



Урок по робототехнике

Боевая машина (БМ - 13)

История создания

Основные даты

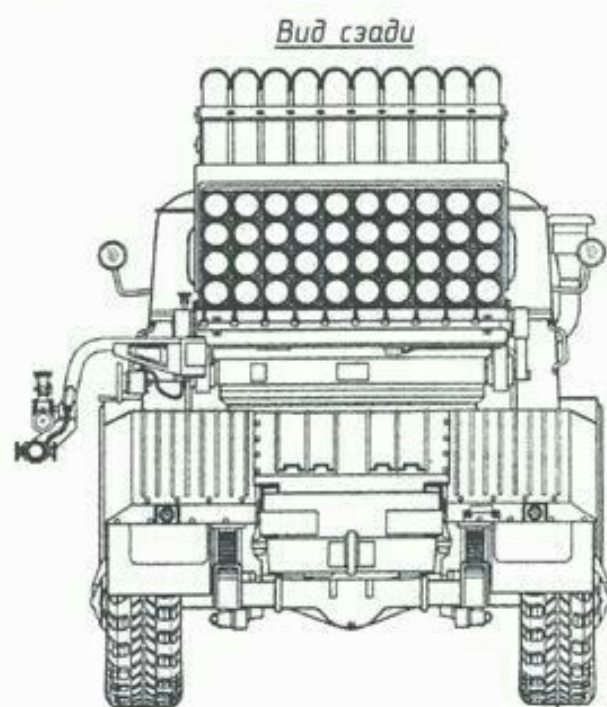
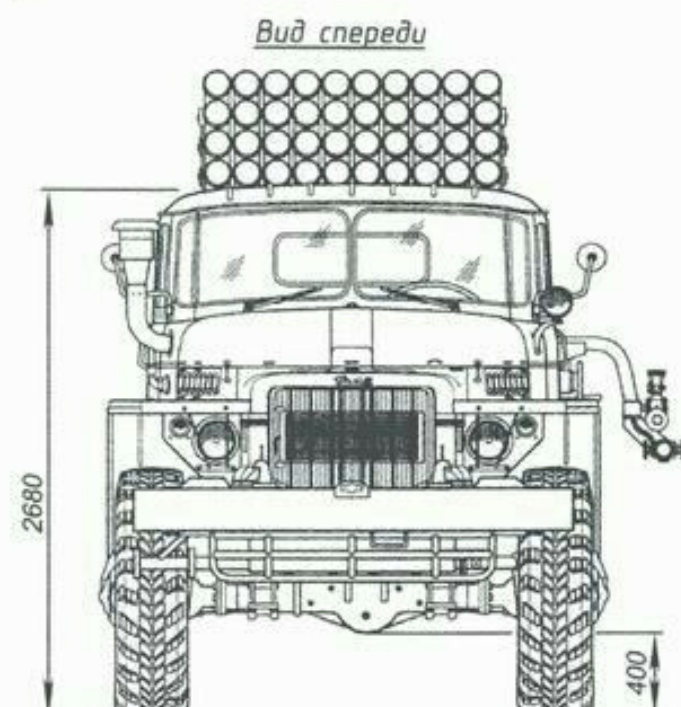
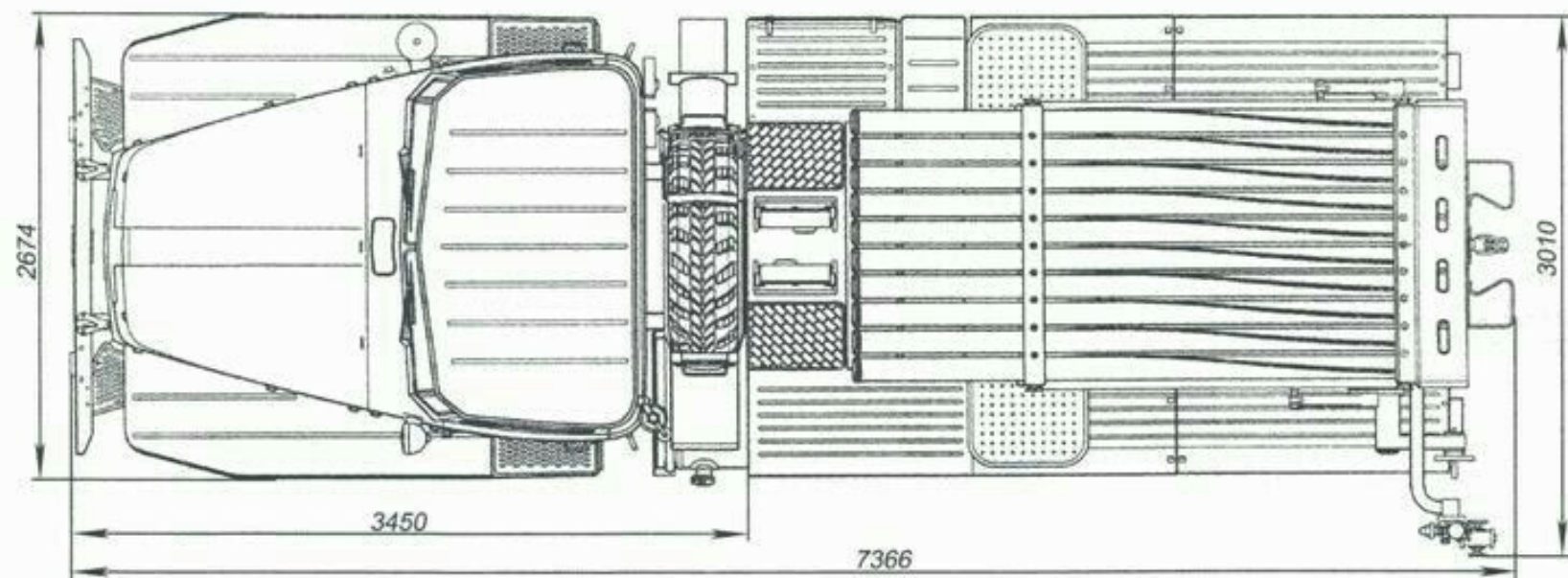
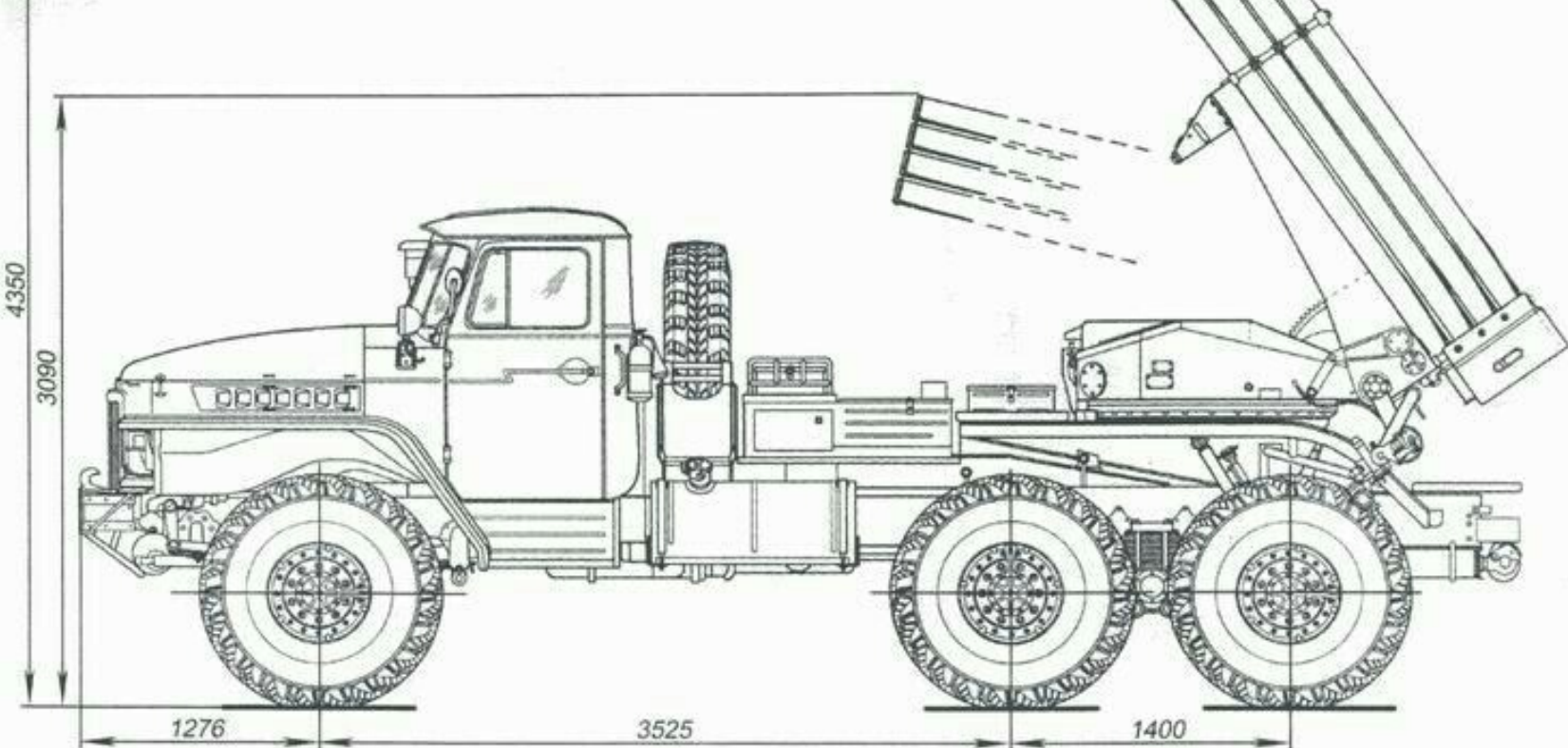
1927 год - Создан бездымный пироксилино-тротильный порох;

1928 год - Разработан первый реактивный снаряд;

1933 год - Появились экспериментальные образцы авиационных реактивных снарядов двух калибров: РС-82 и РС-132;

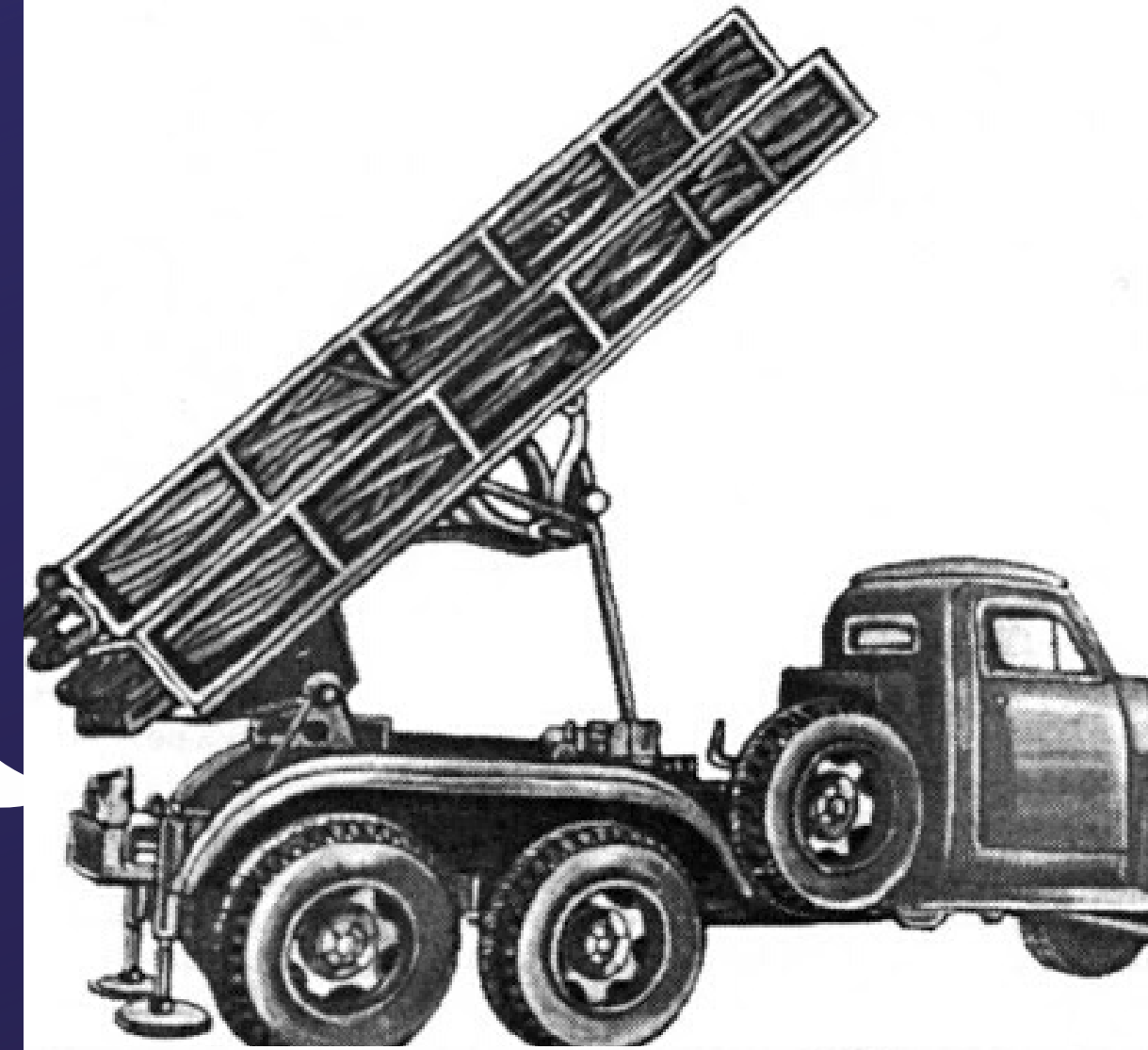
1939 - Изготовлена первая ракетная установка МУ - 1 и МУ - 2;

1940 год - БМ - 13 принята на вооружение.

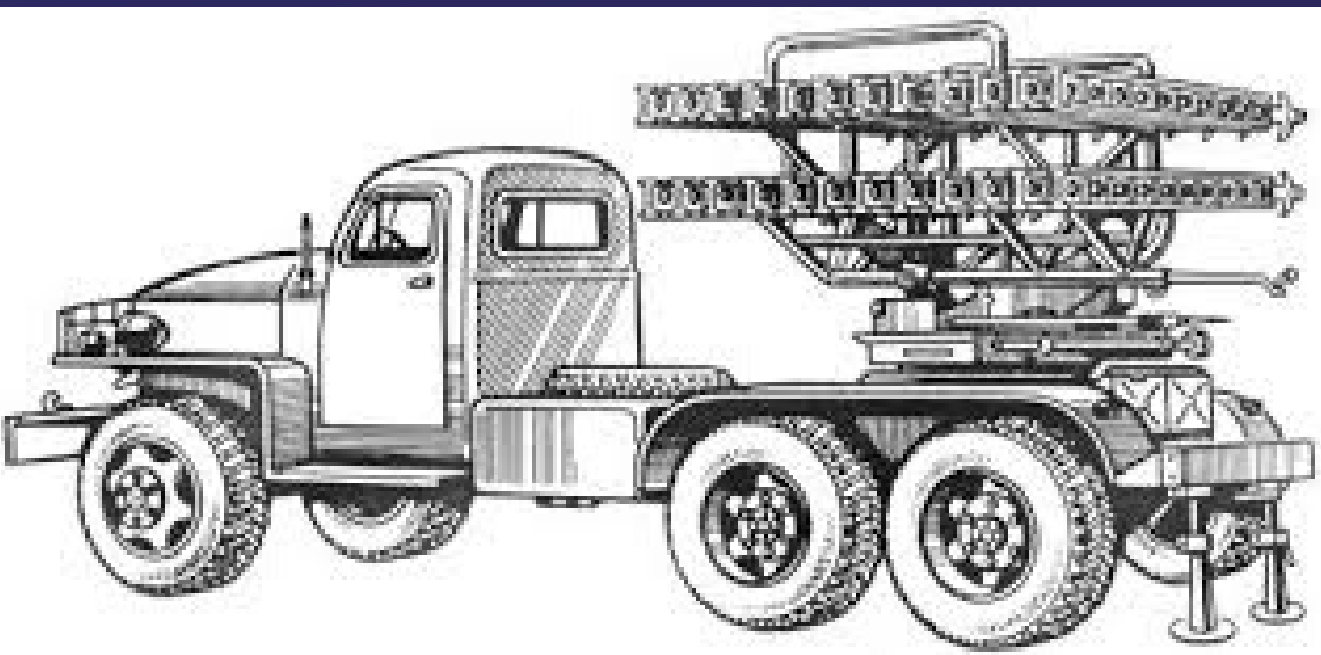


Модификации «Катюши»

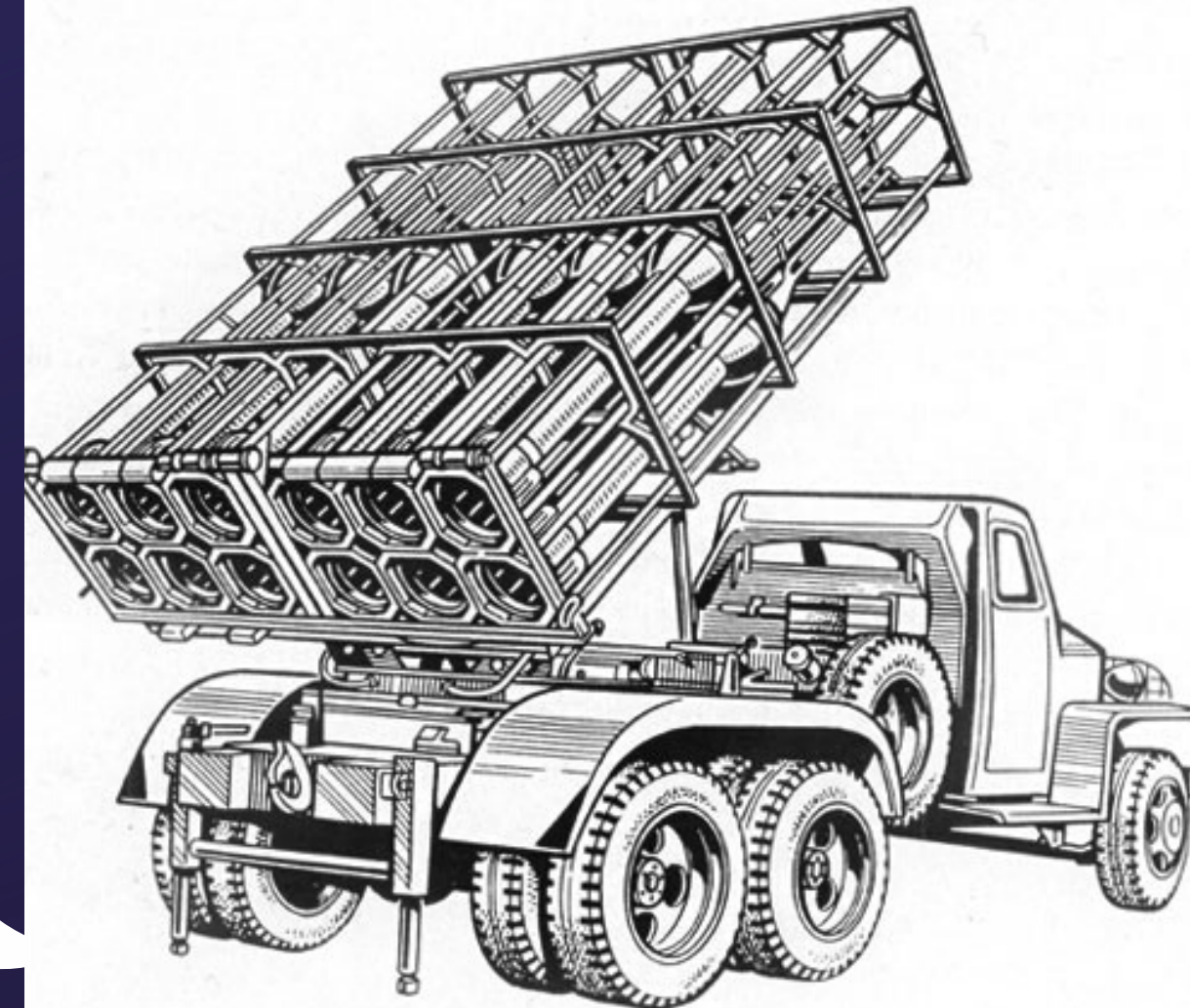
БМ-13-СН



БМ-8-48



БМ-31-12



Преимущества и
недостатки ракетной
установки БМ-13
«Катюша»



РАКЕТНЫЕ УСТАНОВКИ В НЫНЕШНЕЕ ВРЕМЯ

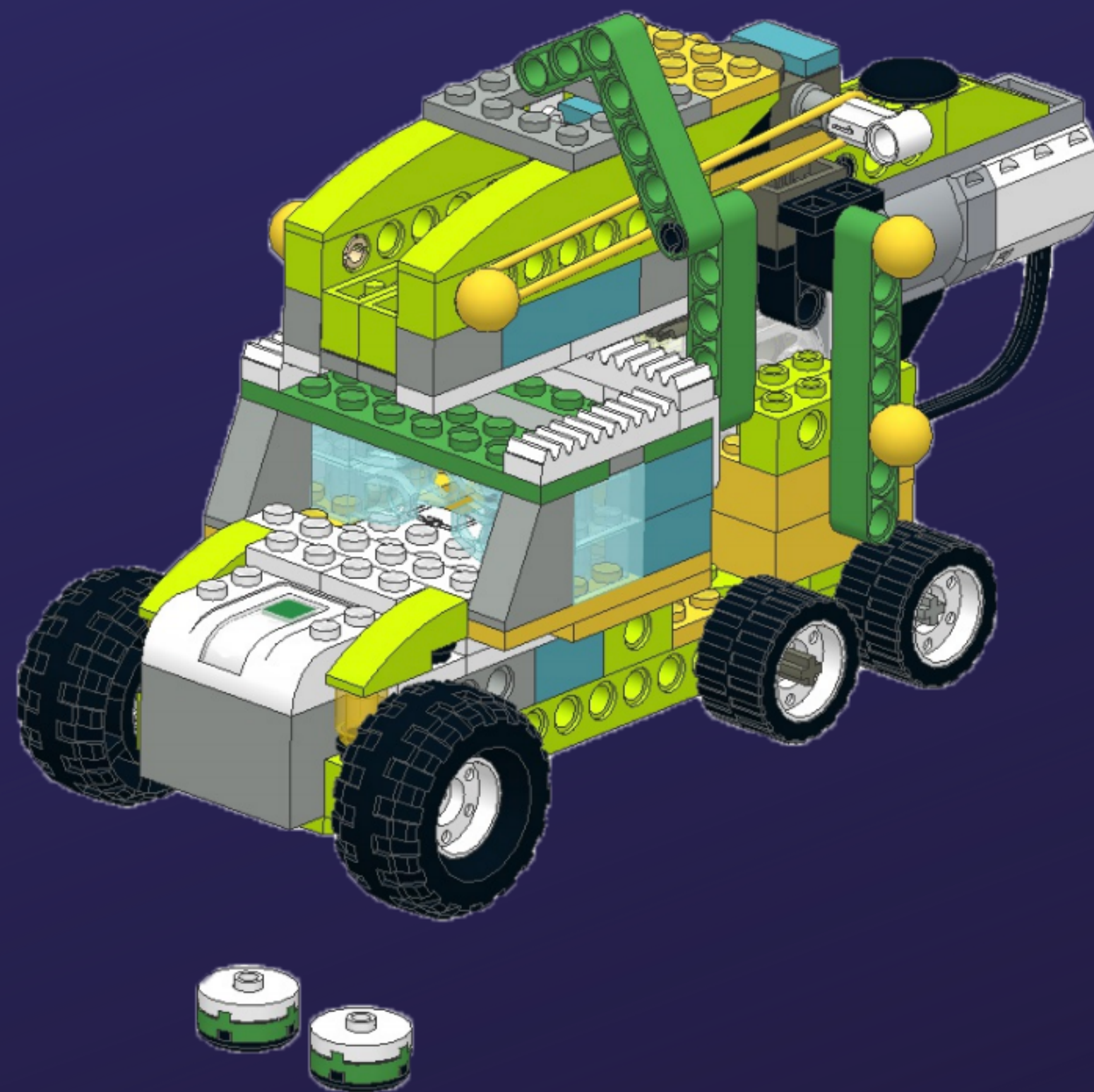
ТОПОЛЬ - М



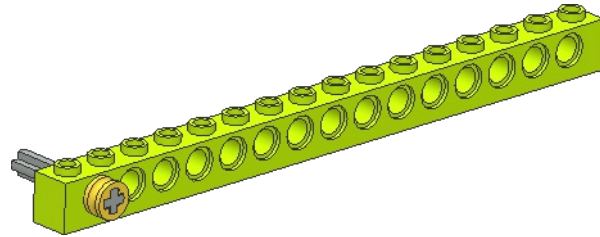
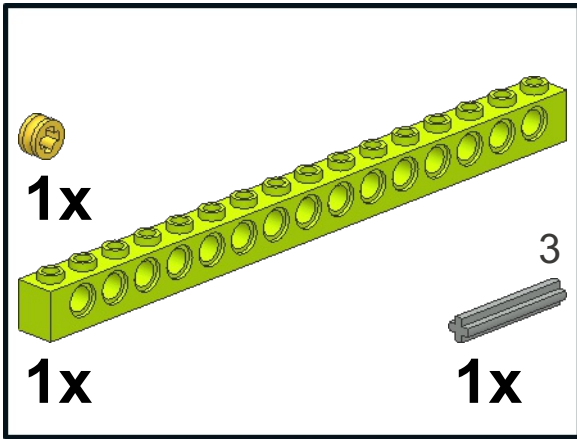
ИСКАНДЕР



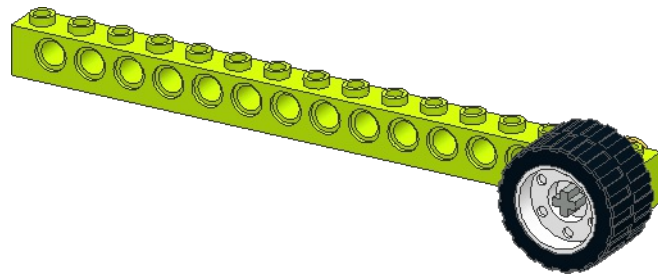
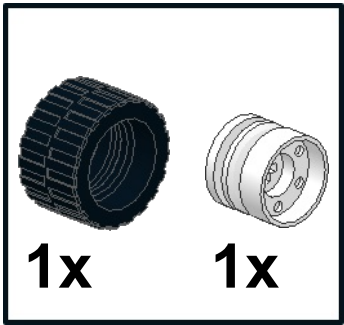
Приступим к
сборке
собственной
боевой машины!





1

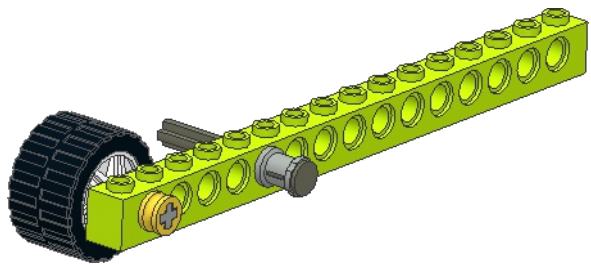


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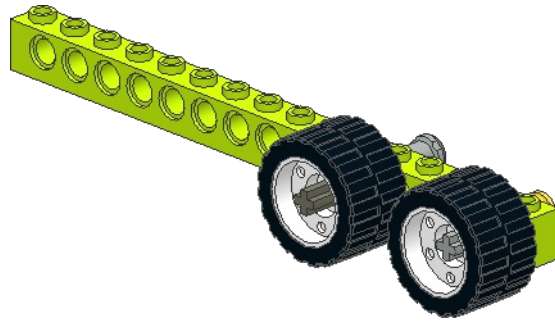
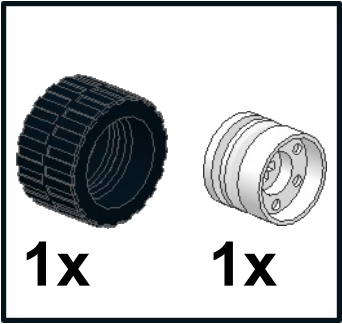


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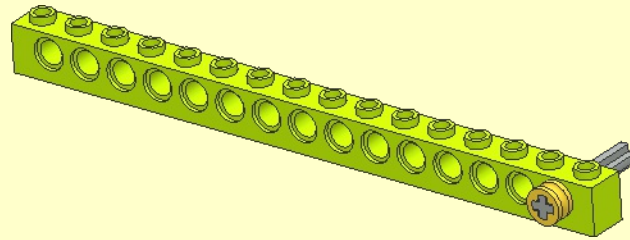
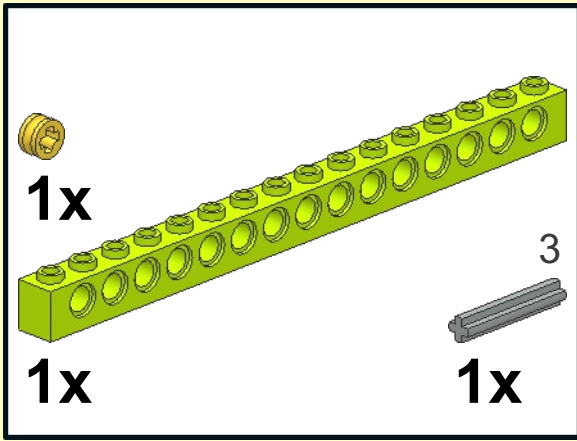

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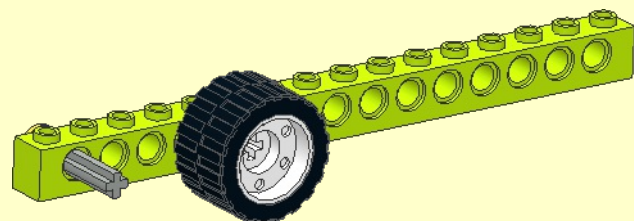
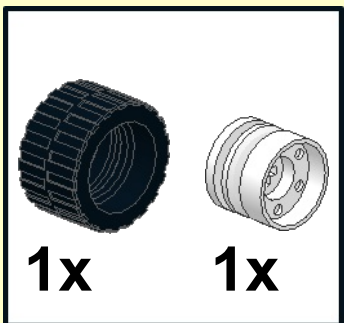
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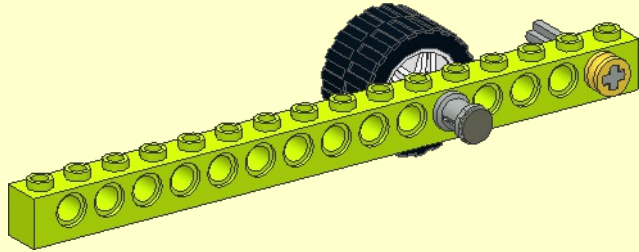


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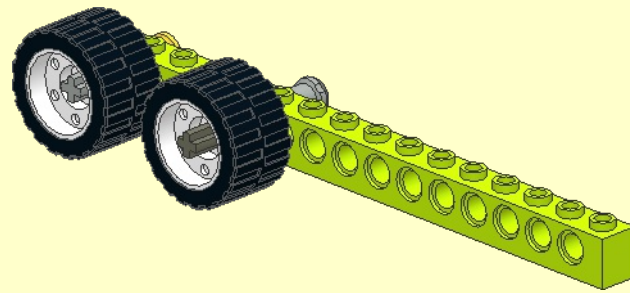
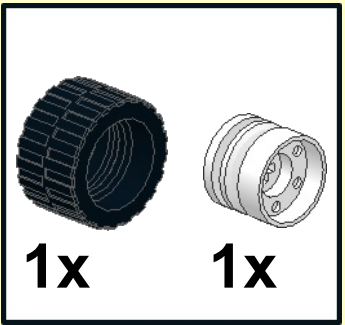


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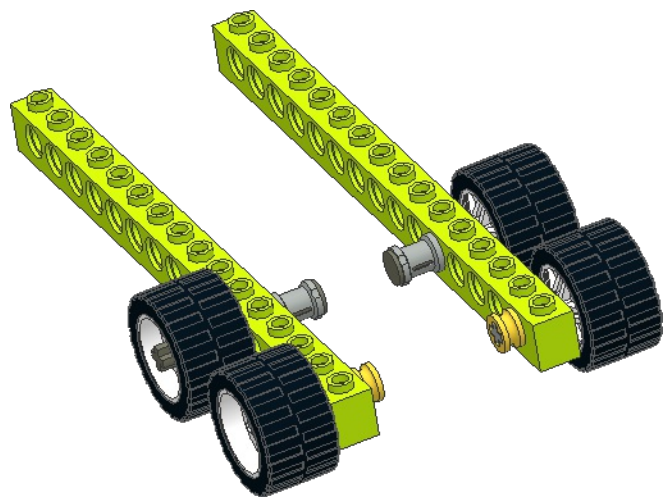
	
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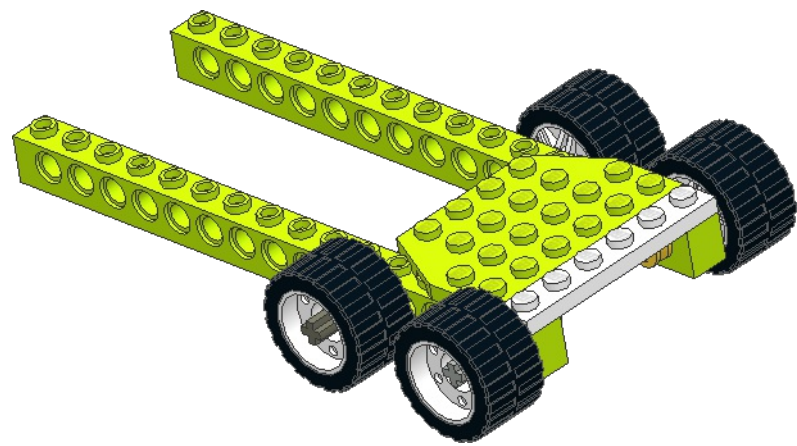
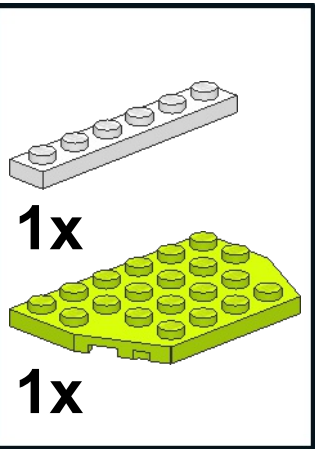
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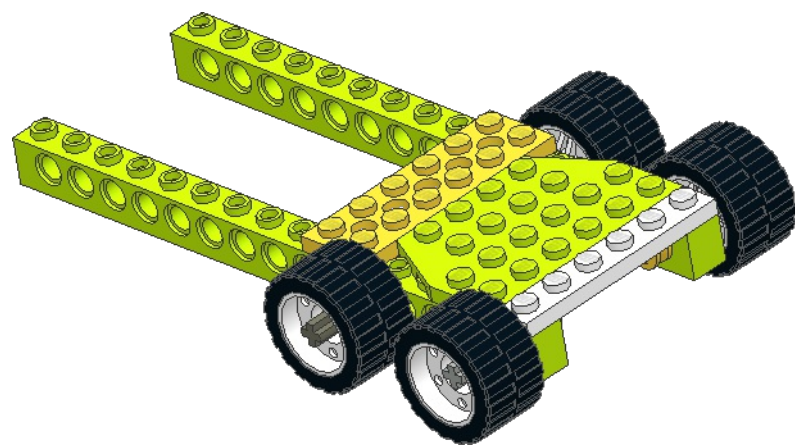
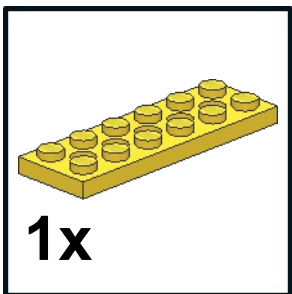
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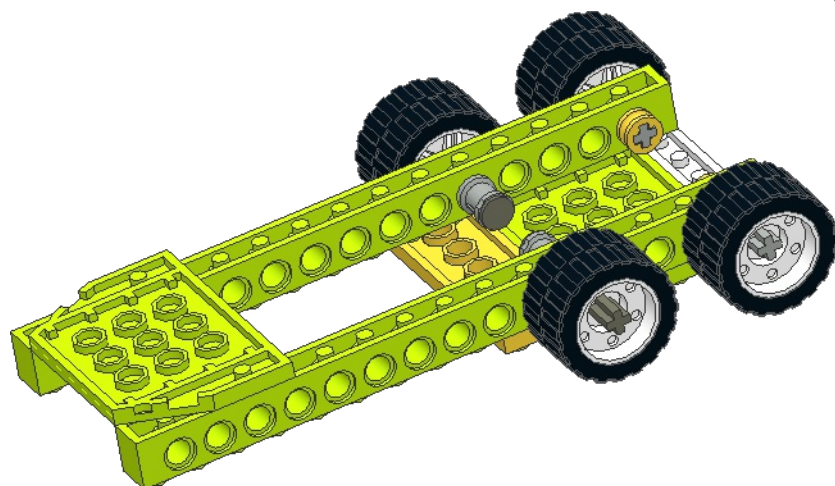
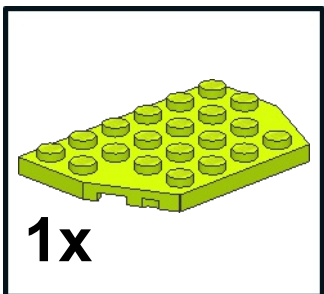
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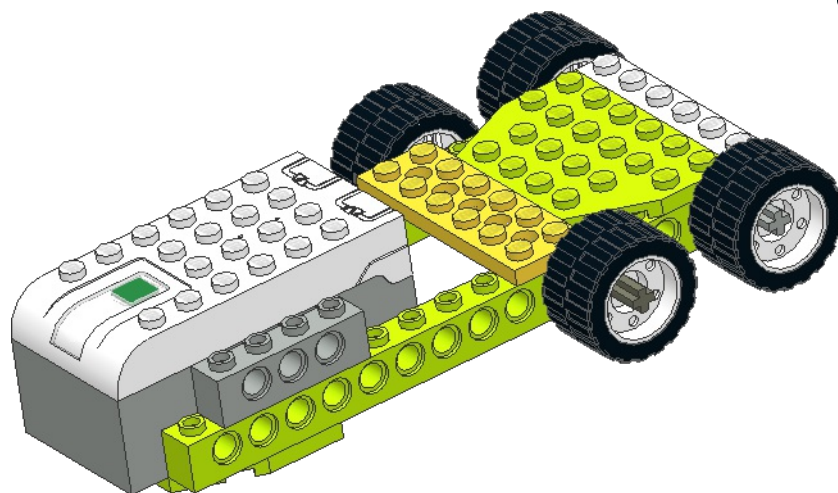
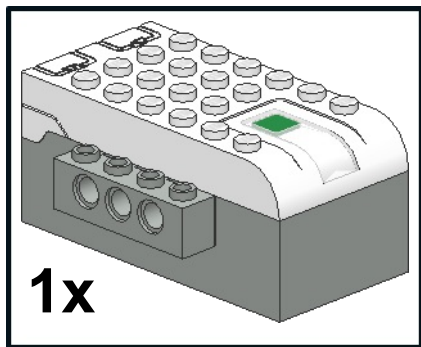
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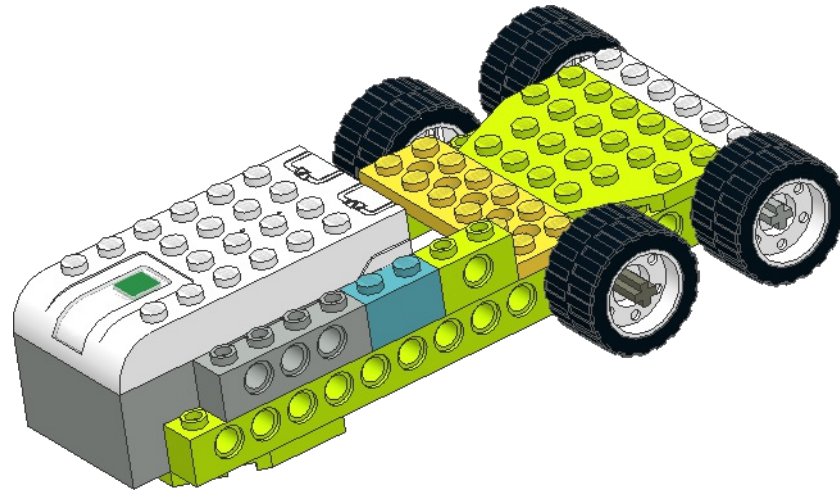
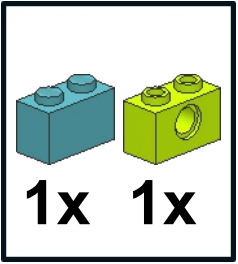
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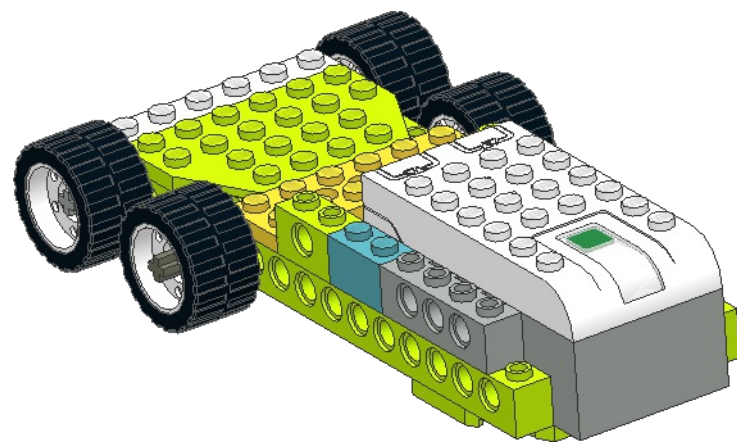
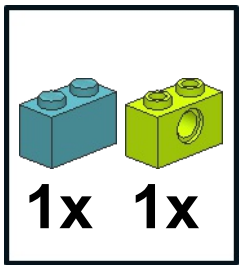
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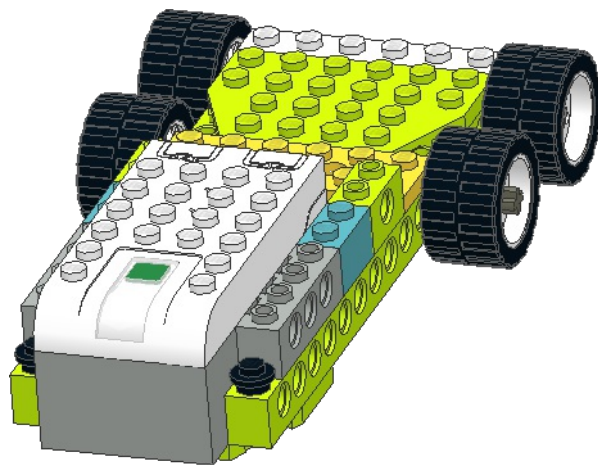
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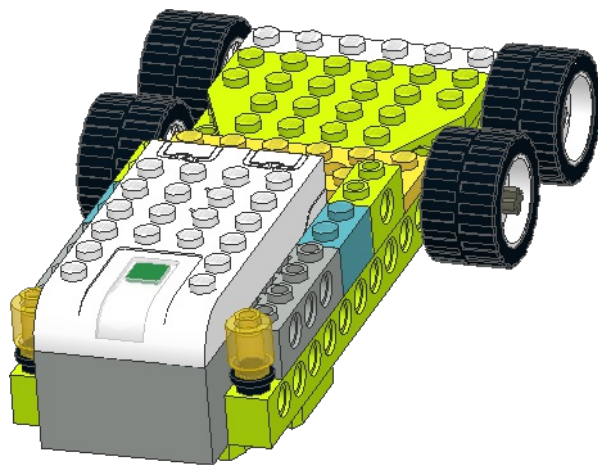
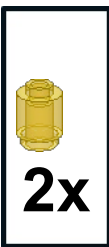
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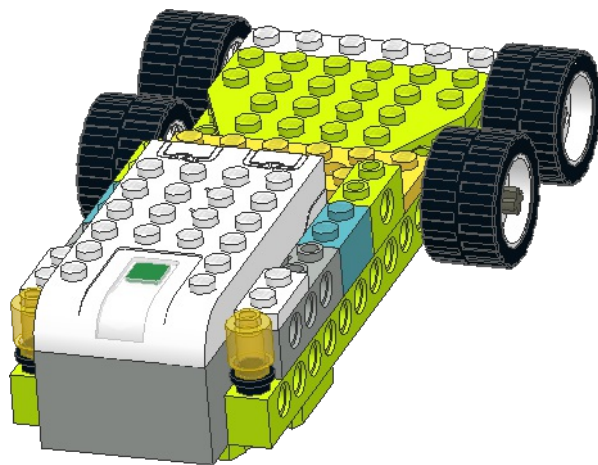
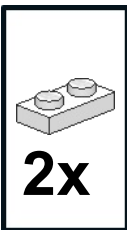
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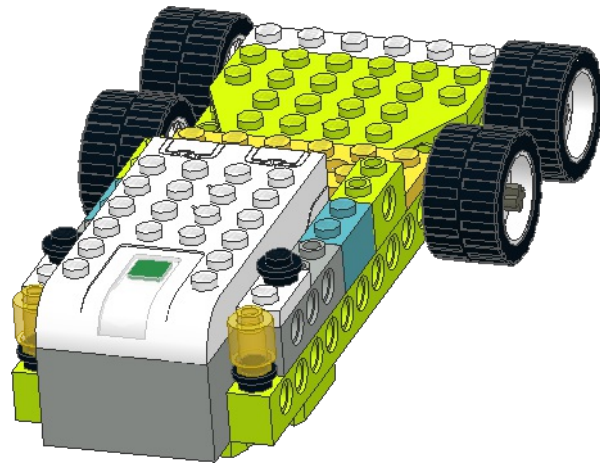
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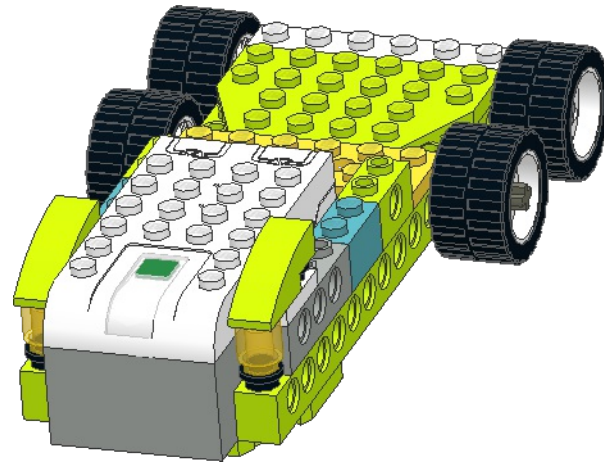
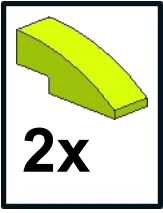
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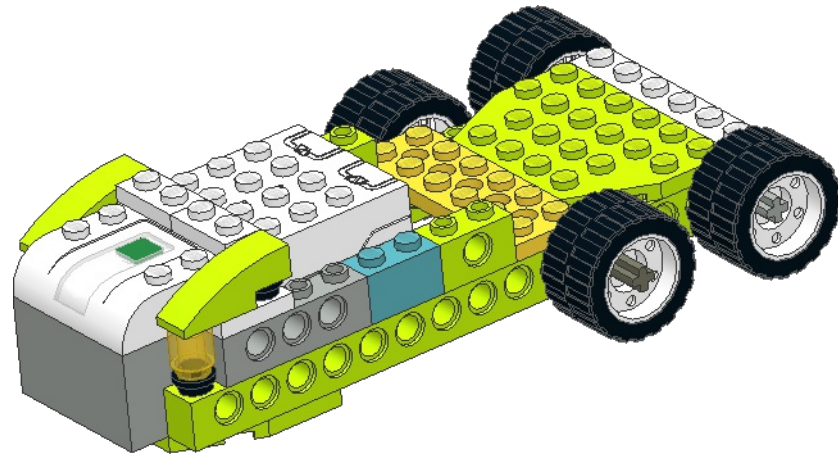
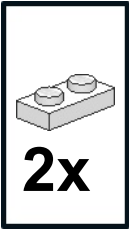
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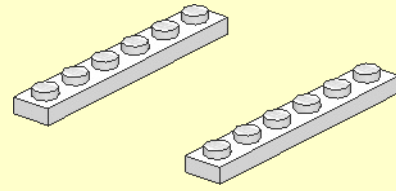
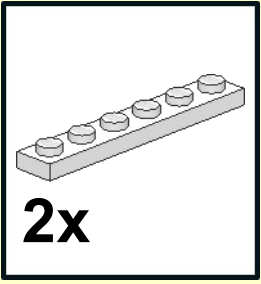
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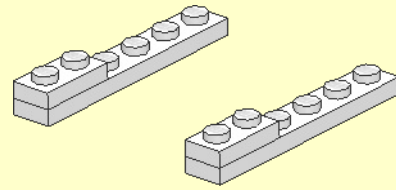
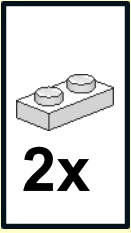
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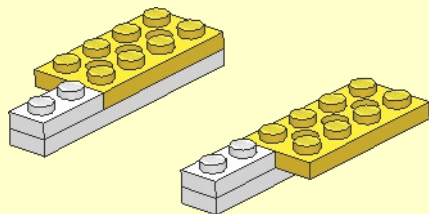
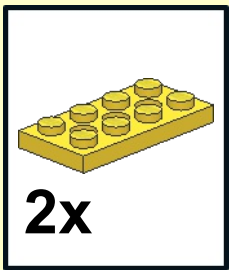
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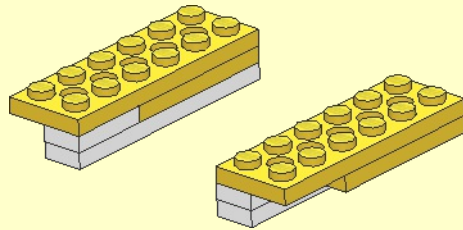
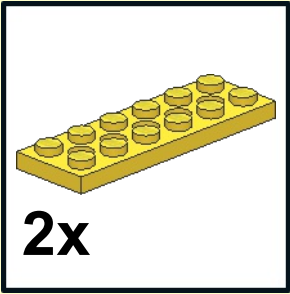
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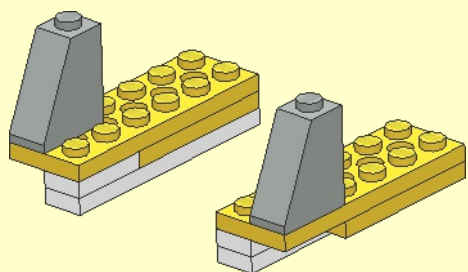
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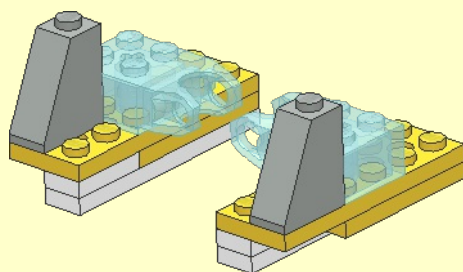
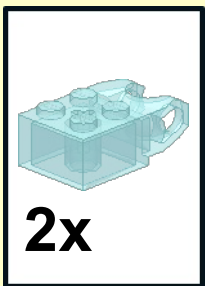
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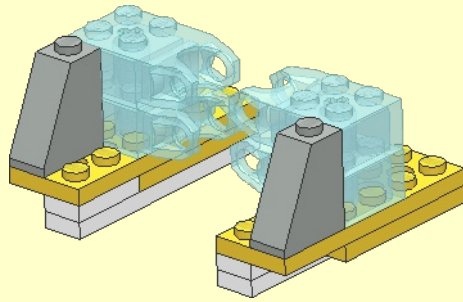
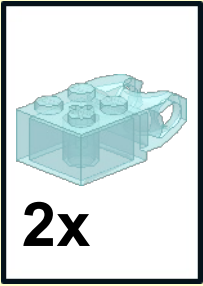
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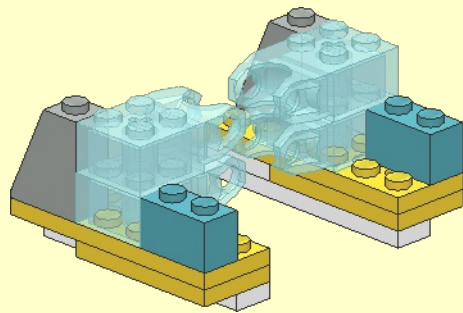
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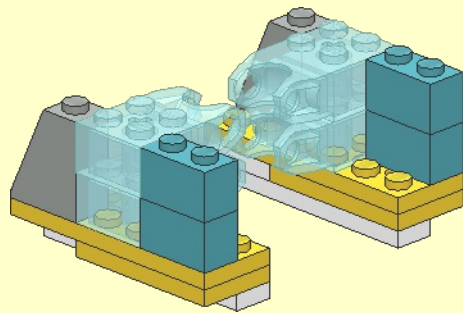
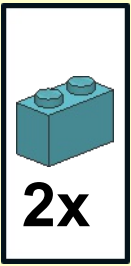
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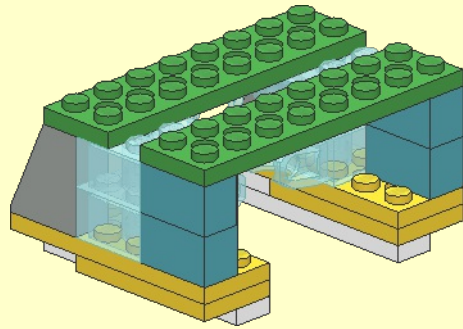
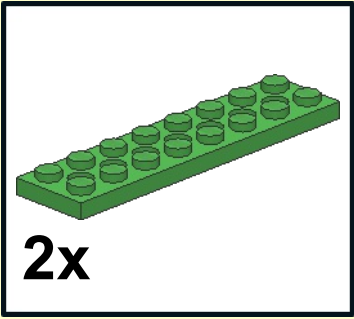
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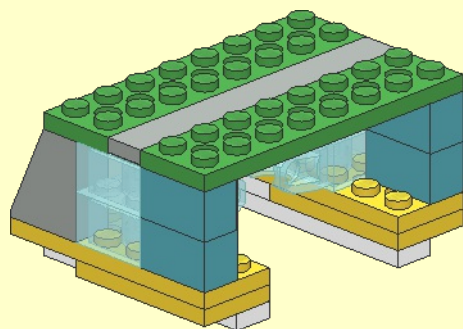
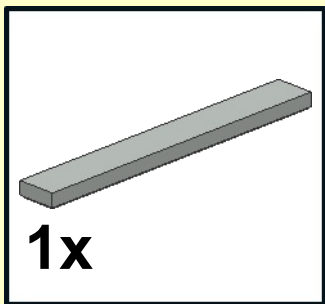
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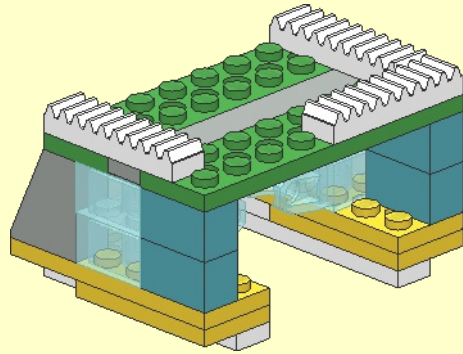
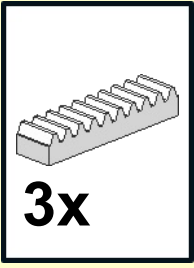
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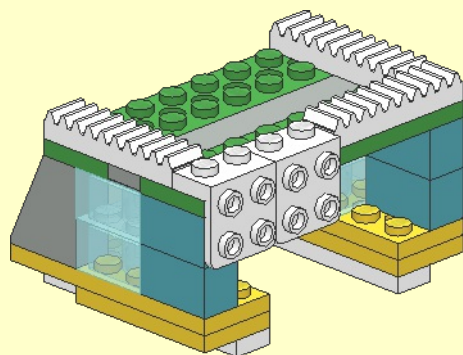
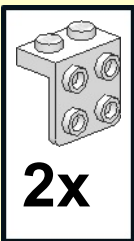
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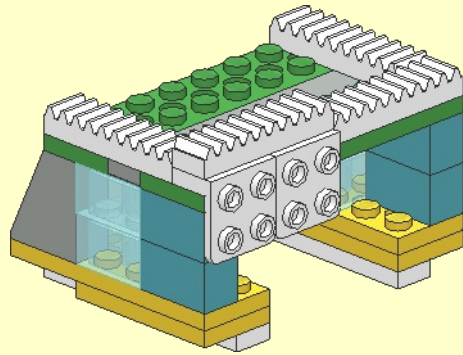
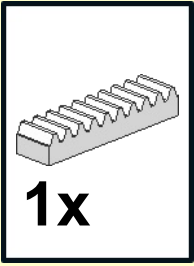
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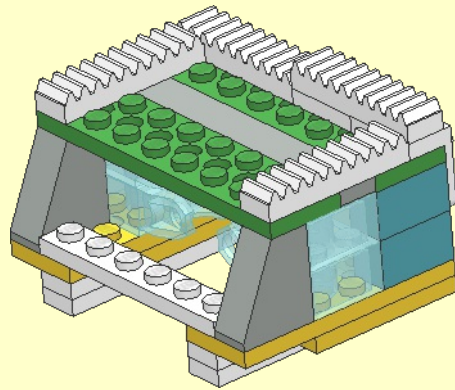
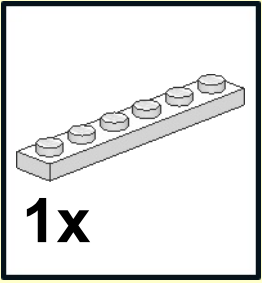
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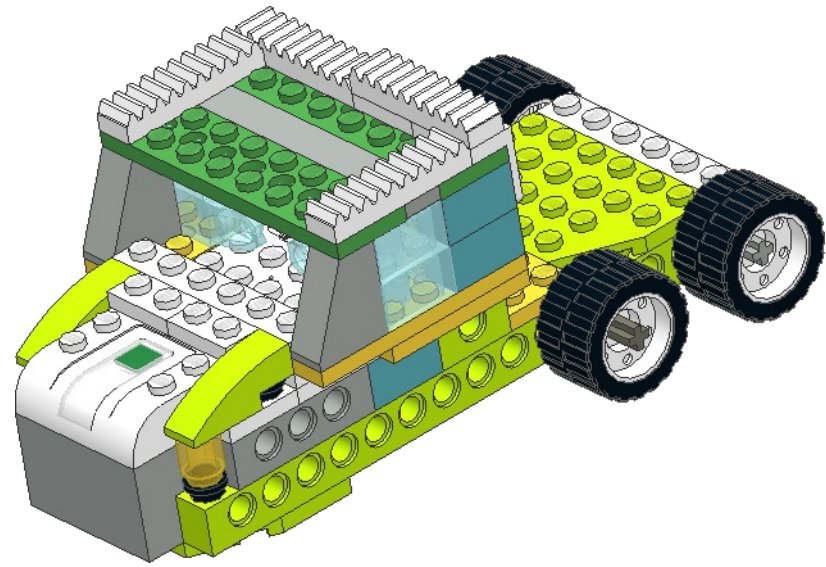


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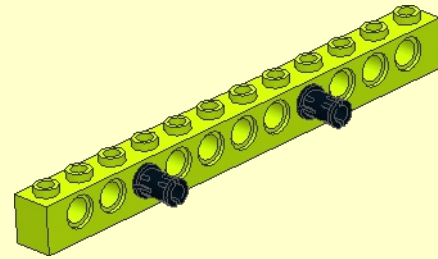
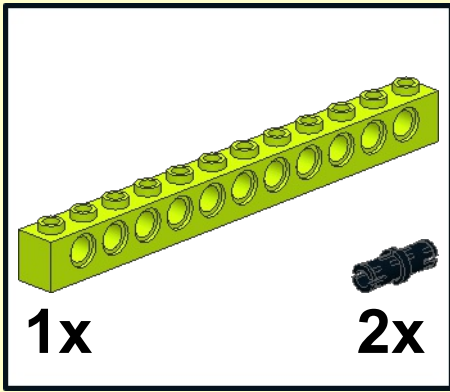


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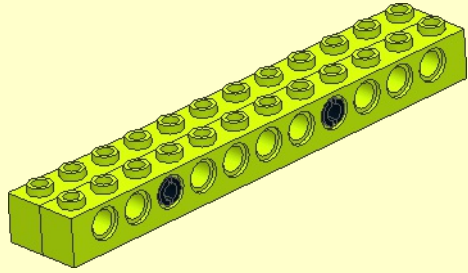
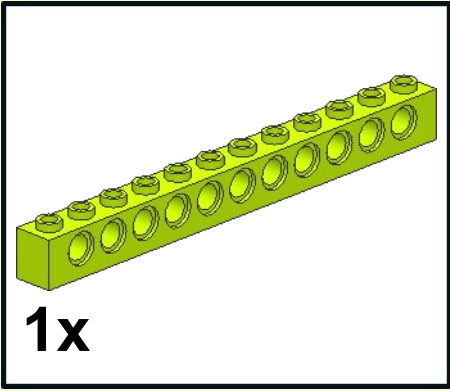




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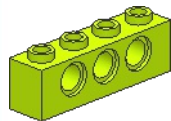
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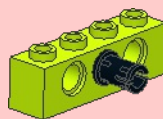
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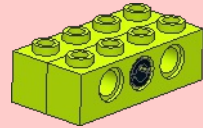
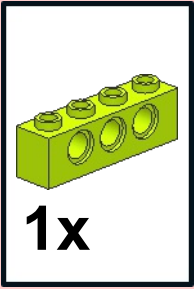
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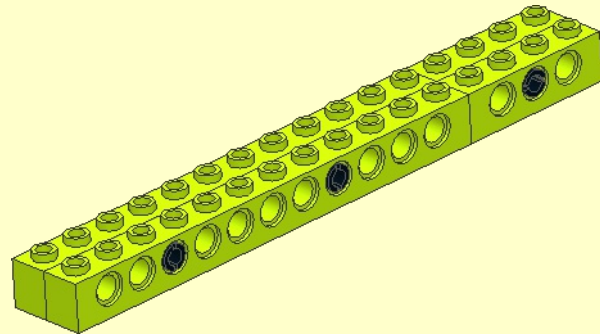
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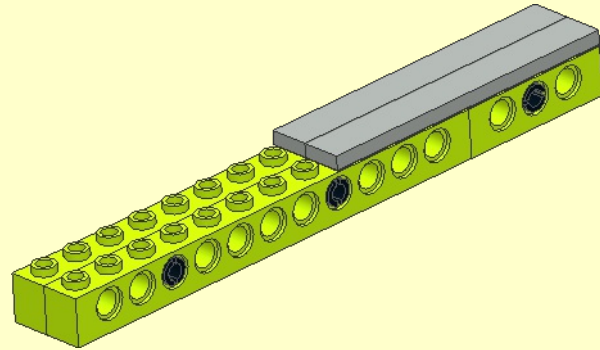
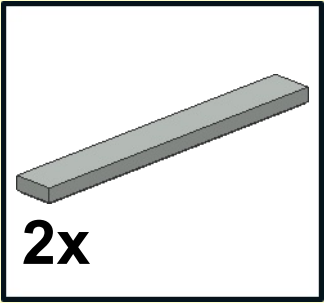
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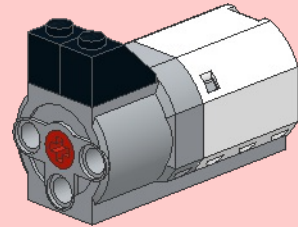
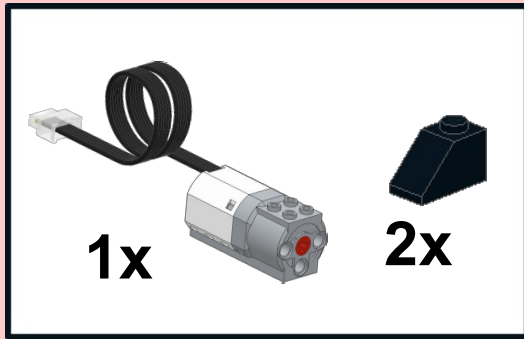
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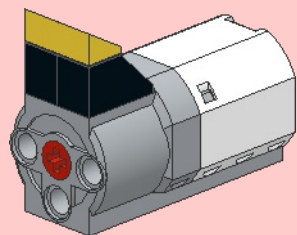
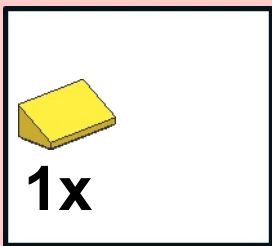
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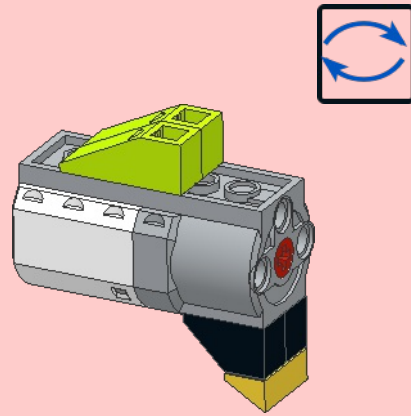
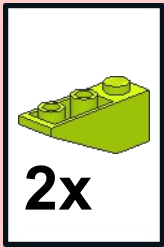
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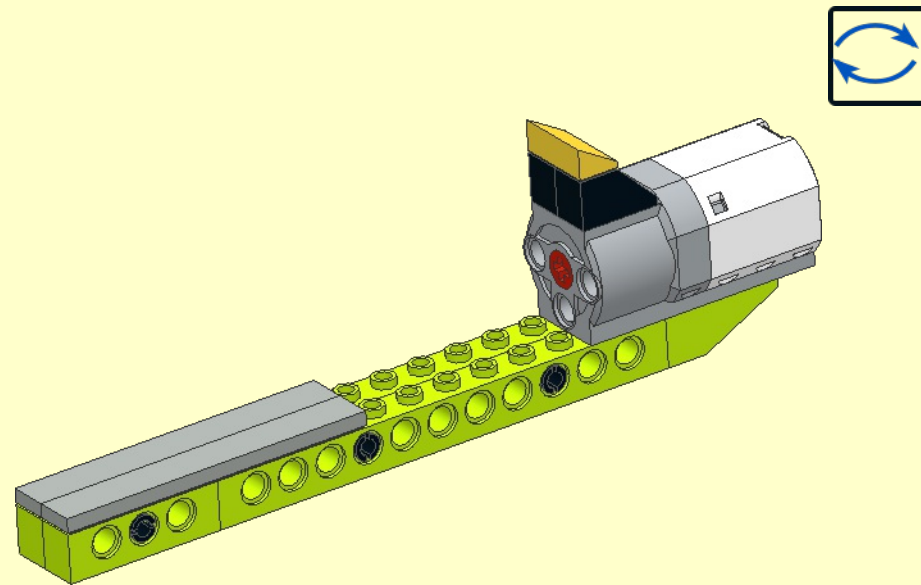
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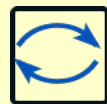
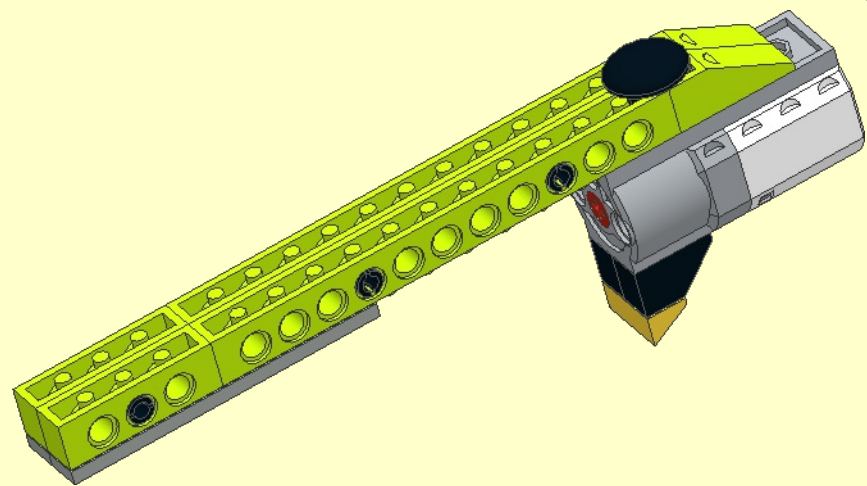
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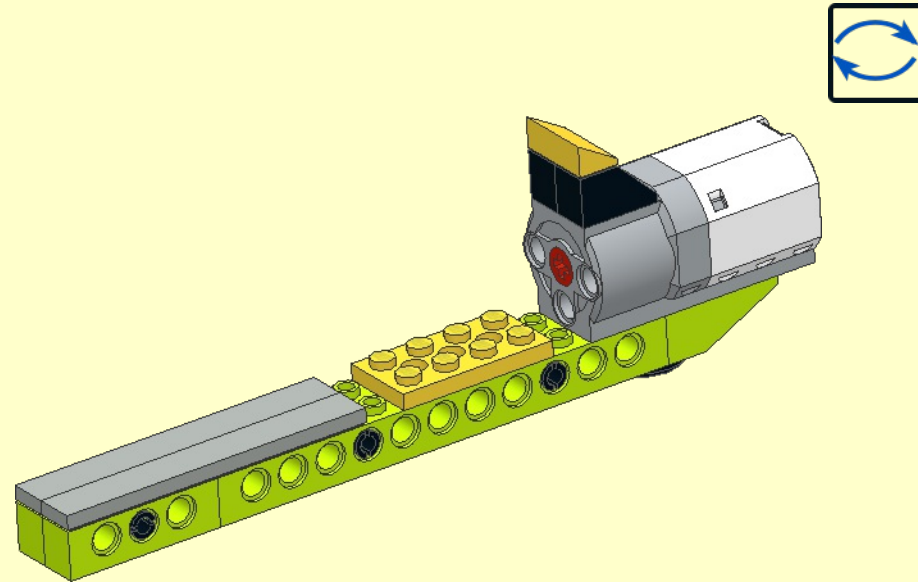
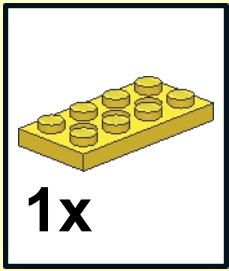
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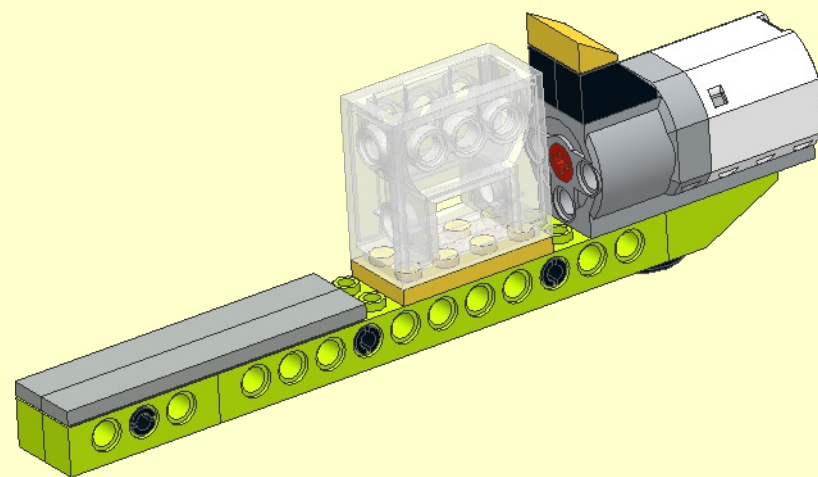
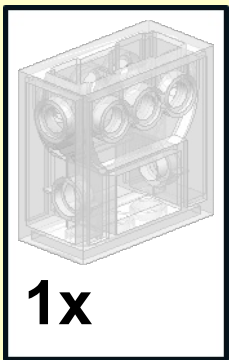
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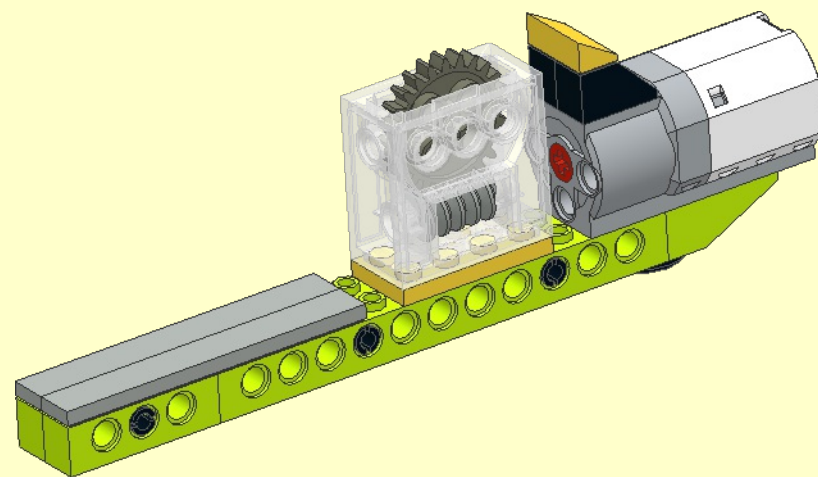
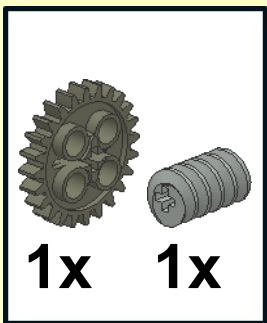
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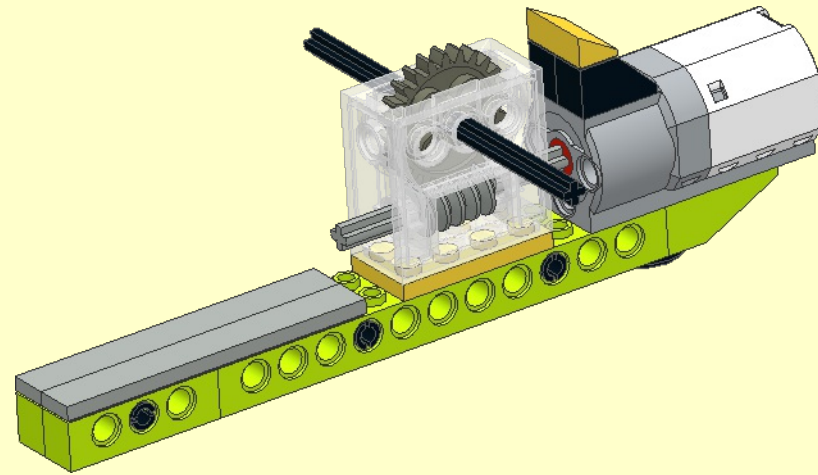
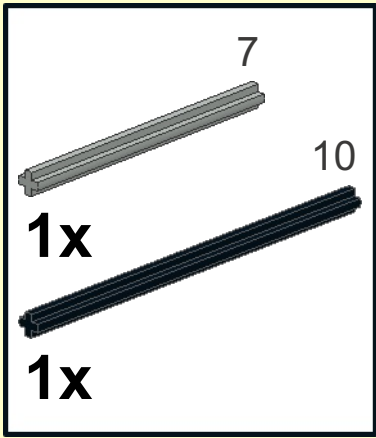
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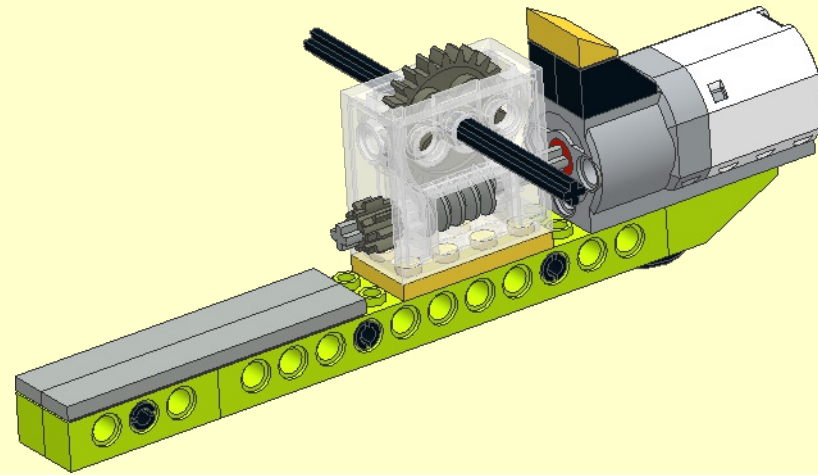
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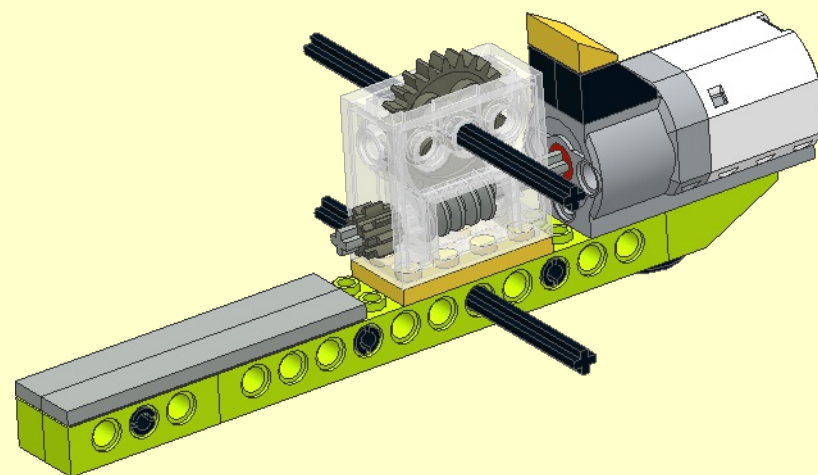
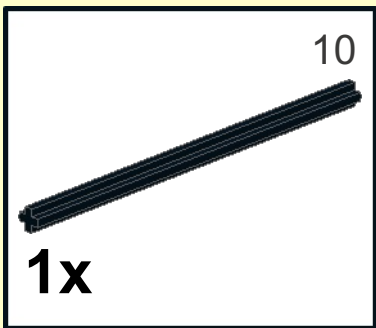
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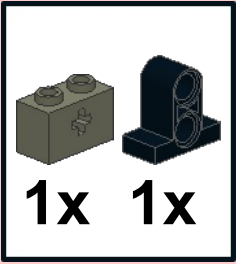
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12



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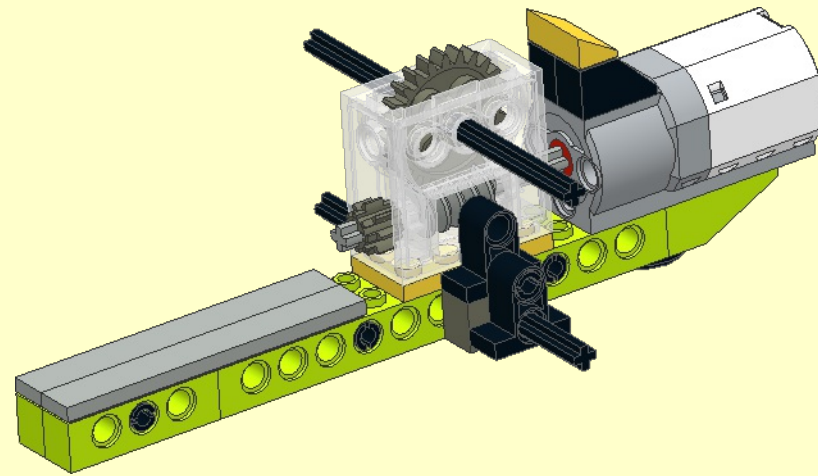


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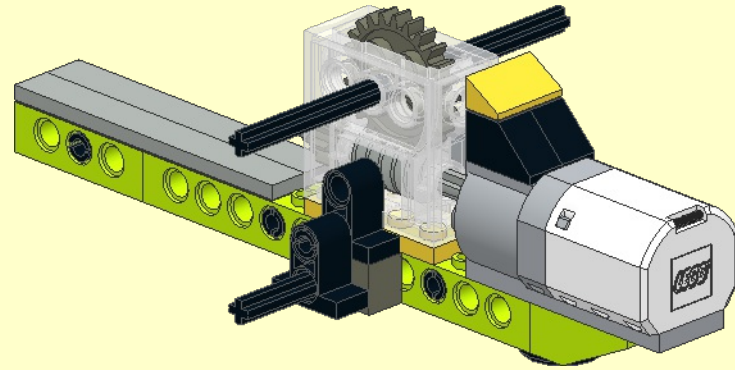


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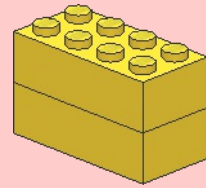
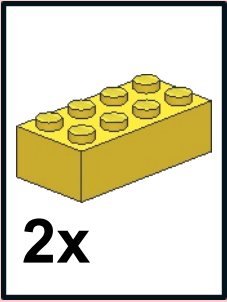
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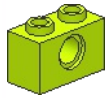
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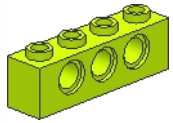
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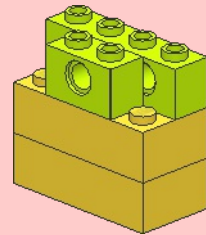
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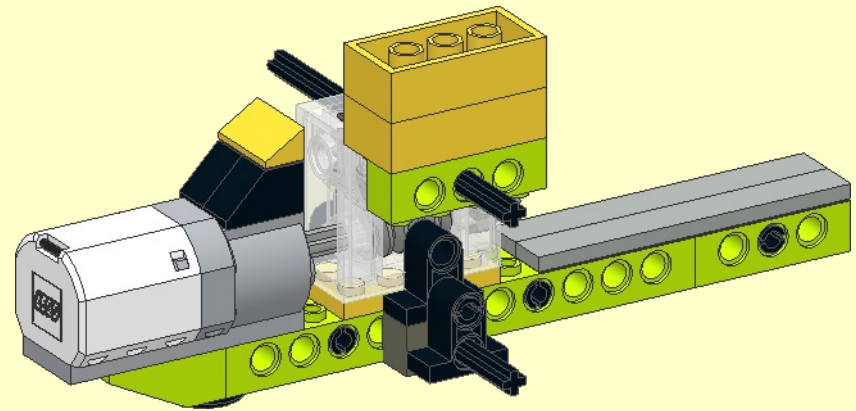


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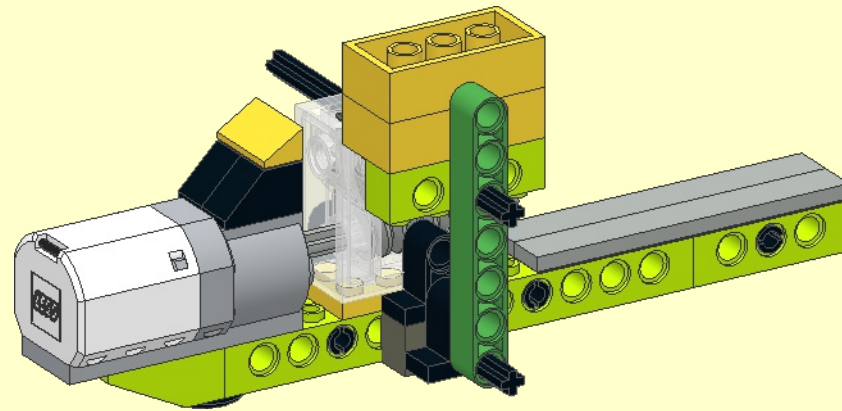
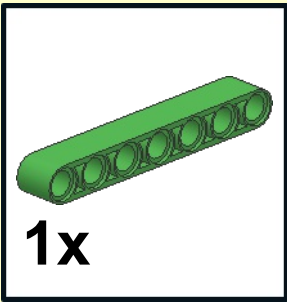


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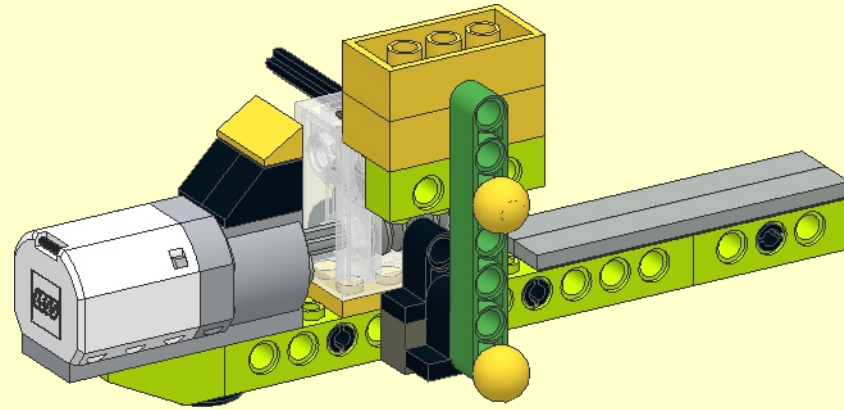
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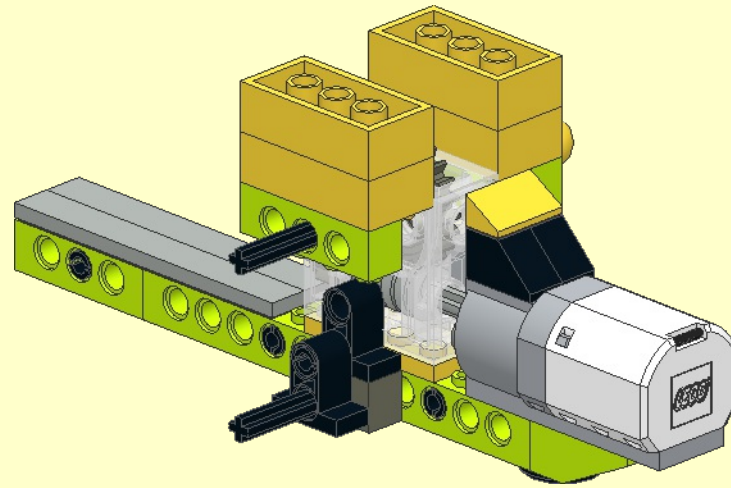
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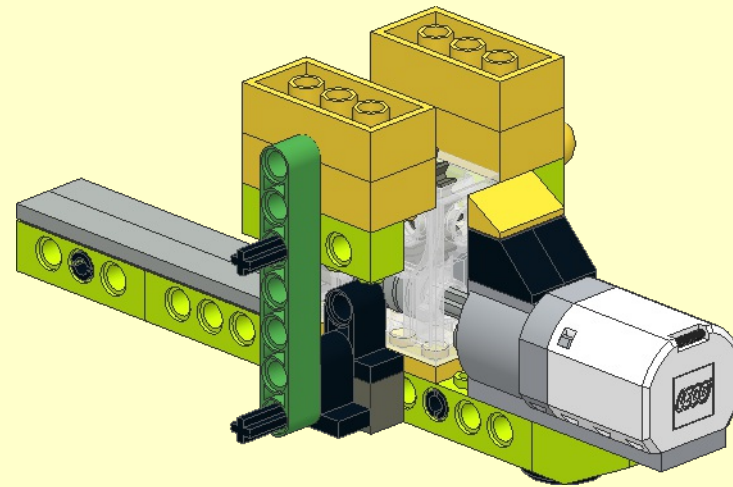
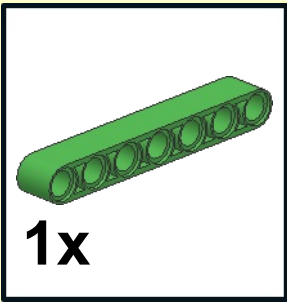
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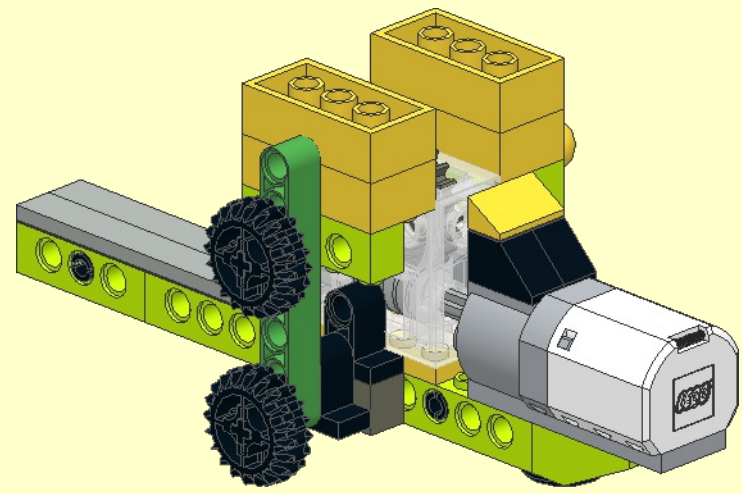
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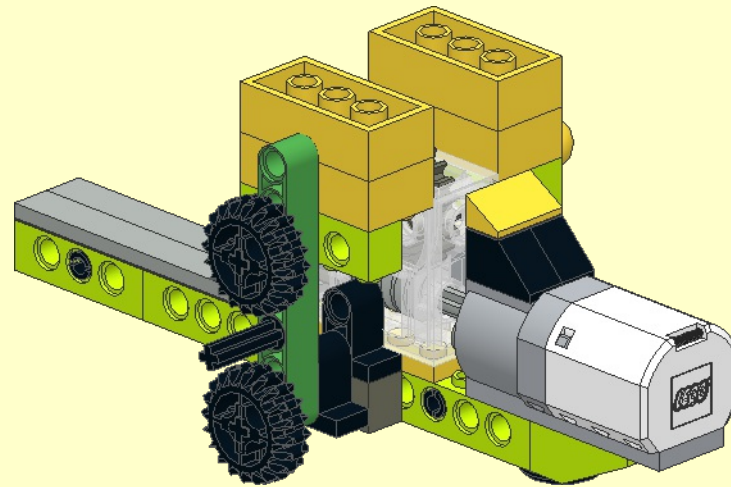
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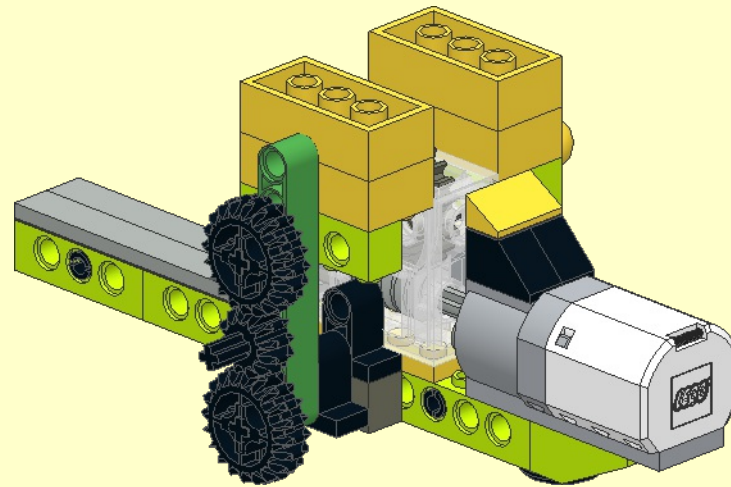
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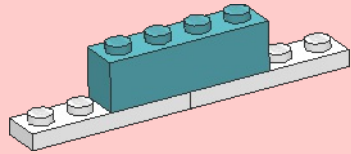
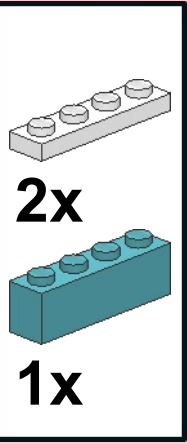
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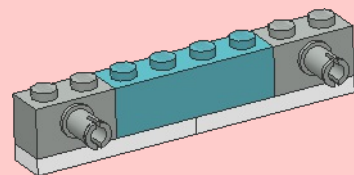
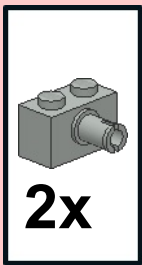
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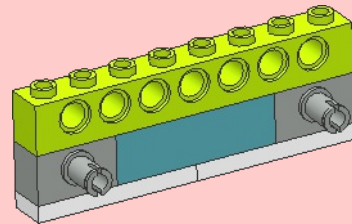
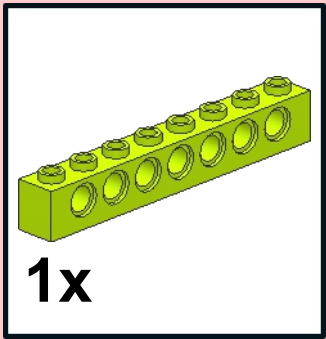
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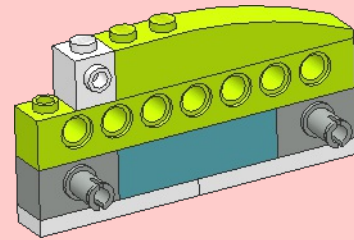
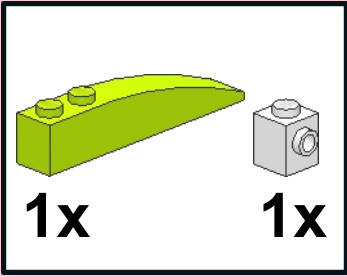
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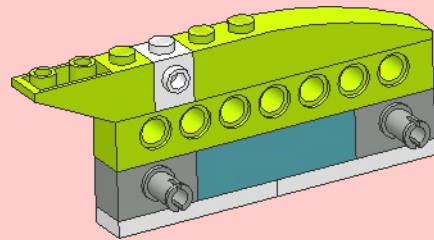
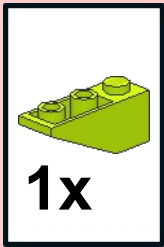
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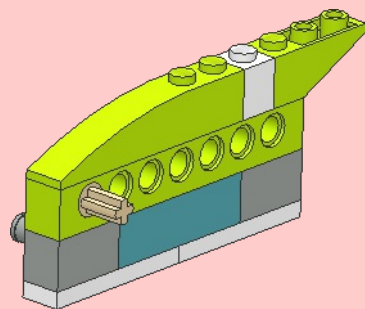
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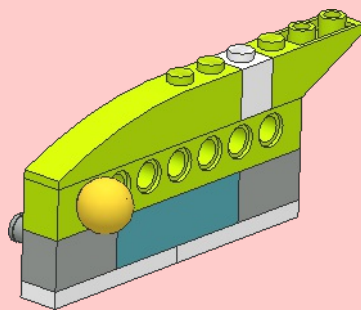
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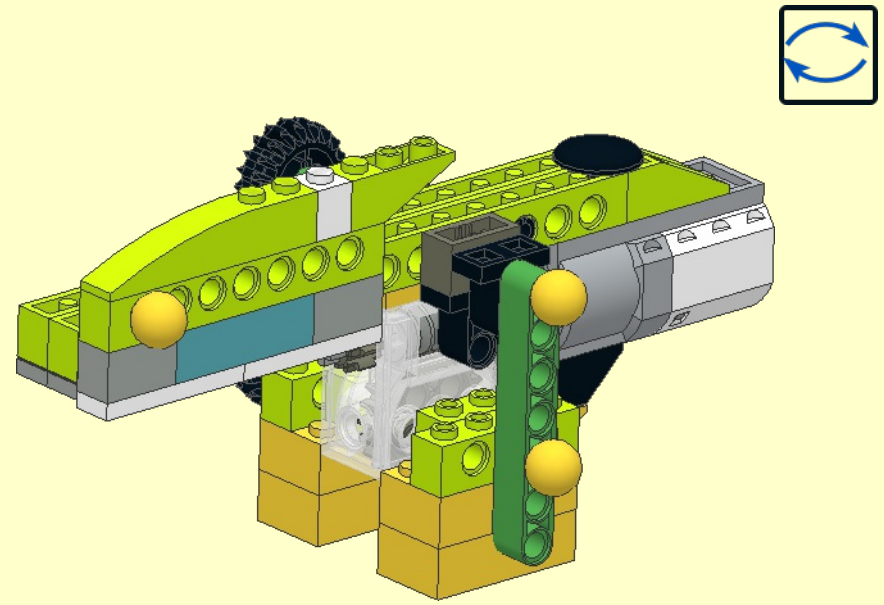


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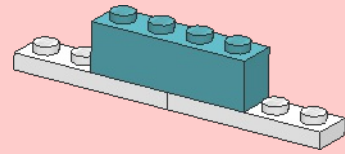
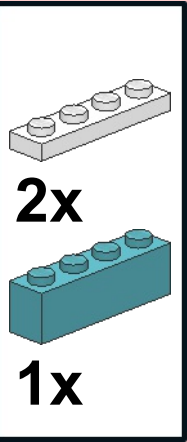


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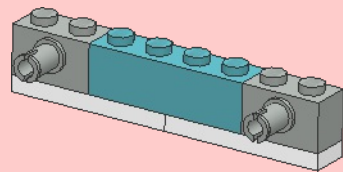
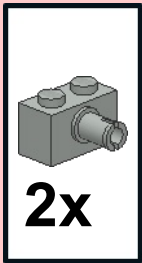




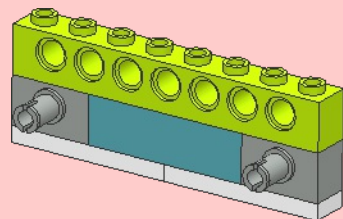
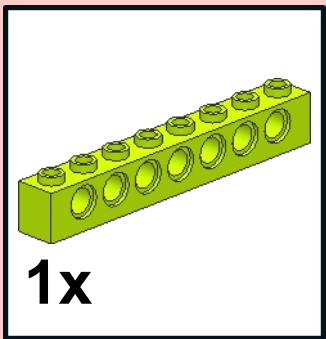
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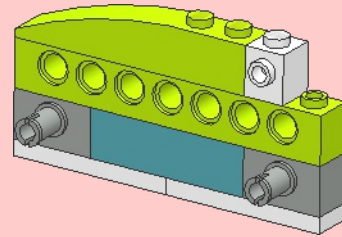
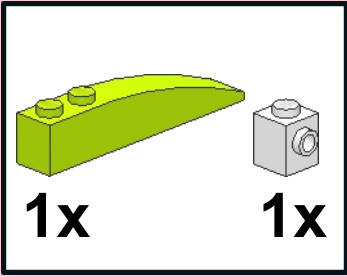
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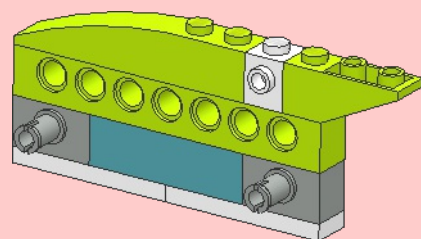
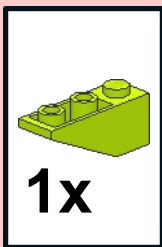
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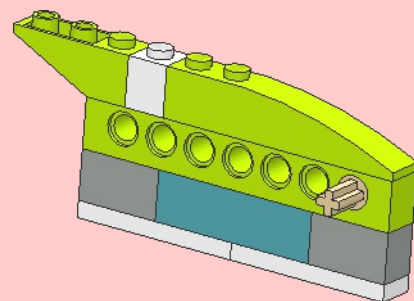
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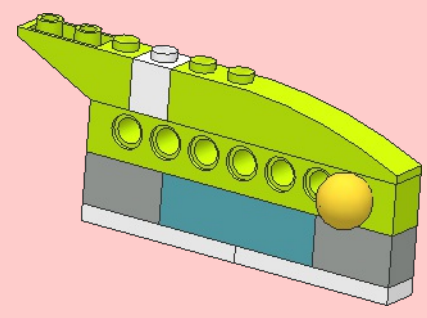
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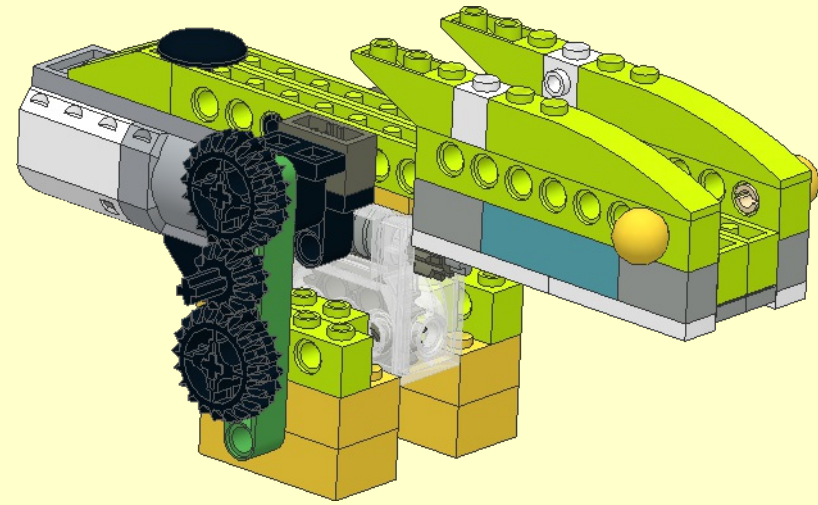
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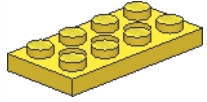
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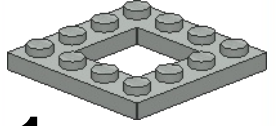
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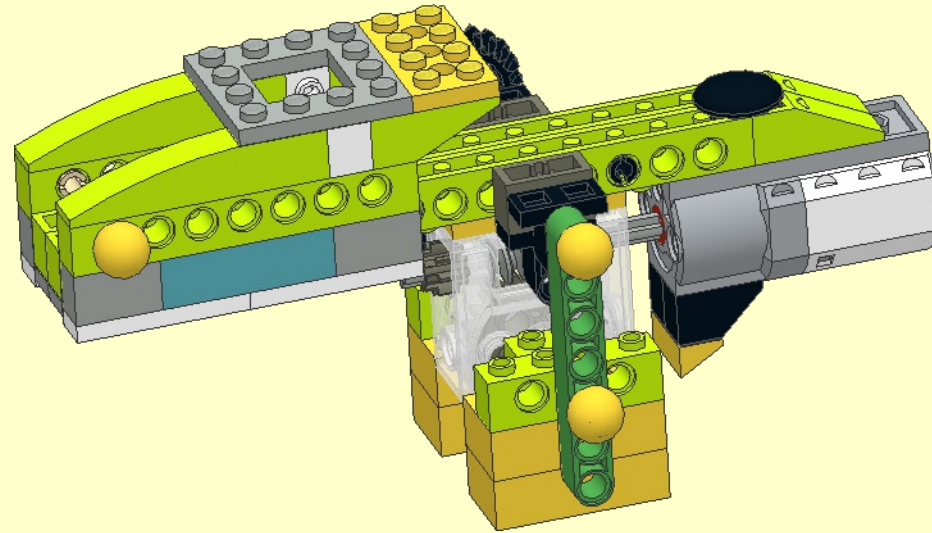
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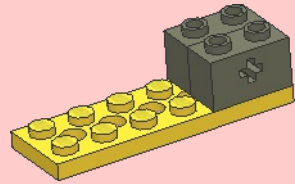
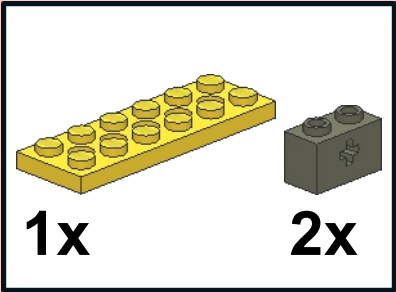
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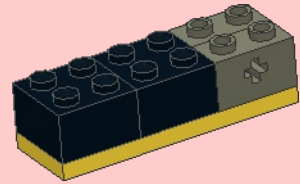
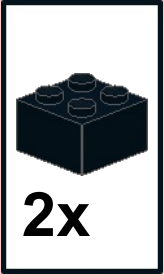
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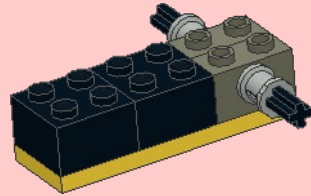
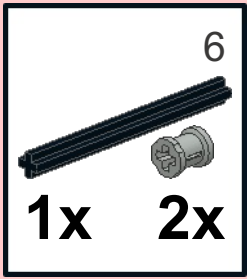
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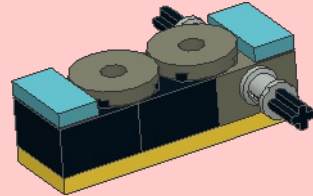
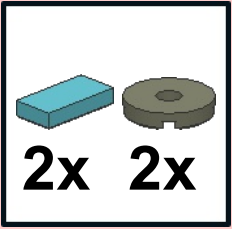
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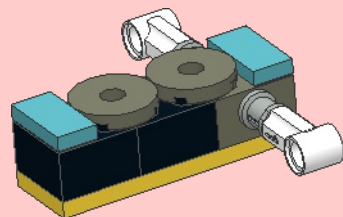
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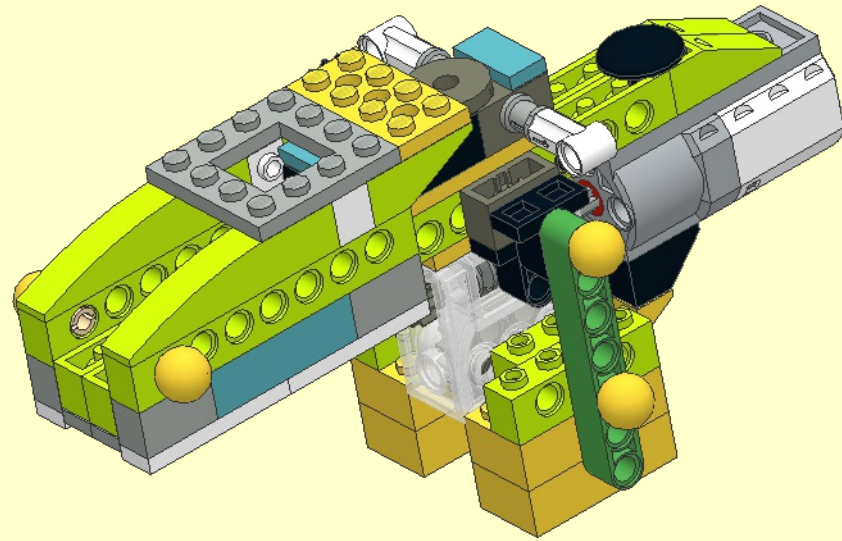
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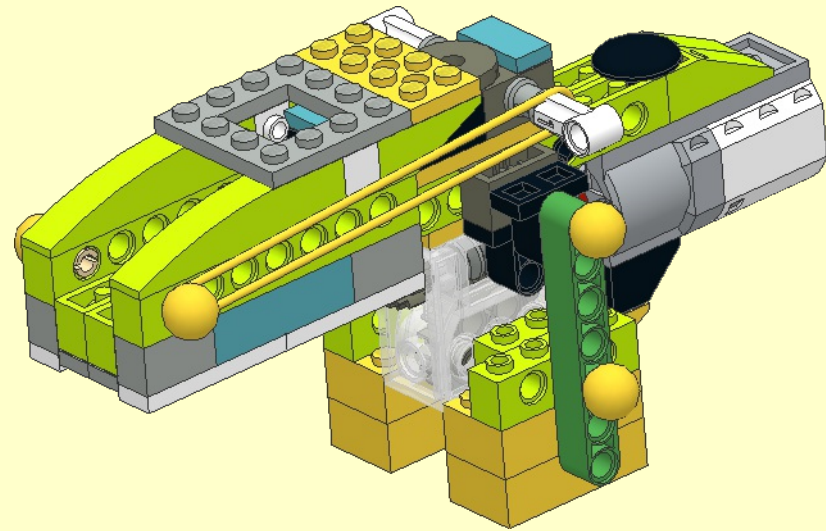
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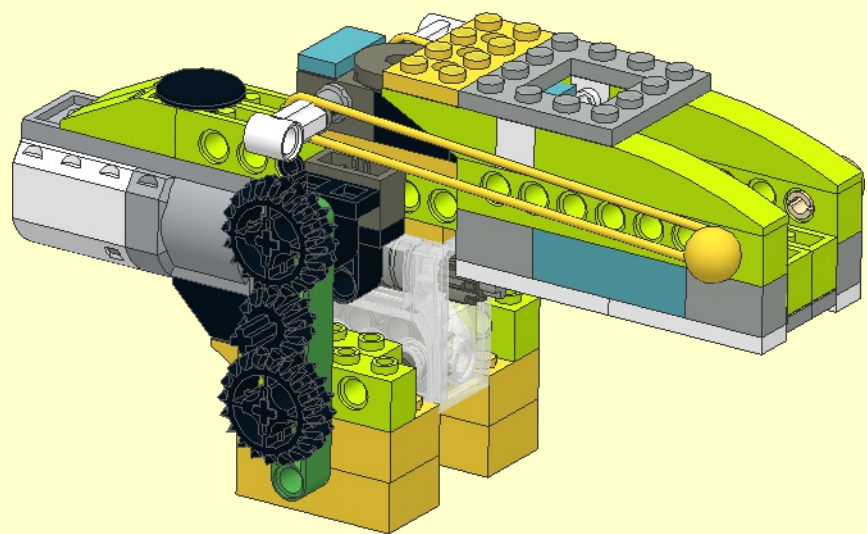
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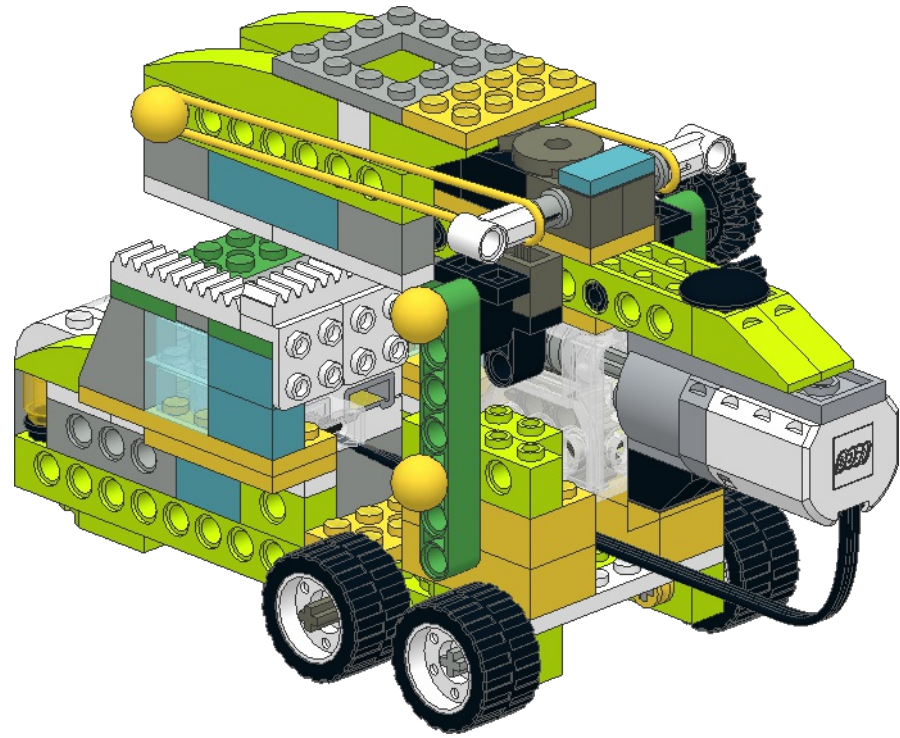


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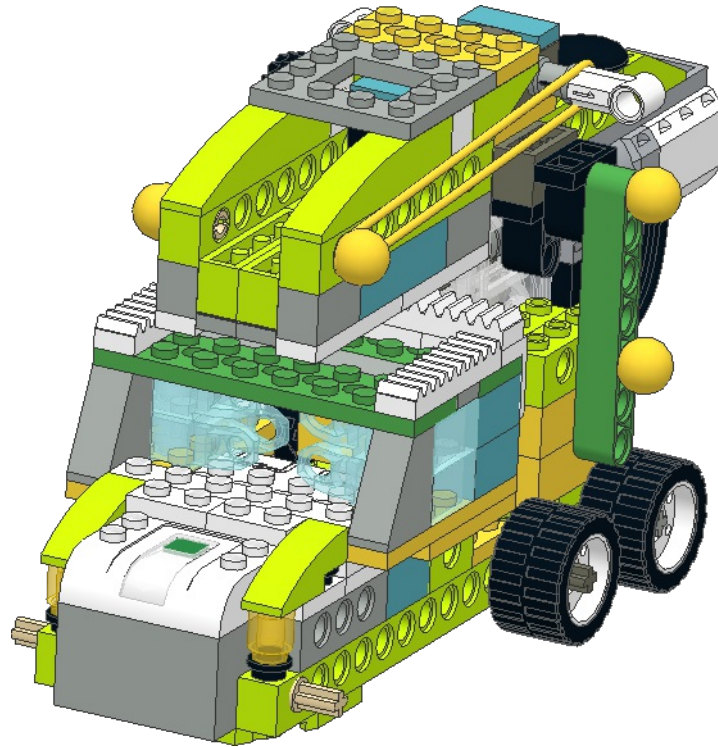


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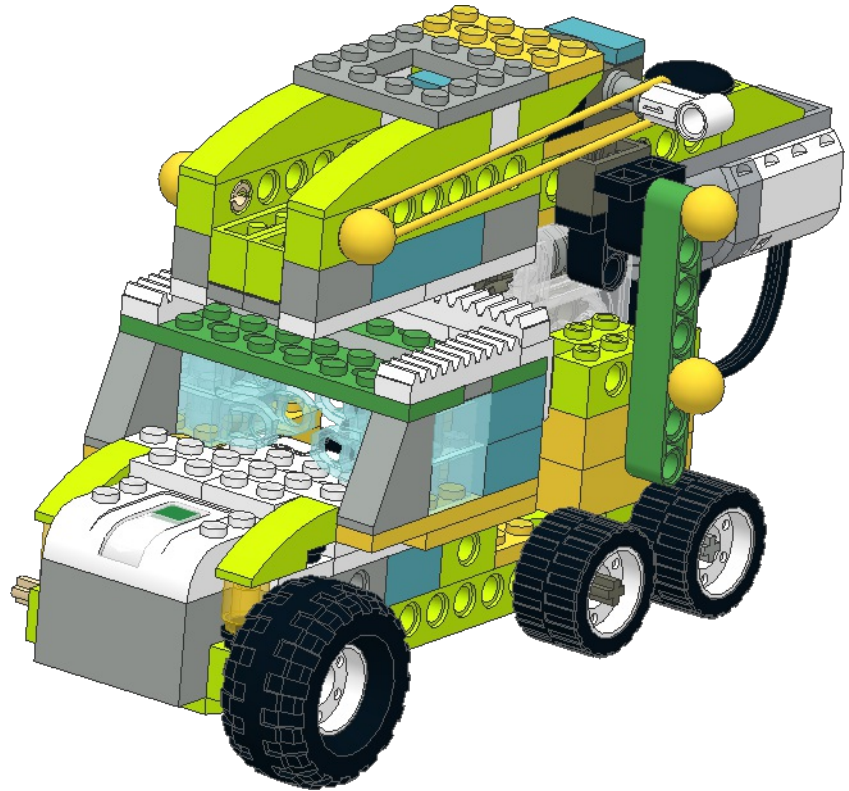




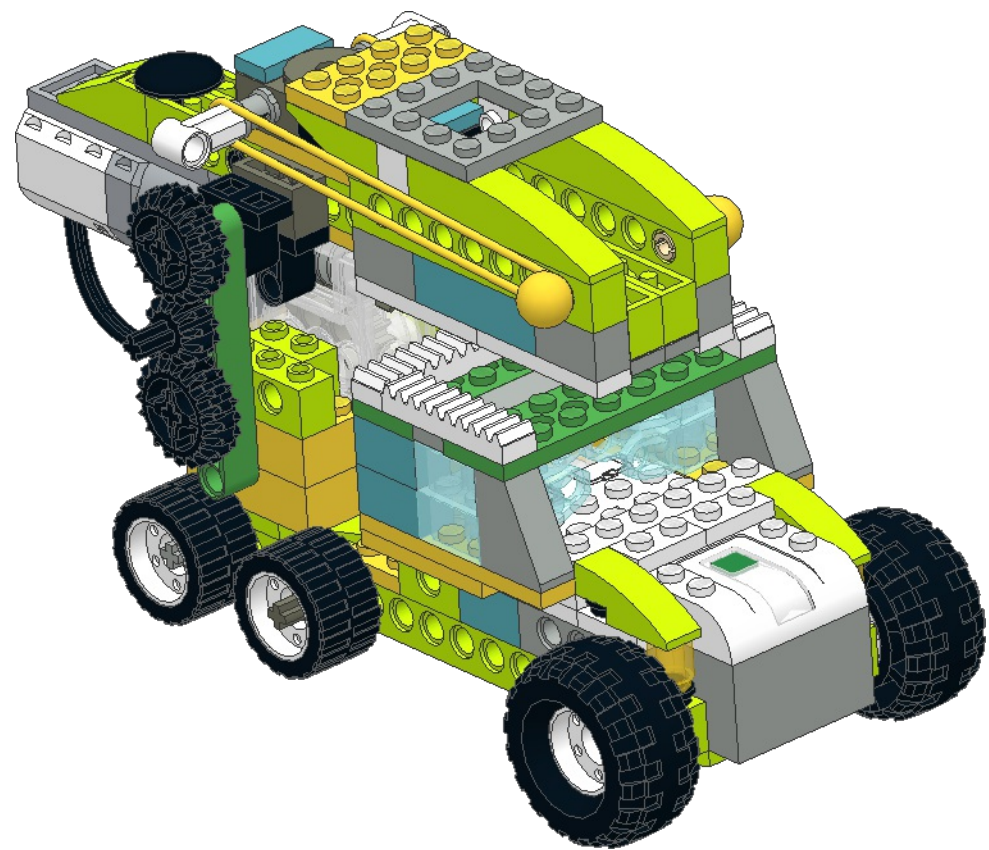
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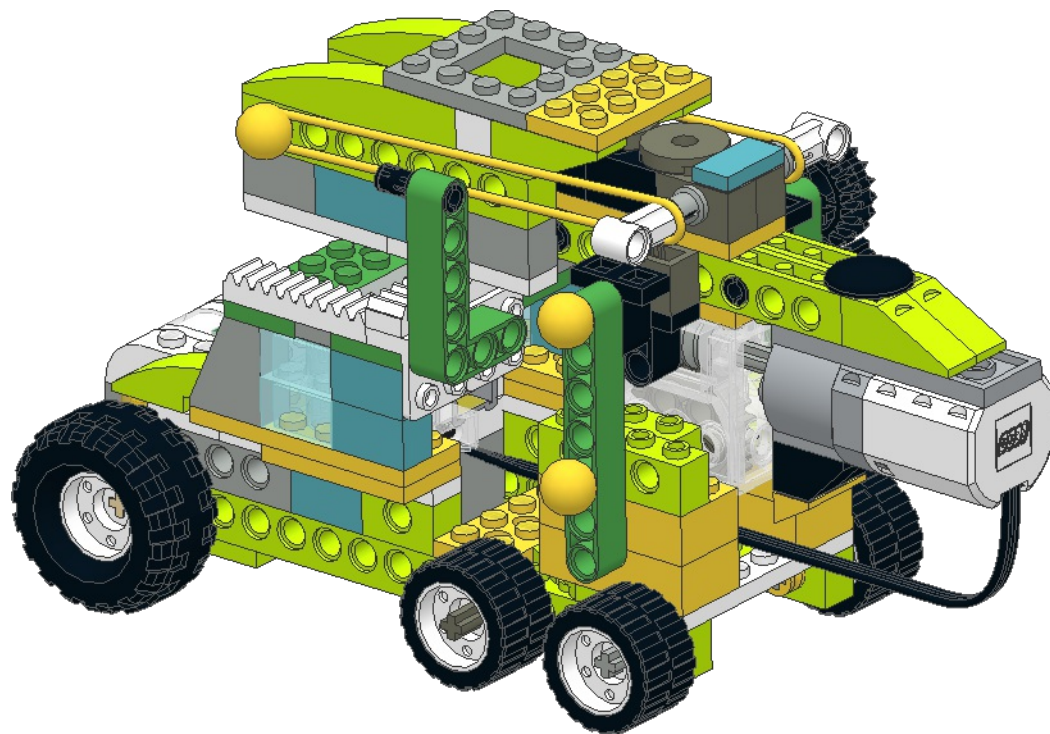
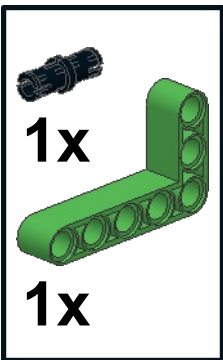
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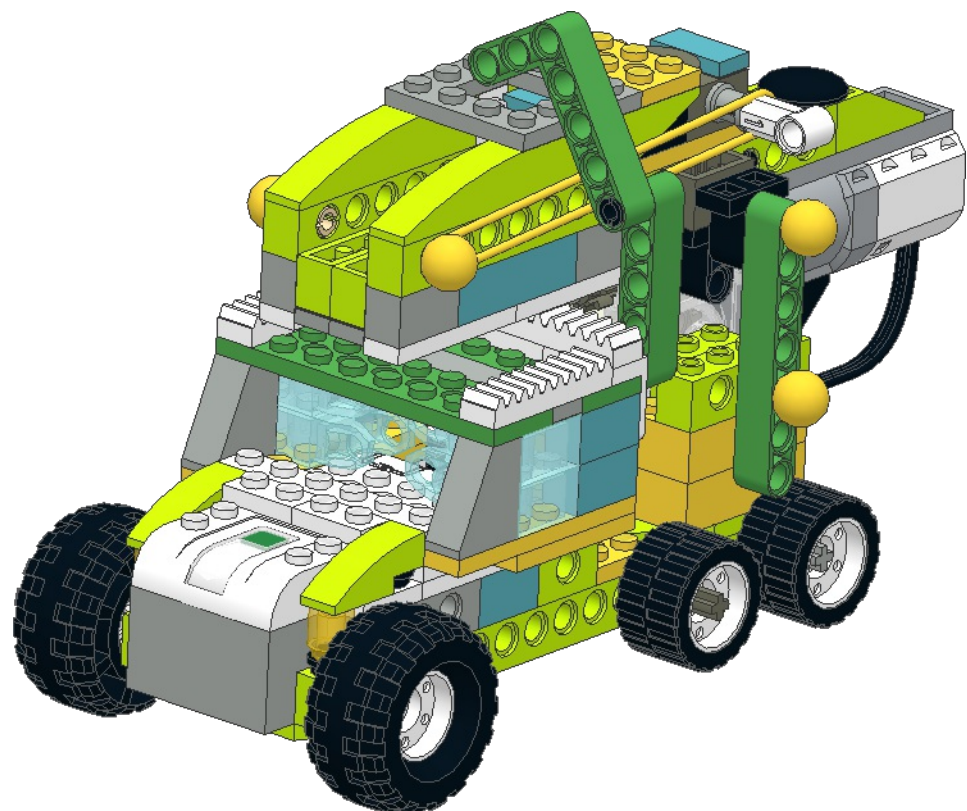
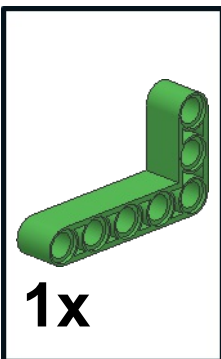
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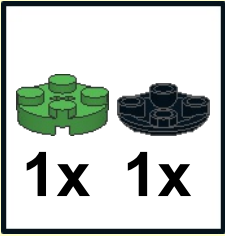
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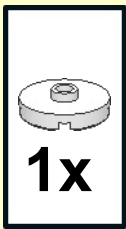
24



1



2



x2

25



