

Odysseus (NOVA-C Lander)



The IM-1 mission, orchestrated by Intuitive Machines, marks a monumental step in lunar exploration, rekindling humanity's quest to the Moon. This mission signifies not only a return to the lunar surface in over fifty years but also a bold leap into a new era of commercial lunar science and exploration.

At the heart of the IM-1 mission is the Nova-C lunar lander, designed and constructed by Intuitive Machines. The lander is equipped with state-of-the-art technology, including a propulsion system powered by an environmentally friendly mix of liquid oxygen and liquid methane. This mission's primary objective is to deliver a variety of payloads to the Moon's south pole region, a part of the Moon that remains unexplored.

These payloads include scientific instruments and technology demonstrations that aim to pave the way for future human and robotic exploration of the Moon.

IM-1, also called TO2-IM, is the first successful mission of the NASA Commercial Lunar Payload Services program and the world's first commercial lunar landing.

IM-1 launched on February 15, 2024 on a SpaceX Falcon 9 from Kennedy Space Center. The lander deployed from the second stage at 06:53 UT. The spacecraft continued in a 185 x 60,000 km Earth orbit, followed by a translunar injection and a maneuver to put it in a 100 km lunar orbit. Odysseus landed on the Moon at Malapert A crater near the south pole on February 22, at 23:24 UT. It appears that Odysseus tipped over on landing and is resting on its side, but is still operational. The lander is capable of operating for about 14 Earth days in sunlight.

Odysseus has already made a bit of history on its journey through space. The vehicle is powered by a single engine that is fueled by liquid oxygen, or LOX, and liquid methane, which are tricky propellants because they have to remain at super-chilled temperatures.

The spacecraft is also the first to ever use those fuels while in orbit.

This is the 151st attempt at a moon mission since 1958, including flybys, orbiters, impactors and landers. Odysseus is the 26th lander to successfully touch down on the lunar surface.



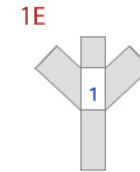
Odysseus (NOVA-C Lander)

1a
Glue to two (2) layers of cardstock

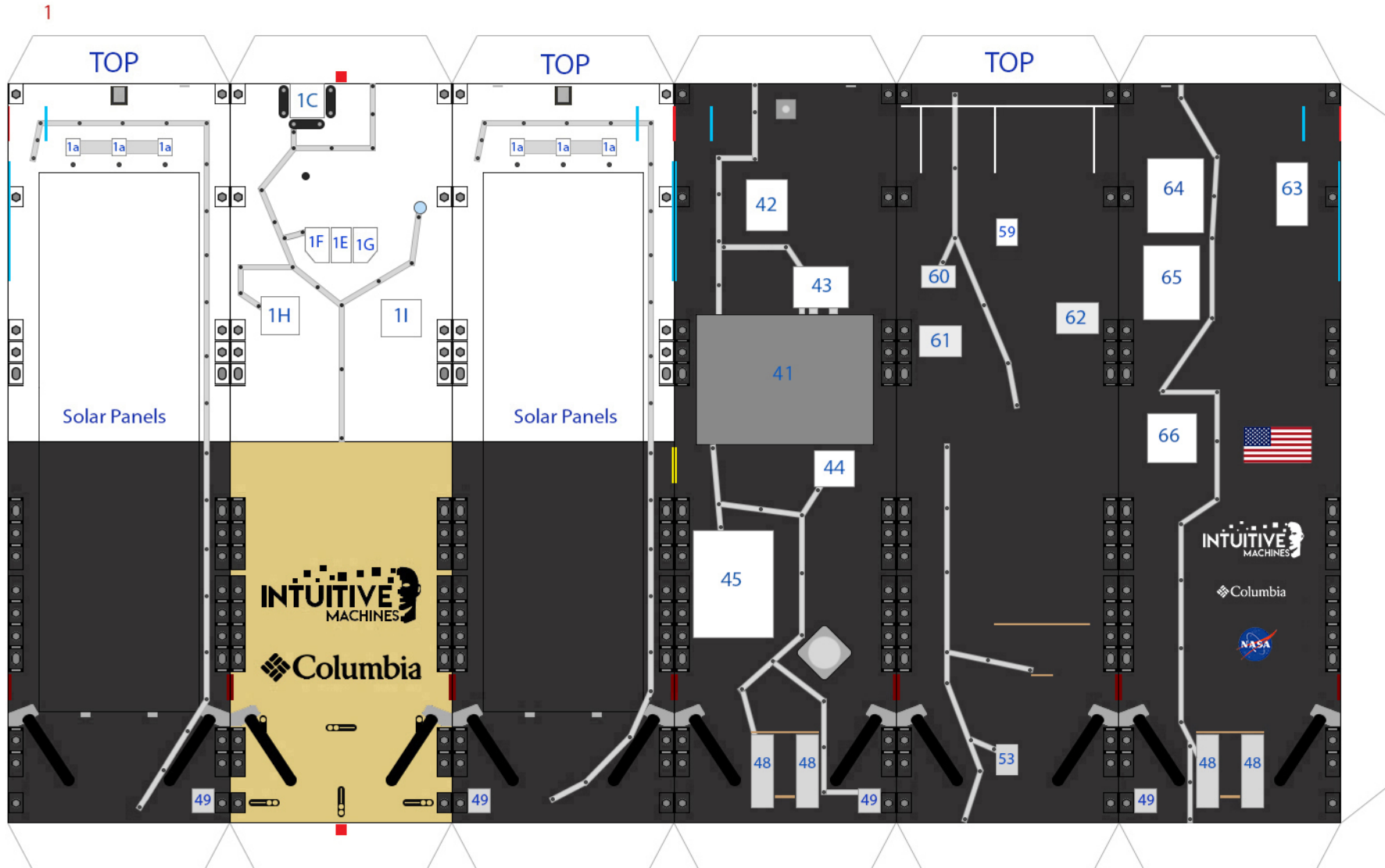
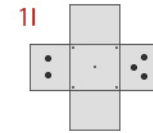
1B
Fold, glue back-to-back



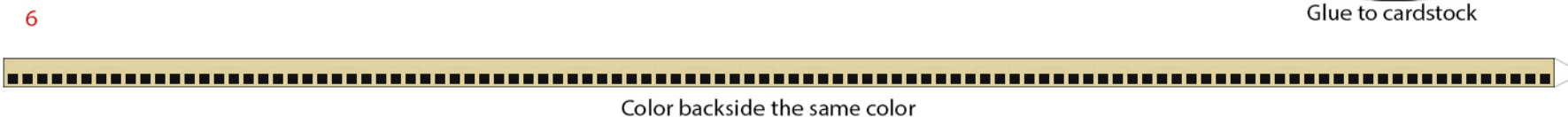
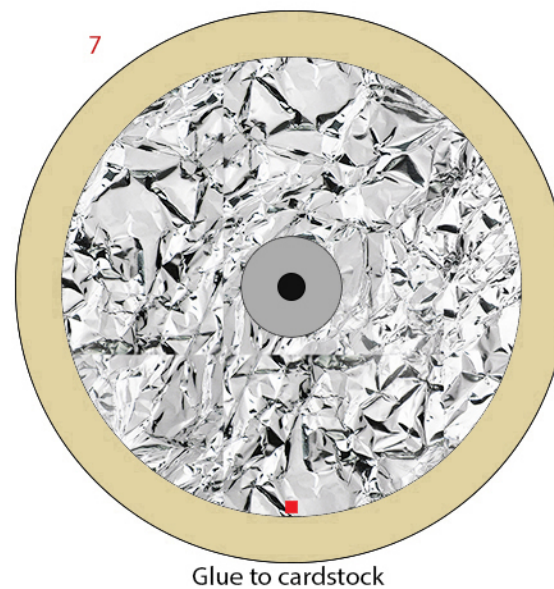
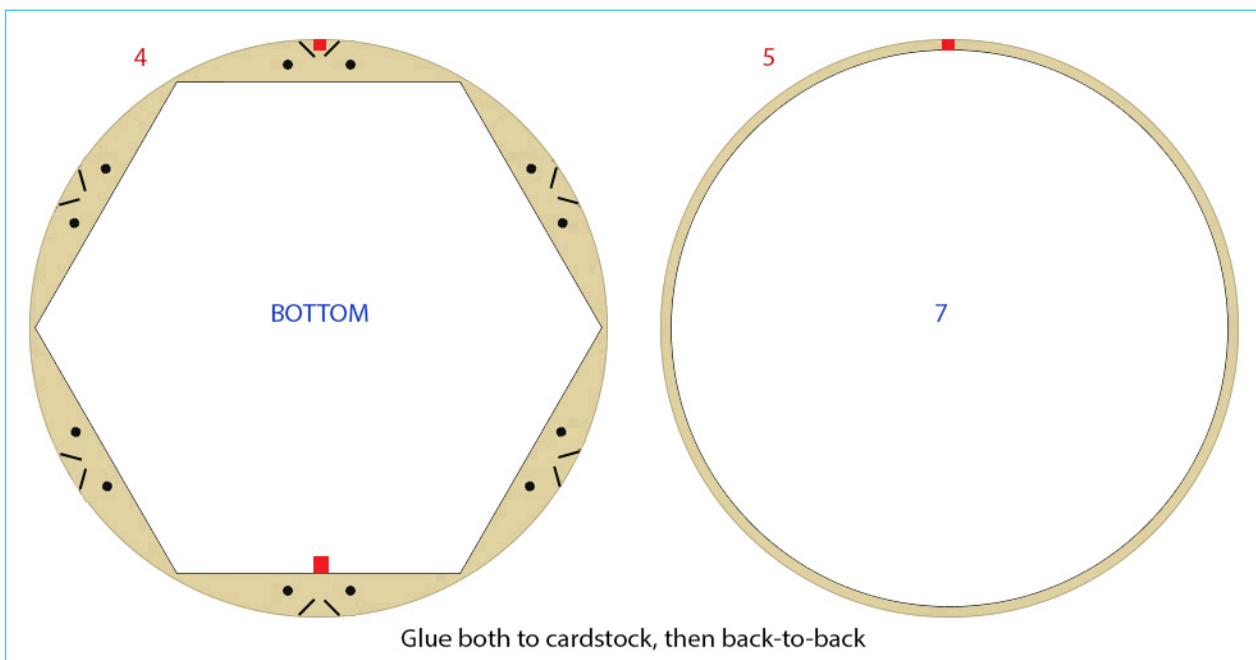
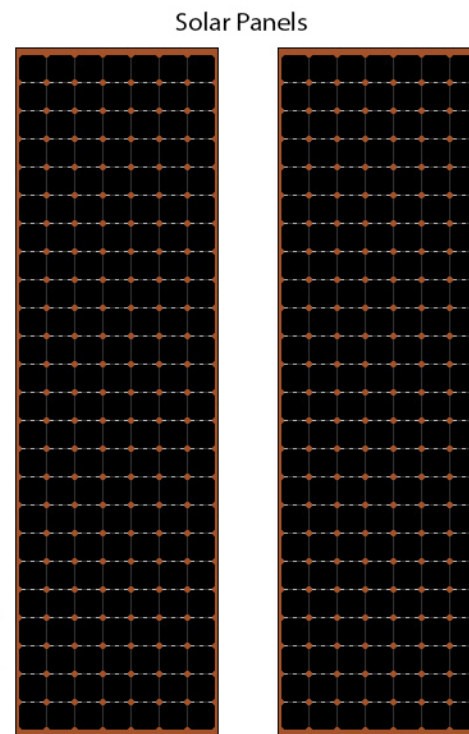
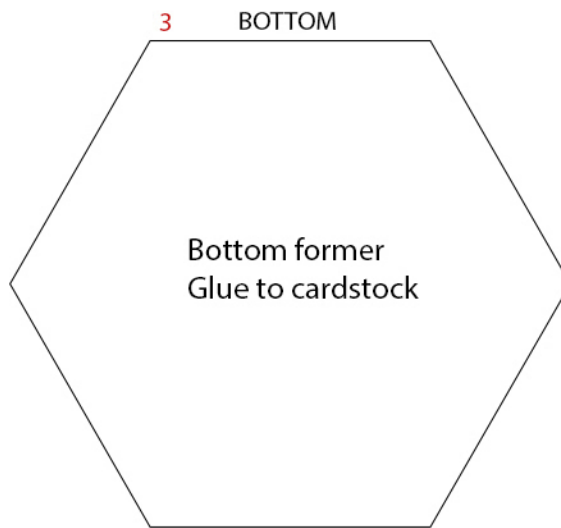
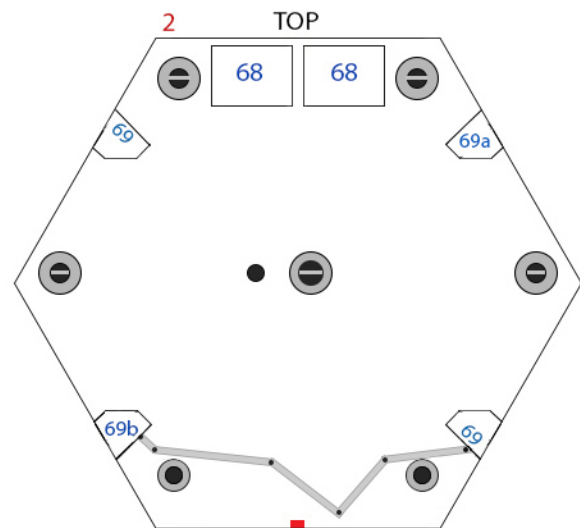
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Fold, glue back-to-back



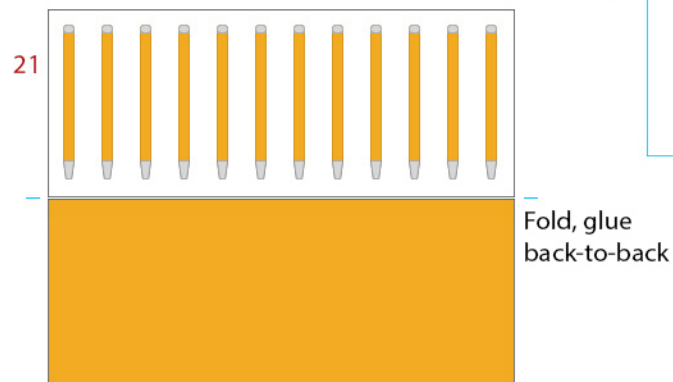
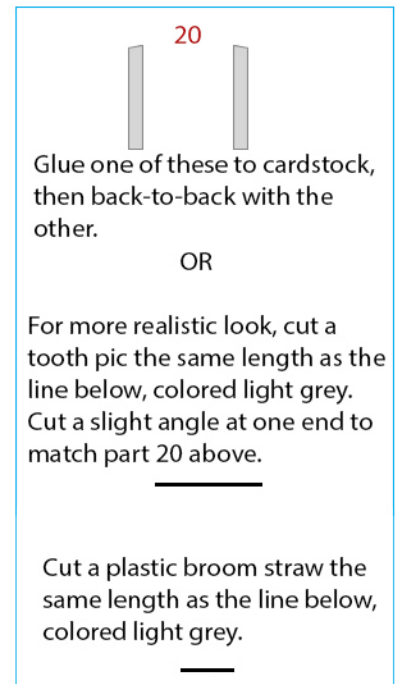
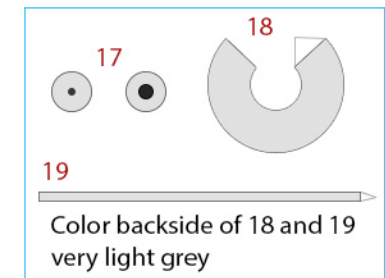
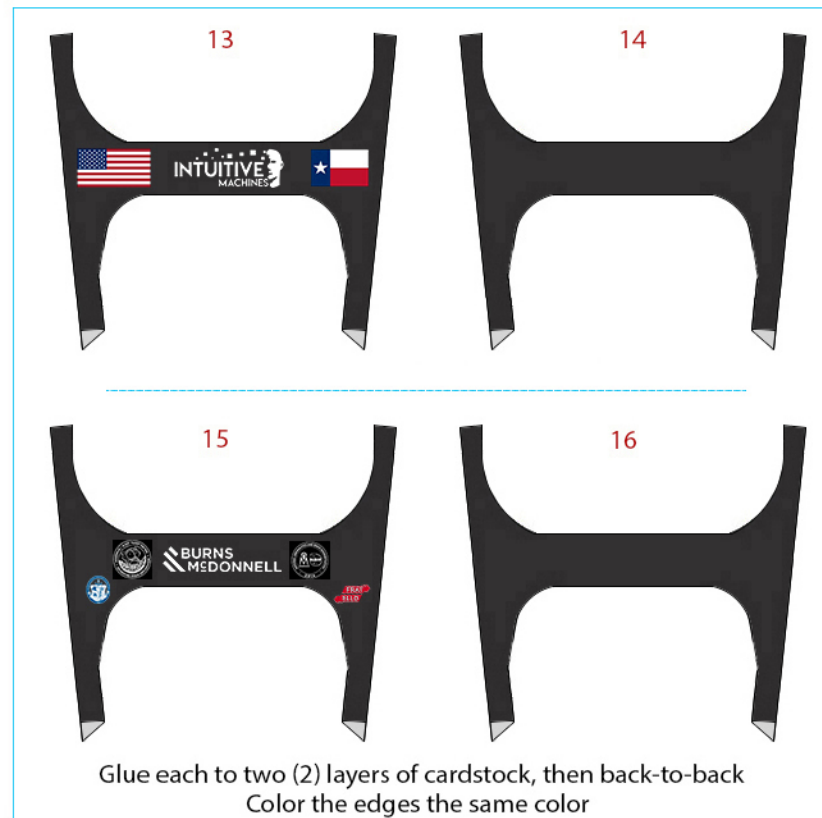
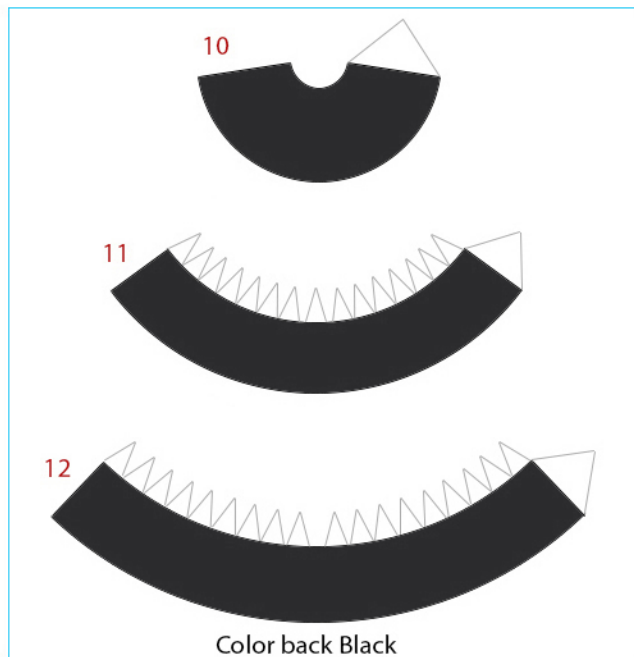
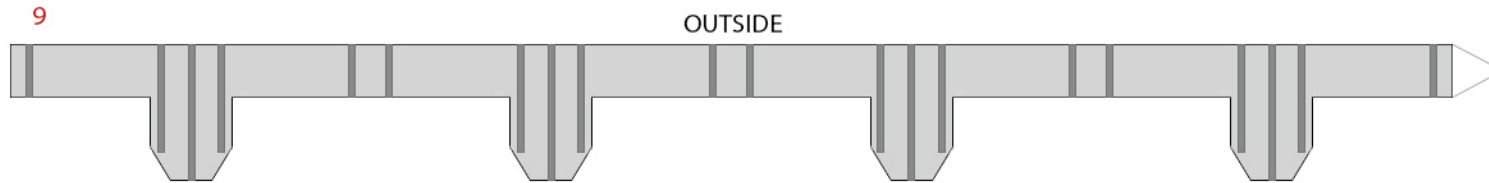
1F
1G
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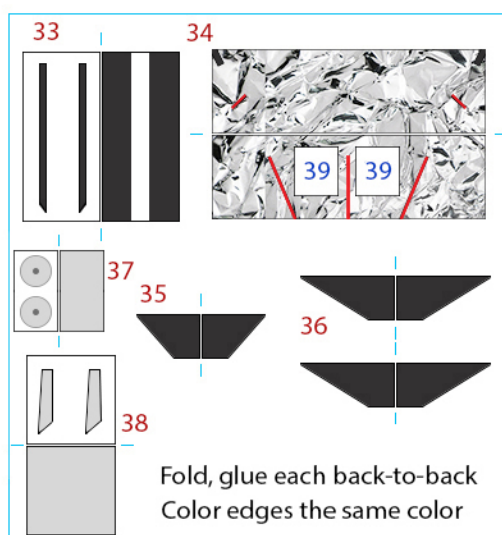
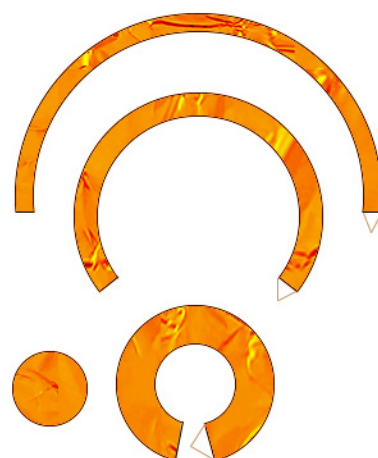
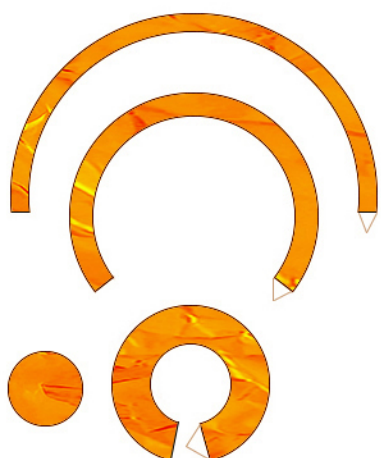
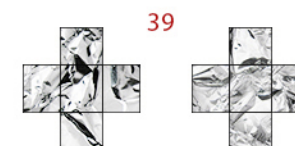
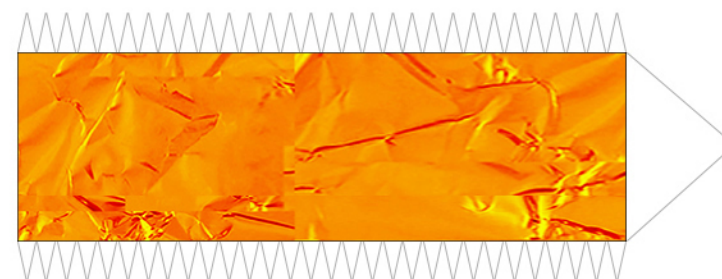
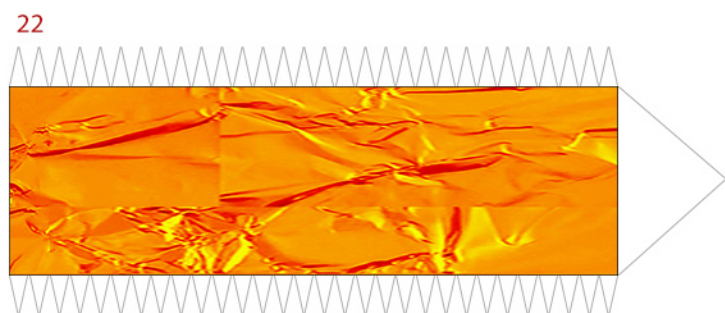
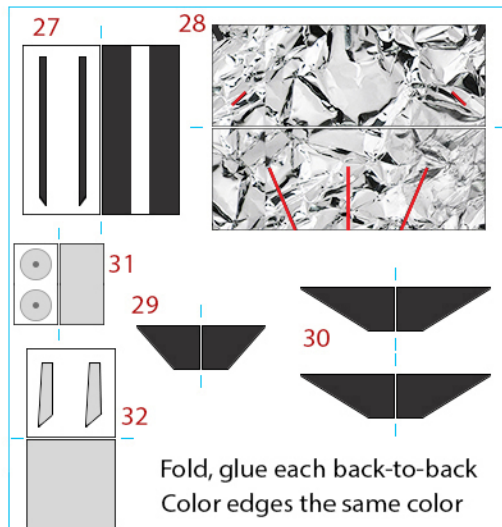
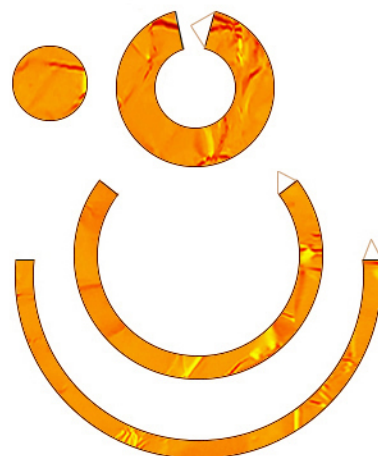
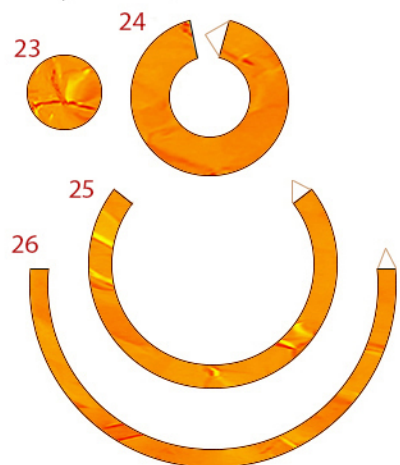
Odysseus (NOVA-C Lander)



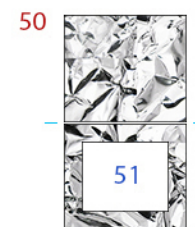
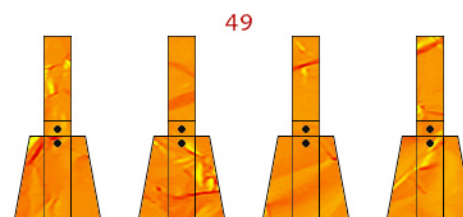
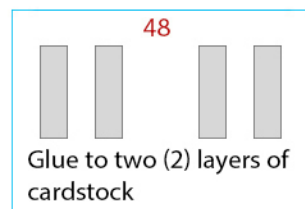
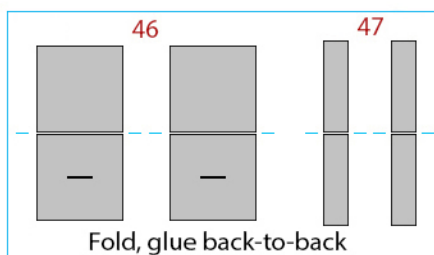
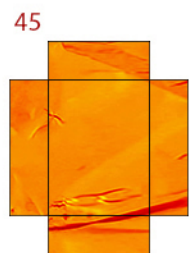
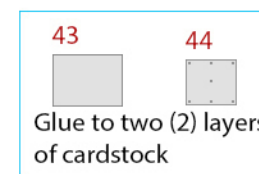
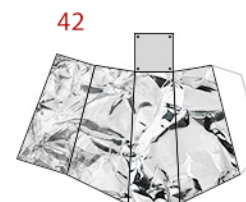
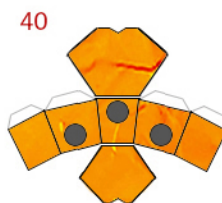
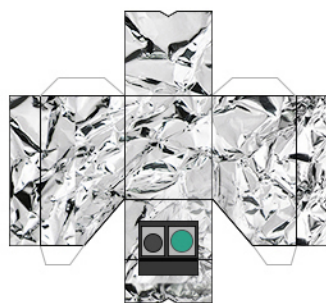
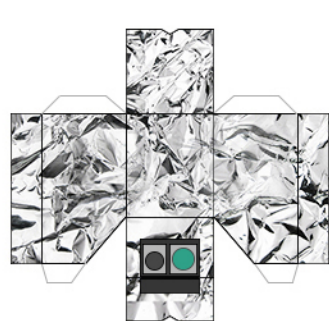
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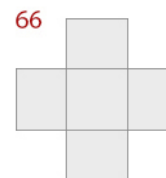
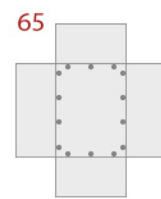
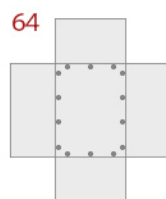
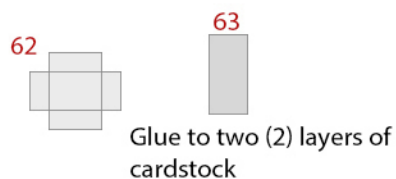
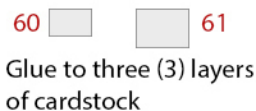
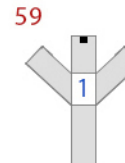
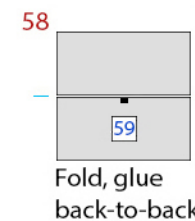
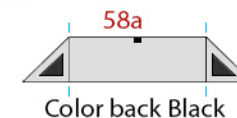
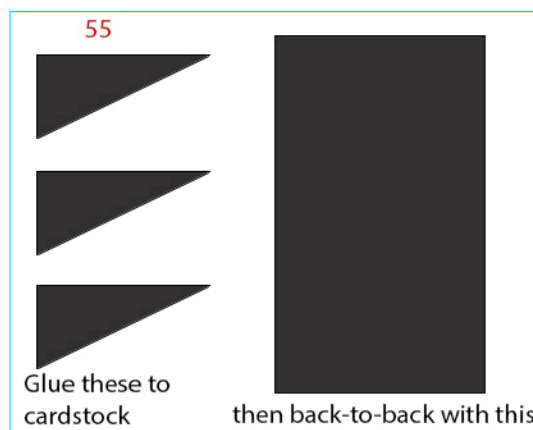
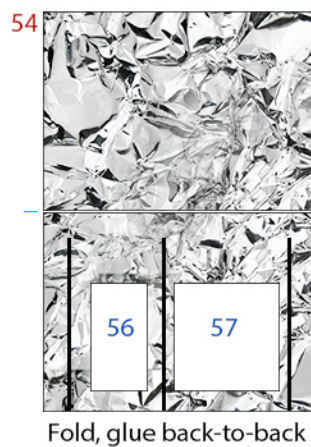
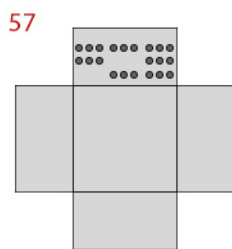
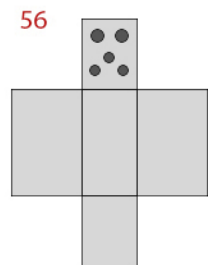
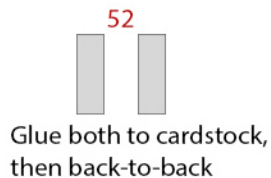
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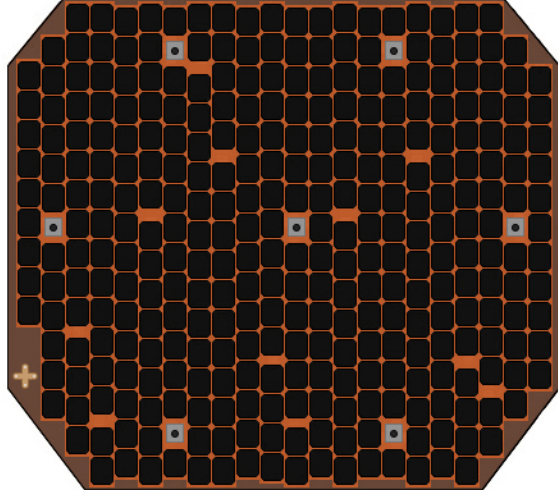
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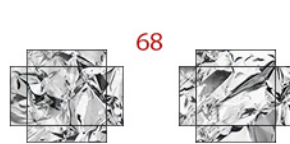
Fold, glue back-to-back



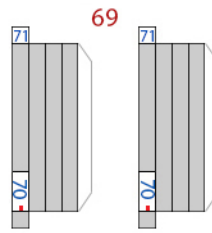
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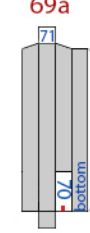
Fold, glue back-to-back



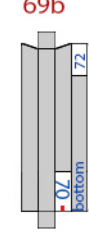
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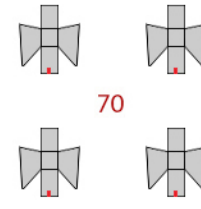
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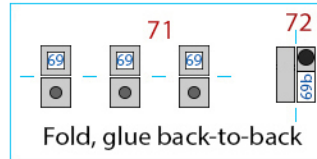
69a



69b



70



71

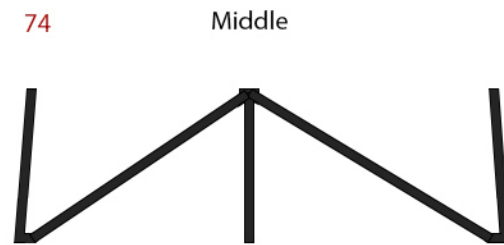
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Fold, glue back-to-back



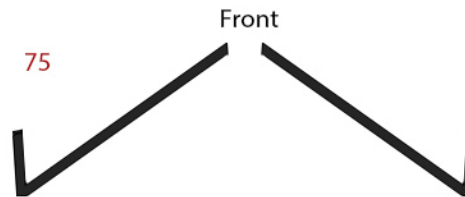
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Color back Black



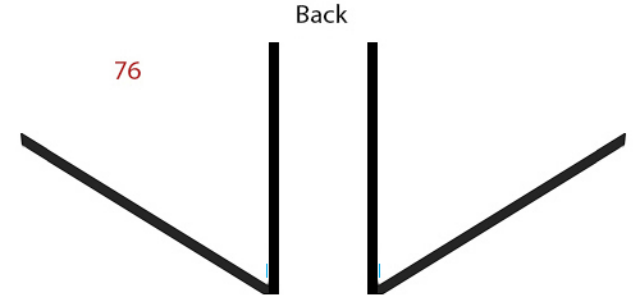
74

Middle



75

Front



76

Back

Fold 45 degrees at the blue lines

Glue all these to two (2) layers of cardstock, color back and edges black.
Super glue will give these more strength.

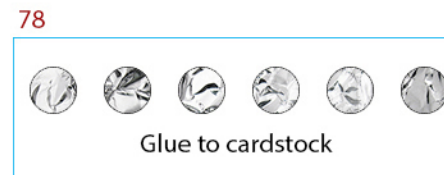
Can also laminate these to two layers of carstock will work as well.



77

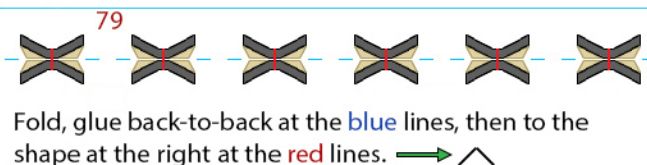


Fold, glue back-to-back



78

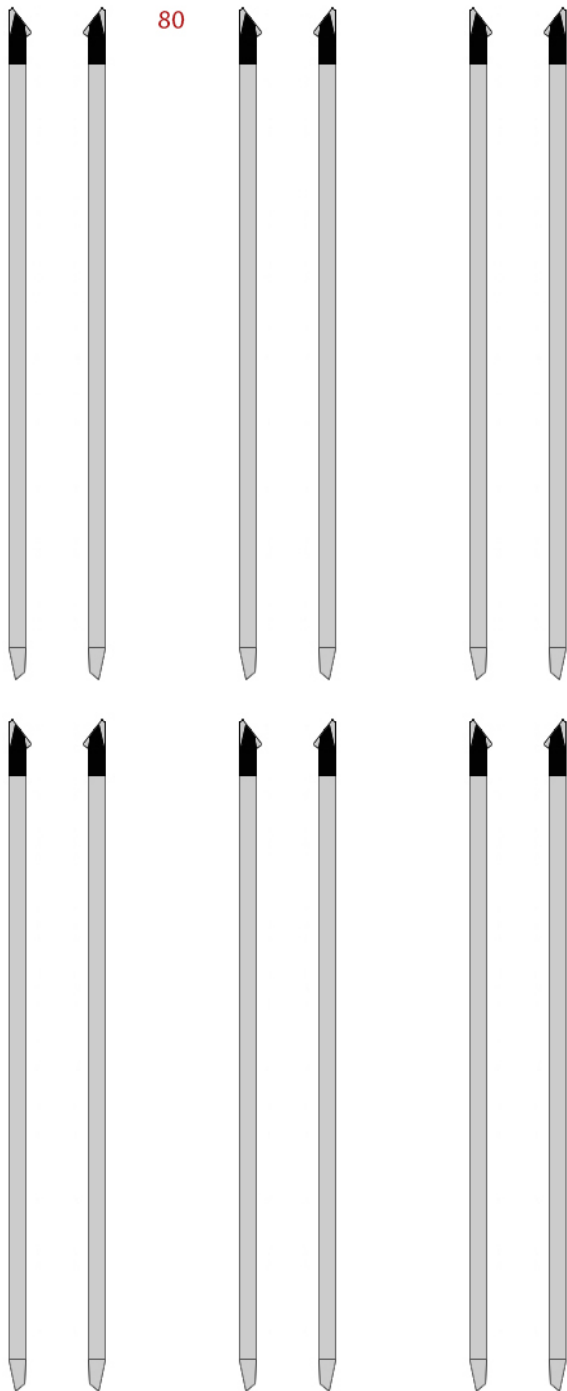
Glue to cardstock



79

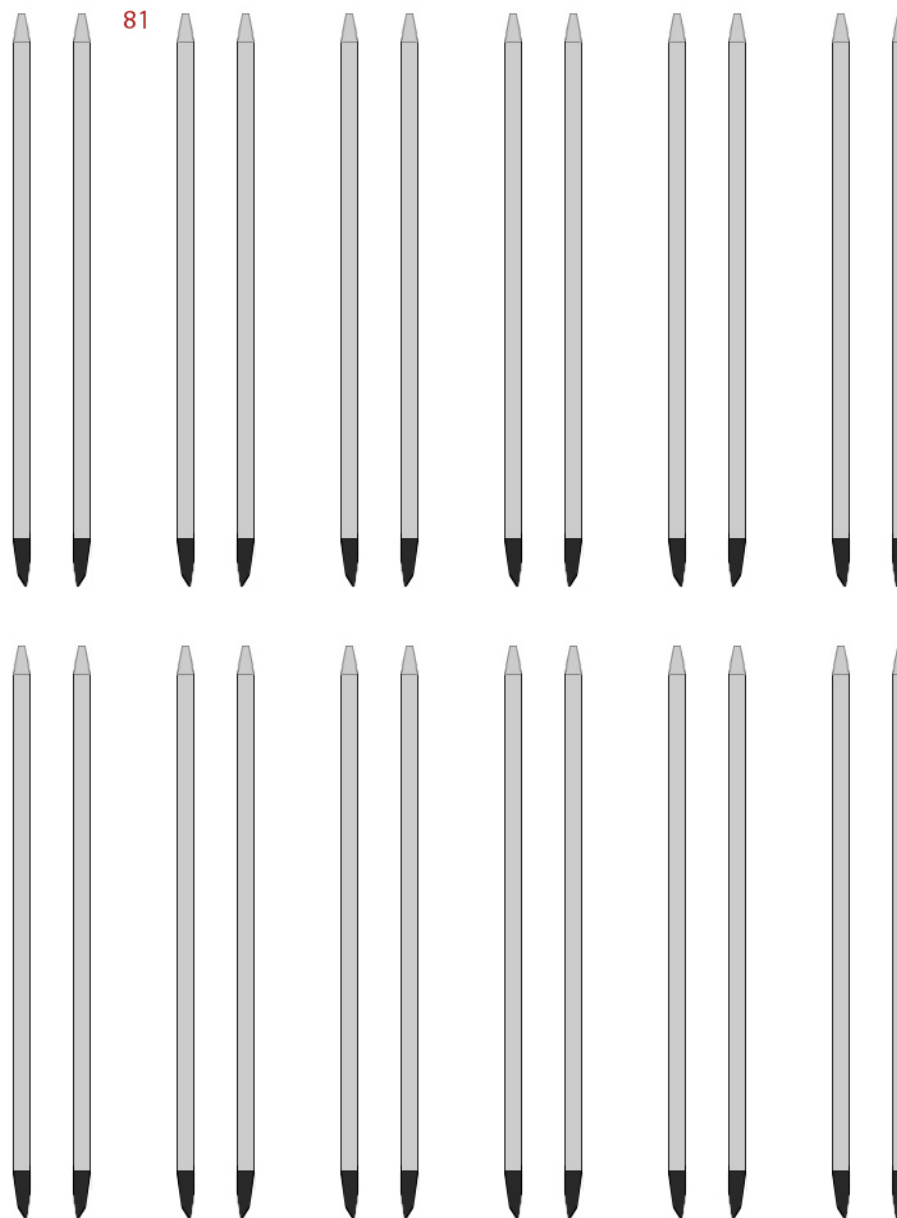
Fold, glue back-to-back at the blue lines, then to the shape at the right at the red lines. → ^

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80

Glue all to cardstock, then each pair back-to-back - should have 6 legs.



81

Glue all to cardstock, then each pair back-to-back

