

zdi-Space Adventures

Ruby und Schräubchen auf galaktischer Entdeckungsreise



Dokument zum Spielfeldaufbau

Weiterführende Schulen | Lokalwettbewerbe

In diesem Dokument werden der Aufbau, die Platzierung und die Befestigung von Aufgabenelementen auf dem Spielfeld beschrieben.

Hinweis zu verwendeten Materialien

Beim zdi-Roboterwettbewerb 2026 wird weiterhin ein fertiges Bauteile-Set verwendet, welches ansonsten bei der World Robot Olympiad Anwendung findet. Alle Aufbauten für den zdi-Roboterwettbewerb können aus diesem Bauteile-Set realisiert werden. Es gibt einzelne Bauteile, die übrig bleiben und nicht eingesetzt werden. Daher nicht wundern, wenn nach dem Zusammenbau der Aufbauten noch weitere Teile vorhanden sind. **Wir bitten die Schulen darauf zu achten, dass das Set mit Blick auf weitere Wettbewerbe vollständig bleibt.**

Schulen, die bereits beim letzten Wettbewerb mitgemacht haben und das Bauteile-Set besitzen, können dieses weiterhin nutzen. Jedes teilnehmende Team hat Anspruch auf ein neues Set, jedoch würde uns ein aufmerksamer Umgang mit vorhandenen Materialien freuen.

Hinweis zu Markierungen auf dem Spielfeld

Für den zdi-Roboterwettbewerb 2026 wurde ein Spielfeld entwickelt, das mit derselben Spielfeldmatte für unterschiedliche Schwierigkeitsstufen (Grundschulen und weiterführende Schulen) funktioniert. Je nach Zielgruppe kann es sein, dass nicht alle Markierungen auf dem Spielfeld verwendet werden oder es andere Anforderungen an das Erreichen der Punktzahlen gibt. **Bitte daher immer das für Ihre und Eure Aufgabe korrekte Dokument zum Spielfeldaufbau lesen.**

Das Spielfeld

Das Spielfeld ist **235cm x 115cm** groß. Die Spielfeldmatte liegt grundsätzlich auf dem Boden. Bei Präsenzwettbewerben wird die Spielfeldmatte ohne Bande auf den Boden platziert.



Objekte am Anfang & Ende in der Base / Befestigung mit Klettband

Diese Tabelle gibt eine kurze Übersicht, über Aufgabenobjekte, die am Start in der Base sind, laut Aufgabenbeschreibung dort am Ende sein müssen und bei welchen Aufgaben eine Befestigung mit Klettband auf der Spielfeldmatte vorgenommen werden muss.

Aufgabe	Material zu Beginn in der Base	Material zum Ende eines Laufes in der Base	Befestigung Klettband
1			Teil C – Modell Aktivierung der Startrampe
2			Teil B – Erdantenne befestigen
3			Teil B – Erdantenne befestigen
4		2 Trümmerreste	
5			Befestigung von 2 Pfosten
6	3 Farbklötzte		
7	2 Materialblöcke		Teil B – Experiment befestigen
8		1 Rückkehrkapsel	
9	1 Rover		
10		2 Proben	Hindernis vor dem Terrain
11	4 Markierungsblöcke		
12			3 Barrieren an der Base (1) und beim Terrain (2)

Material zu Beginn in der Base:



Bei den oben genannten Aufgaben werden Aufgabenobjekte mit Klettband auf der Spielfeldmatte befestigt. Dazu gibt es schwarz-weiß-gestreifte Markierungen auf der Spielfeldmatte, welche die Stellen für Klettband markieren.

Bauanleitungen & Platzierungen auf dem Spielfeld

In diesem Jahr wurden für alle Spielfeldobjekte Bauanleitungen erstellt, welche hier am Ende alle angefügt sind. Zum Zusammenbau wird ausschließlich das zuvor erwähnte Material-Set benötigt.

Außerdem soll im Folgenden ein kurzer Eindruck zur Platzierung der Aufgabenobjekte auf dem Spielfeld, sofern sie, denn nicht am Anfang in der Base liegen, gegeben werden.

Aufgabe 1 – Rakete zum Start vorbereiten

Rakete, Unterbau und Treibstoff stehen zu Beginn auf verschiedenen Markierungen auf der Matte. Sie werden dabei immer so ausgerichtetet, wie auf den Fotos unten zu sehen. Der Aktivierungsmechanismus (Teilaufgabe C) wird mit Klettband befestigt und so positioniert, dass sich der rote Hebel vollständig innerhalb der Konstruktion befindet.



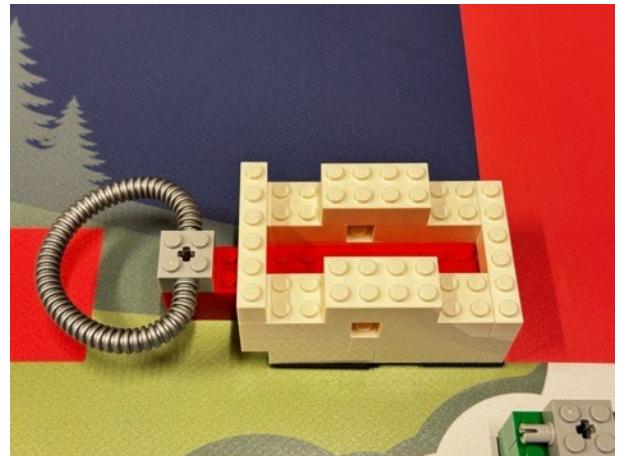
Positionierung der Rakete



Positionierung des Unterbaus
(Schlinge möglichst gerade und immer in diese Richtung wie im Foto ausgerichtet.)



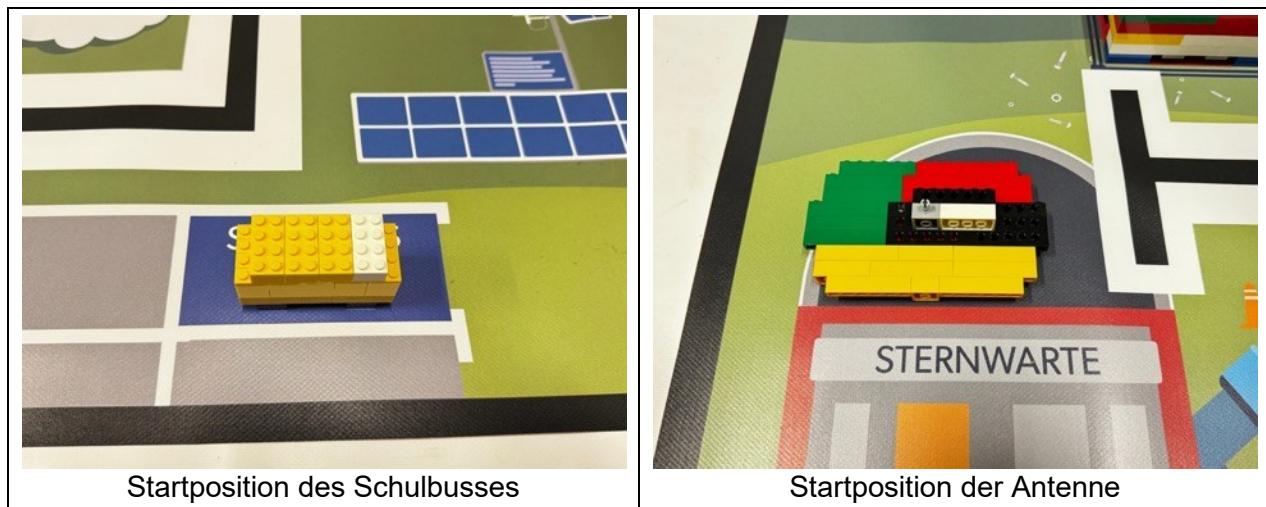
Positionierung des Treibstoffes



Startposition des Hebels

Aufgabe 2 – Sternwarte

Der Schulbus wird im blauen Bereich wie im Foto zu sehen ausgerichtet aufgestellt. Bei der Erdantenne ist wichtig, dass sie so ausgerichtet wird, dass die rote Ecke nach oben rechts zeigt. Der Zeiger der Antenne wird dabei so ausgerichtet, dass der obere schwarze Teil oben an dem schwarzen Bereich der Antenne ansetzt (siehe Foto).



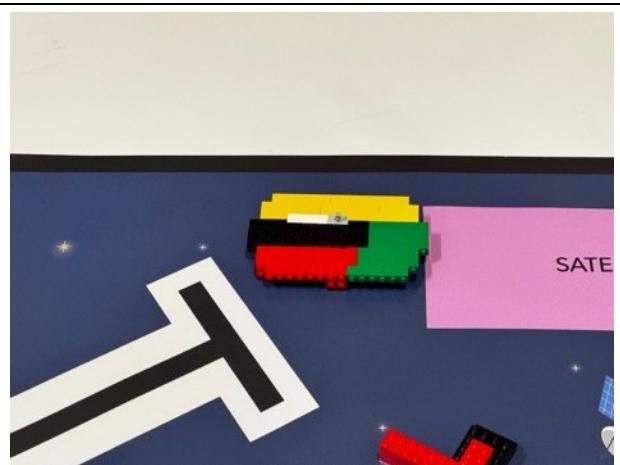
Aufgabe 3 – Mini-Satelliten und Kommunikation

Die Satelliten werden in der Mitte des Spielfeldes auf die entsprechenden Markierungen gelegt, der rote Satellit nach links, der gelbe nach rechts.

Die Antenne wird so ausgerichtet, dass die rote Ecke nach unten links zeigt. Der Zeiger ist genauso ausgerichtet wie bei der Antenne in Aufgabe 2.



Startposition Satelliten



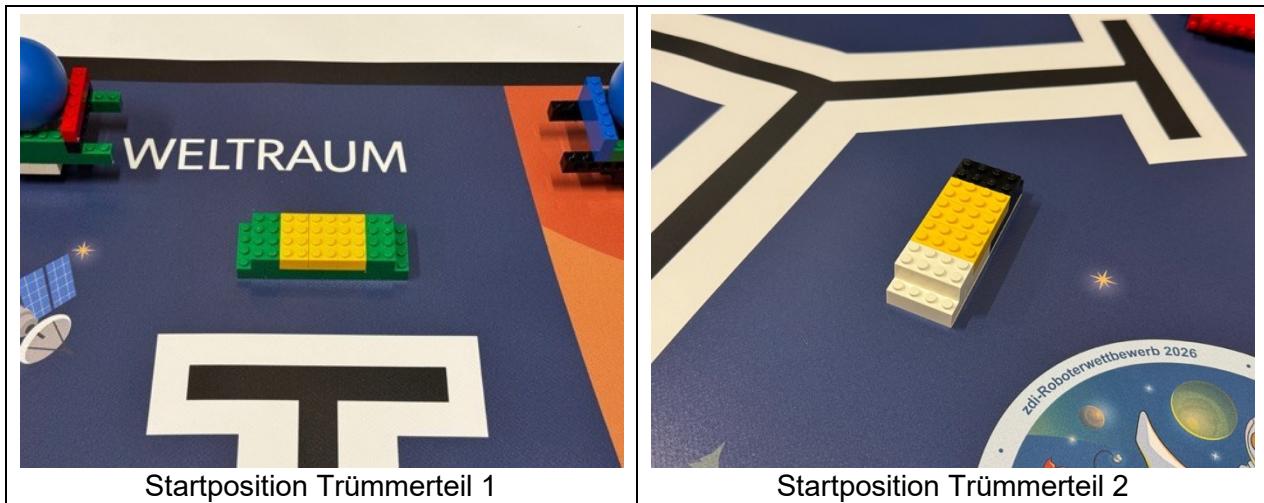
Startposition der Antenne



Dieses Foto zeigt einmal, wo bei der Antenne das Klettbond befestigt wird.

Aufgabe 4 – Trümmerteile einsammeln

Die beiden Trümmerteile werden auf die gelben Markierungen im Weltall gelegt. Das Teil mit grünen Teilen nach oben rechts im Weltraum, das andere im linken Bereich.



Aufgabe 5 – Aufbruch ins Weltall

Für diese Aufgaben werden die beiden Pfosten mit Klettband am unteren LEGO-Teil auf der Spielfeldmatte befestigt. Das Element mit den roten LEGO-Steinen nach links, das andere nach rechts wie im Bild zu sehen.



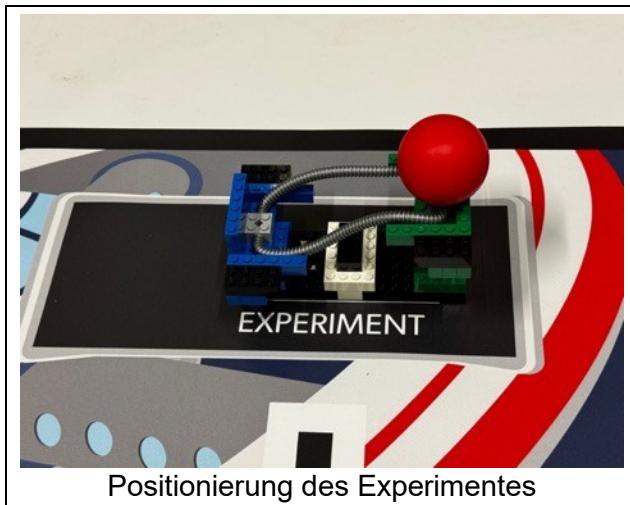
Positionierung der Pfosten

Aufgabe 6 – Umweltbeobachtung aus dem All

Die Farbklötzte für diese Aufgabe befinden sich zum Start in der Base.

Aufgabe 7 – Experimente in Schwerelosigkeit

Die Materialblöcke sind zu Beginn in der Base, das Experiment wird auf die Markierung im Experimentbereich gesetzt. Dabei ist der untere Teil der Konstruktion links, der obere rechts.



Aufgabe 8 – Transport der Rückkehrkapsel

Die Rückkehrkapsel steht zu Beginn am Rand zwischen Weltall und Raumstation.

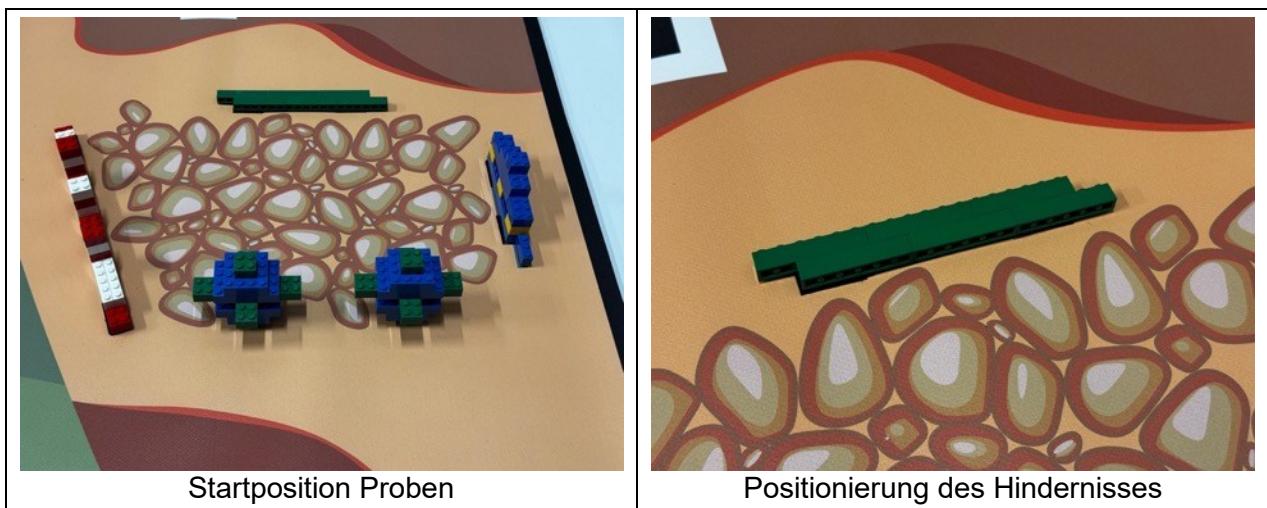


Aufgabe 9 – Rover zum Einsatzort bringen

Der Rover ist zu Beginn in der Base.

Aufgabe 10 – Proben abholen

Die Proben werden an den unteren Rand des Spielfeldes unten rechts unterhalb des Terrains gestellt. Außerdem wird ein Hindernis vor dem Terrain mit Klettband befestigt.

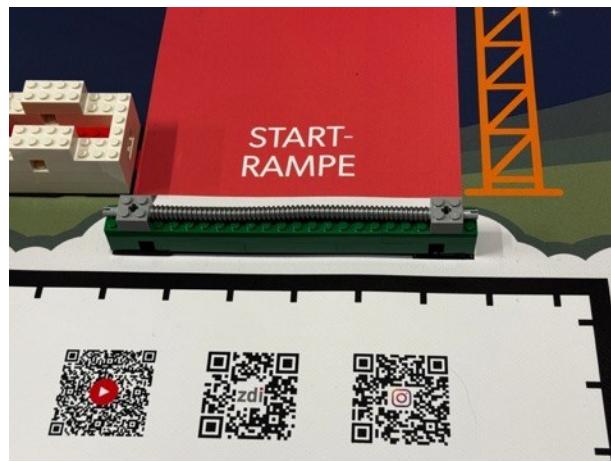


Aufgabe 11 – Landebereiche markieren

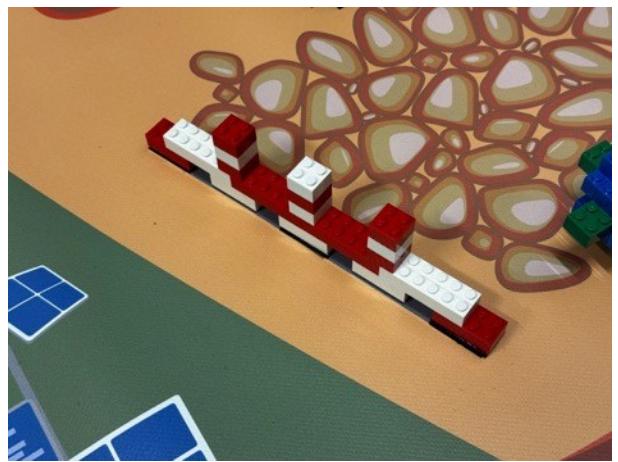
Die Markierungsblöcke für die Landebereiche befinden sich zu Beginn in der Base.

Aufgabe 12 – Bonuspunkte für Barrieren

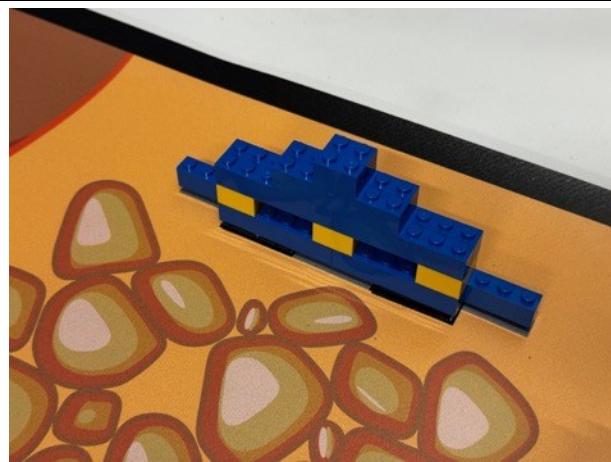
Die drei Barrieren, eine oberhalb der Base und die anderen neben dem Terrain, werden auf der Spielfeldmatte mit Klettband befestigt.



Positionierung Barriere oberhalb der Base



Positionierung Barriere links neben Terrain

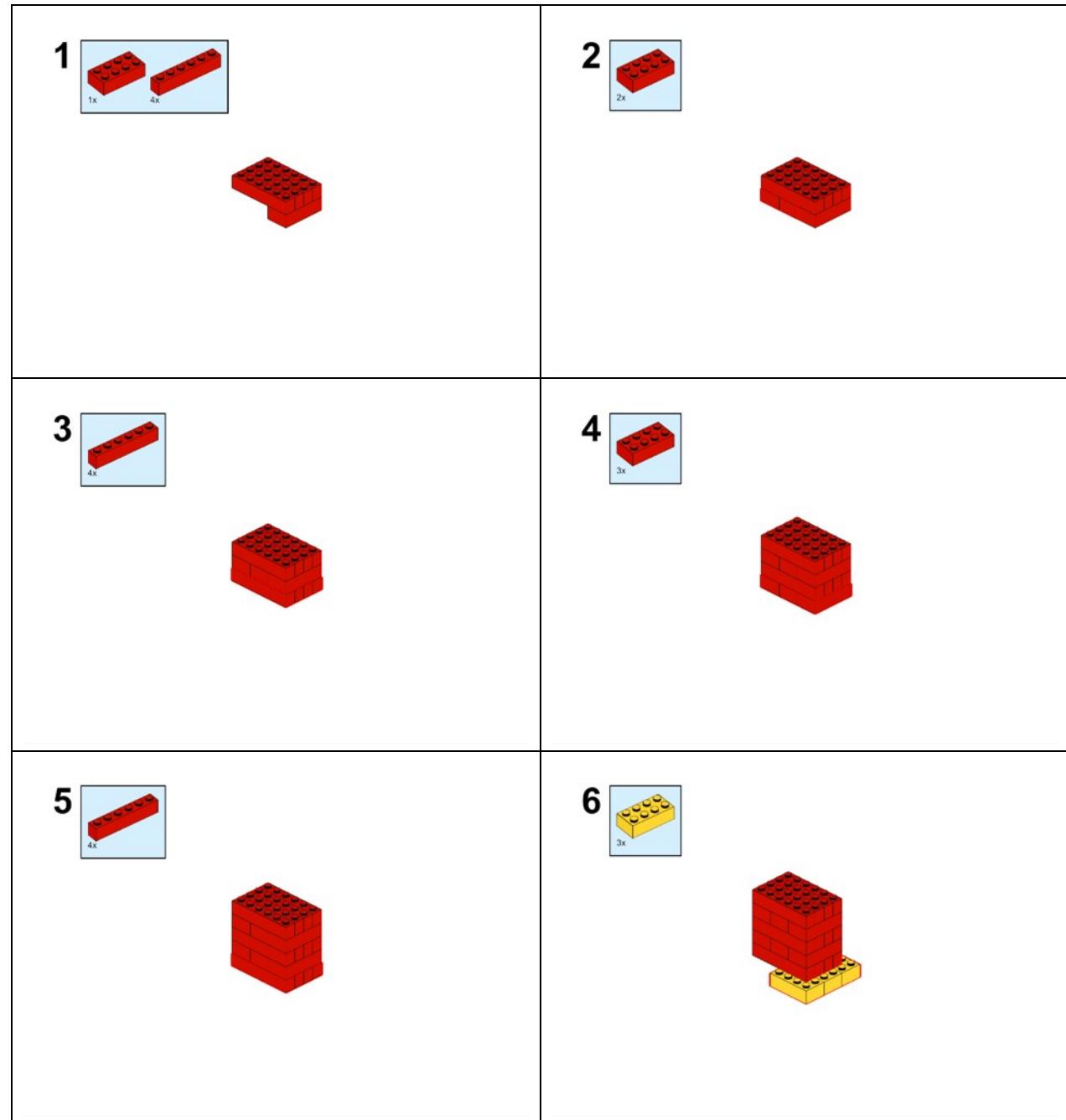


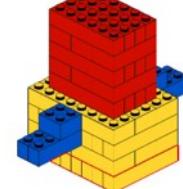
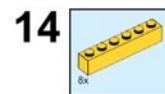
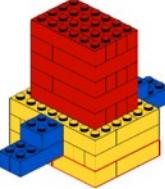
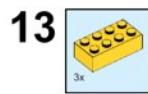
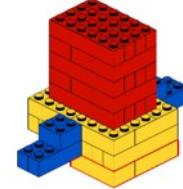
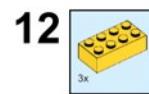
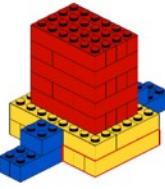
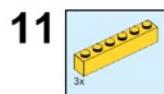
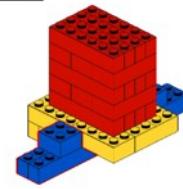
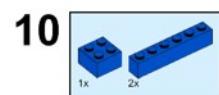
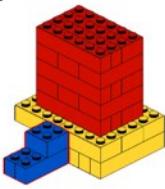
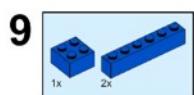
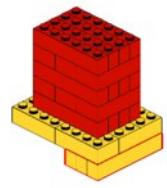
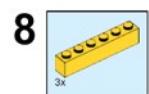
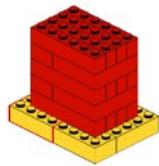
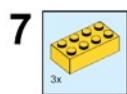
Positionierung Barriere rechts neben dem Terrain

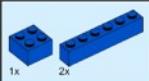
Bauanleitungen Aufgabenobjekte

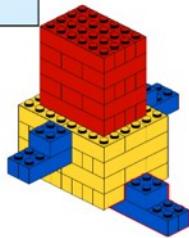
Aufbau Aufgabe 1 – Rakete zum Start vorbereiten

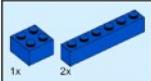
Teil A - Rakete

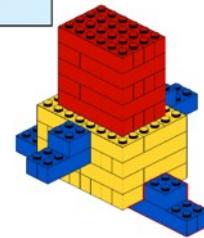




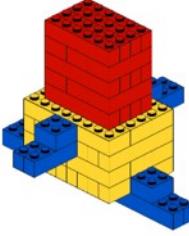
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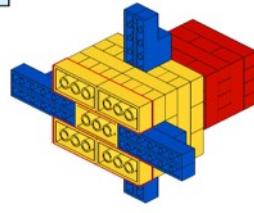
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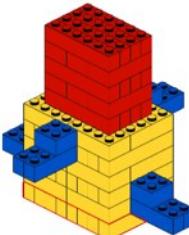
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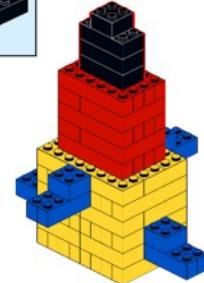
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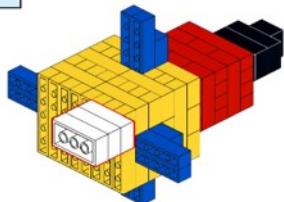
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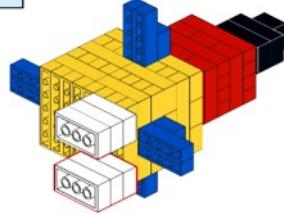
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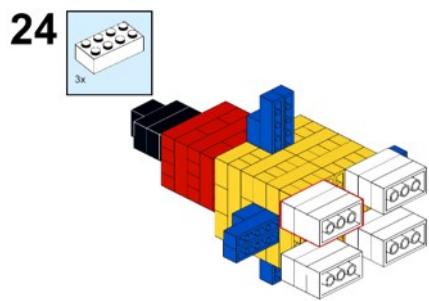
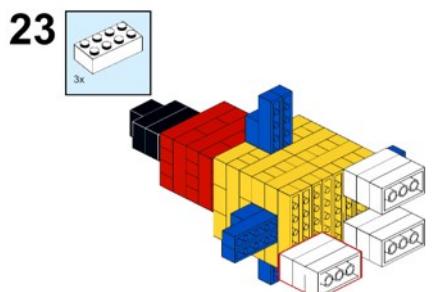


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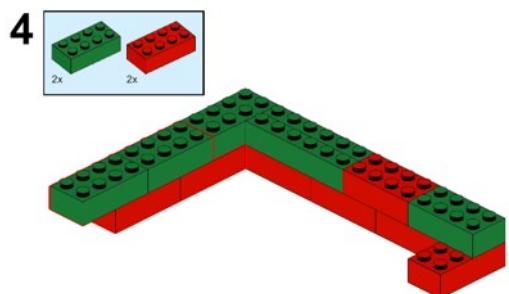
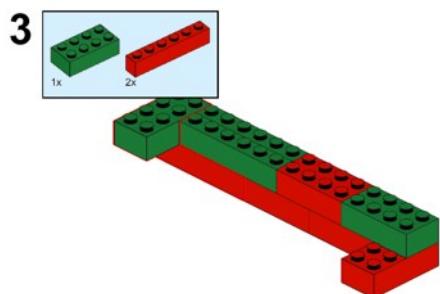
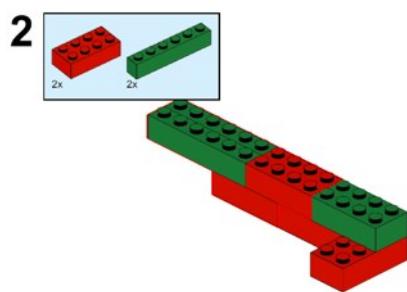
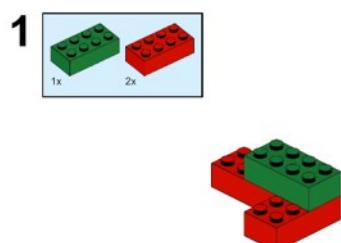


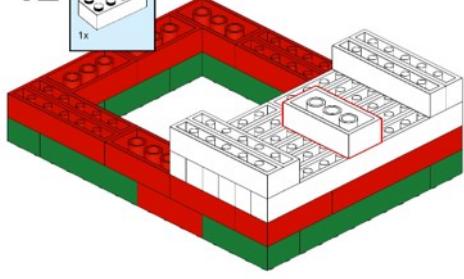
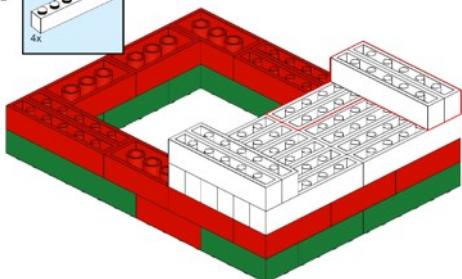
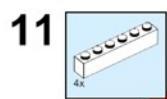
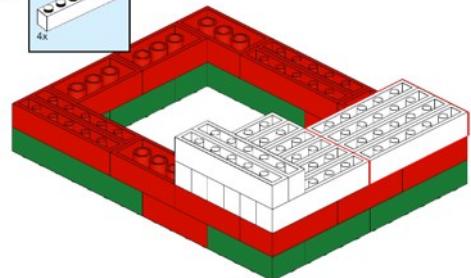
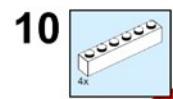
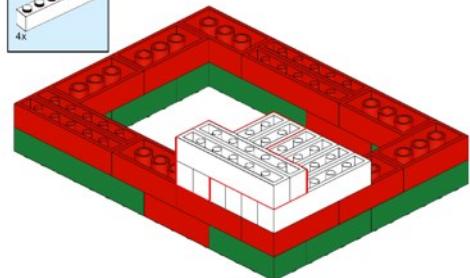
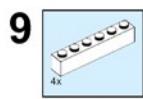
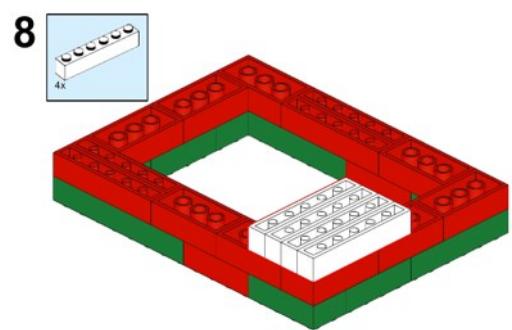
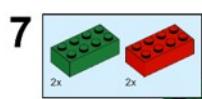
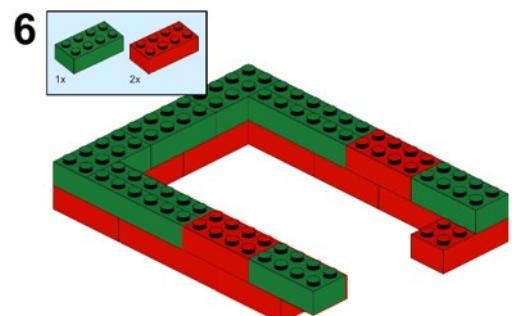
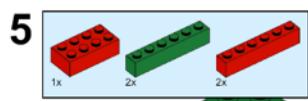
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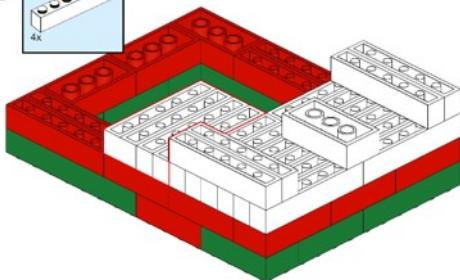


Teil A – Unterbau

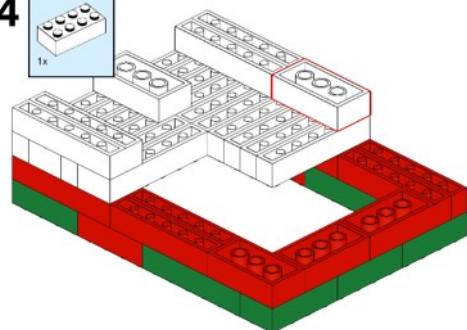




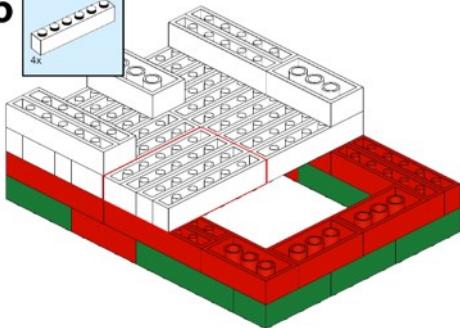
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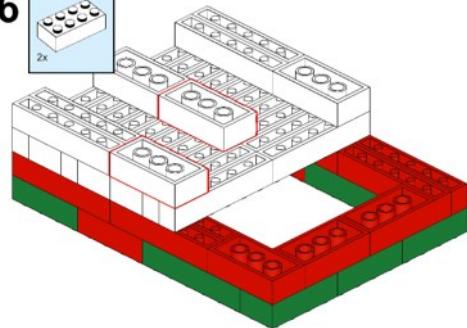
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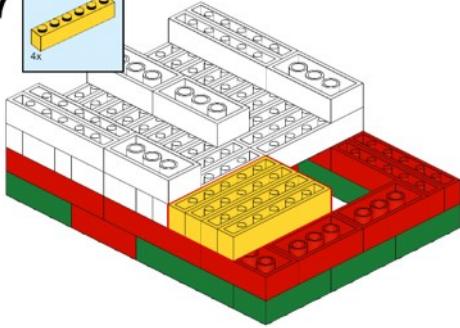
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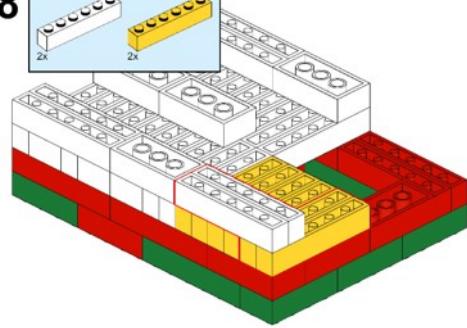
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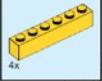


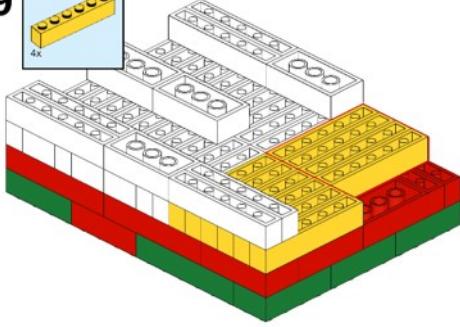
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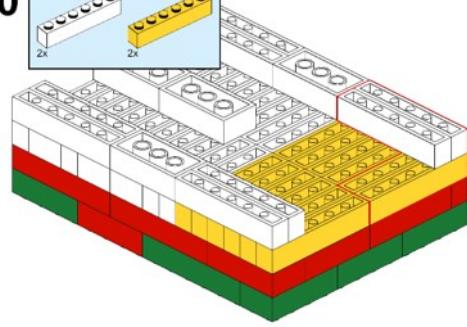
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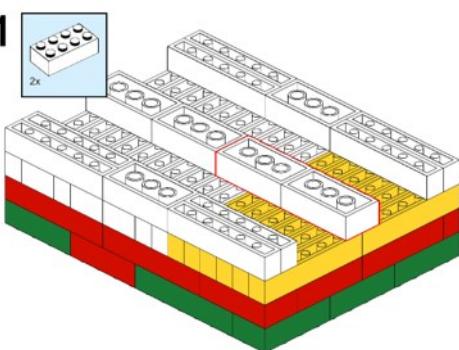
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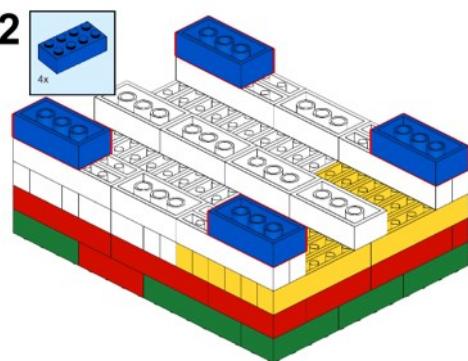
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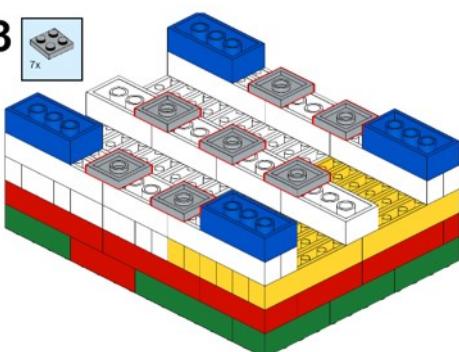
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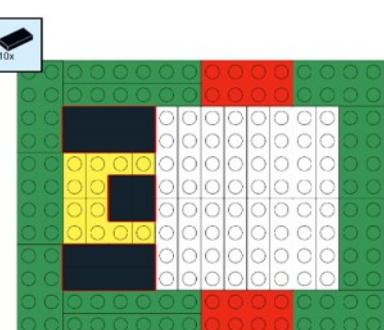
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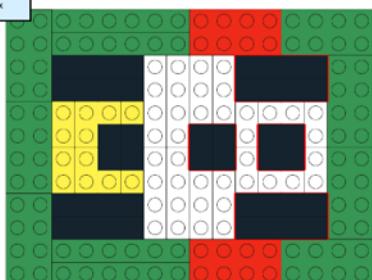
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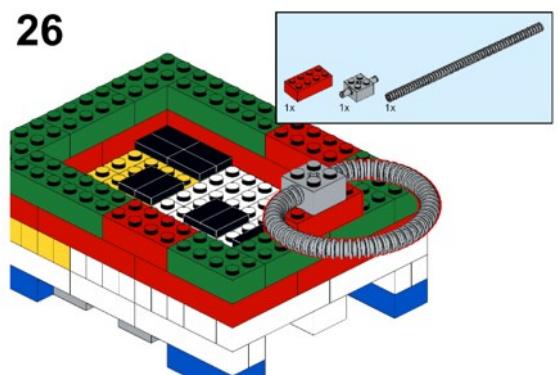
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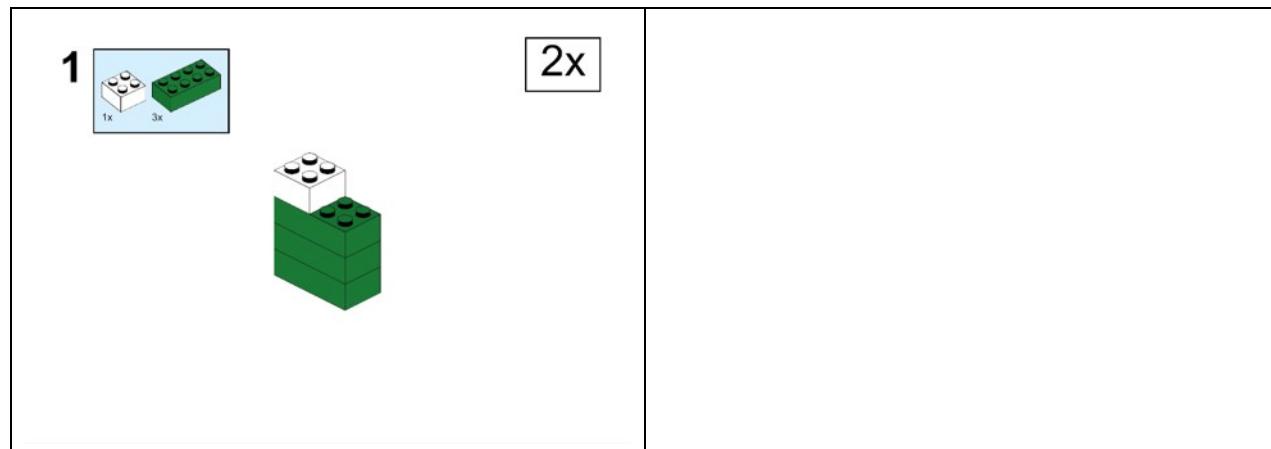
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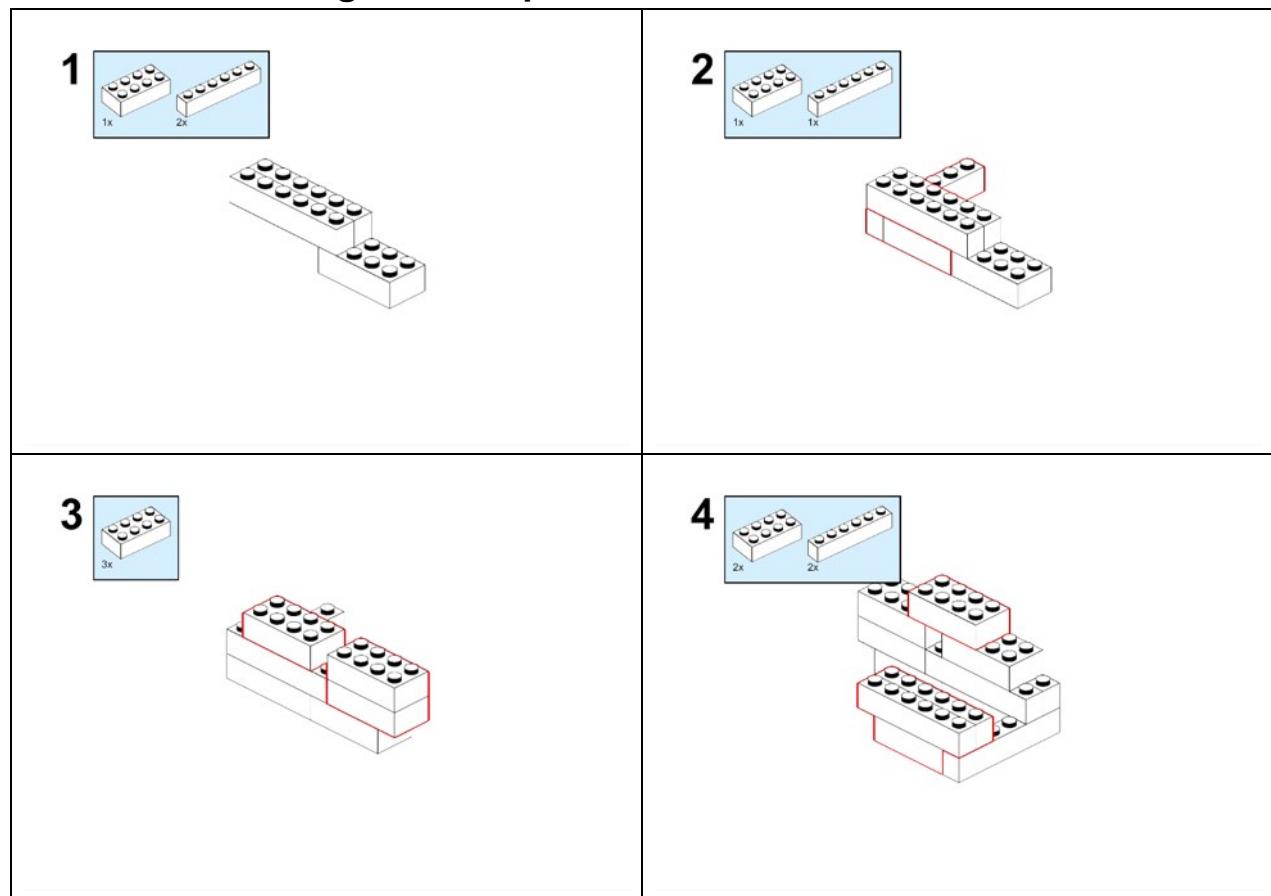
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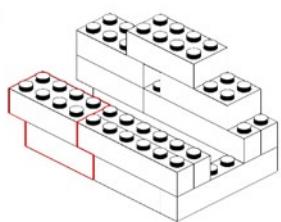
Teil B – Treibstoff



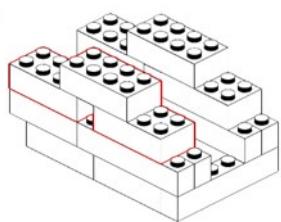
Teil C – Aktivierung Startrampe



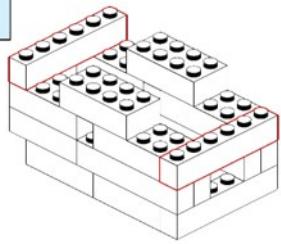
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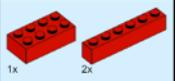


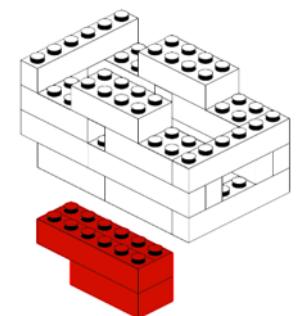
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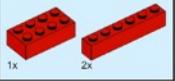


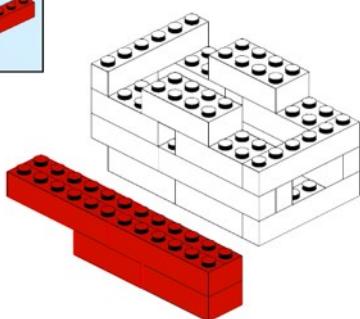
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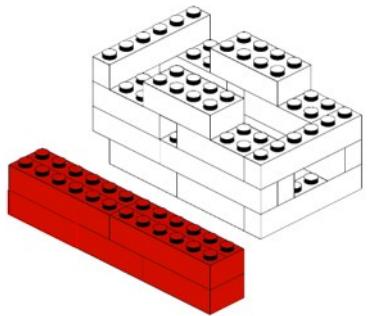
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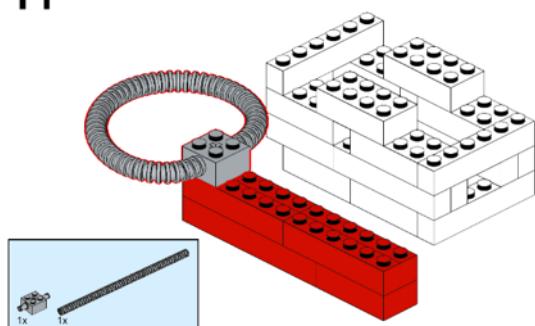
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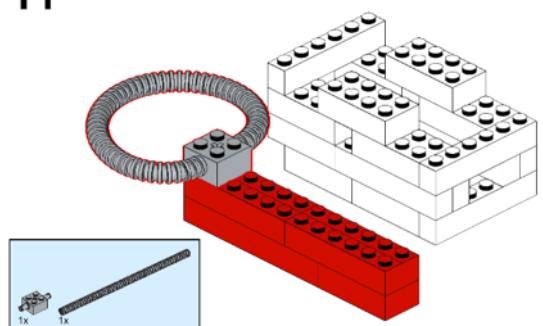
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11

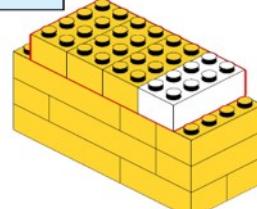
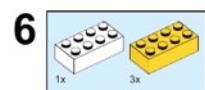
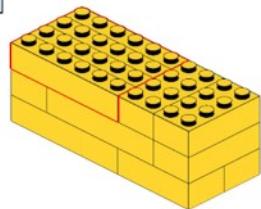
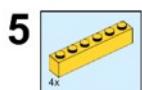
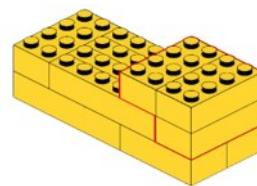
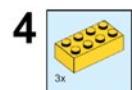
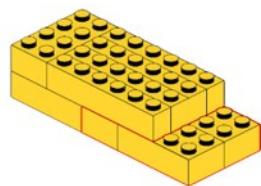
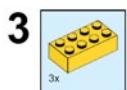
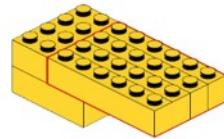
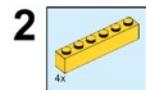
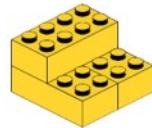
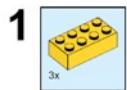


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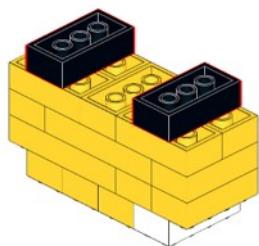


Aufbau Aufgabe 2 – Sternwarte

Teil A – Schulbus

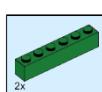


7

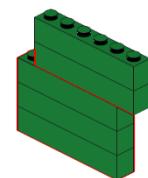
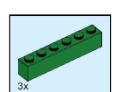


Teil B – Erdantenne

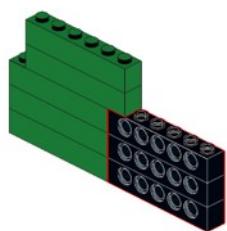
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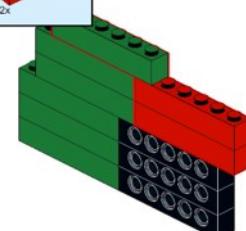
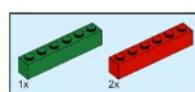
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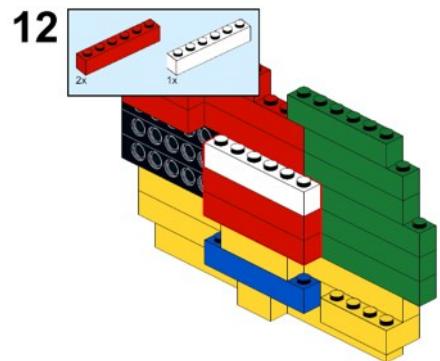
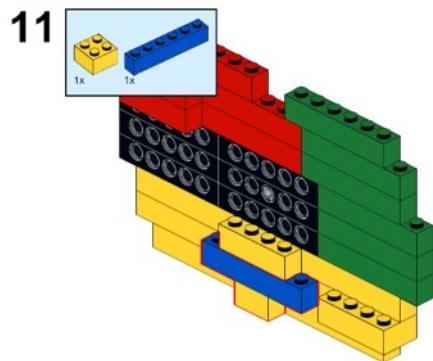
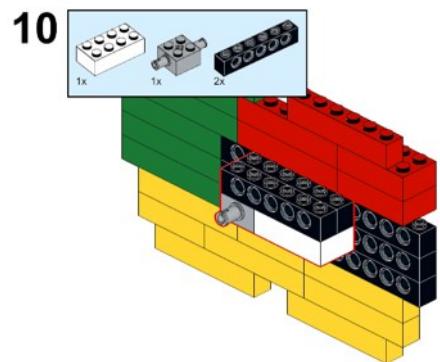
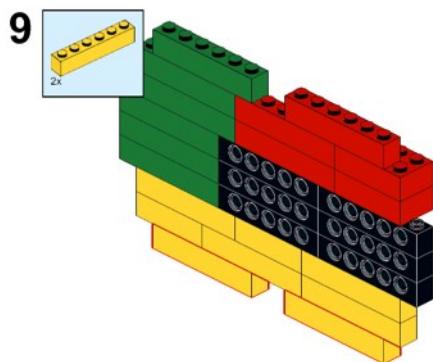
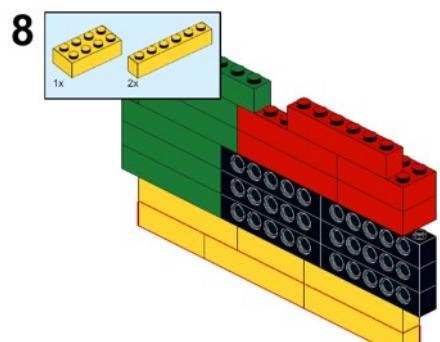
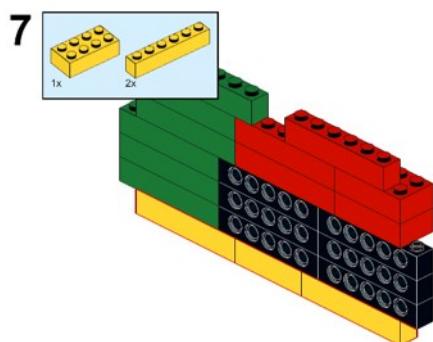
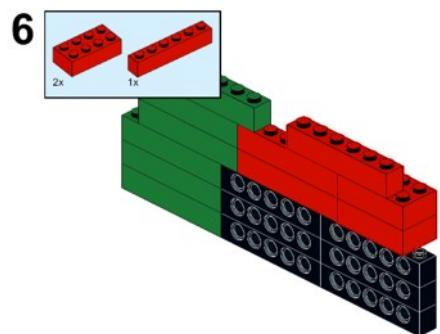
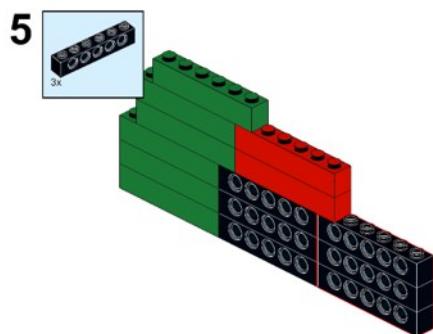


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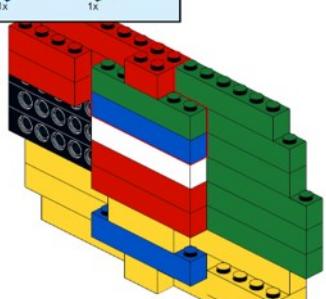
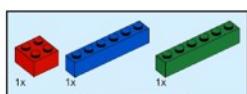


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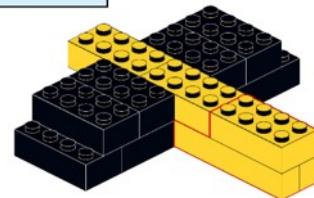
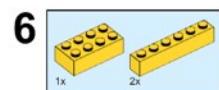
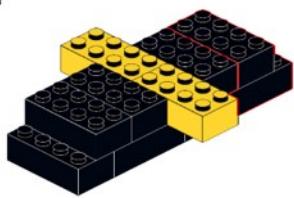
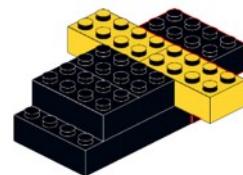
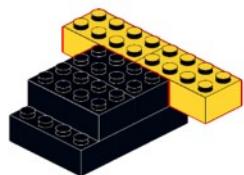
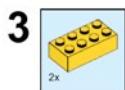
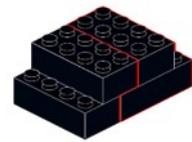


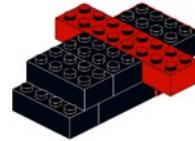
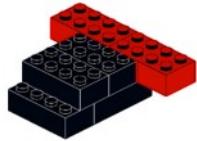
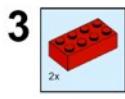
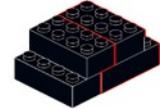
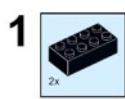
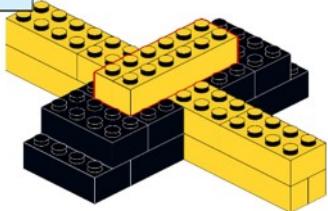
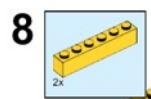
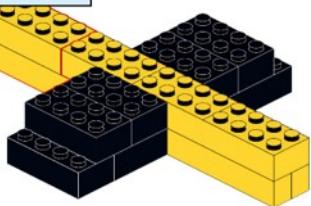
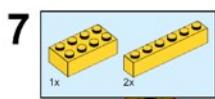
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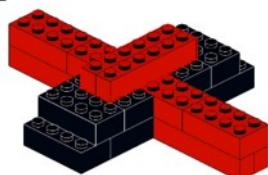
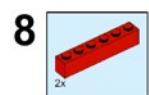
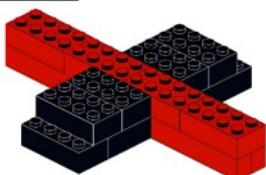
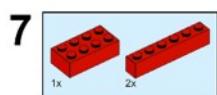
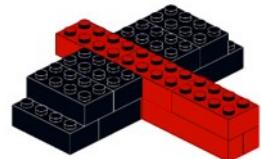
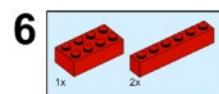
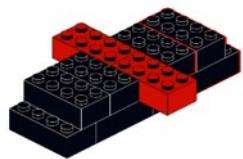


Aufbau Aufgabe 3 – Mini-Satelliten und Kommunikation

Teil A – Satelliten



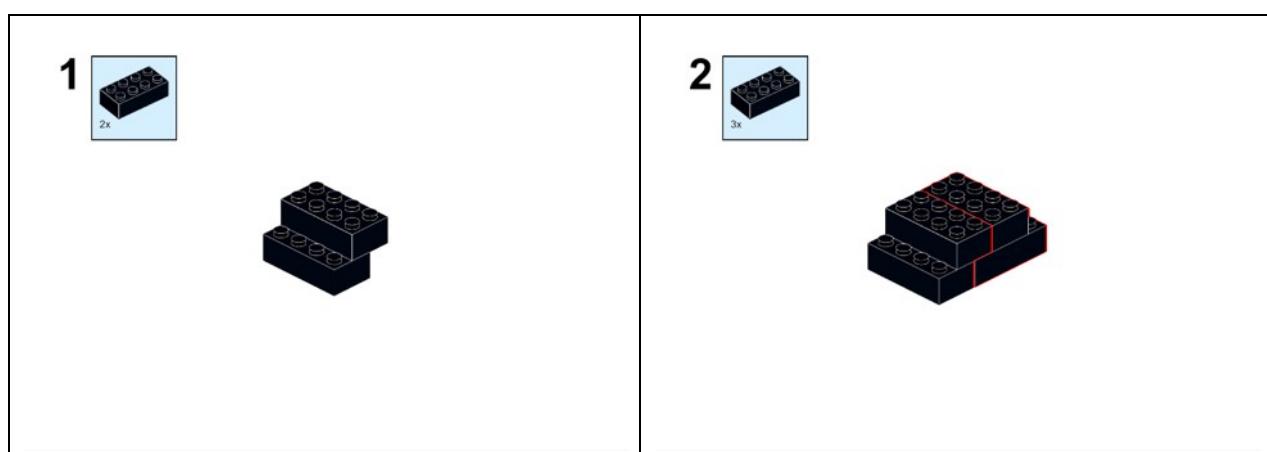
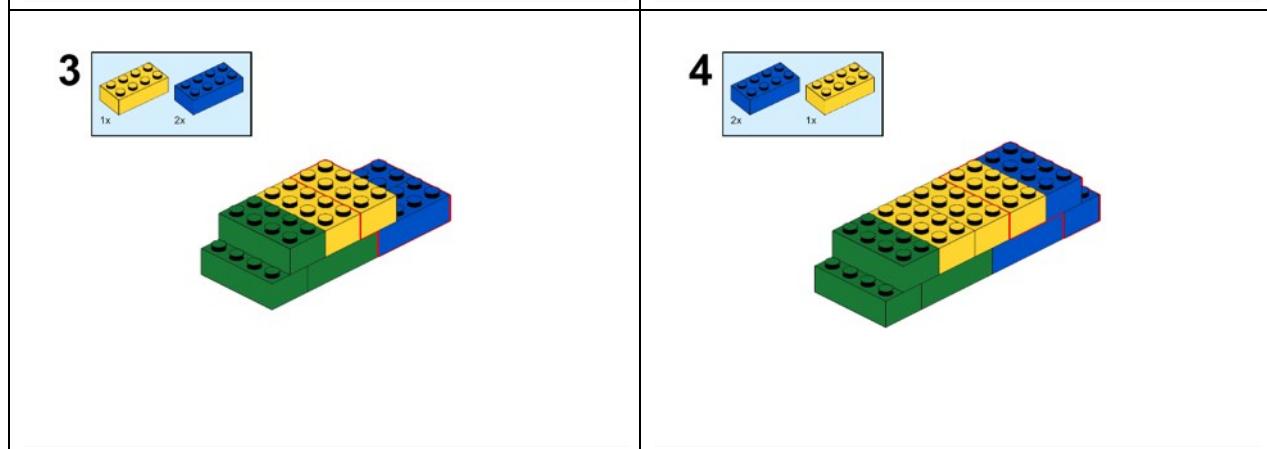
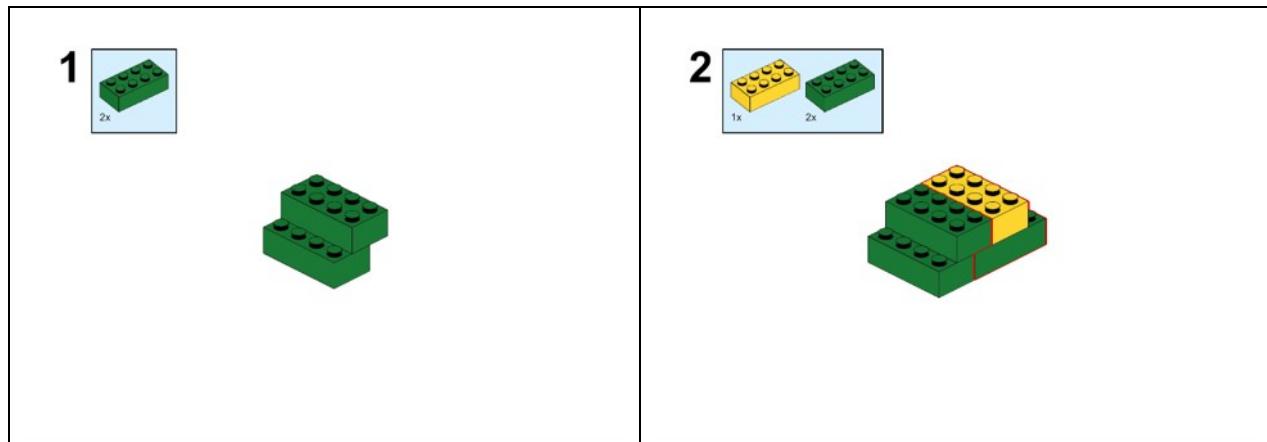


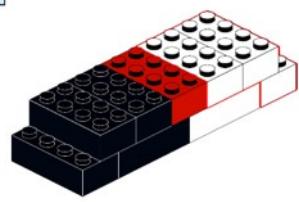
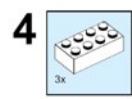
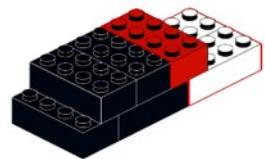
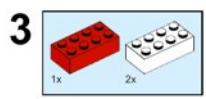


Teil B – Weltallantenne

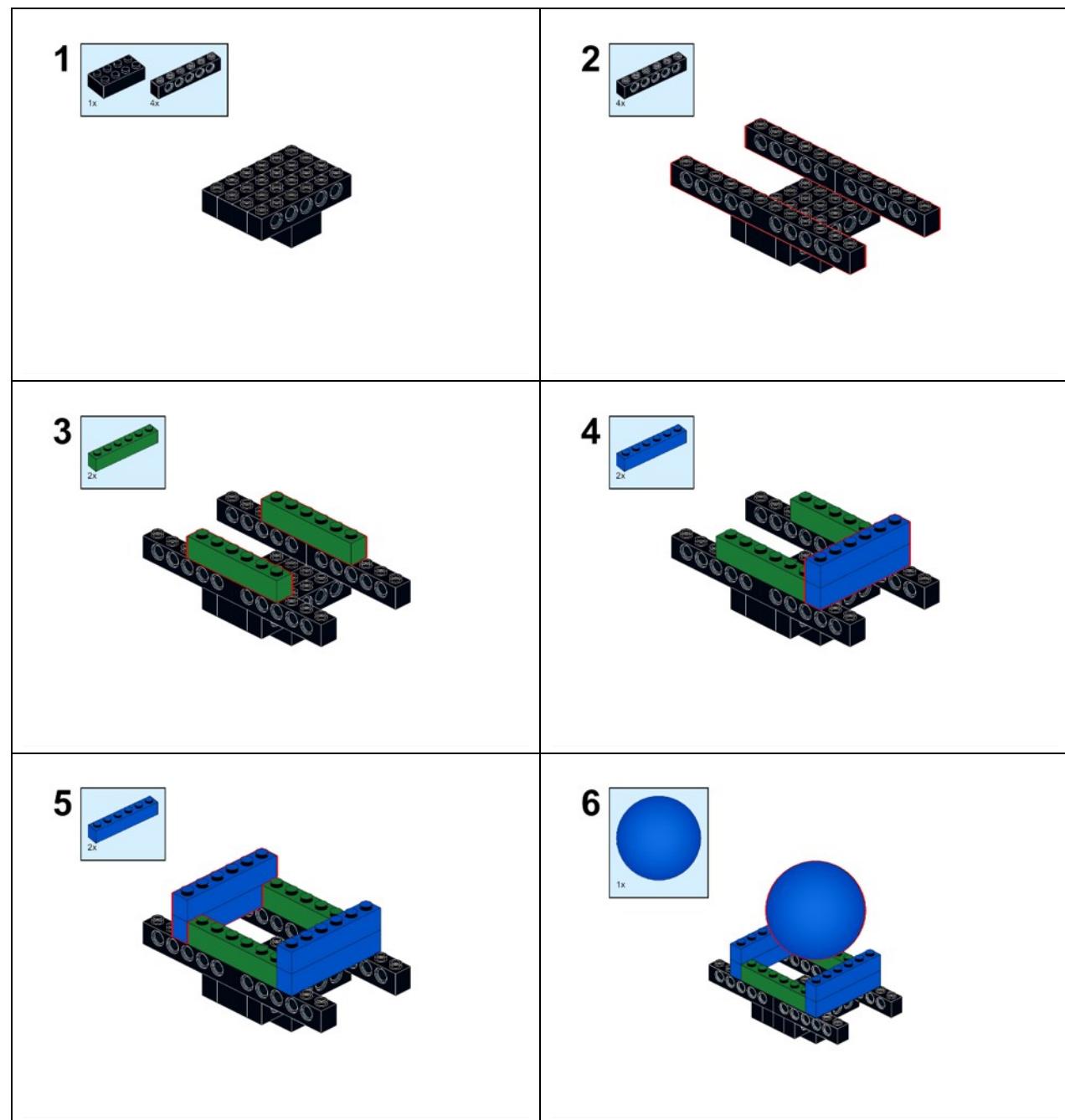
Siehe Aufgabe 2 Teil B

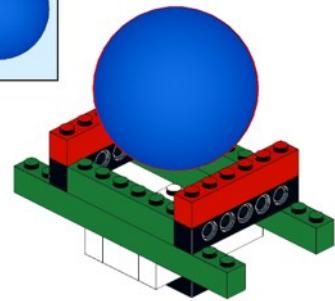
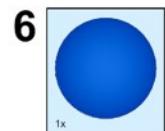
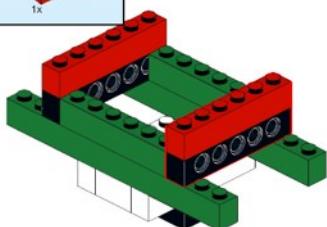
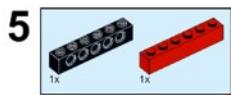
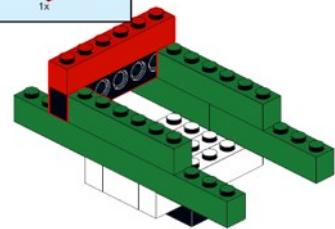
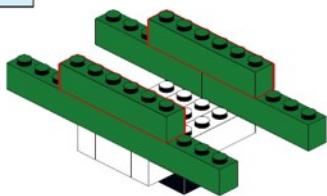
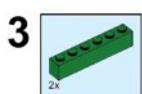
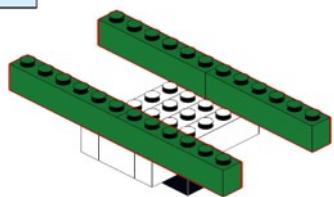
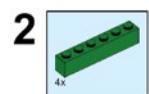
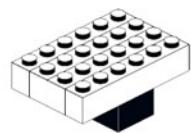
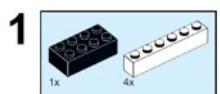
Aufbau Aufgabe 4 – Trümmerenteile einsammeln



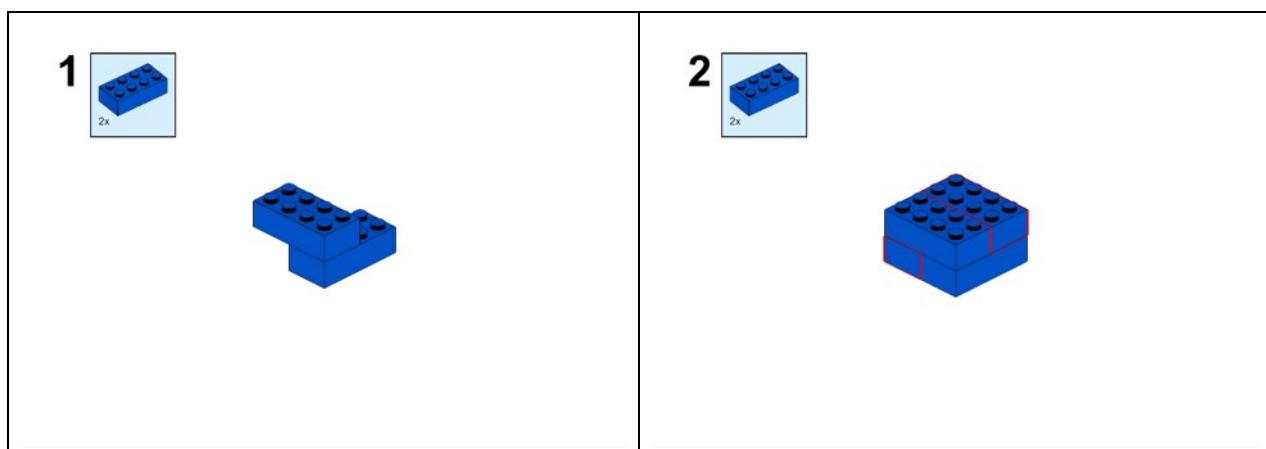
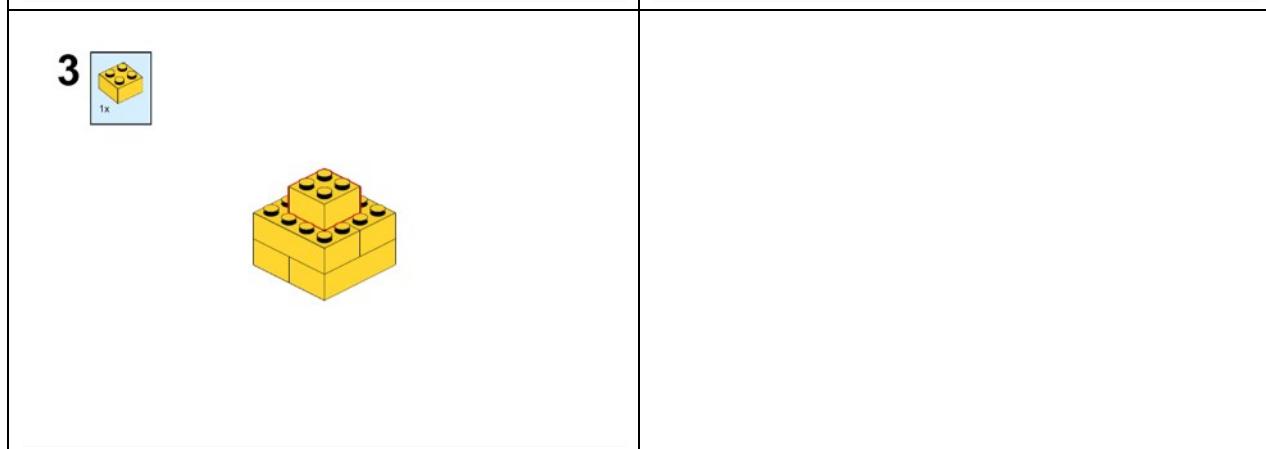
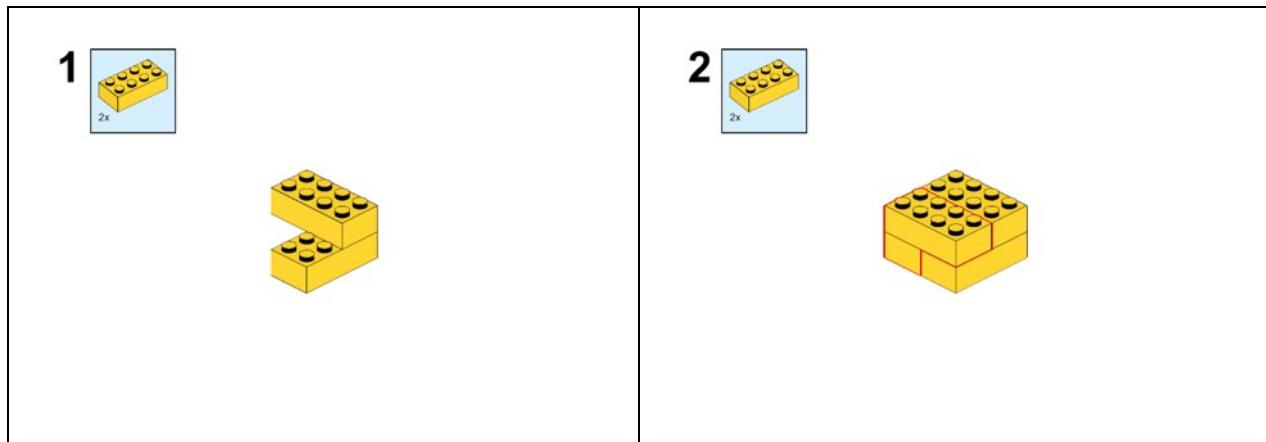


Aufbau Aufgabe 5 – Aufbruch ins Weltall

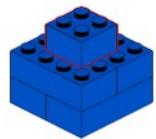




Aufbau Aufgabe 6 – Umweltbeobachtung aus dem All



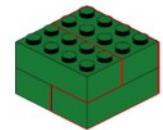
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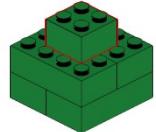
1 



2 

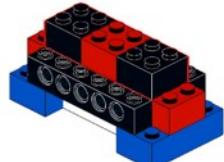
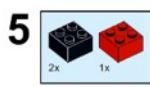
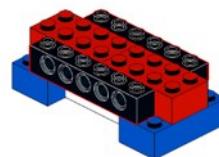
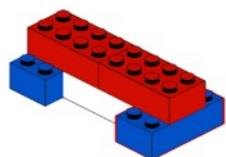
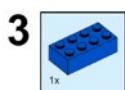
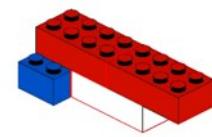
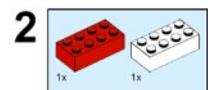
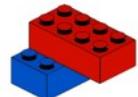
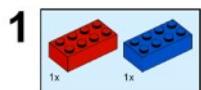


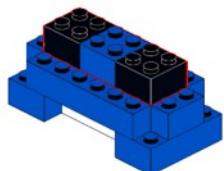
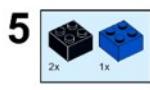
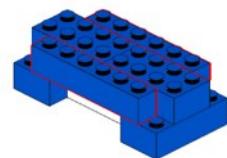
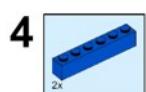
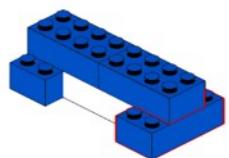
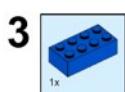
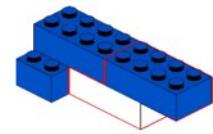
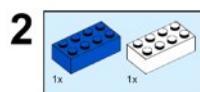
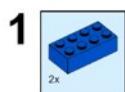
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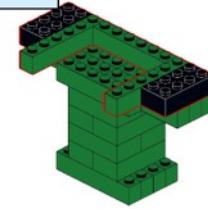
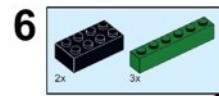
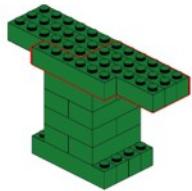
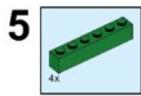
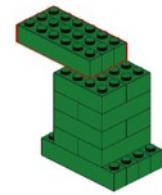
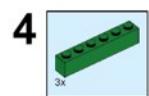
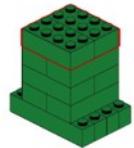
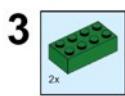
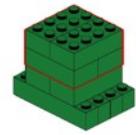
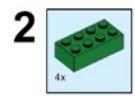
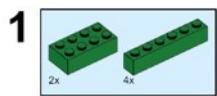
Aufbau Aufgabe 7 – Experimente in der Schwerelosigkeit

Teil A - Material

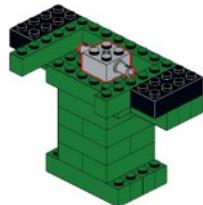




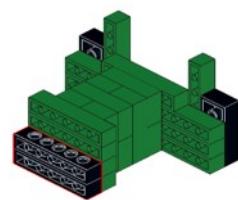
Teil B – Experiment



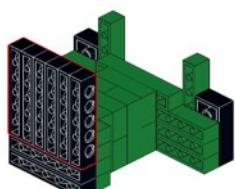
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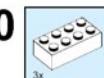


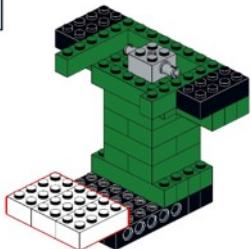
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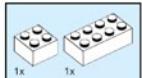


9 
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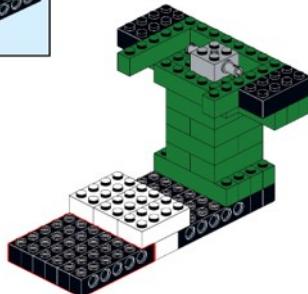
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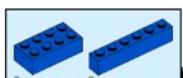


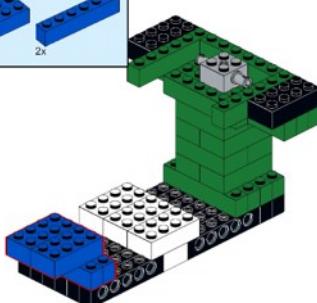
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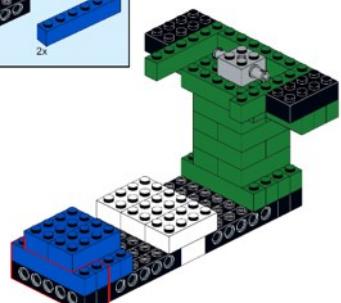
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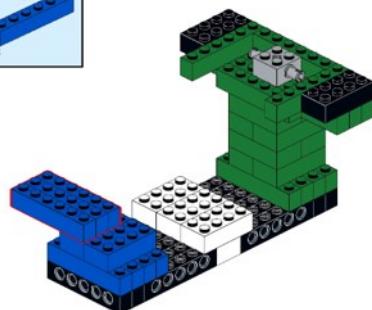
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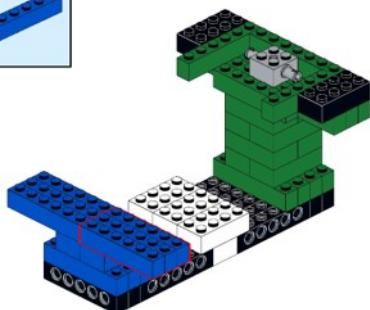
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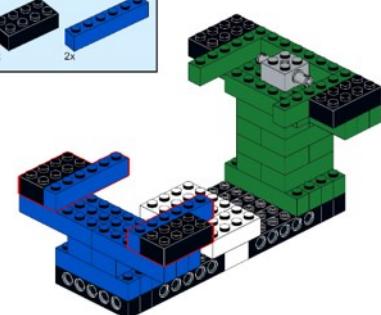
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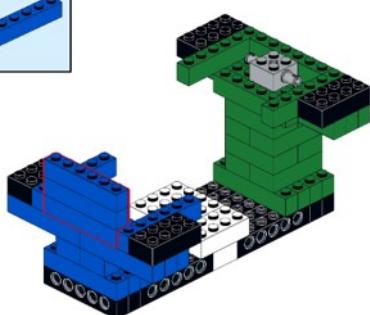
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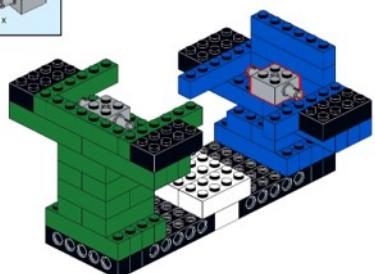
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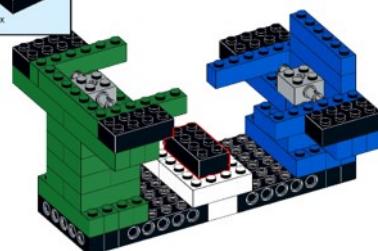
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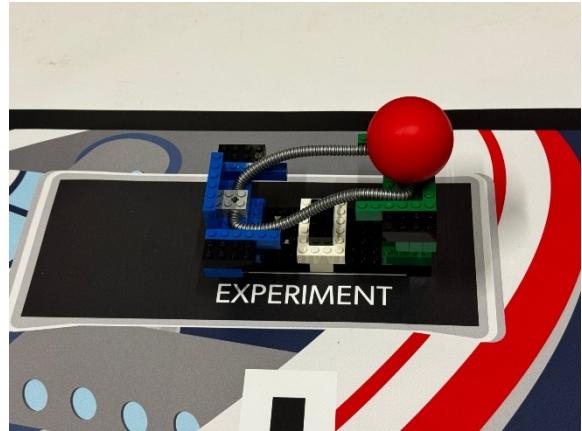
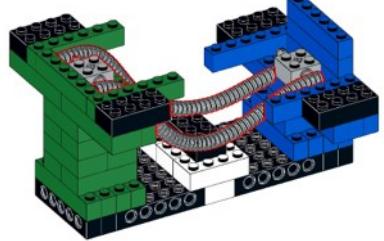
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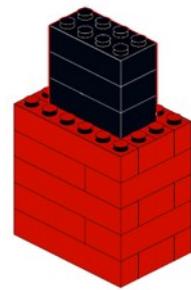
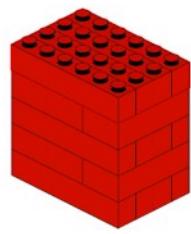
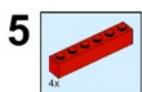
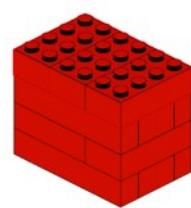
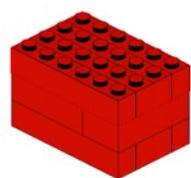
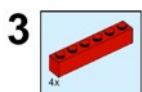
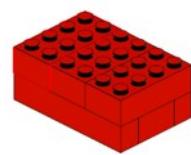
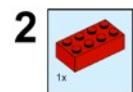
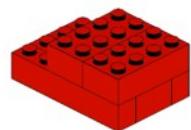
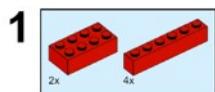
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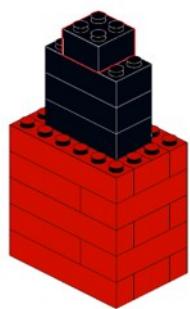
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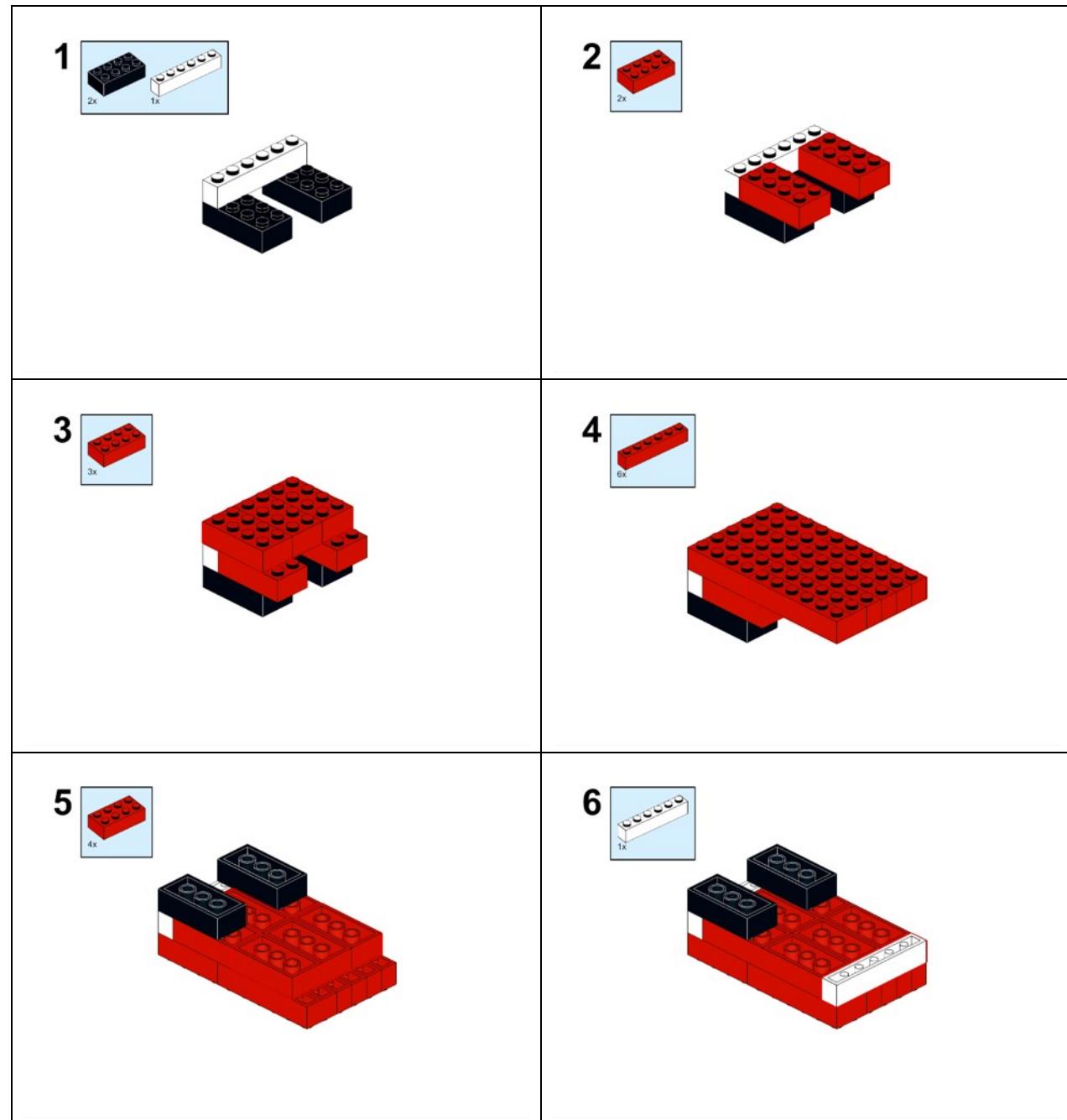
Aufbau Aufgabe 8 – Transport der Rückkehrkapsel



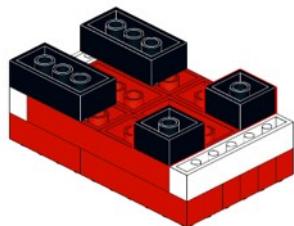
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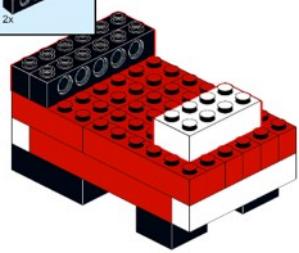
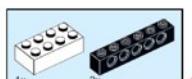
Aufbau Aufgabe 9 – Rover zum Einsatzort bringen



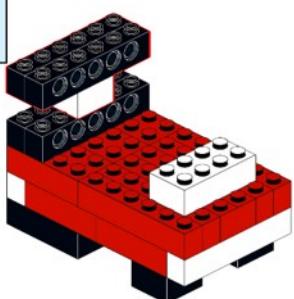
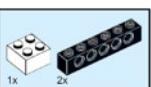
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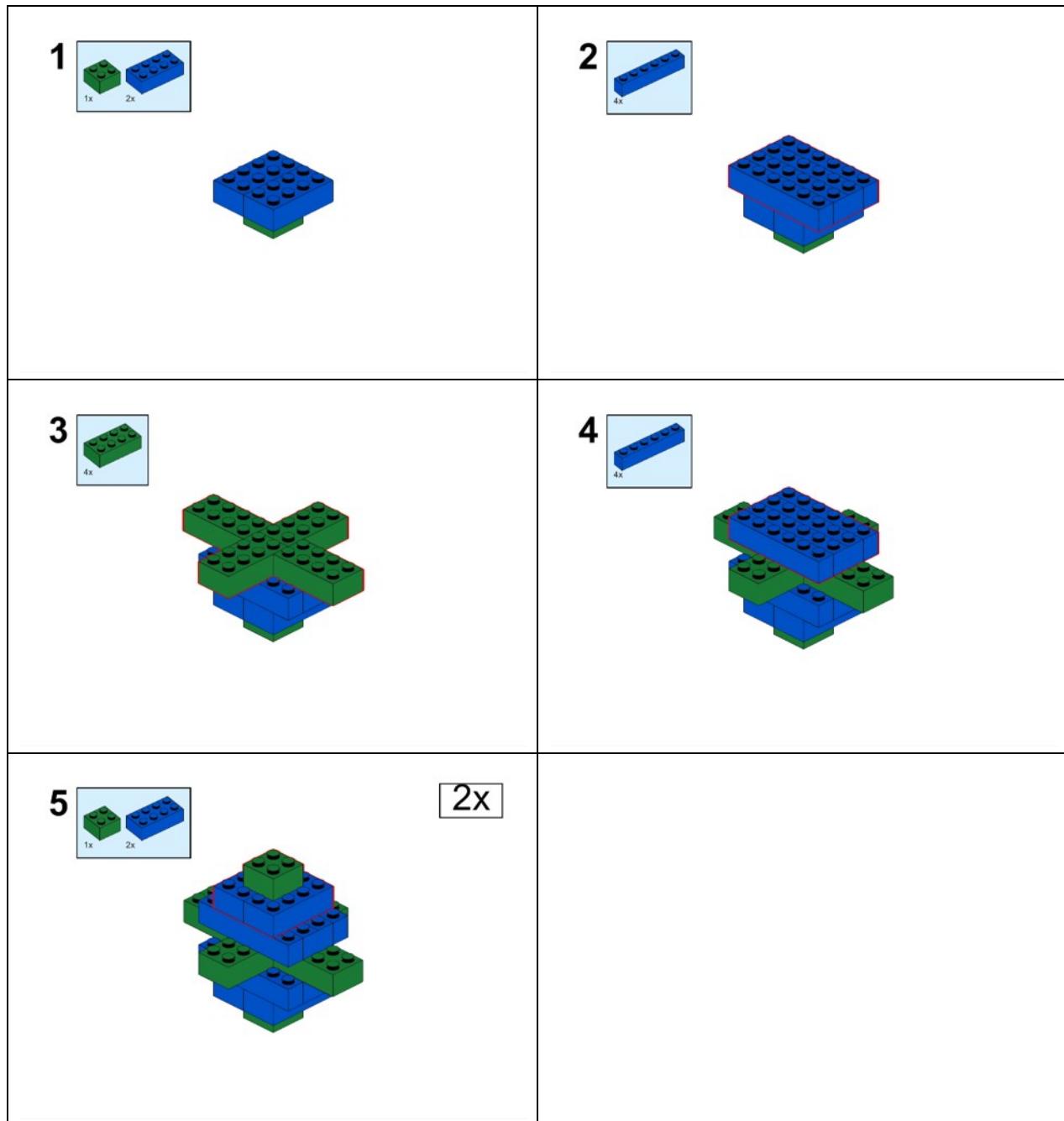
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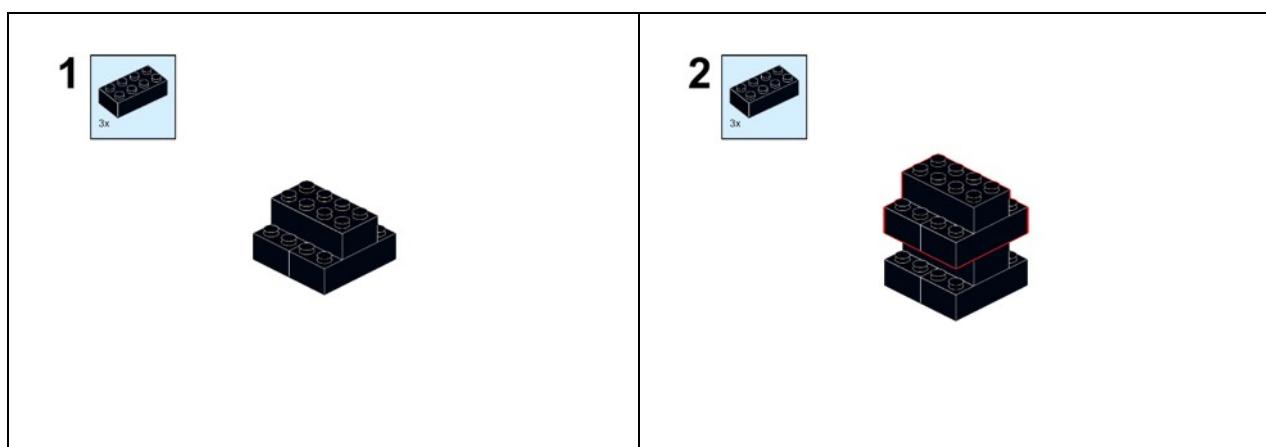
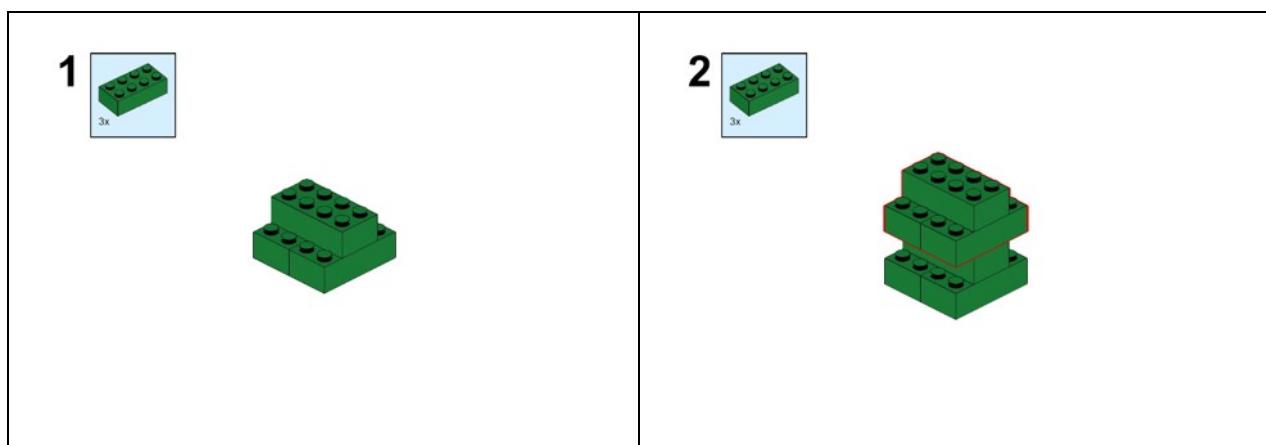
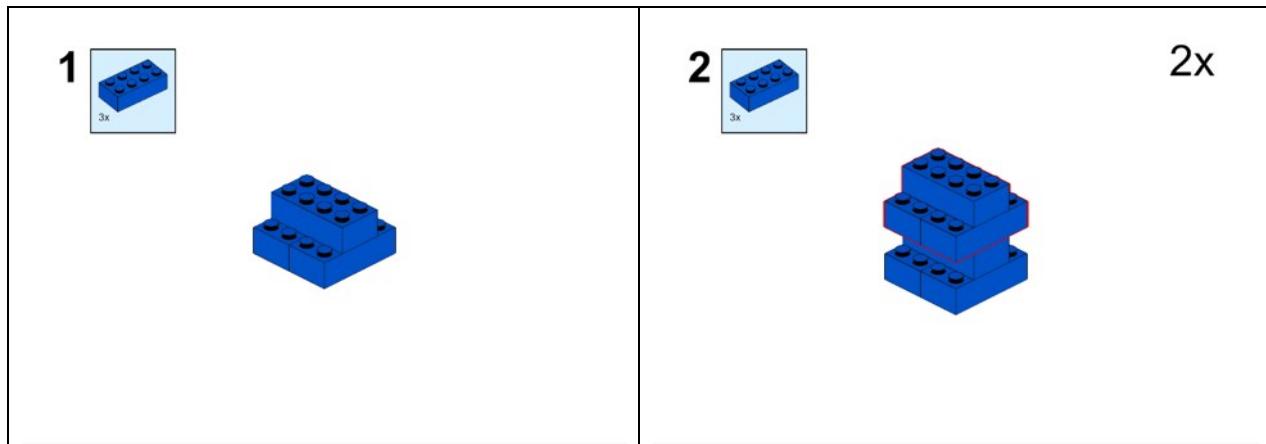
9



Aufbau Aufgabe 10 – Proben abholen



Aufbau Aufgabe 11 – Landebereiche markieren



Aufbau Aufgabe 12 – Barrieren

