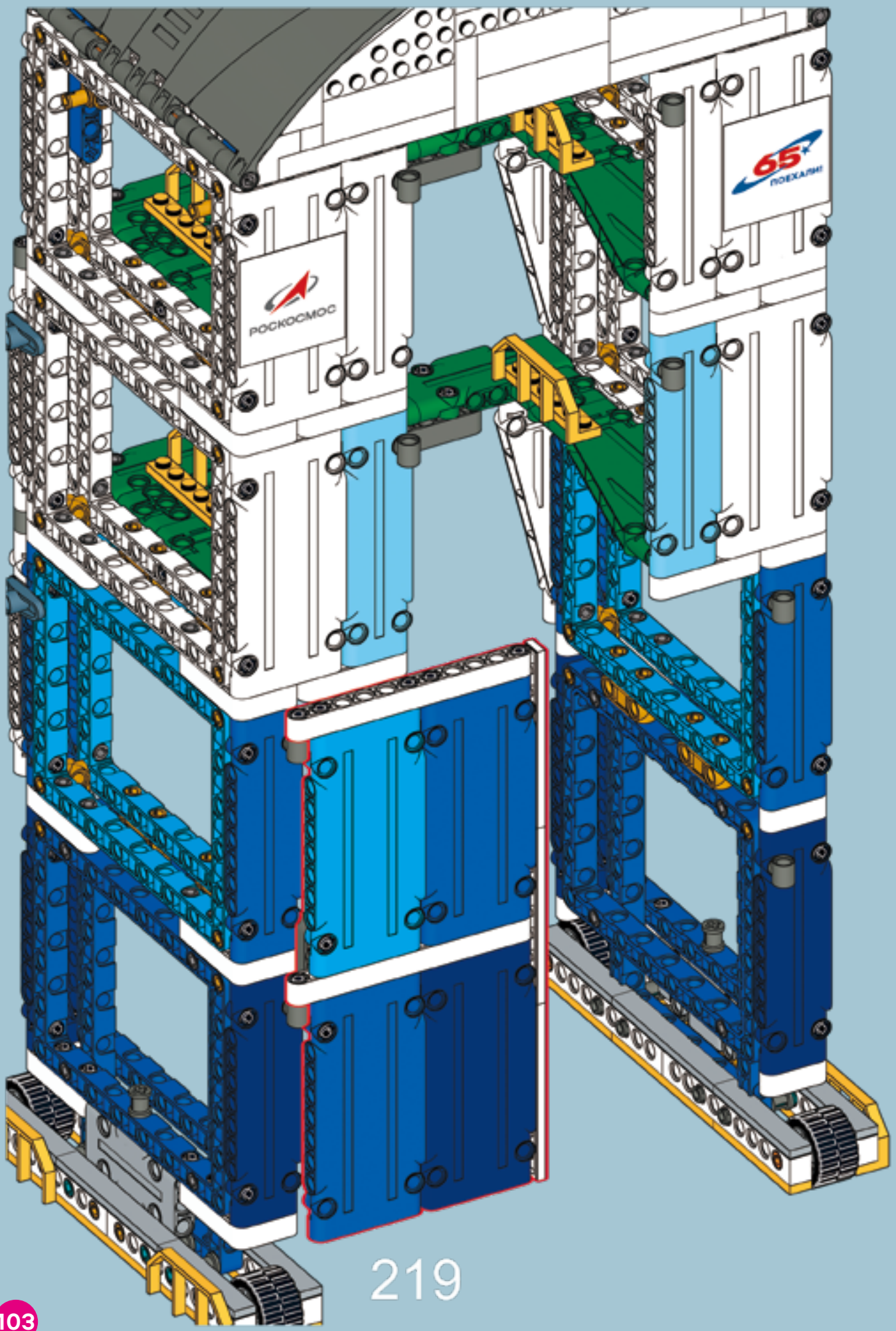
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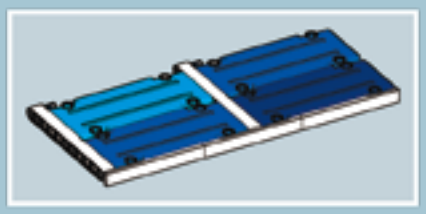


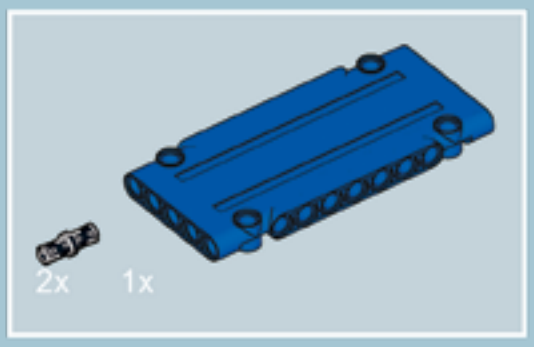
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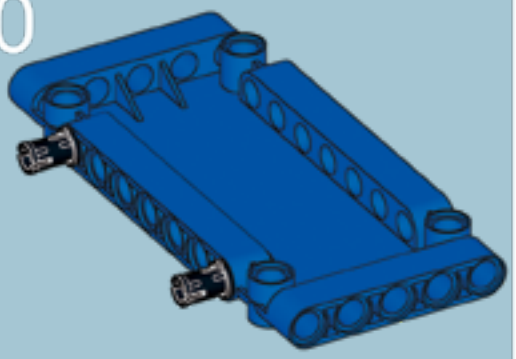


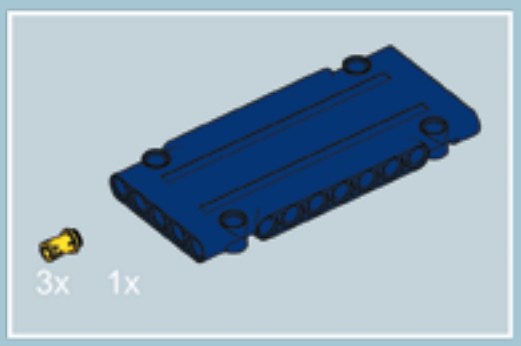
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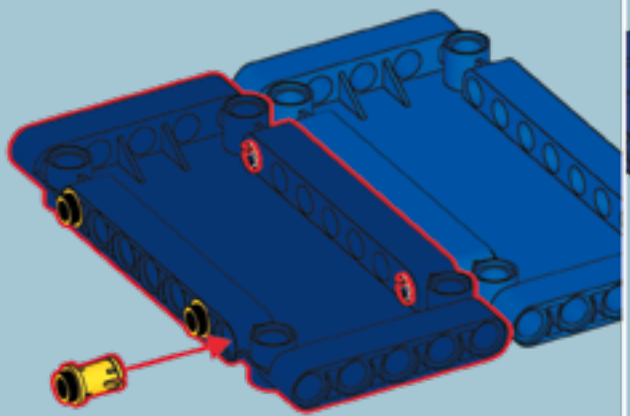


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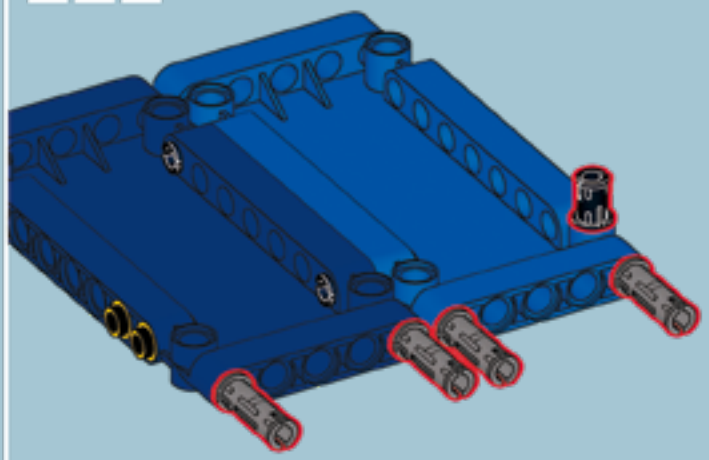


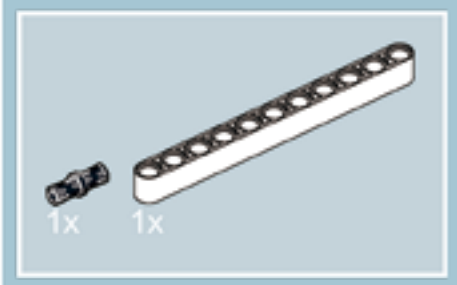
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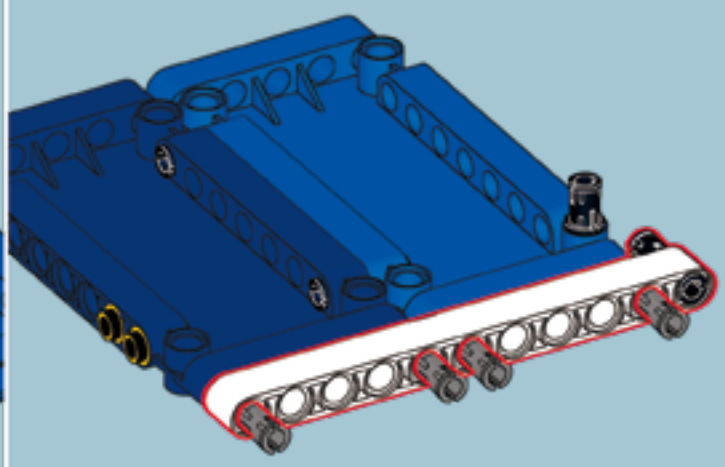


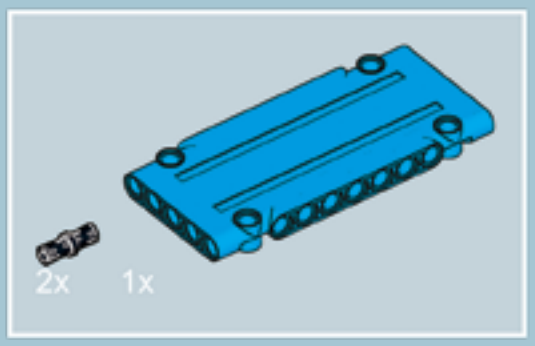
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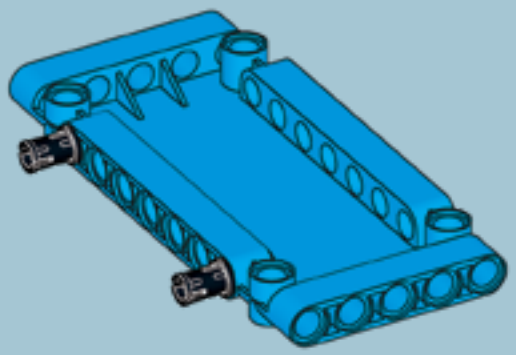


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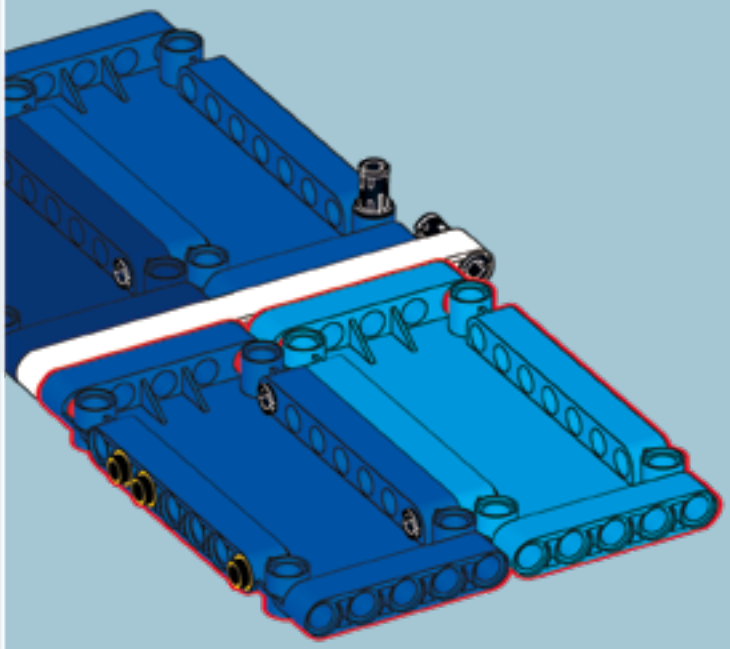


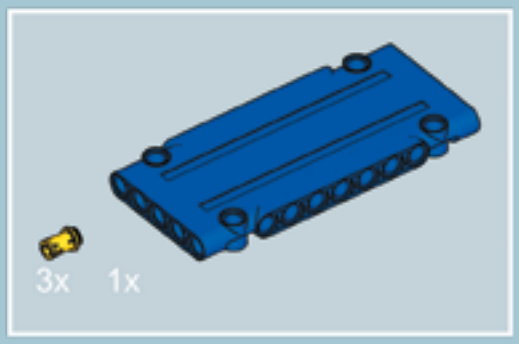


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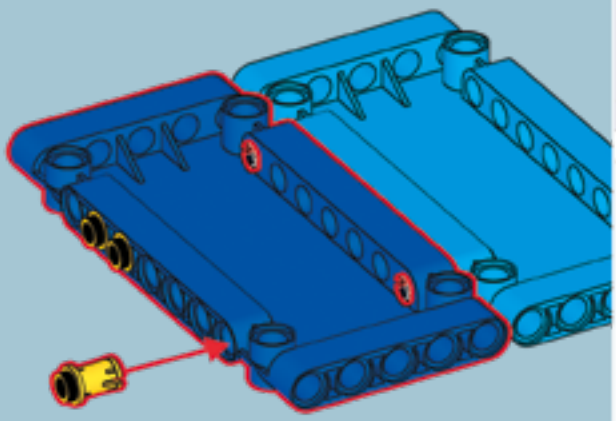


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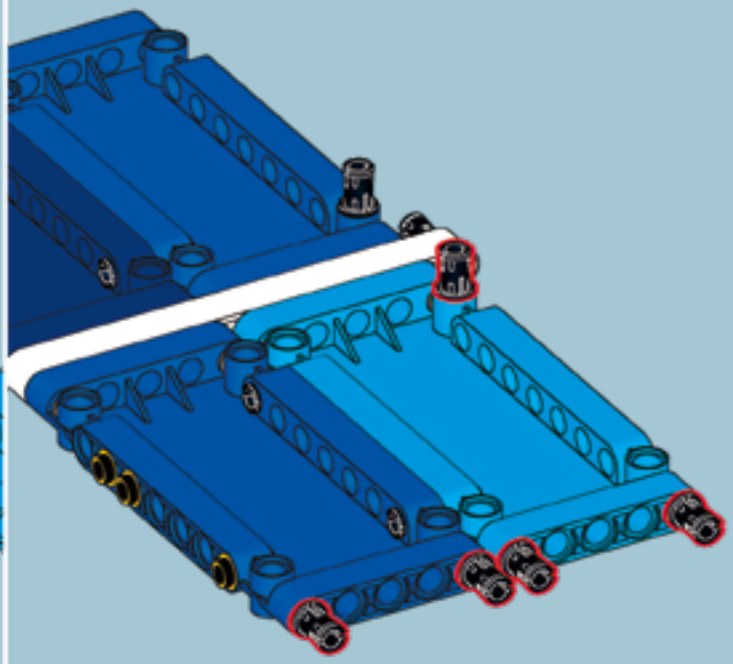


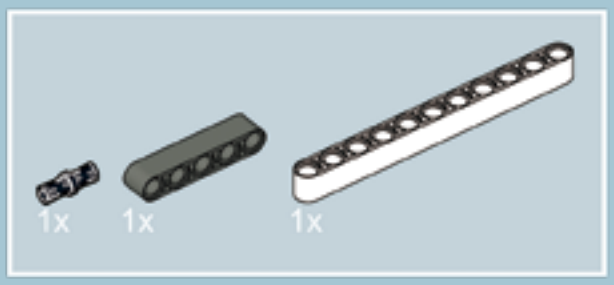
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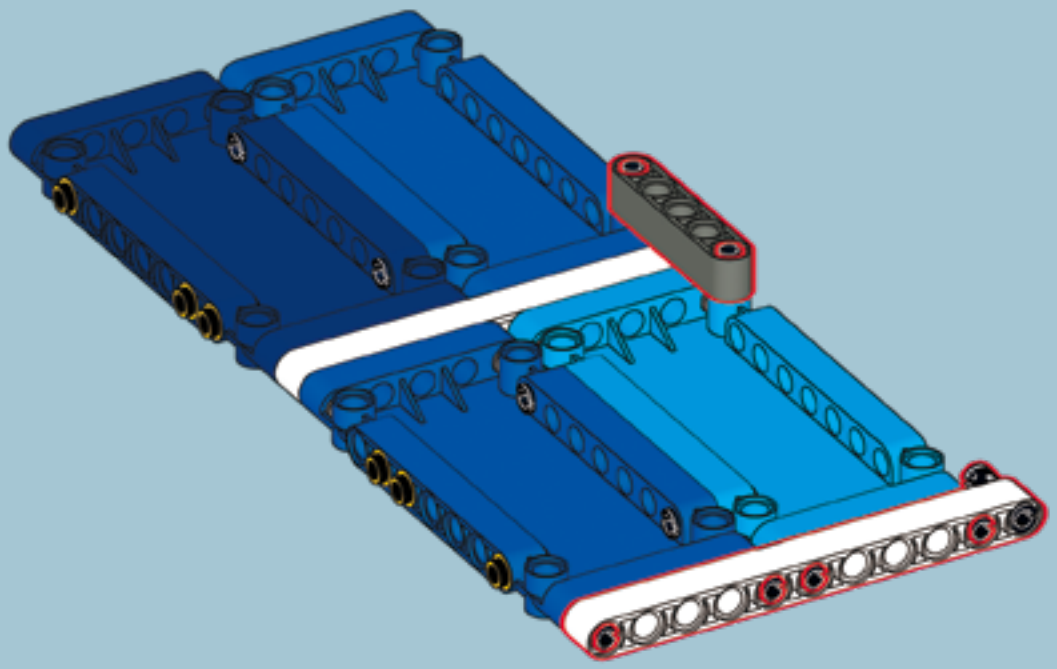


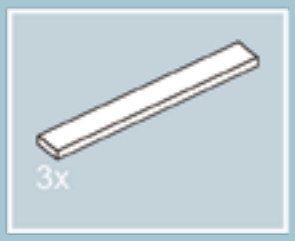
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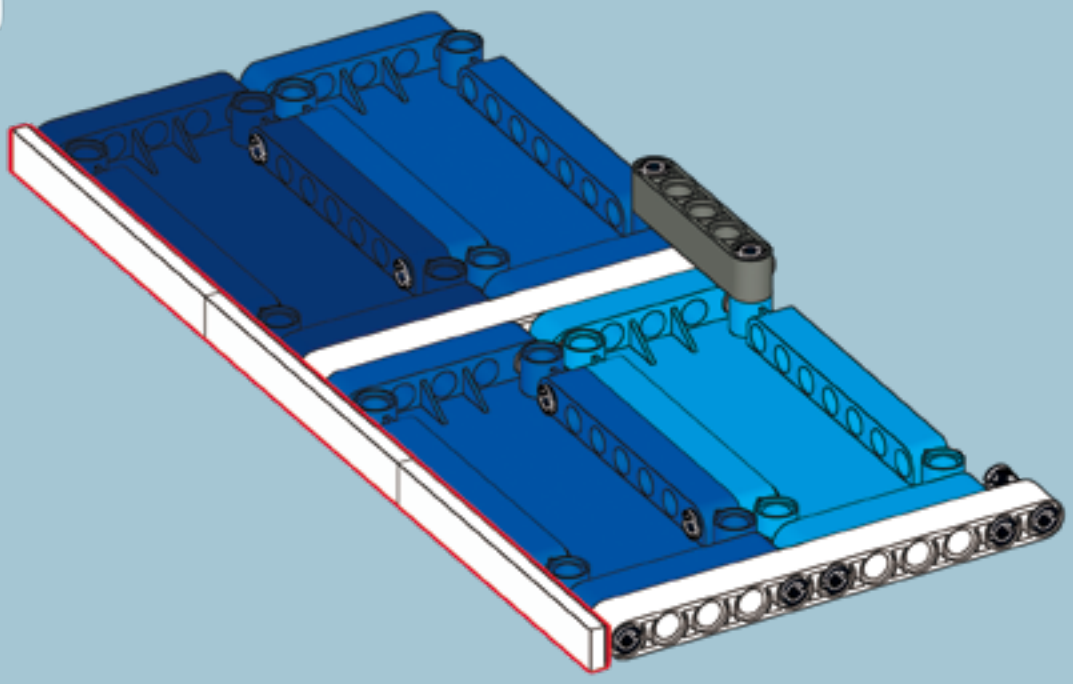


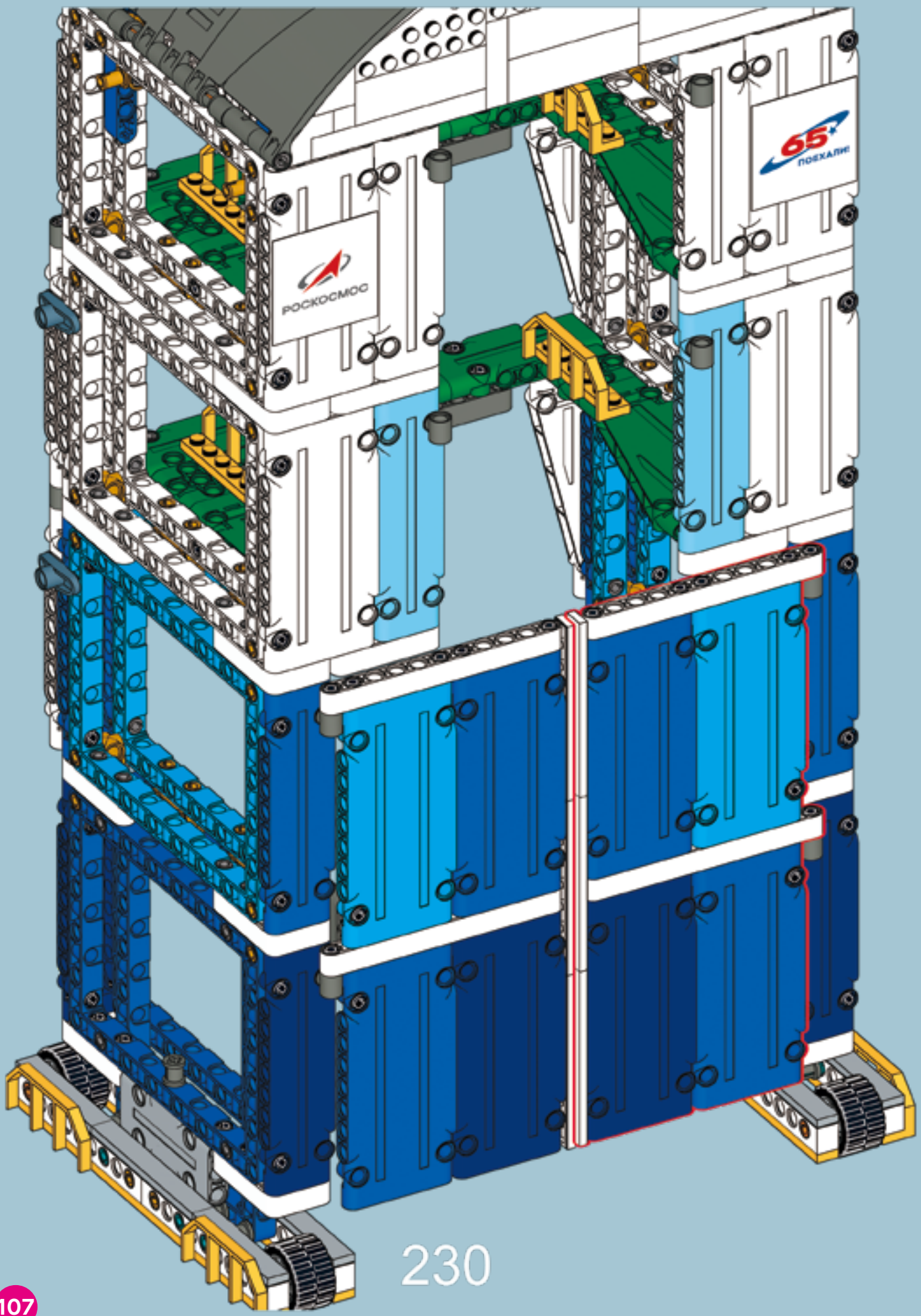
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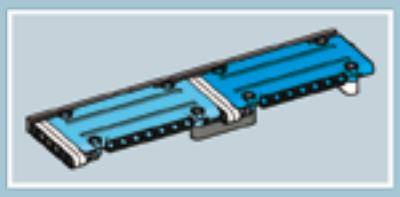


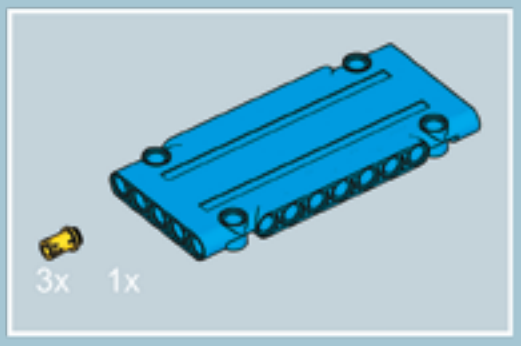
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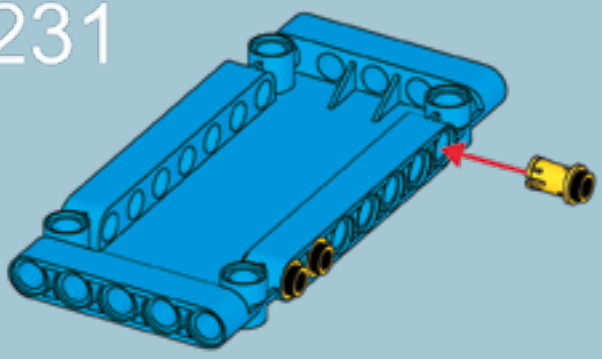


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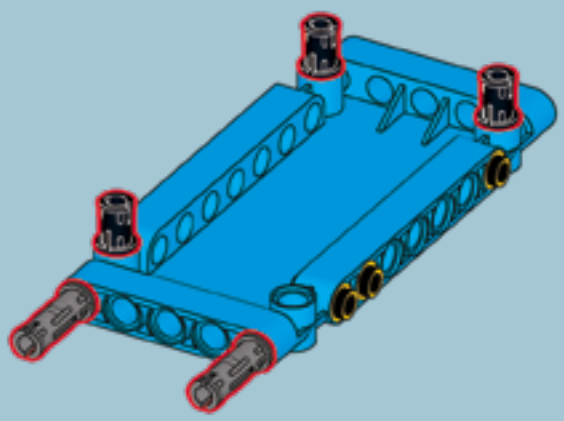


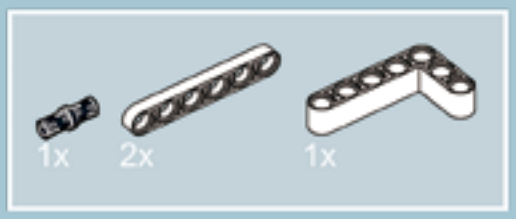
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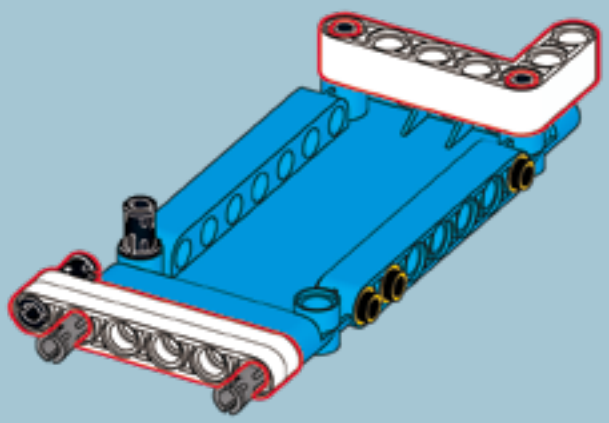


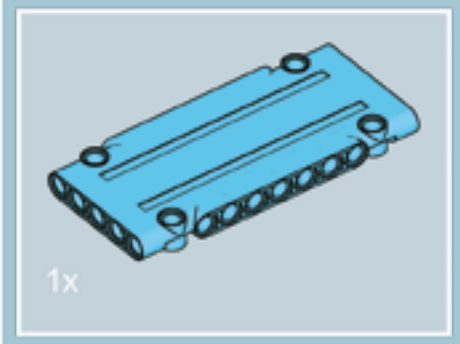
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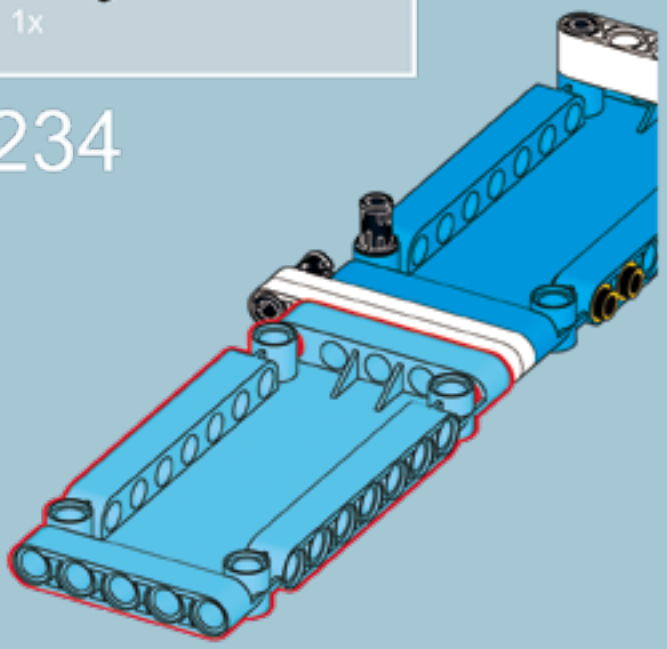


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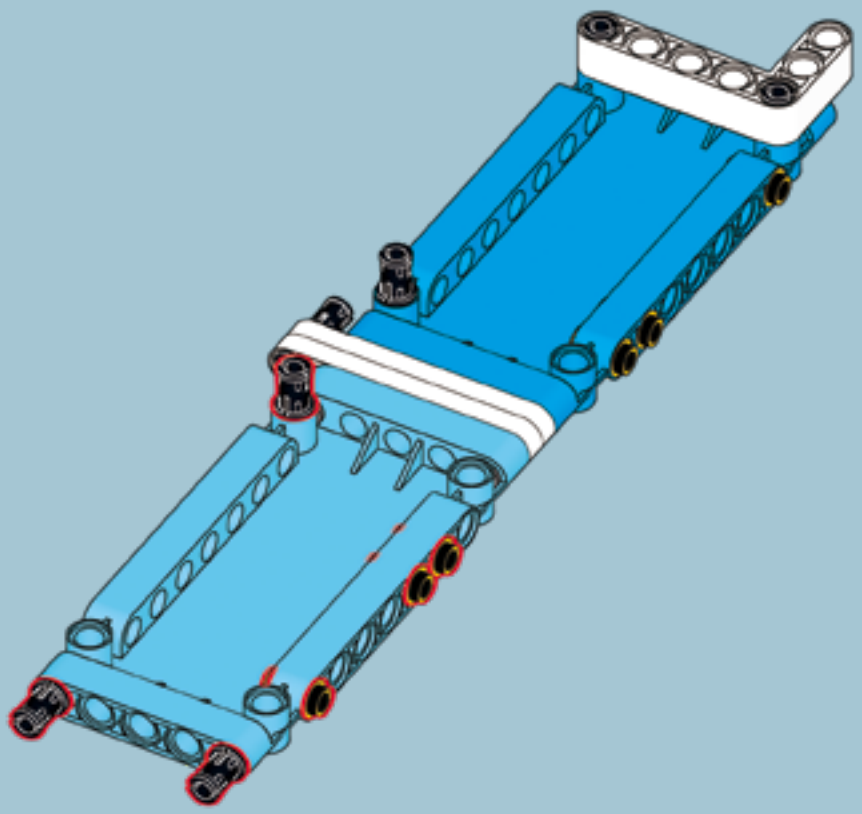


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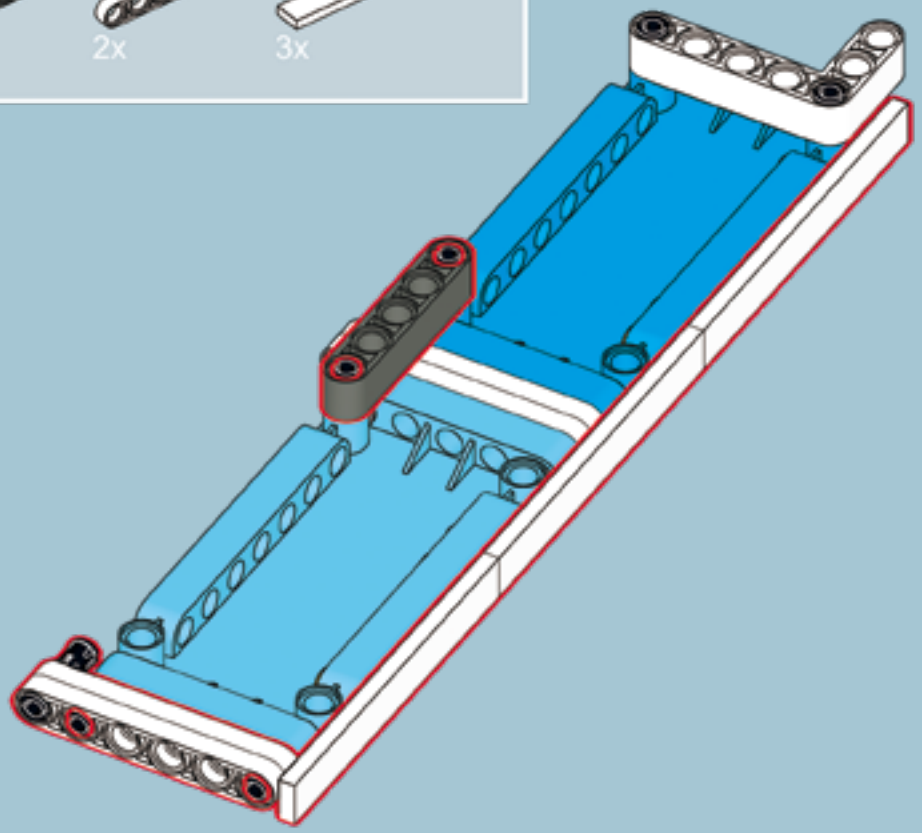


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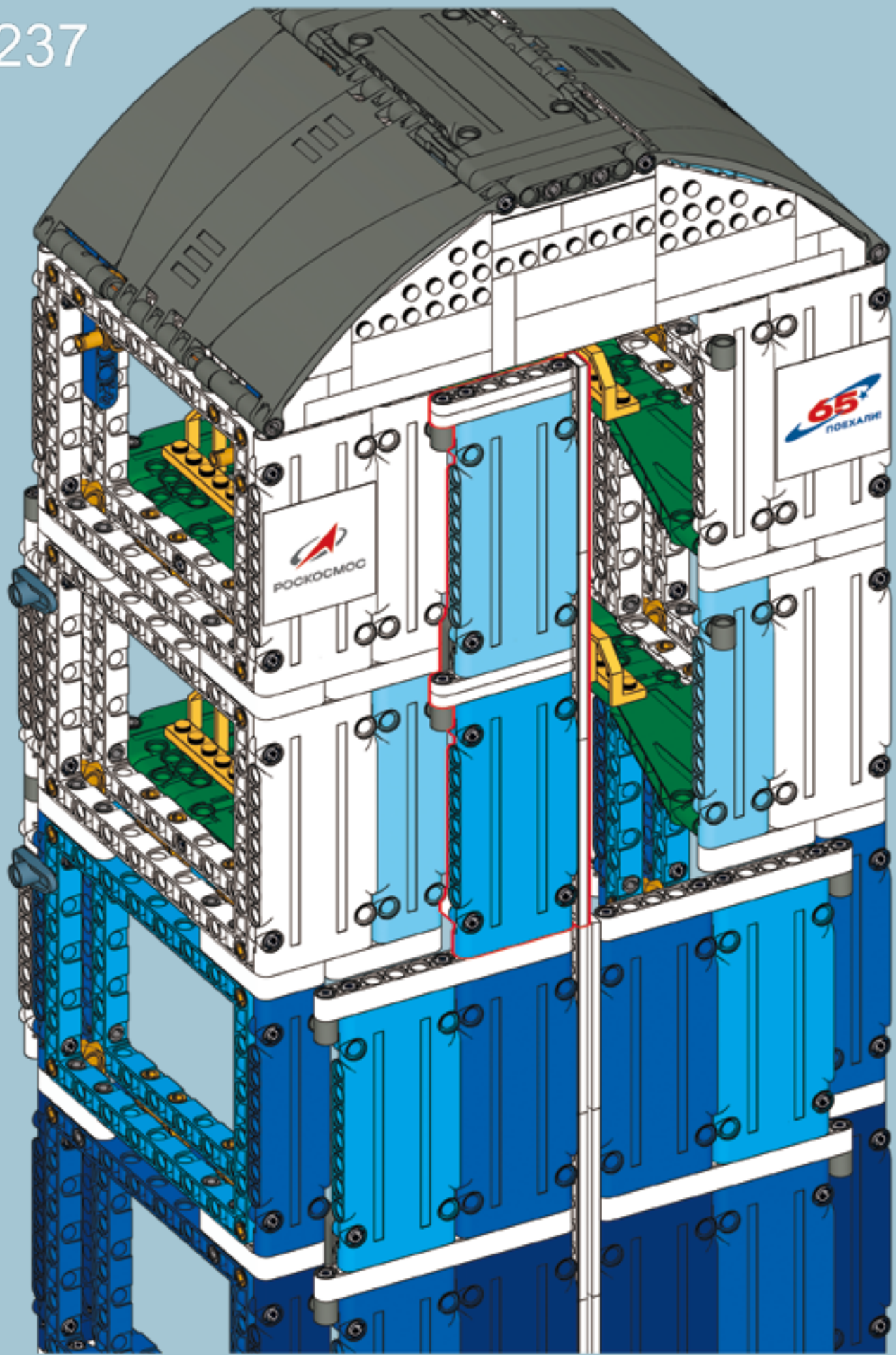


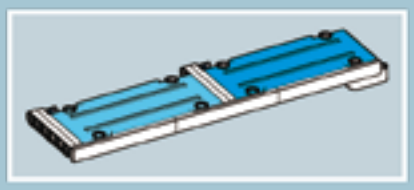


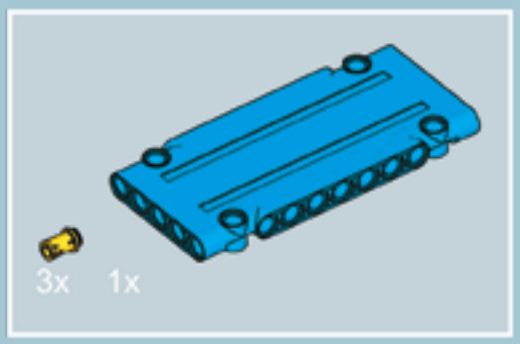
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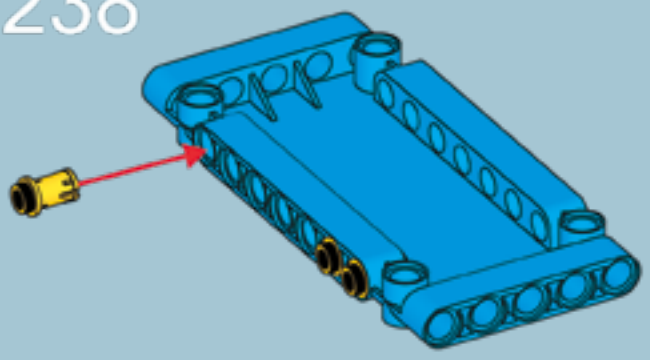
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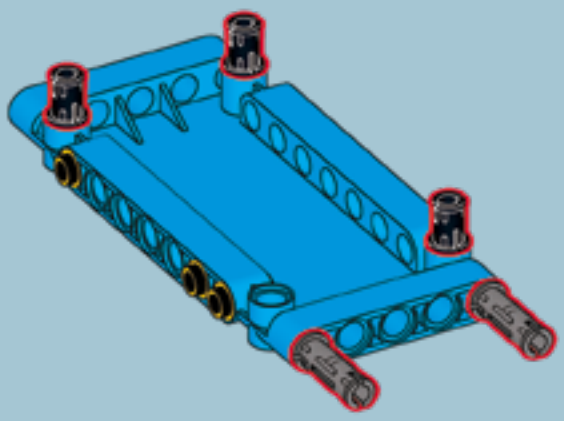


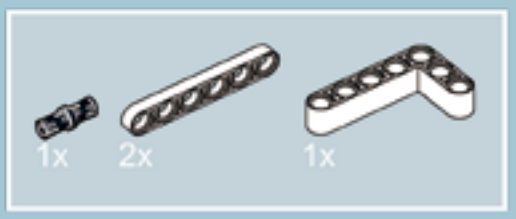
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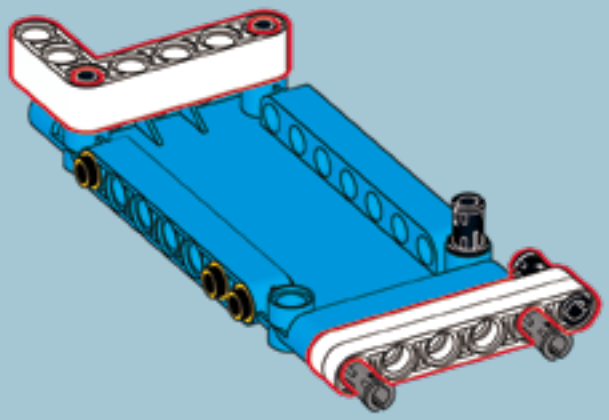


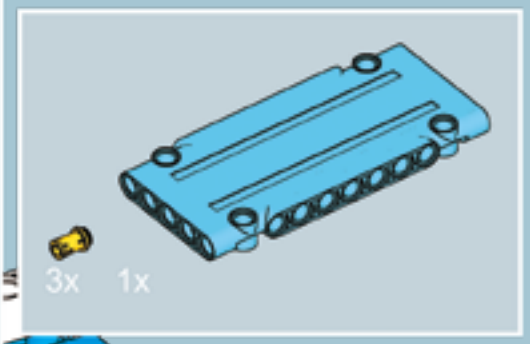
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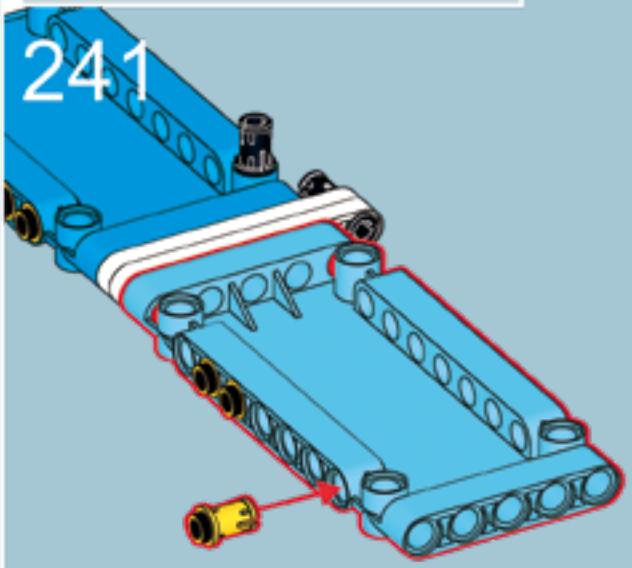


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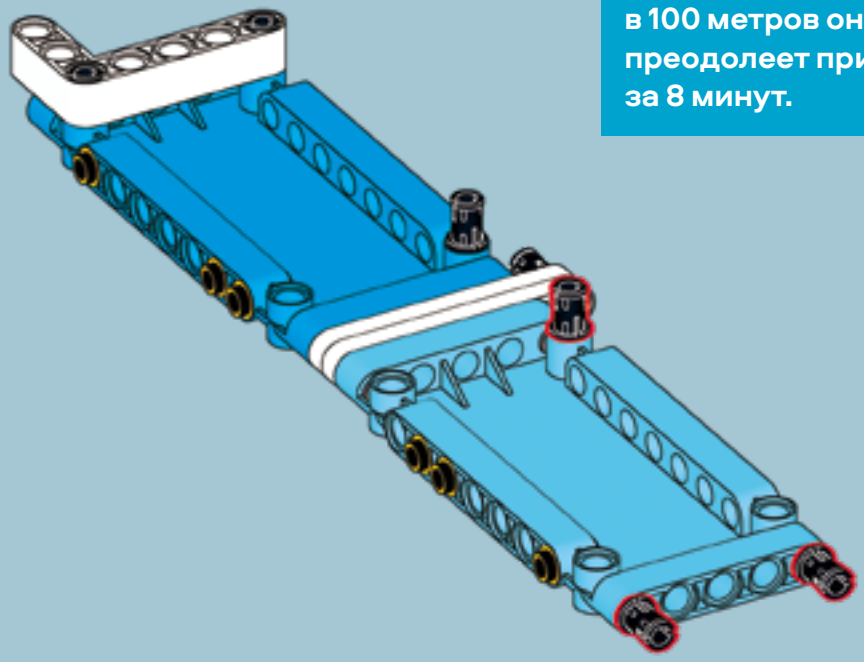


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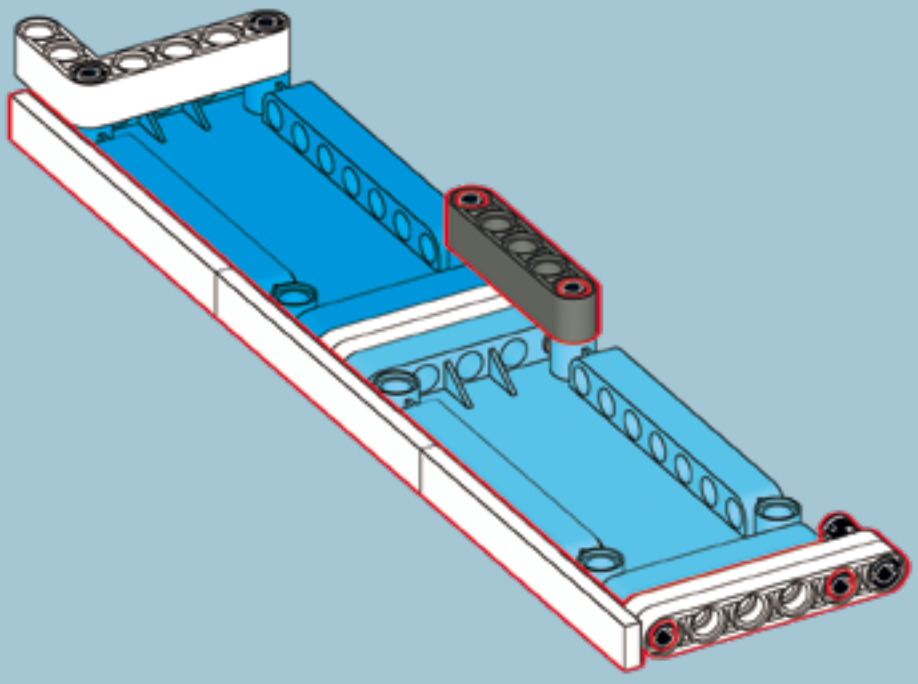
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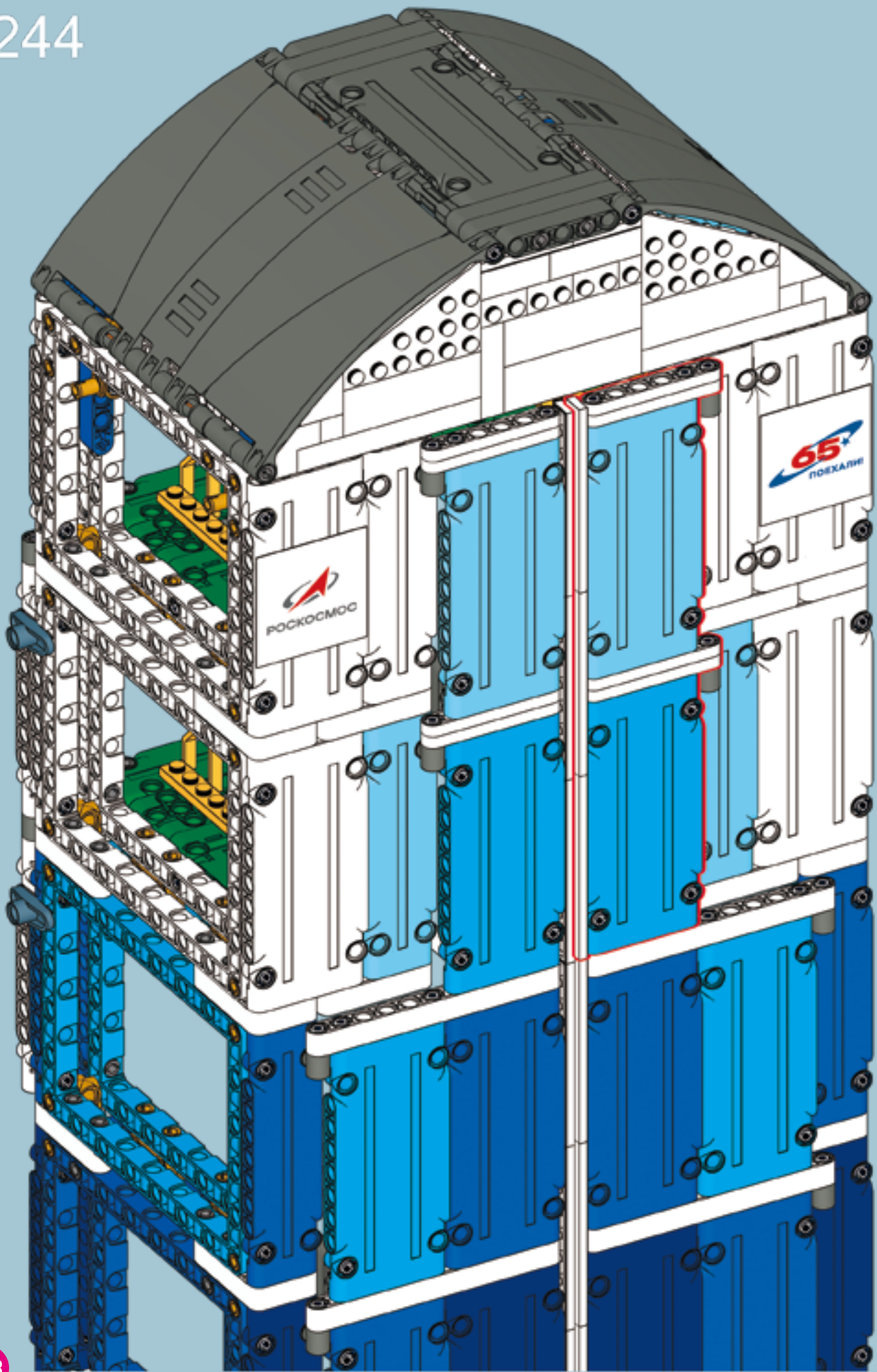
Скорость движения башни может достигать 12 метров в минуту. То есть путь в 100 метров она преодолеет примерно за 8 минут.



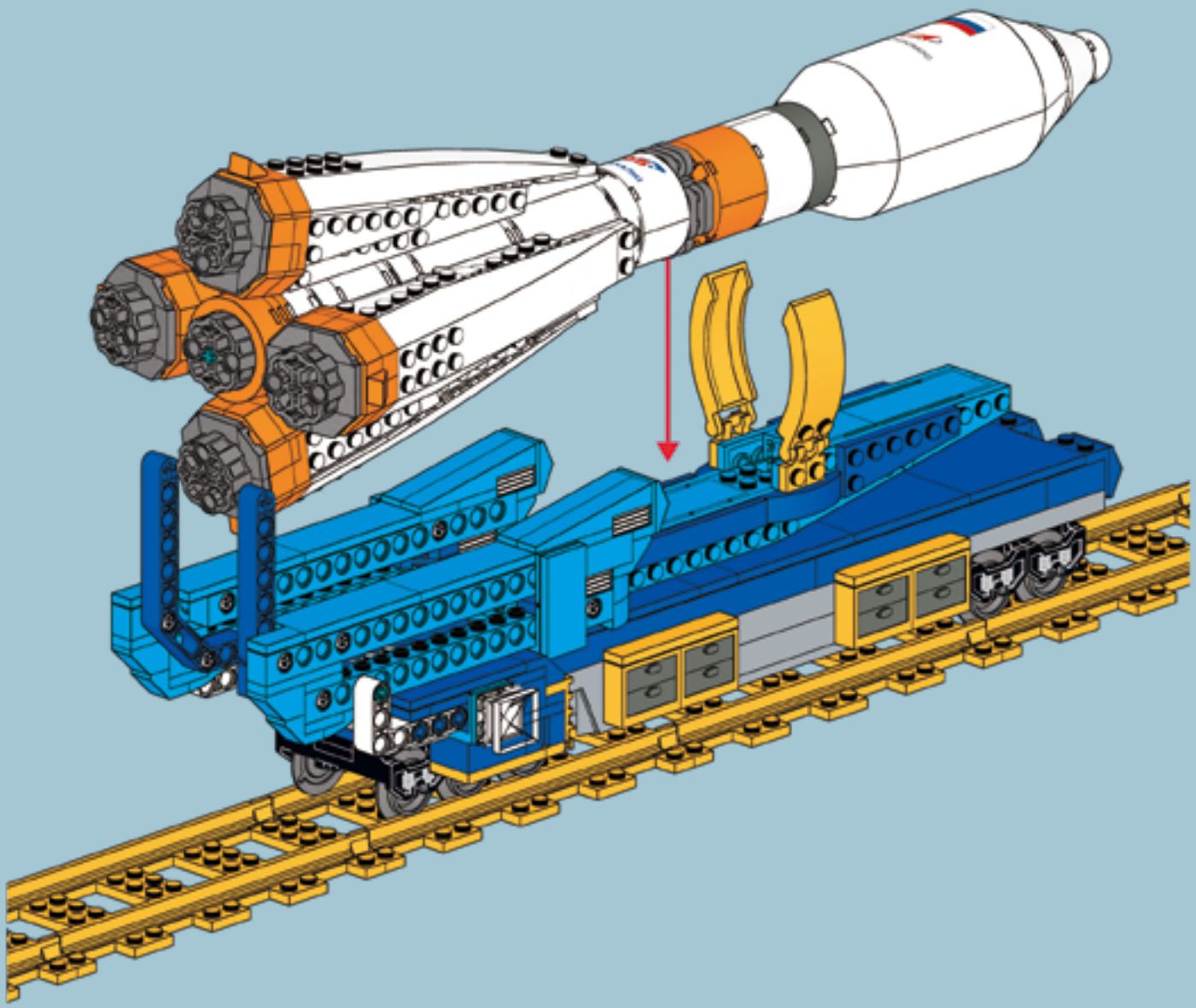
243



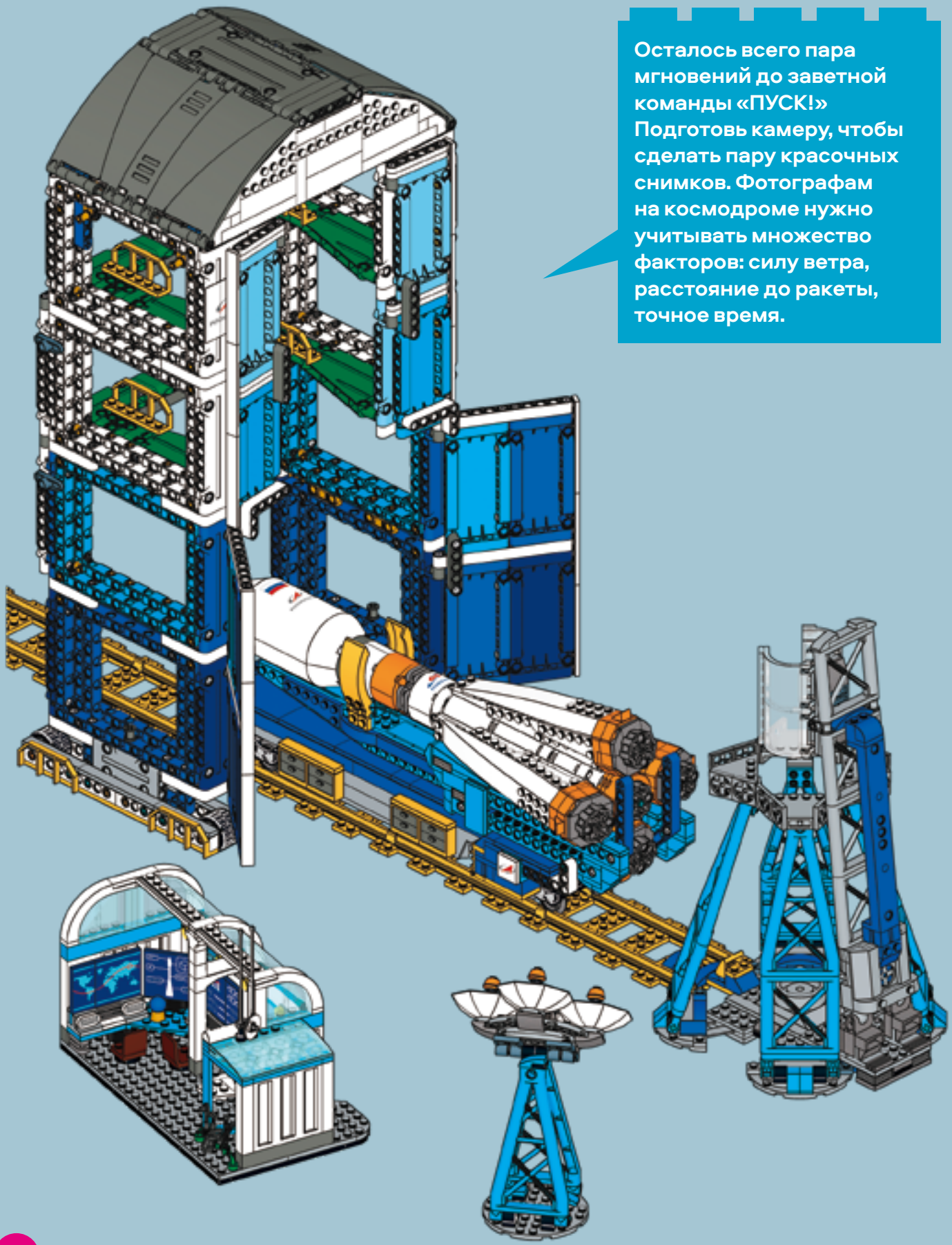
244

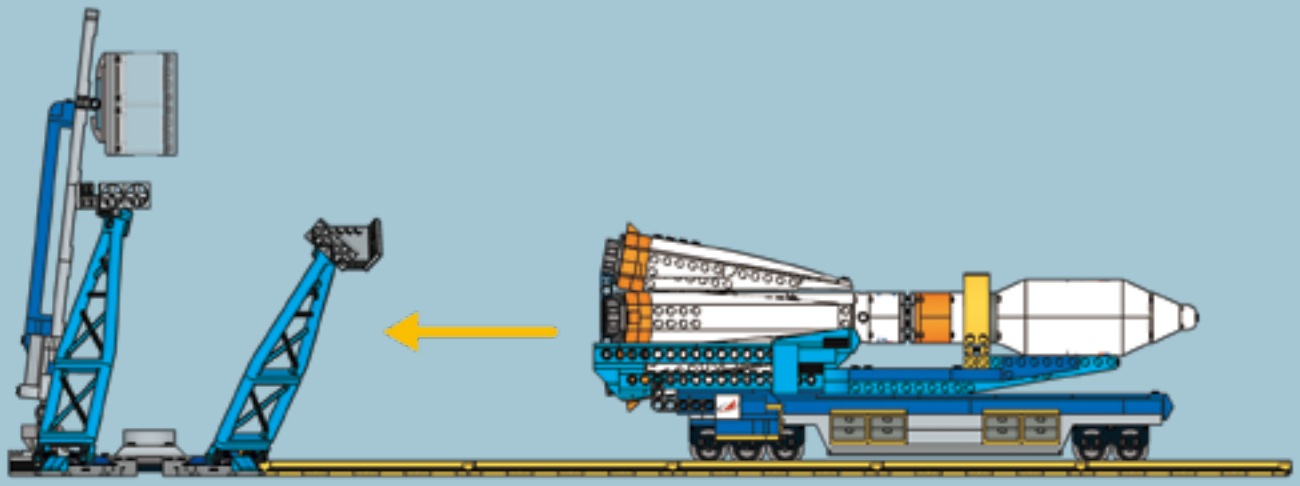


Уже на следующем шаге ракета займёт своё место на стартовой площадке. Будь внимателен: отклоняться от расчёта нельзя даже на 1 секунду!



Осталось всего пара мгновений до заветной команды «ПУСК!» Подготовь камеру, чтобы сделать пару красочных снимков. Фотографам на космодроме нужно учитывать множество факторов: силу ветра, расстояние до ракеты, точное время.



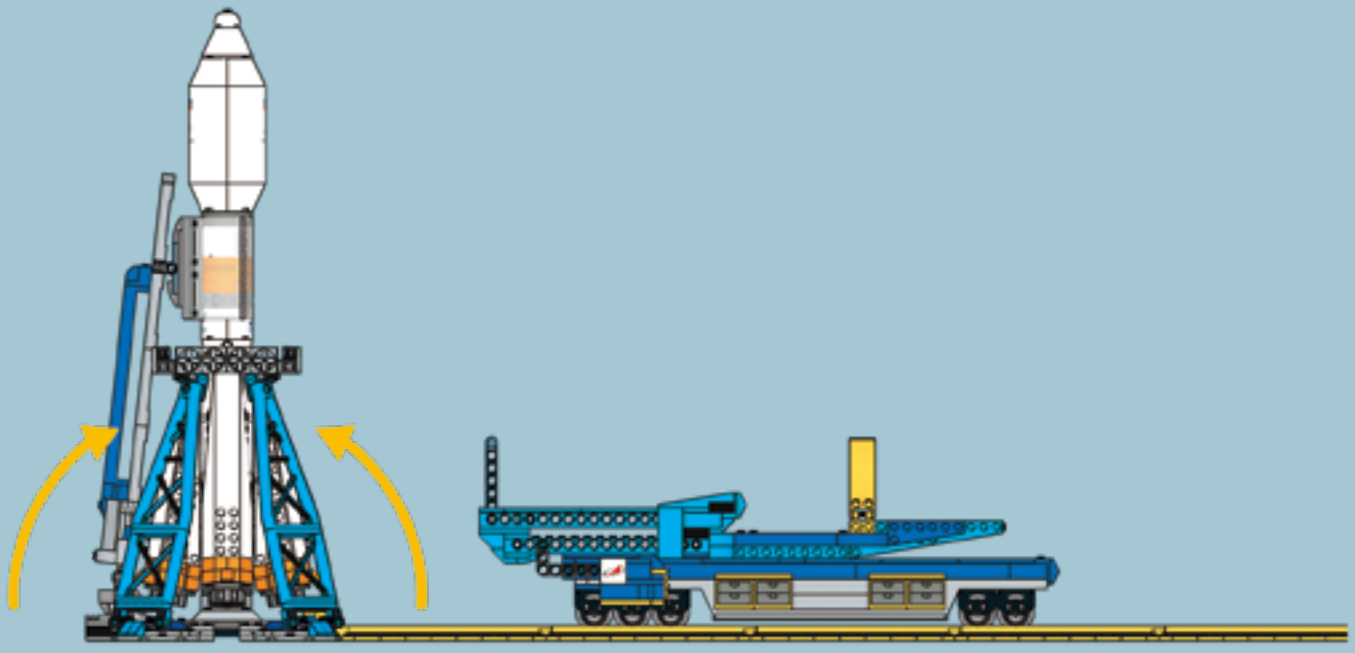




Главное при размещении ракеты-носителя на стартовой площадке — убедиться, что не осталось лишних деталей!

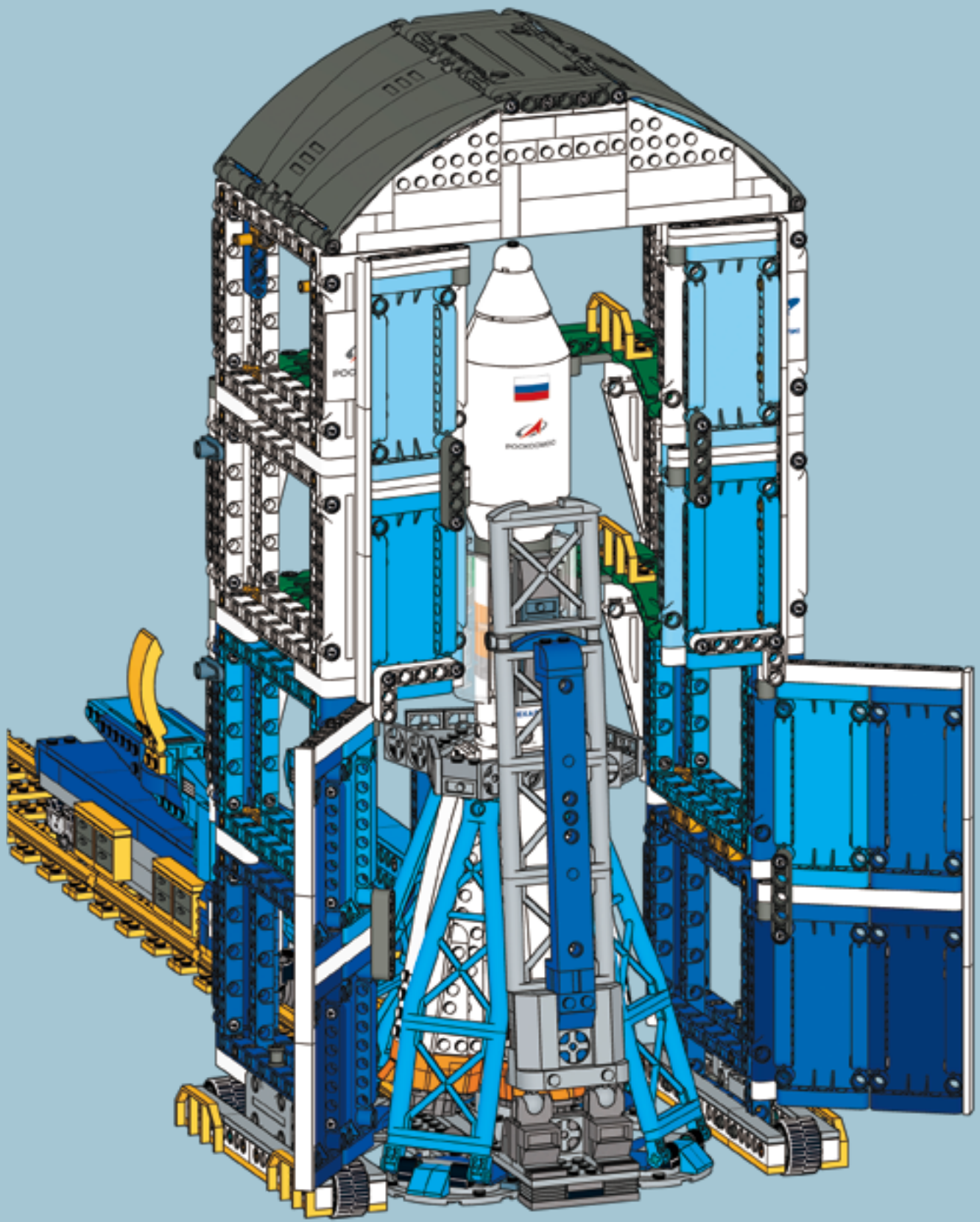


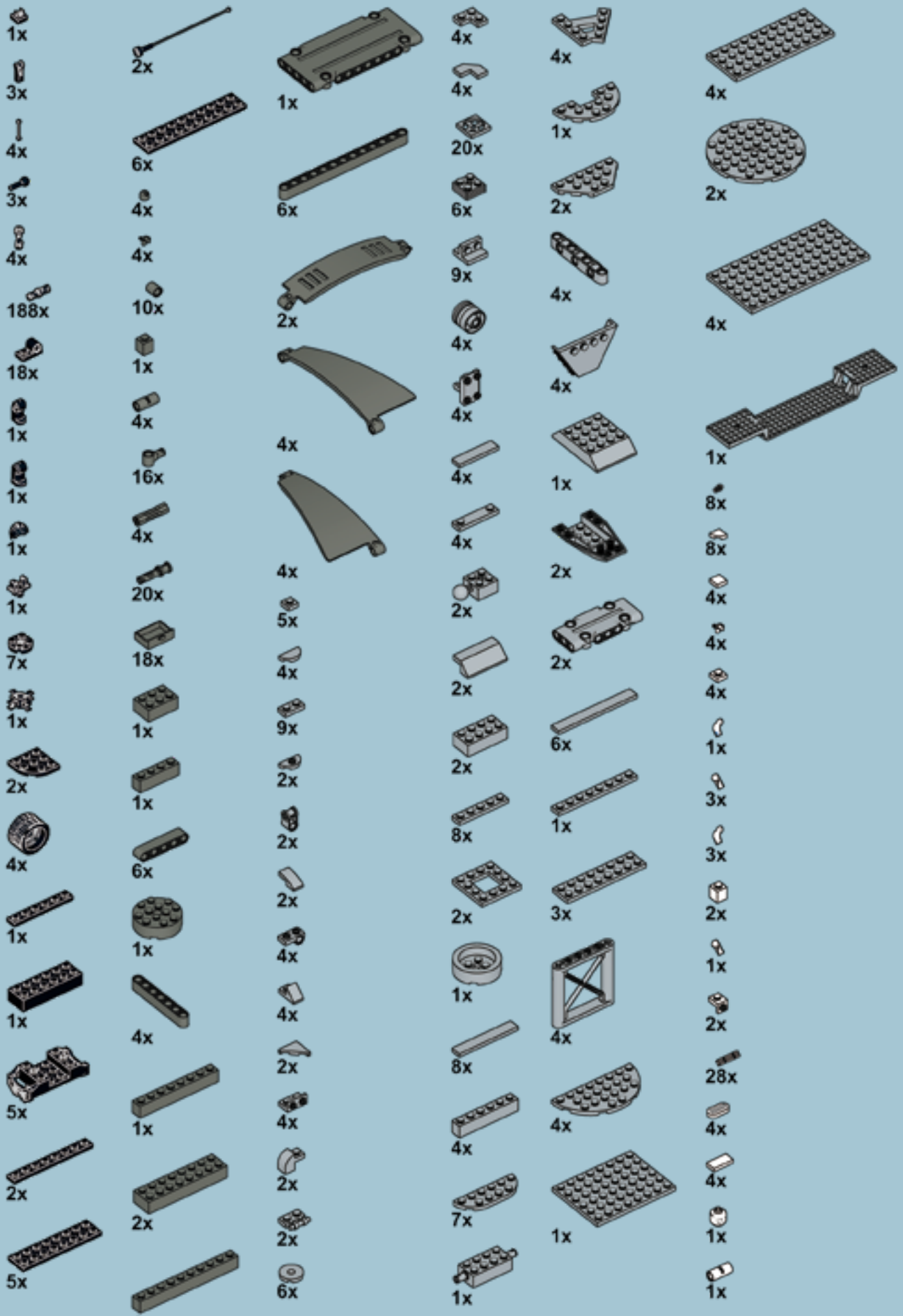
Есть контакт подъёма...

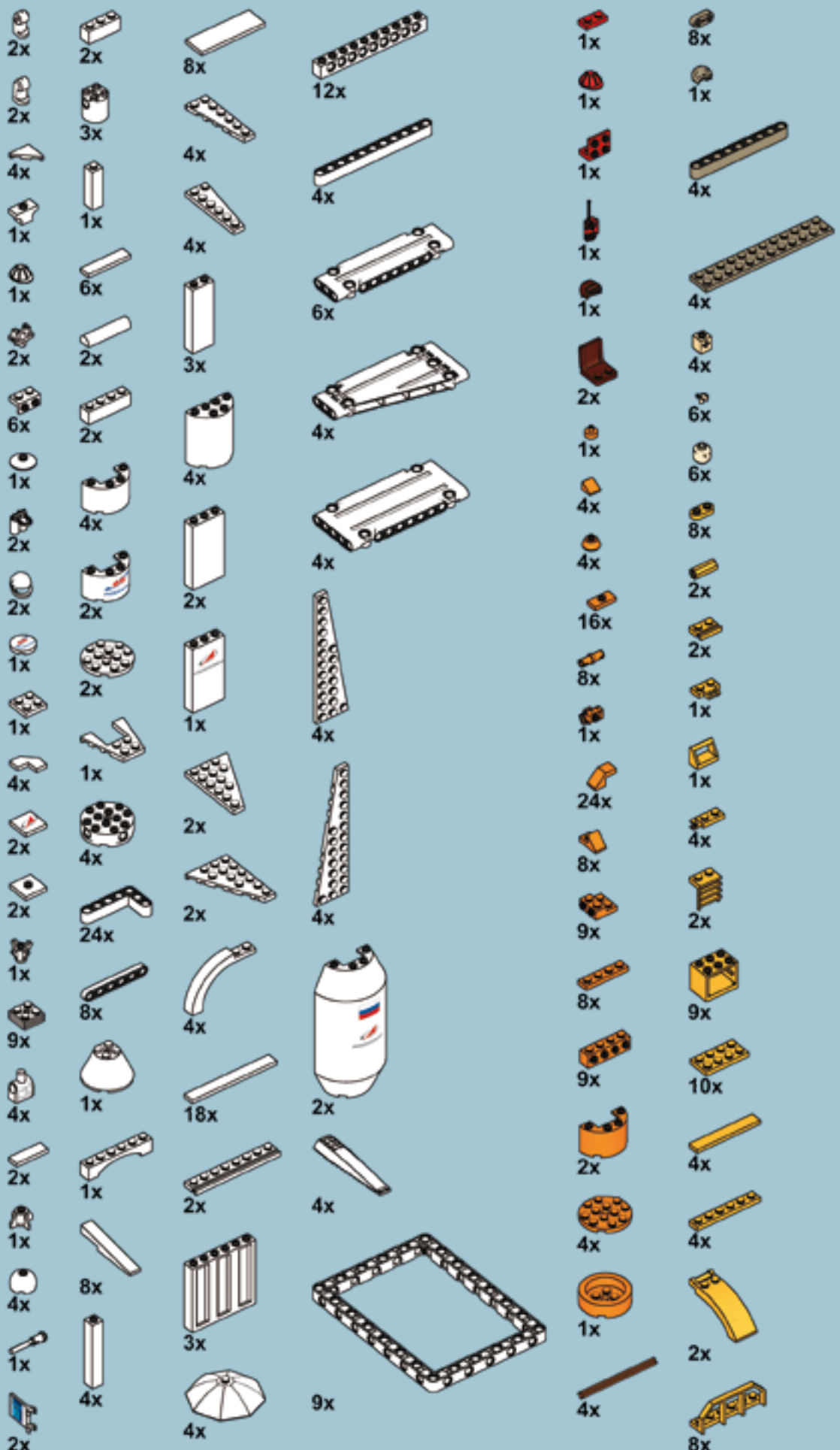


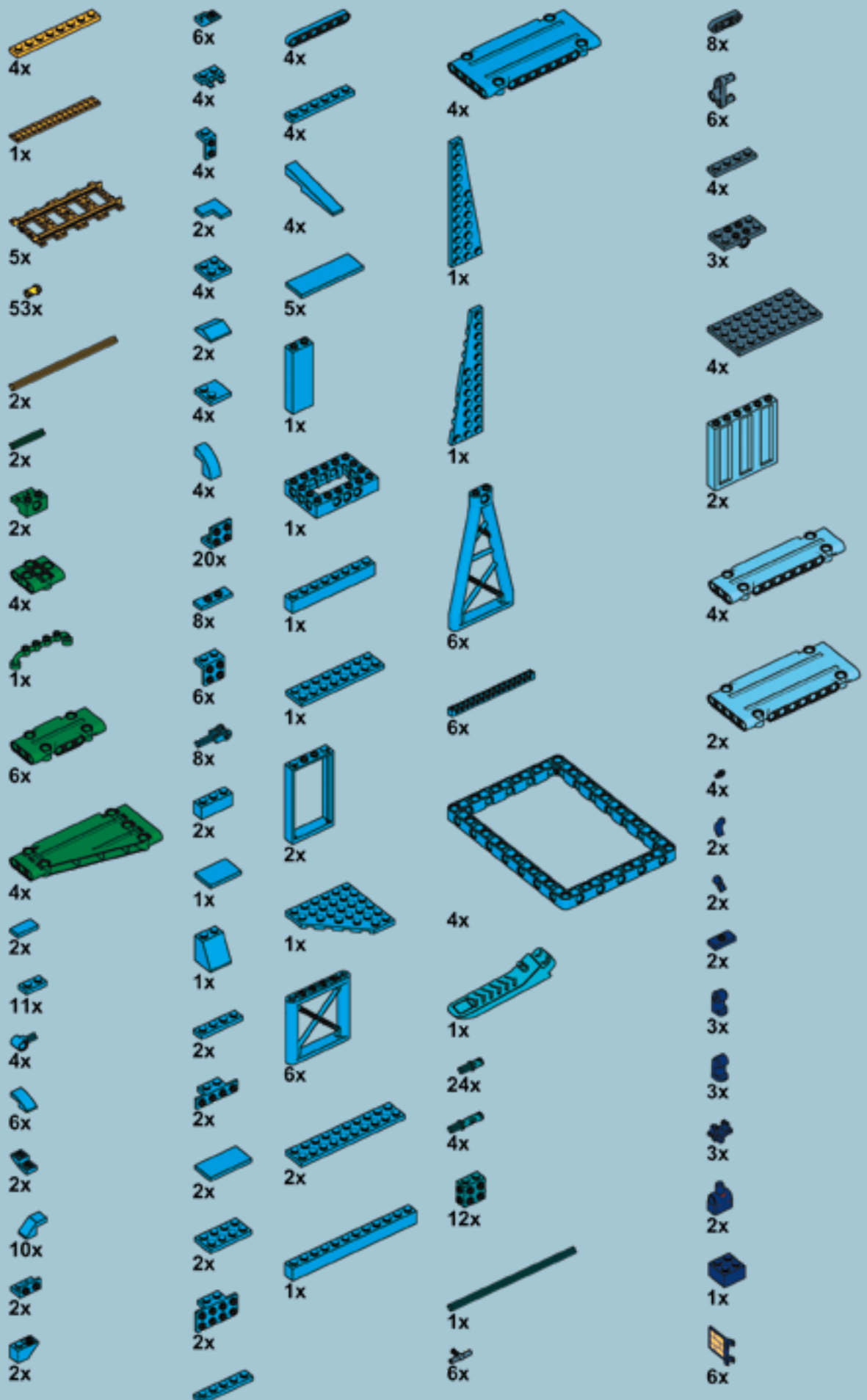


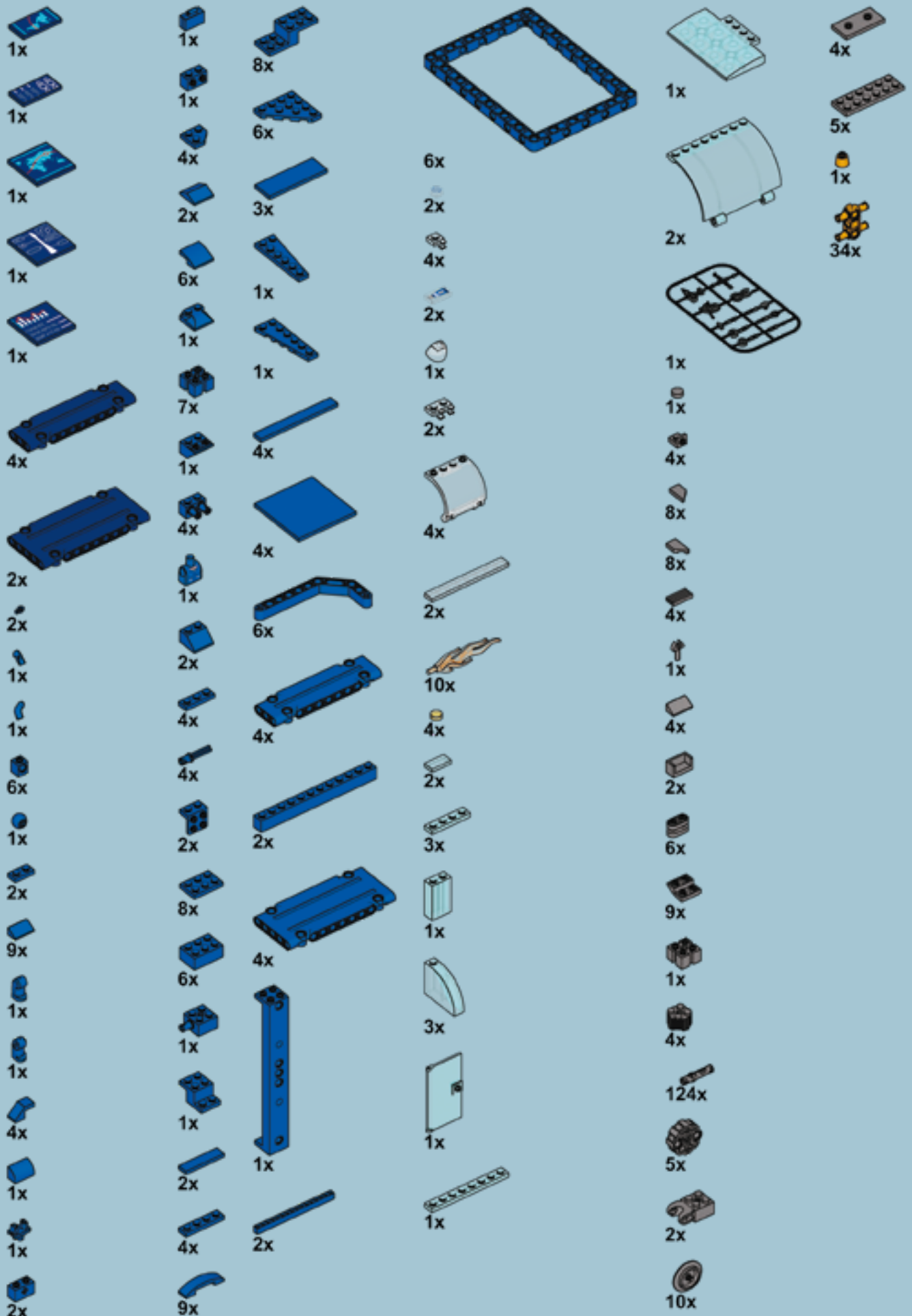
Ура! Ты собрался в полёт и дал старт успешному пуску своей первой ракеты с космодрома Восточный! Какую важную миссию ты ей поручишь?




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6x
9x
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4x
124x
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2x
10x
4x
5x
1x
34x

Узнай больше о космонавтах

#статькосмонавтом2026

Узнай больше о конструкторах

@rubrick

РУБРИК