

# S-75 Dvina



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# S-75 Dvina

From Wikipedia, the free encyclopedia

The S-75 Dvina (Russian: S-75; NATO reporting name SA-2 Guideline) is a Soviet-designed, high-altitude air defense system, built around a command guided surface-to-air missile. Since its first deployment in 1957 it has become the most widely deployed air defense system in history. It scored the first destruction of an enemy aircraft by a surface-to-air missile, shooting down a Taiwanese Martin RB-57D Canberra over China, on October 7, 1959, hitting it with three V-750 (1D) missiles at an altitude of 20 km (65,600 ft). The success was attributed to Chinese fighters at the time in order to keep the S-75 program secret.

This system first gained international fame when an S-75 battery, using the newer, longer-range and higher-altitude V-750VN (13D) missile shot down the U-2 of Francis Gary Powers overflying the Soviet Union on May 1, 1960. The system was also deployed in Cuba during the Cuban Missile Crisis, where on October 27, 1962, it shot down a U-2 overflying Cuba flown by Rudolf Anderson, almost precipitating nuclear war. North Vietnamese forces used the S-75 extensively during the Vietnam War to defend Hanoi and Haiphong. It has also been locally produced in the People's Republic of China using the names HQ-1 and HQ-2.

## DEVELOPMENT

In the early 1950s, the United States Air Force rapidly accelerated its development of long-range jet bombers carrying nuclear weapons. The USAF program led to the deployment of Boeing B-47 Stratojet supported by aerial refueling aircraft to extend its range deep into the Soviet Union. The USAF quickly followed the B-47 with the development of the Boeing B-52 Stratofortress, which had greater range and payload than the B-47. The range, speed, and payload of these U.S. bombers posed a significant threat to the Soviet Union in the event of a war between the two countries.

Consequently, the Soviets initiated the development of improved air defense systems. Although the Soviet Air Defence Forces had large numbers of anti-aircraft artillery (AAA), including radar-directed batteries, the limitations of guns versus high-altitude jet bombers were obvious. Therefore, the Soviet Air Defense Forces began the development of missile systems to replace the World War II-vintage gun defenses.

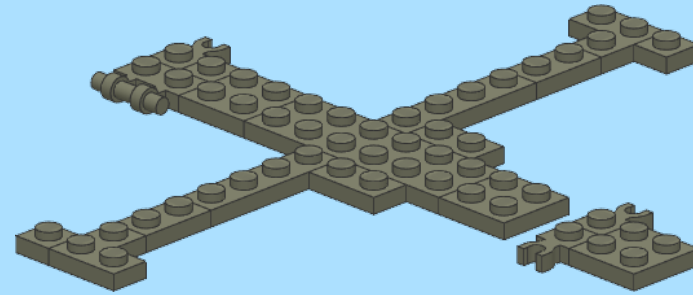
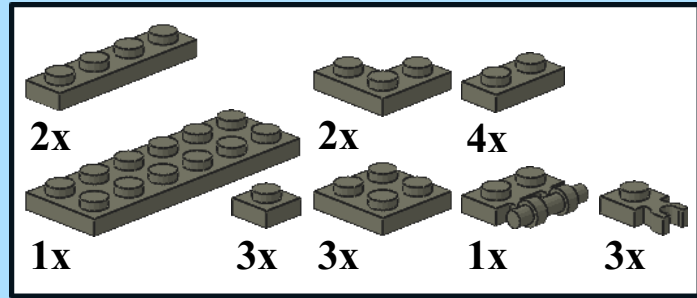
In 1953, KB-2 began the development of what became the S-75 under the direction of Pyotr Grushin. This program focused on producing a missile which could bring down a large, non-maneuvering, high-altitude aircraft. As such it did not need to be highly maneuverable, merely fast and able to resist aircraft counter-measures. For such a pioneering system, development proceeded rapidly, and testing began a few years later. In 1957, the wider public first became aware of the S-75 when the missile was shown at that year's May Day parade in Moscow.

## INITIAL DEPLOYMENT

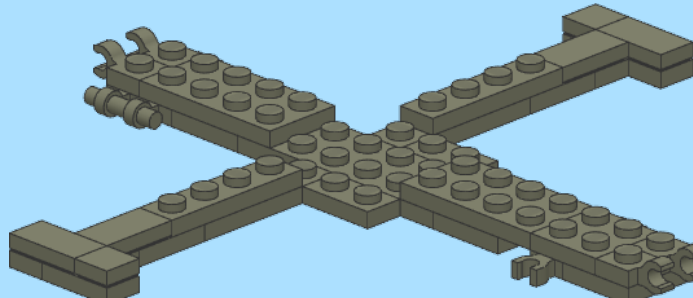
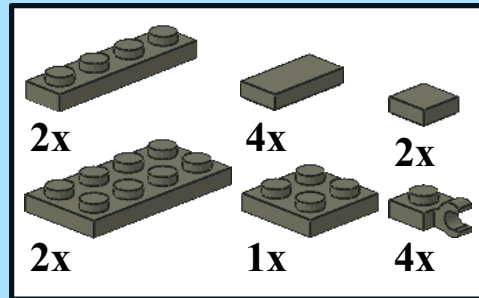
Wide-scale deployment started in 1957, with various upgrades following over the next few years. The S-75 was never meant to replace the S-25 Berkut surface-to-air missile sites around Moscow, but it did replace high-altitude anti-aircraft guns, such as the 130 mm KS-30 and 100 mm KS-19. Between mid-1958 and 1964, U.S. intelligence assets located more than 600 S-75 sites in the USSR. These sites tended to cluster around population centers, industrial complexes, and government control centers. A ring of sites was also located around likely bomber routes into the Soviet heartland. By the mid-1960s, the Soviet Union had ended the deployment of the S-75 with perhaps 1,000 operational sites.

In addition to the Soviet Union, several S-75 batteries were deployed during the 1960s in East Germany to protect Soviet forces stationed in that country. Later the system was sold to most Warsaw Pact countries and was provided to China, North Korea, and eventually, North Vietnam.

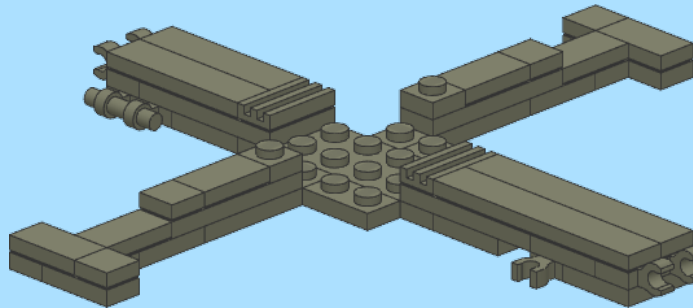
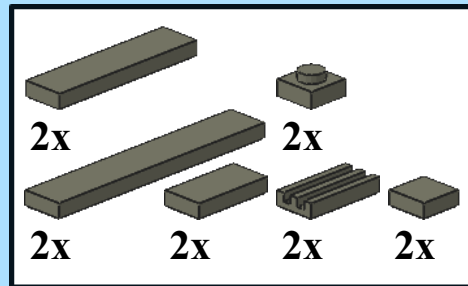
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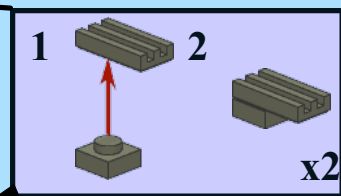
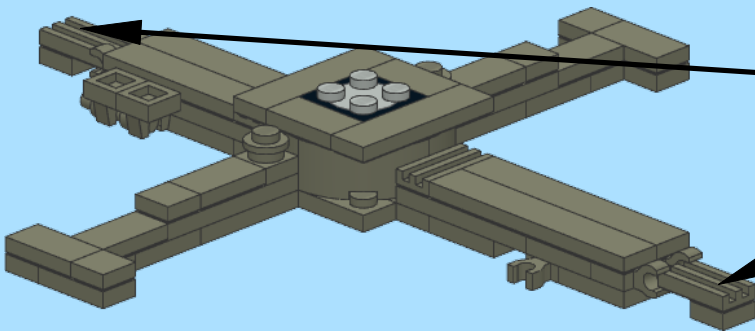
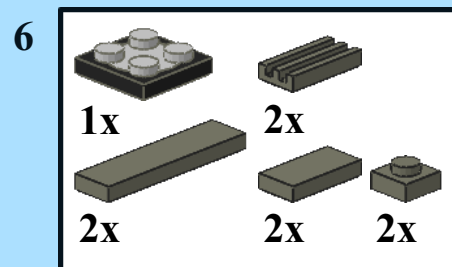
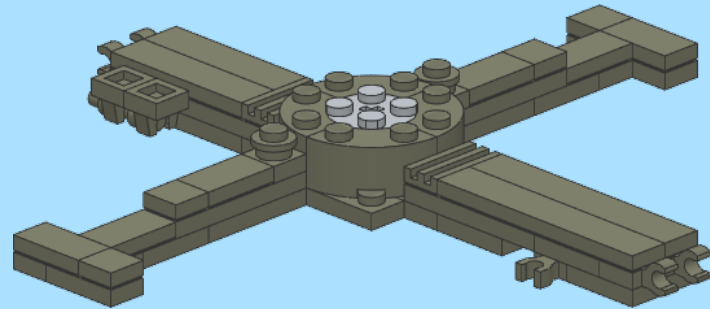
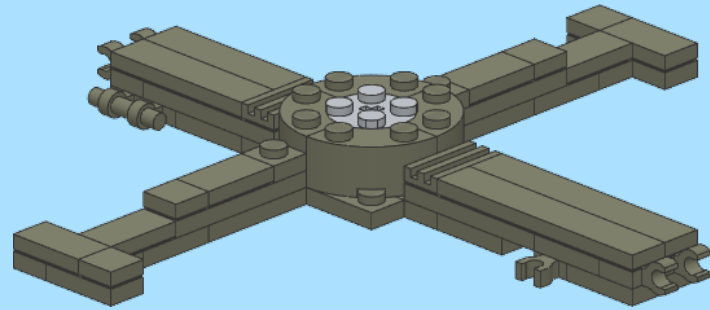
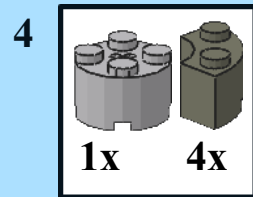


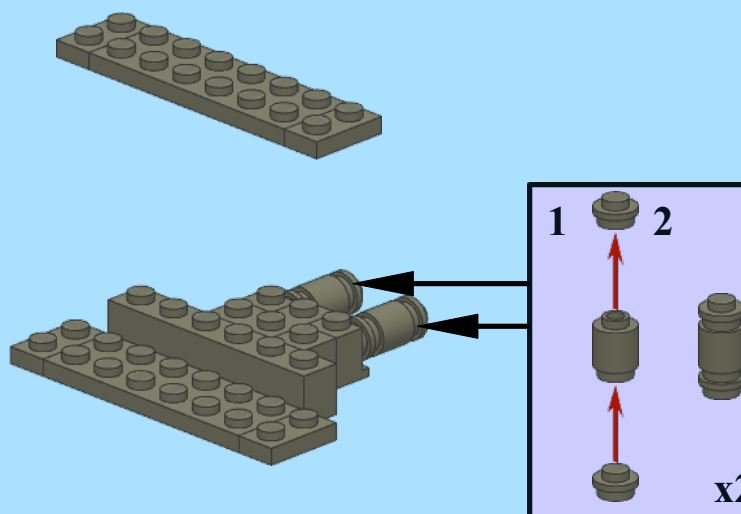
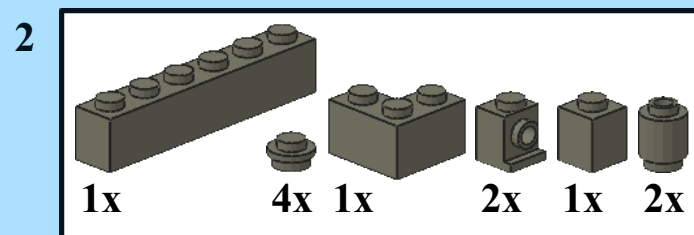
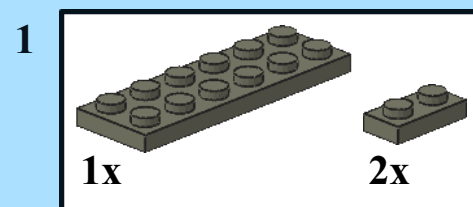
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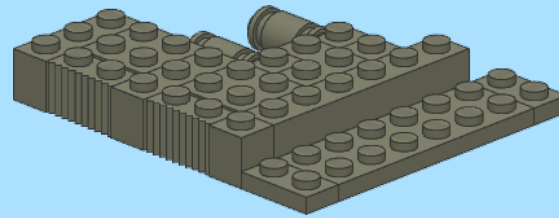
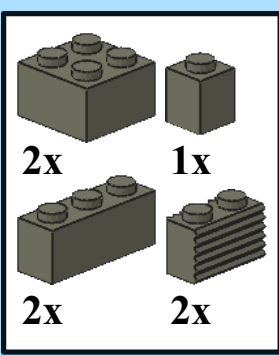
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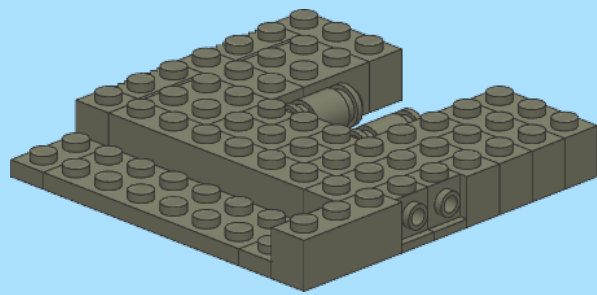
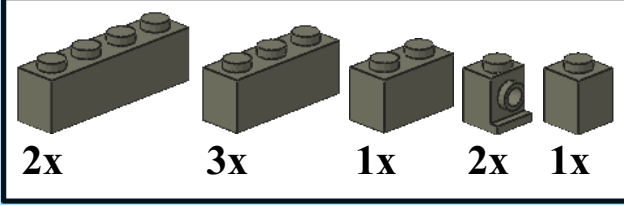


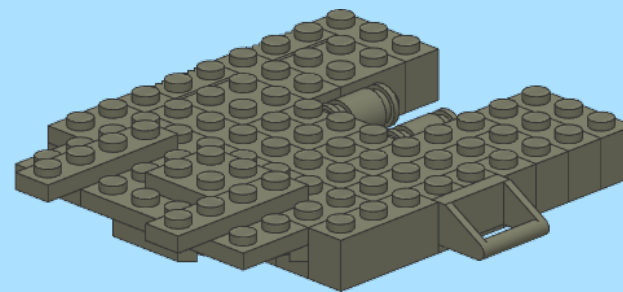
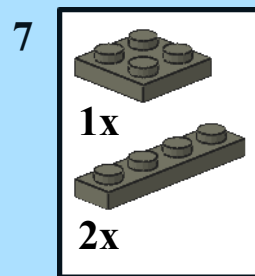
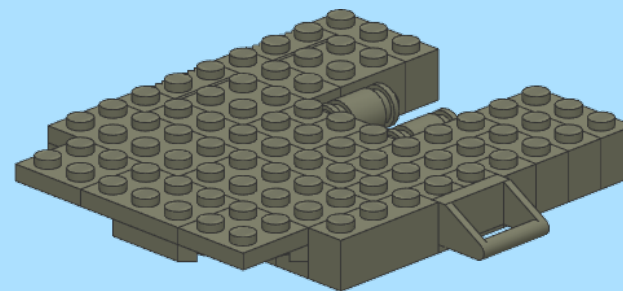
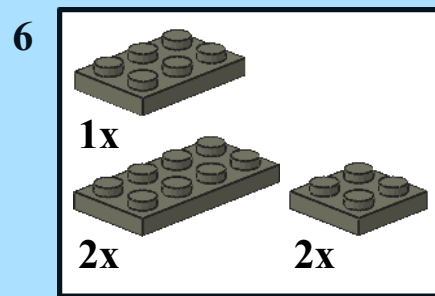
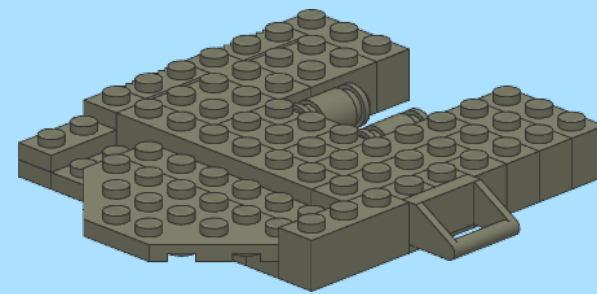
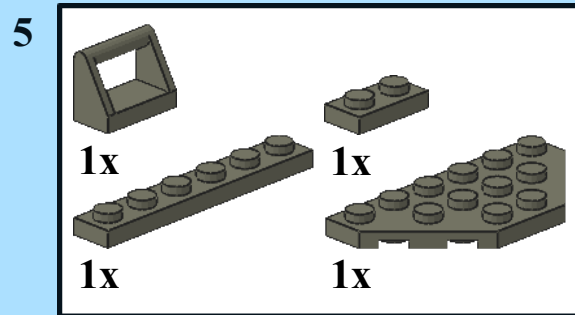




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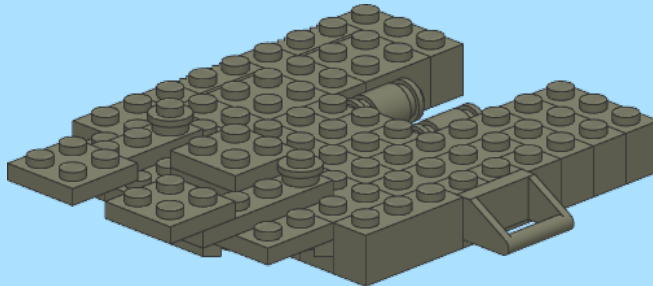
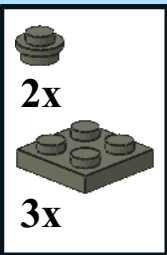




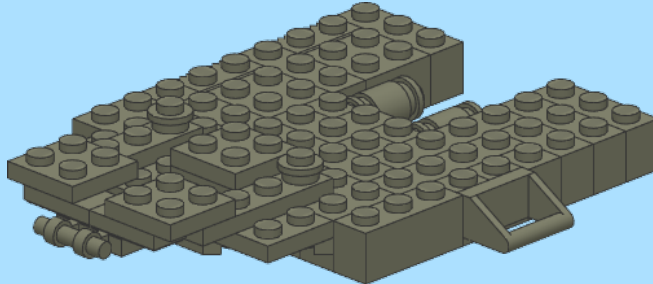
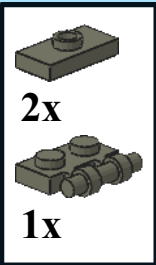




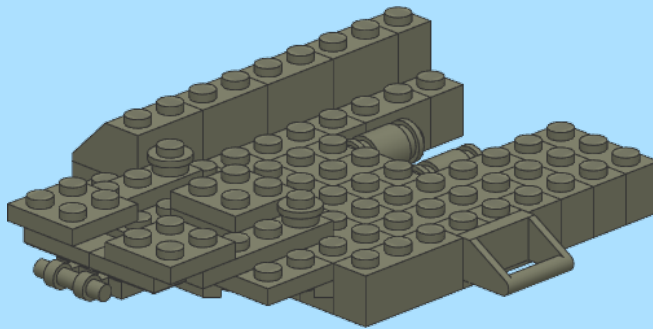
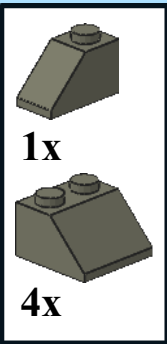
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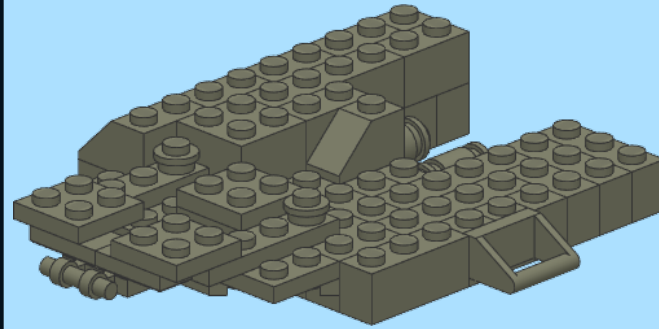
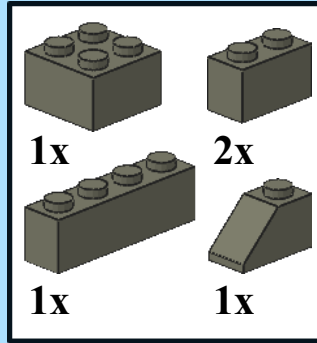
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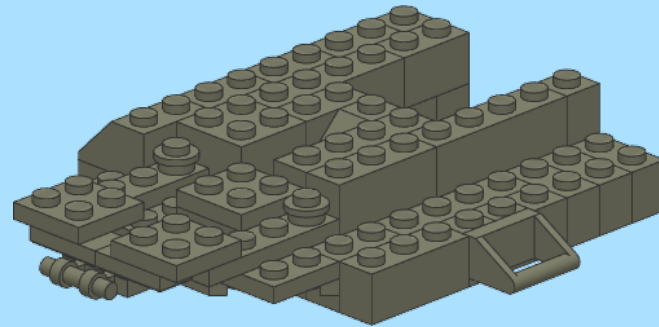
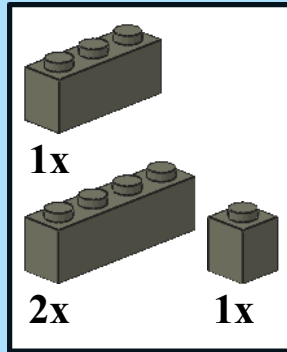
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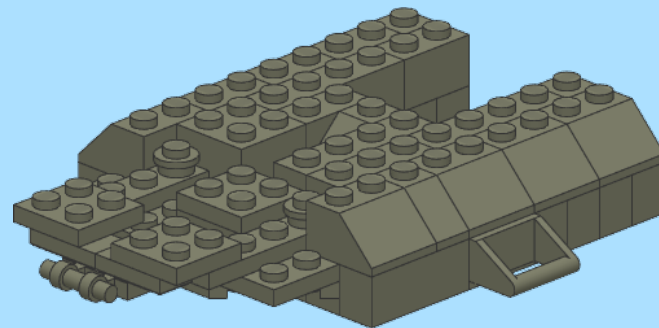
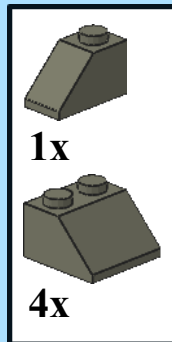
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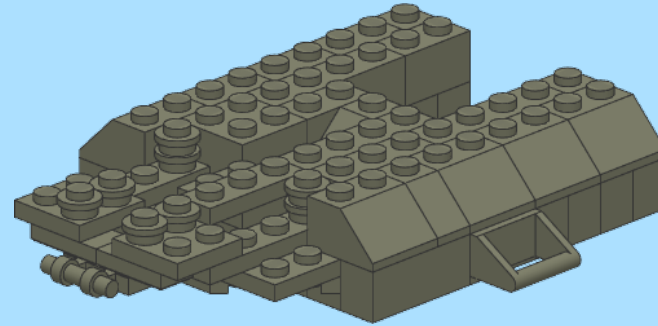
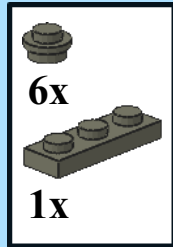
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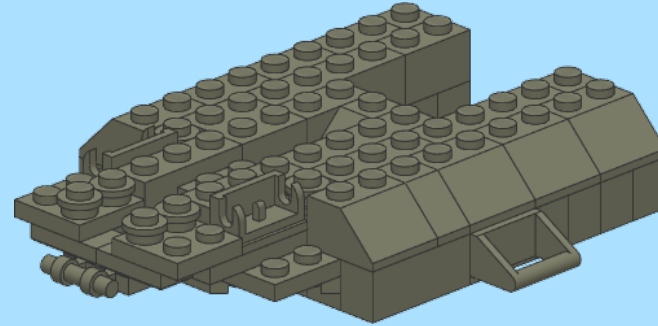
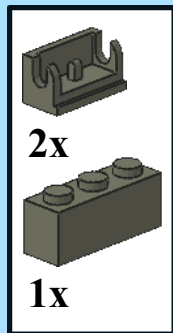
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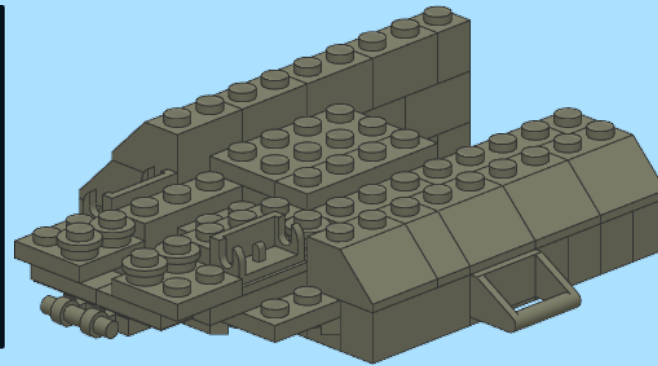
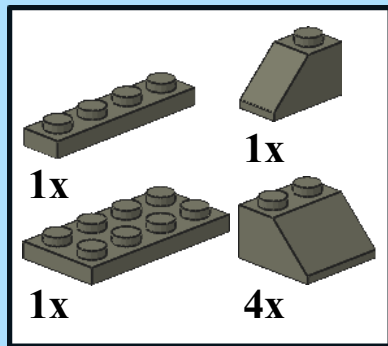
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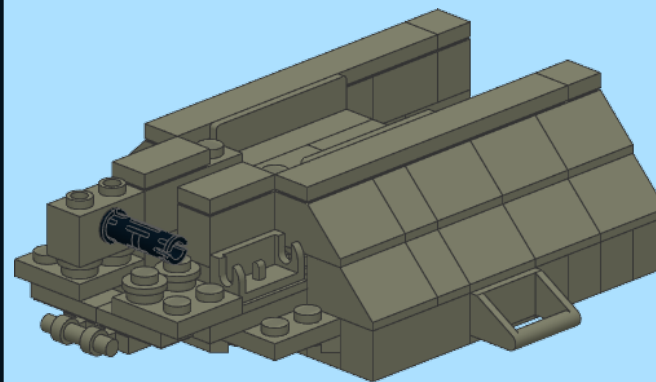
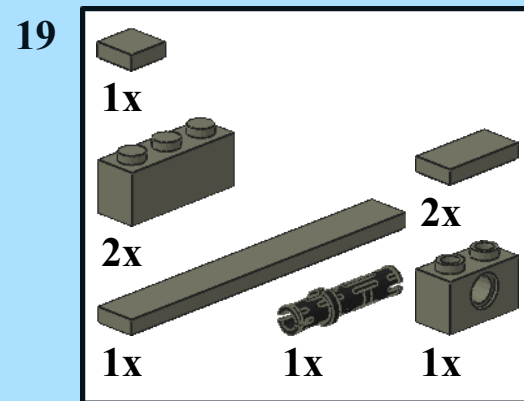
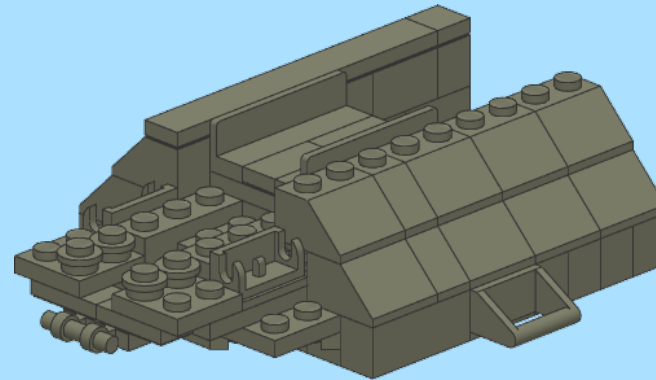
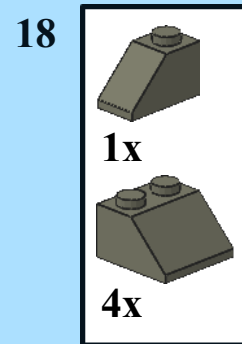
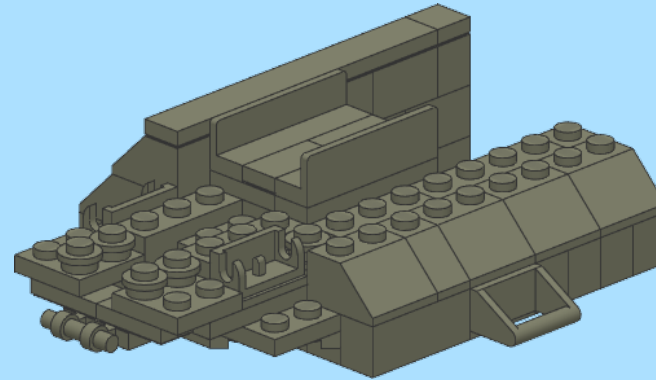
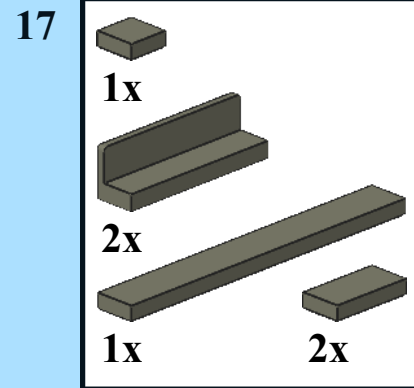


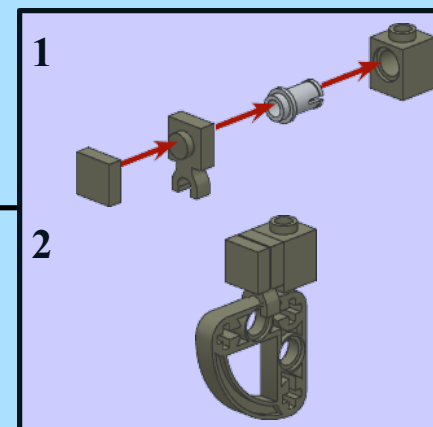
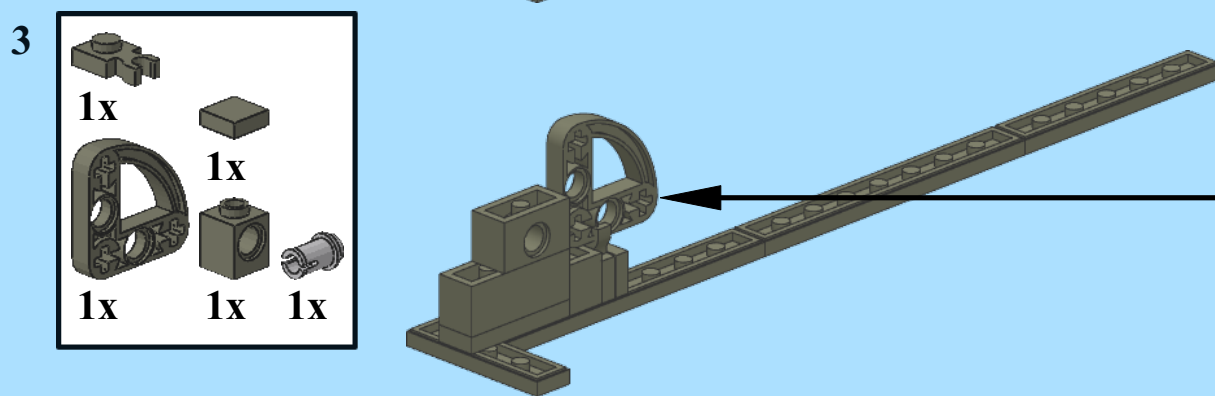
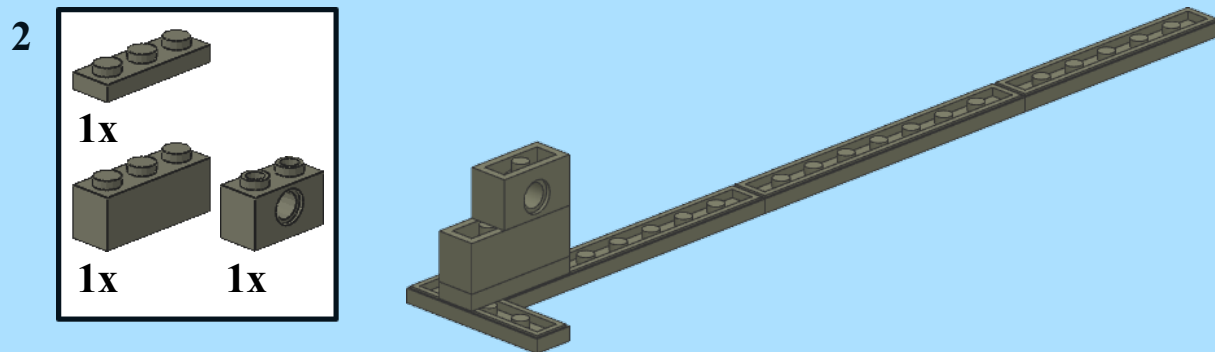
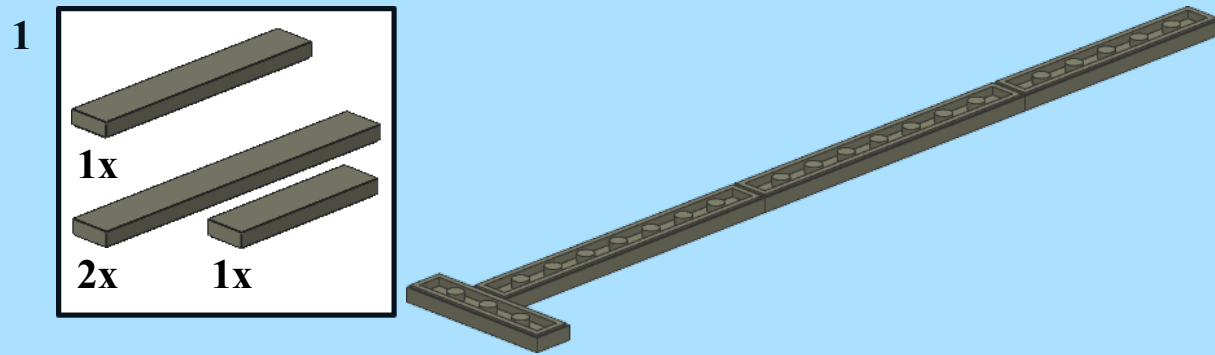
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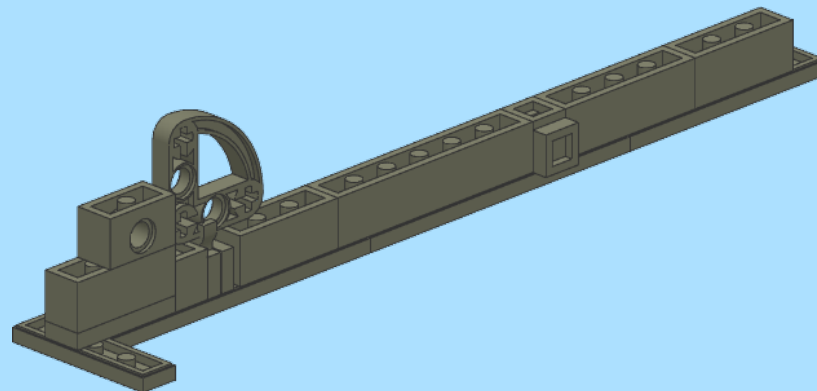
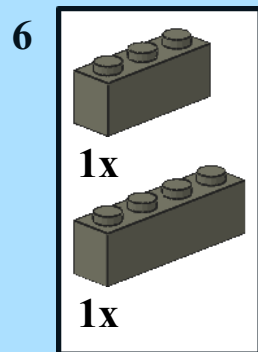
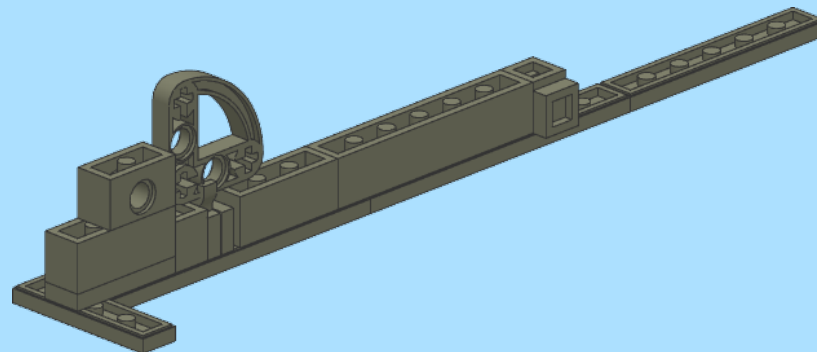
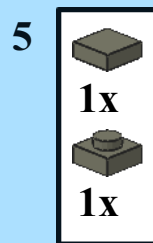
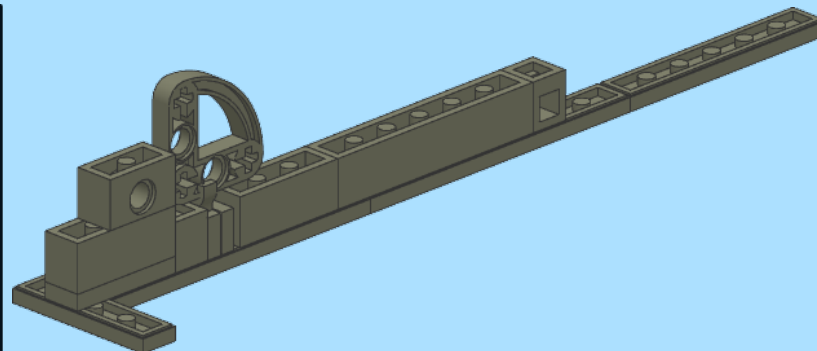
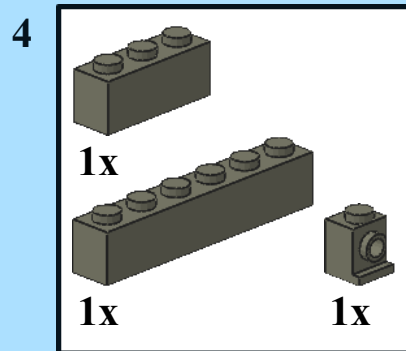




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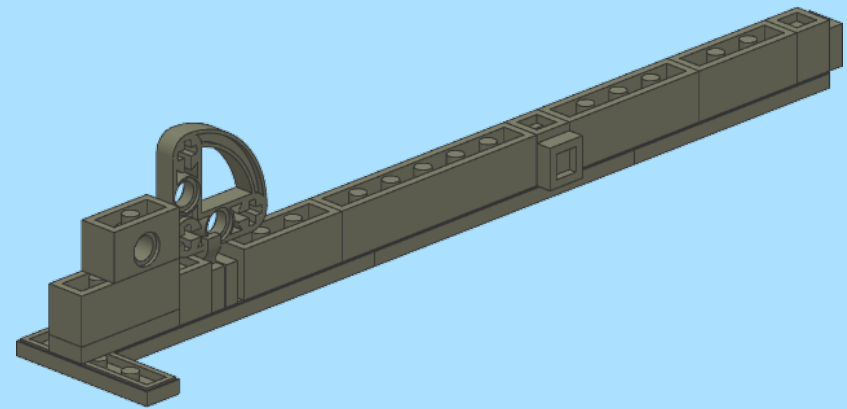




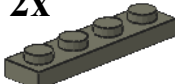


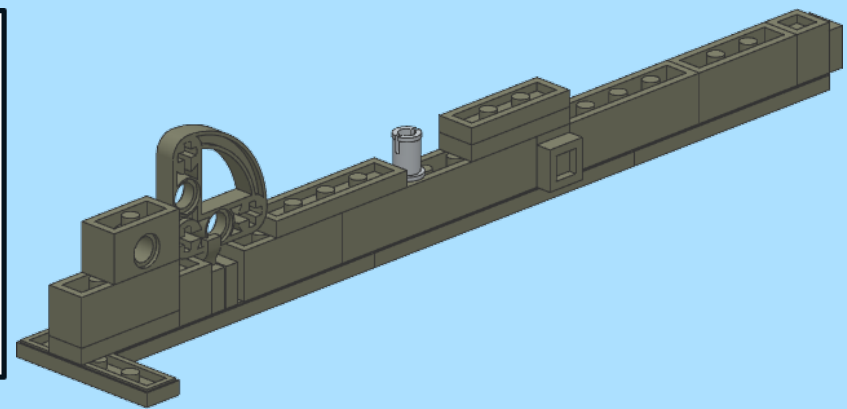





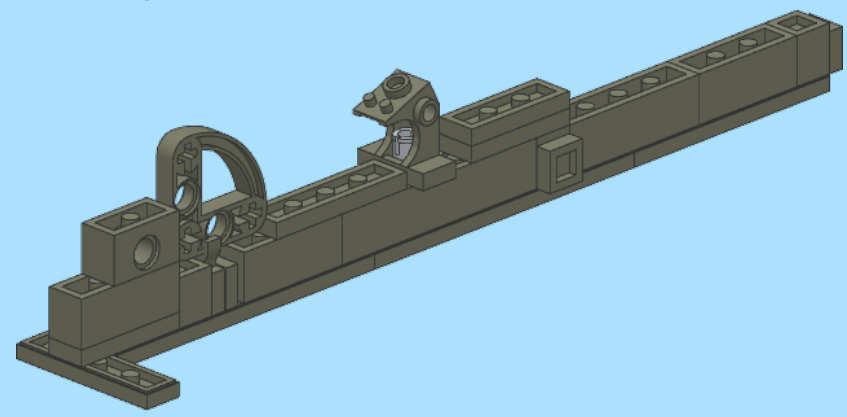
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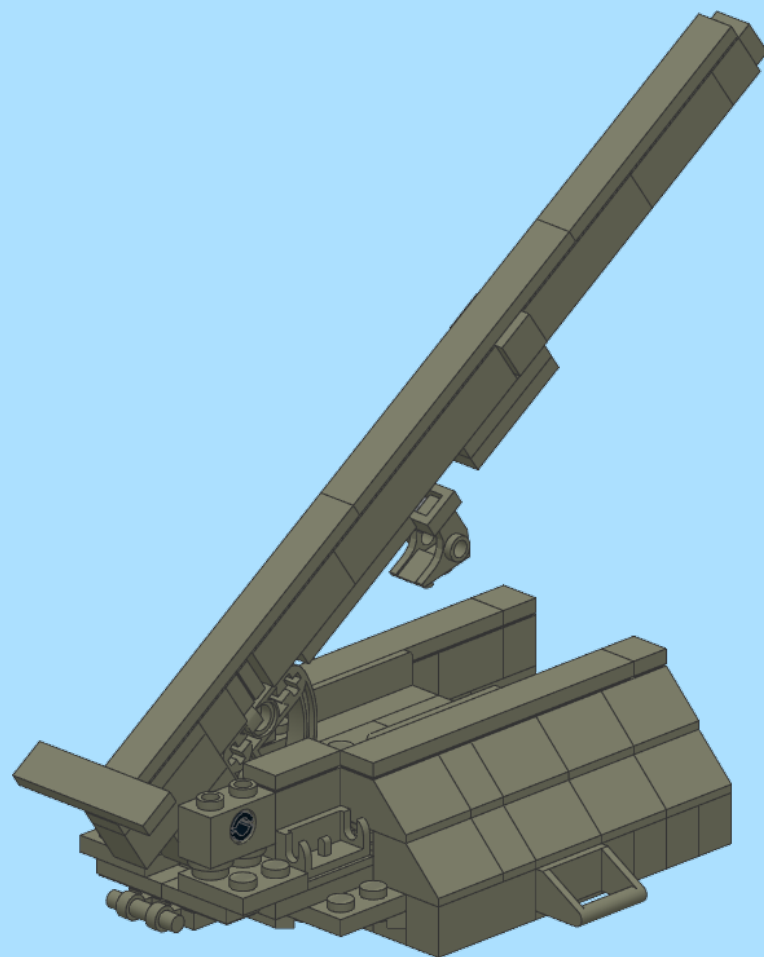
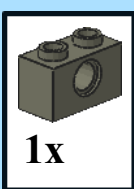


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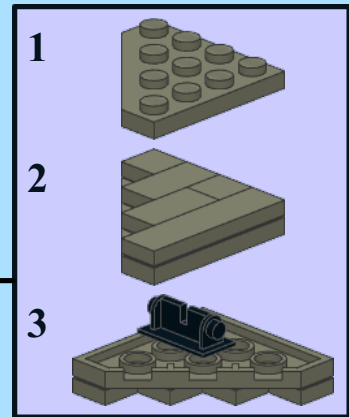
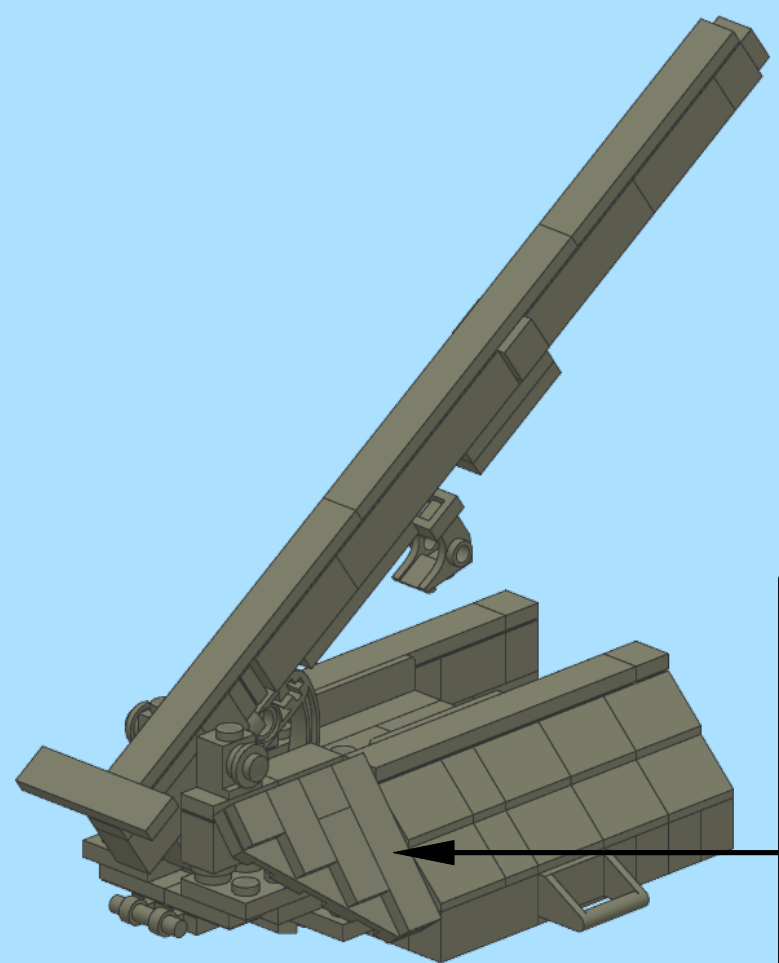
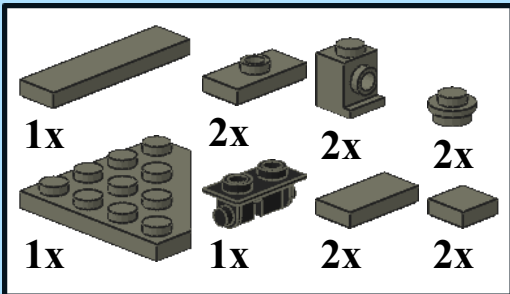


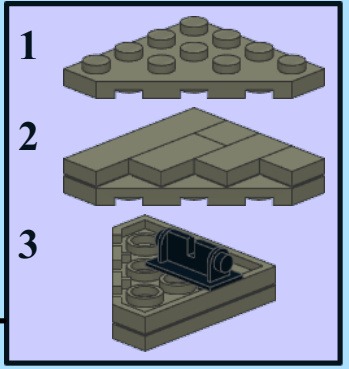
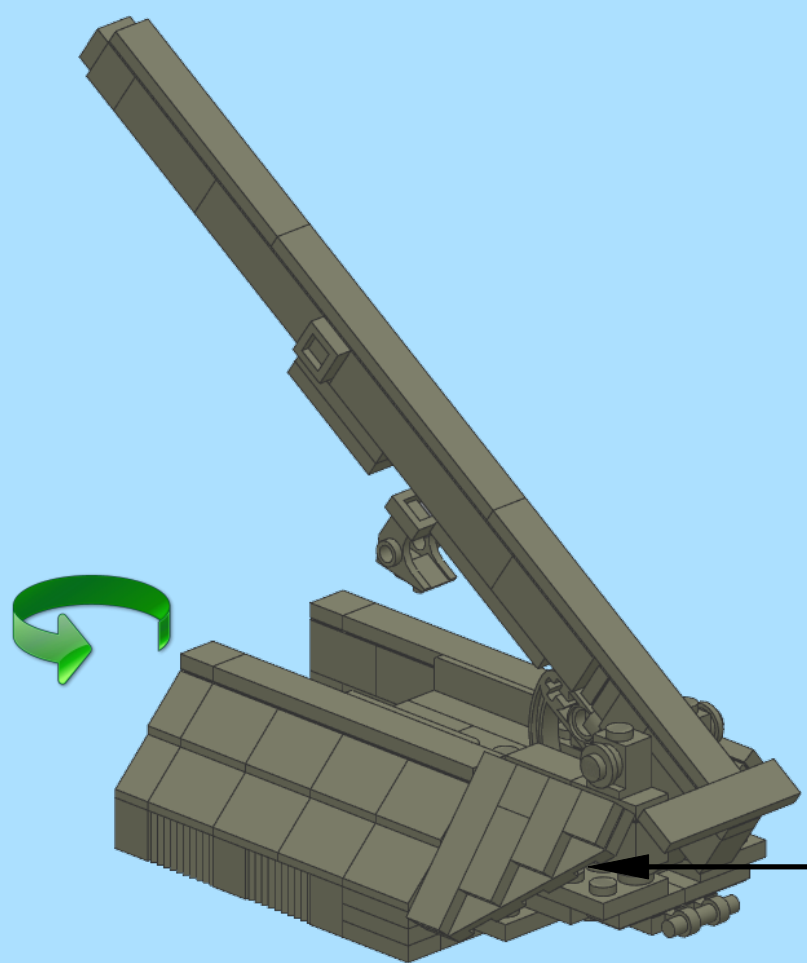
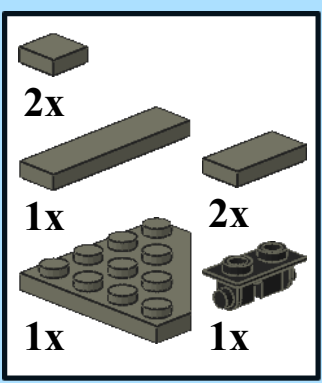
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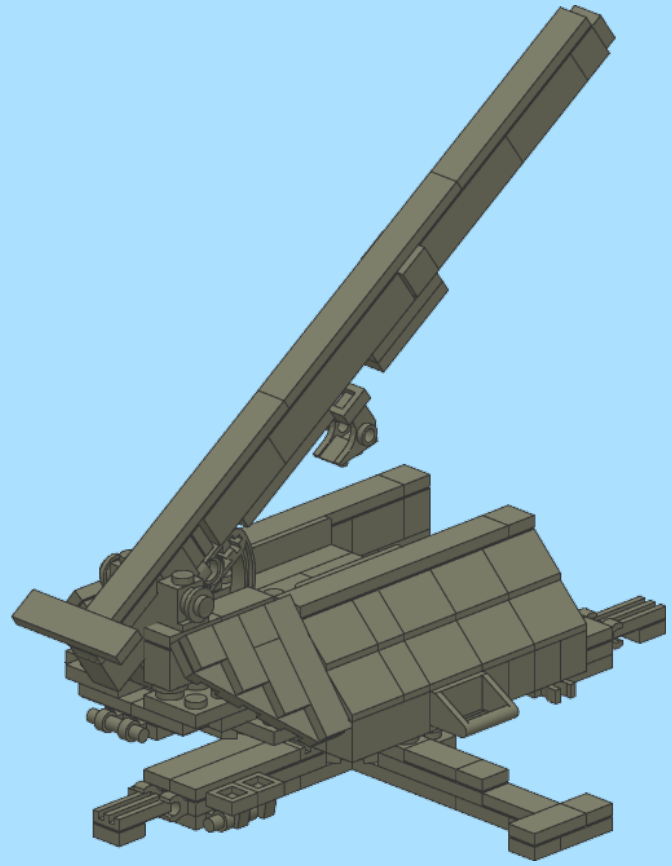


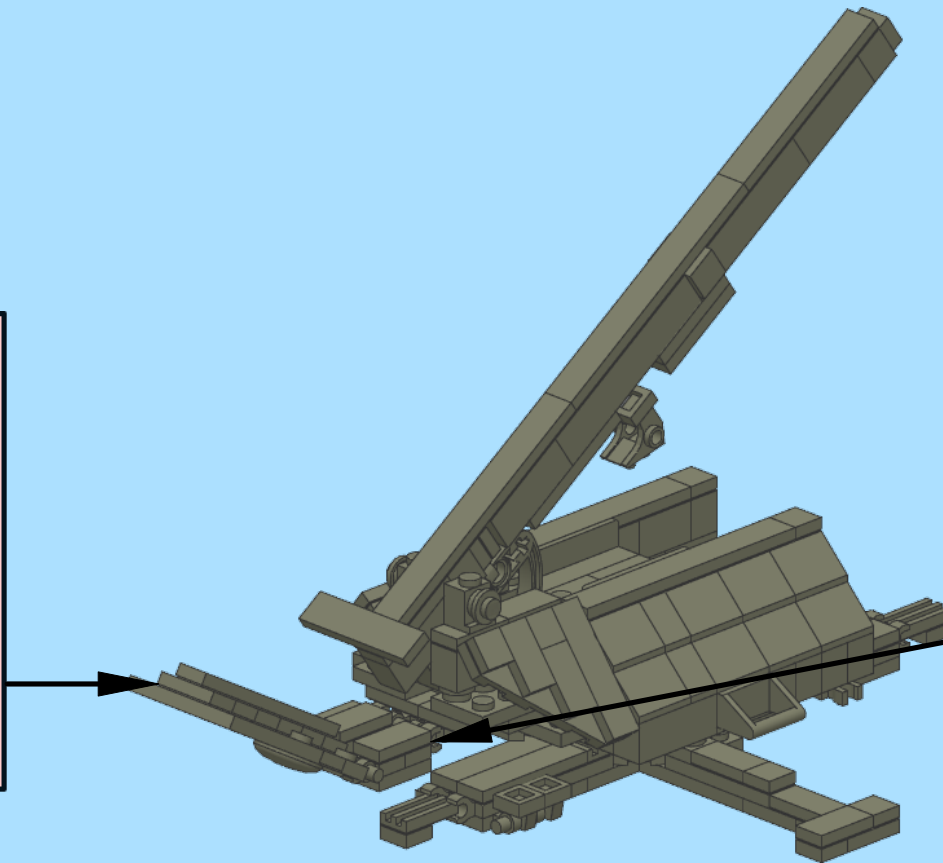
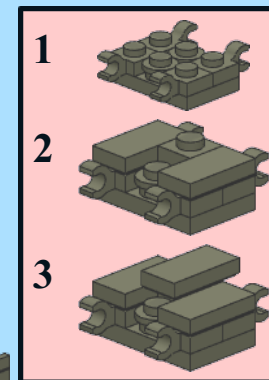
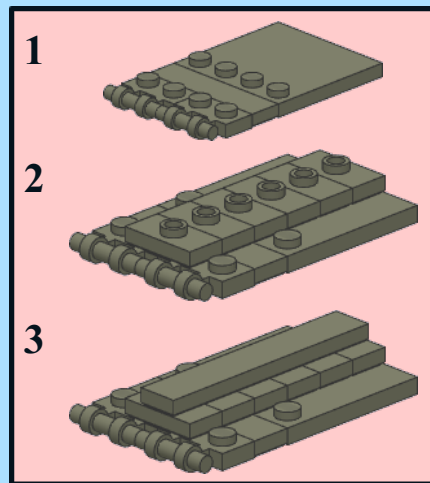
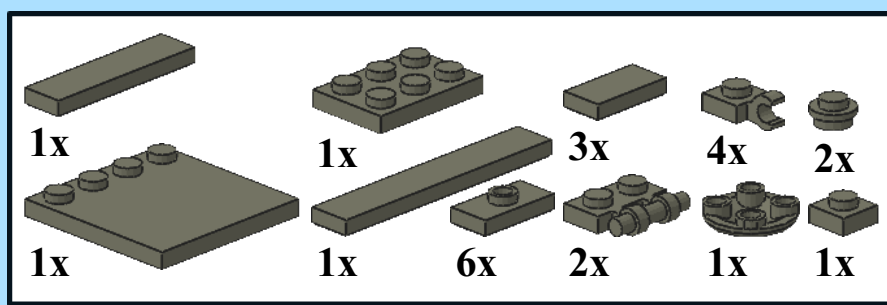


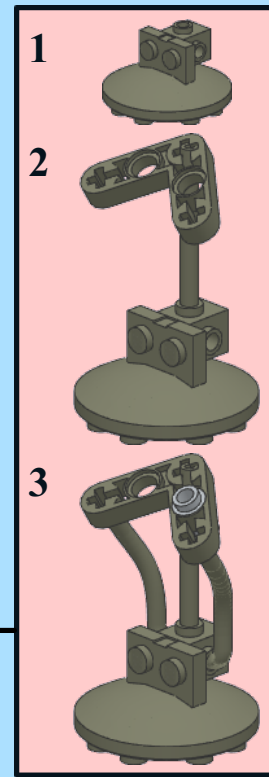
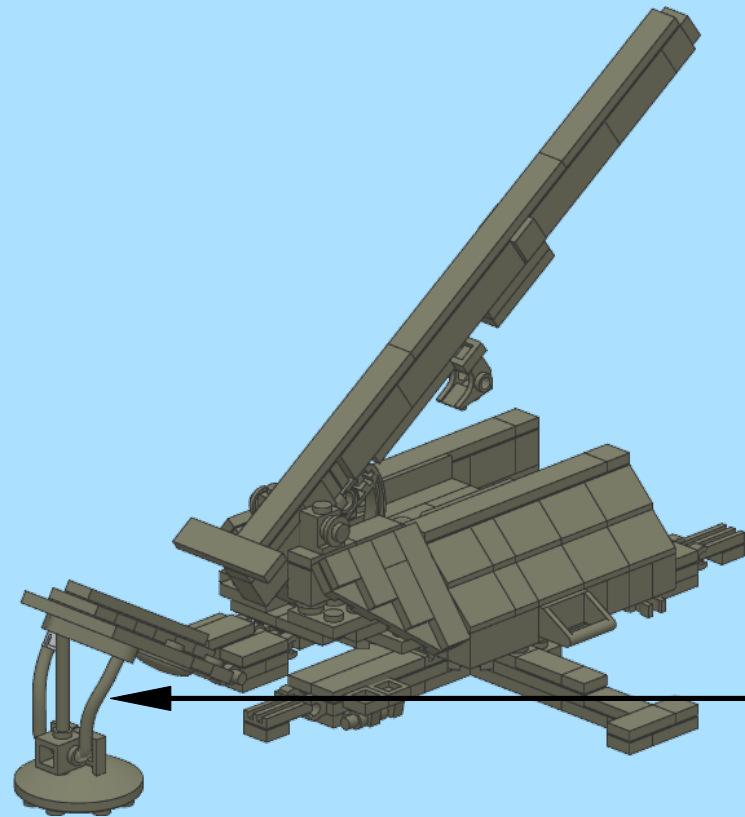
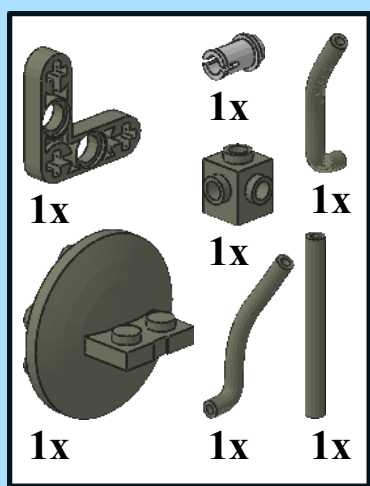


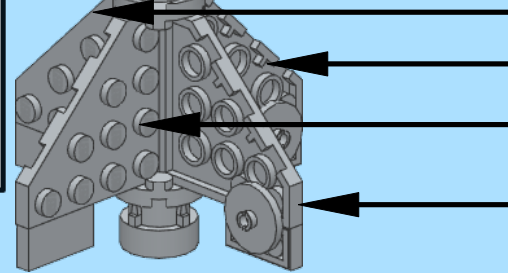
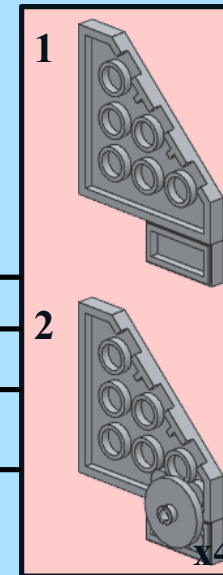
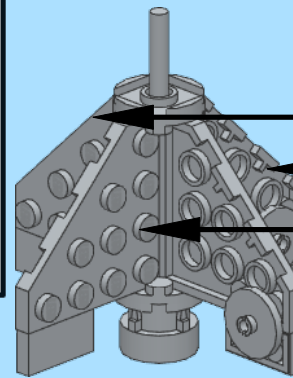
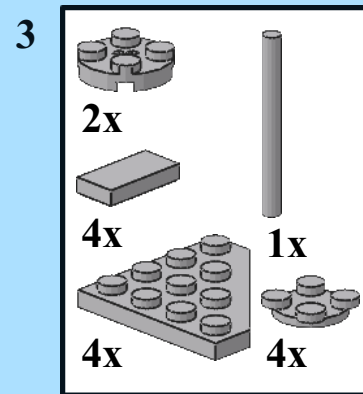
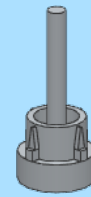
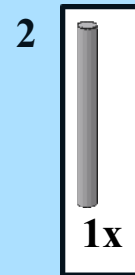
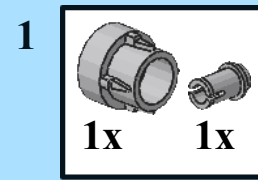




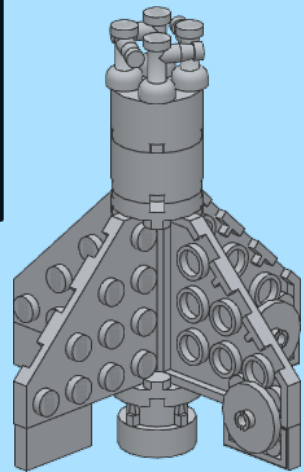
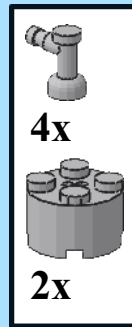




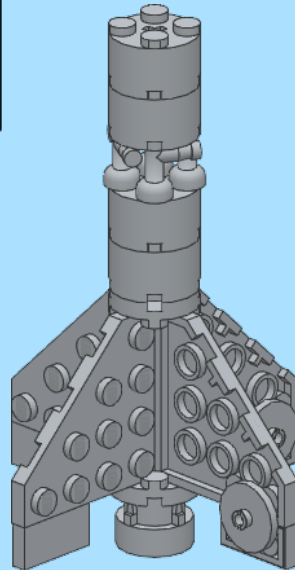
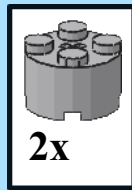




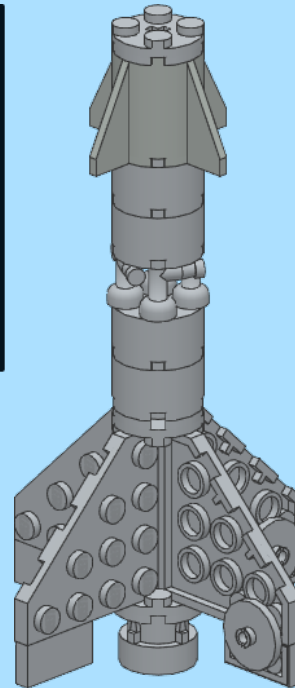
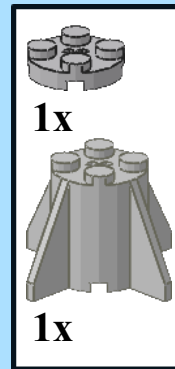
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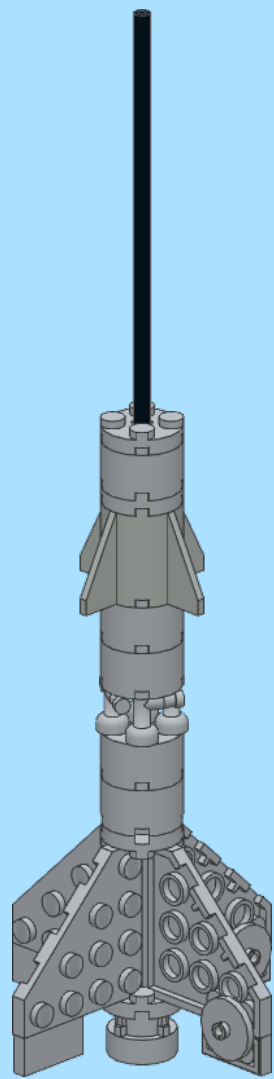
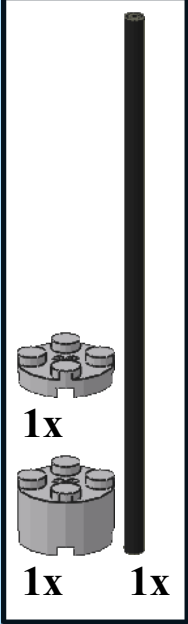


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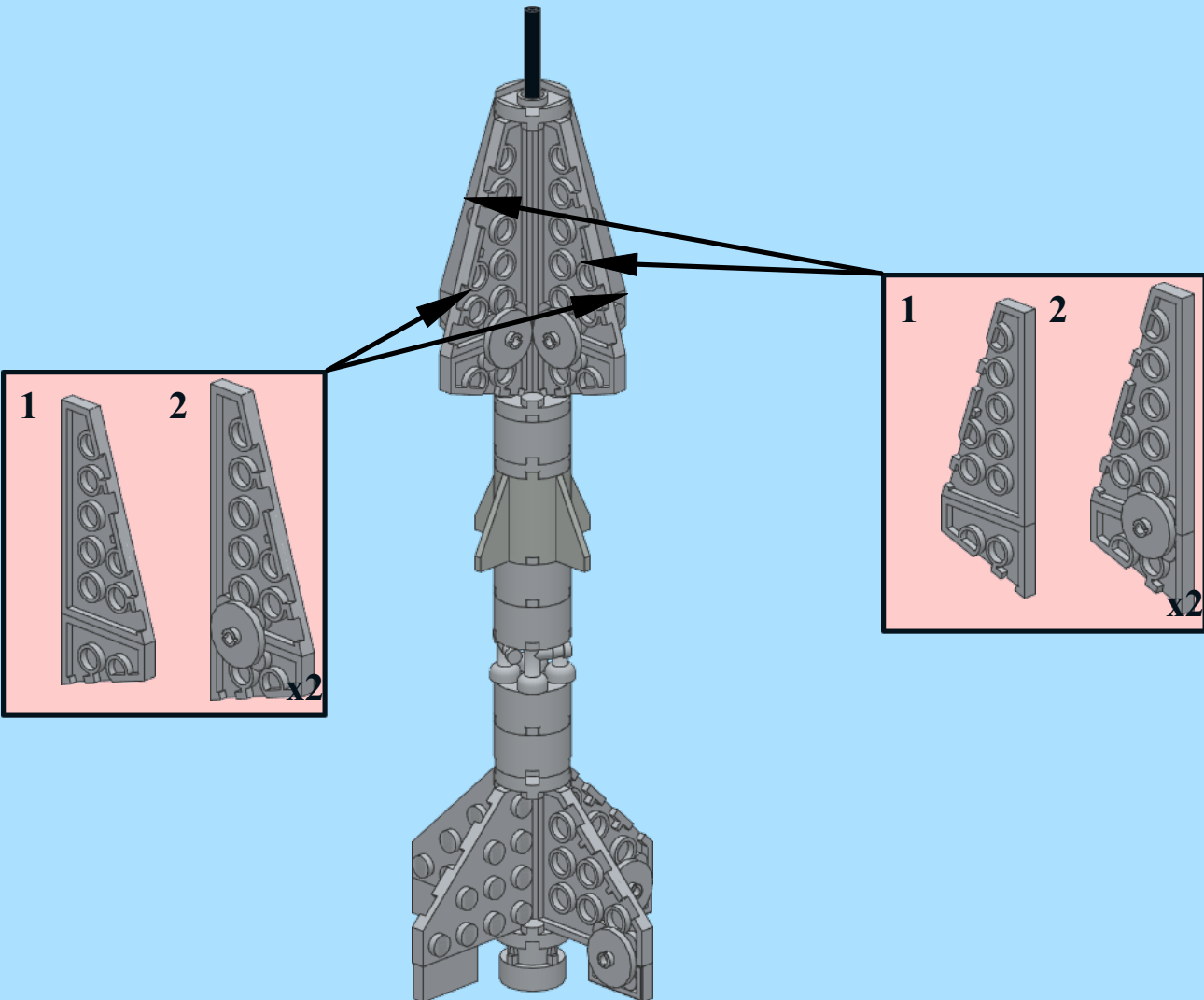
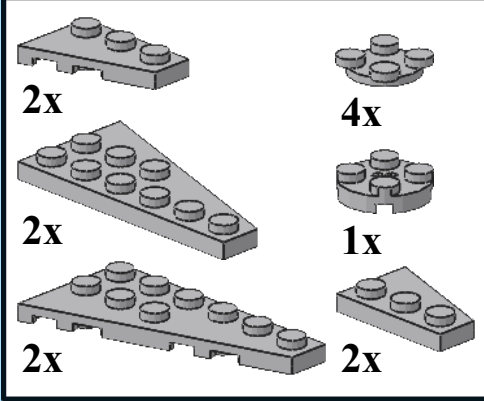


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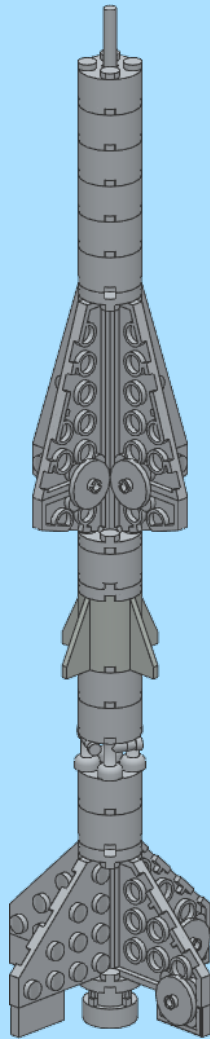
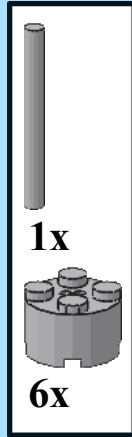




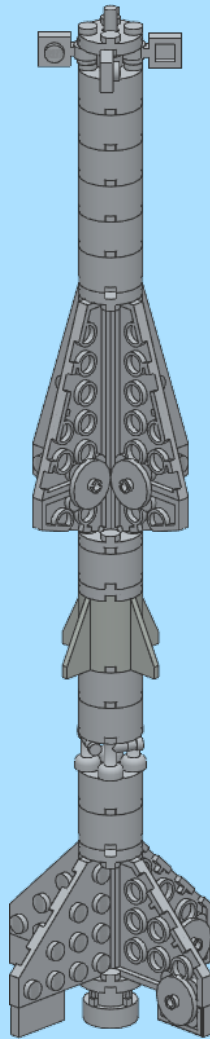




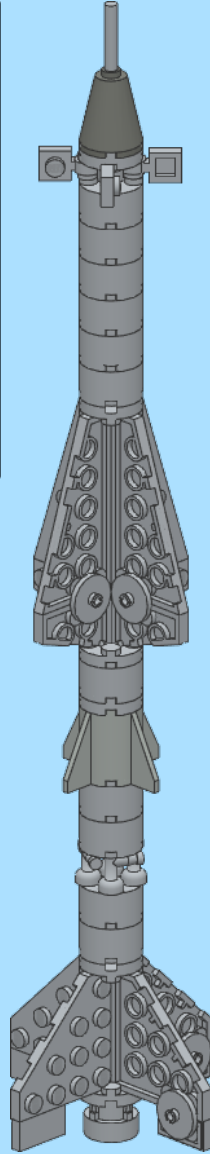
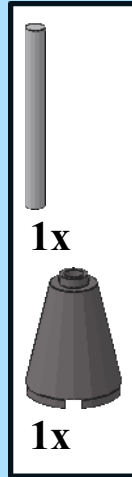
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