

New Horizons



New Horizons is an interplanetary space probe that was launched as a part of NASA's New Frontiers program. Engineered by the Johns Hopkins University Applied Physics Laboratory (APL) and the Southwest Research Institute (SwRI), with a team led by S. Alan Stern, the spacecraft was launched in 2006 with the primary mission to perform a flyby study of the Pluto system in 2015, and a secondary mission to fly by and study one or more other Kuiper belt objects (KBOs) in the decade to follow, which became a mission to 486958 Arrokoth. It is the fifth space probe to achieve the escape velocity needed to leave the Solar System.

On January 19, 2006, New Horizons was launched from Cape Canaveral Air Force Station by an Atlas V rocket directly into an Earth-and-solar escape trajectory with a speed of about 16.26 km/s (10.10 mi/s; 58,500 km/h; 36,400 mph). It was the fastest man-made object ever launched from Earth.

New Horizons made its closest approach to Jupiter, on February 28, 2007, at a distance of 2.3 million kilometers (1.4 million miles). The Jupiter flyby provided a gravity assist that increased New Horizons' speed; the flyby also enabled a general test of New Horizons' scientific capabilities, returning data about the planet's atmosphere, moons, and magnetosphere.

On July 14, 2015, at 11:49 UTC, it flew 12,500 km (7,800 mi) above the surface of Pluto, making it the first spacecraft to explore the dwarf planet. In August 2016, New Horizons was reported to have traveled at speeds of more than 84,000 km/h (52,000 mph). On October 25, 2016, at 21:48 UTC, the last of the recorded data from the Pluto flyby was received from New Horizons. Having completed its flyby of Pluto, New Horizons then maneuvered for a flyby of Kuiper belt object 486958 Arrokoth (then nicknamed Ultima Thule), which occurred on January 1, 2019, when it was 43.4 AU from the Sun. In August 2018, NASA cited results by Alice on New Horizons to confirm the existence of a "hydrogen wall" at the outer edges of the Solar System. This "wall" was first detected in 1992 by the two Voyager spacecrafts.

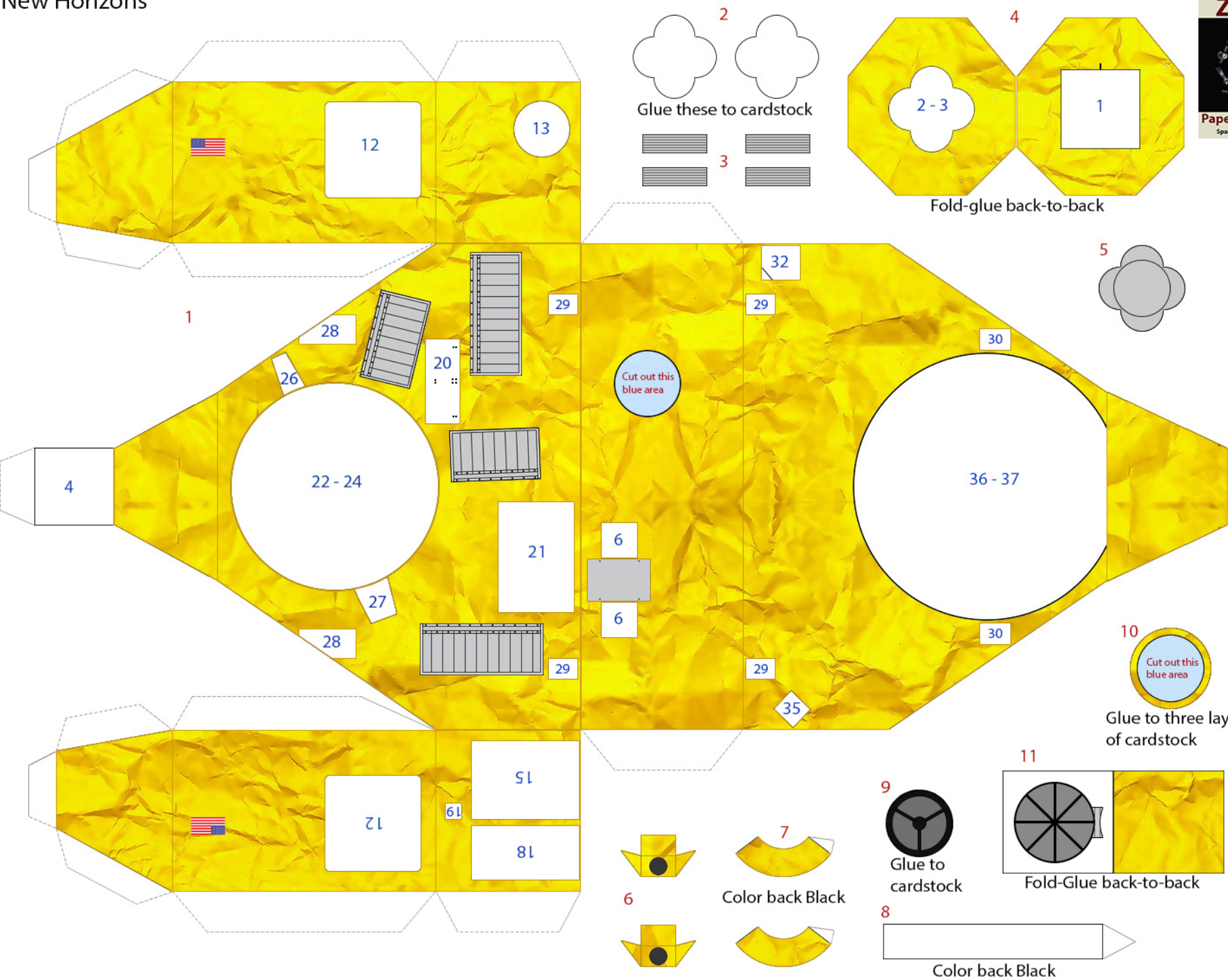
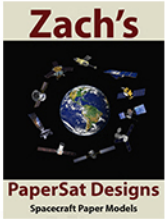
The New Horizons team requested, and received, a mission extension through 2021 to explore additional Kuiper belt objects (KBOs). Funding was secured on July 1, 2016. During this Kuiper Belt Extended Mission (KEM), the spacecraft has performed a close fly-by of 486958 Arrokoth and will conduct more distant observations on an additional two dozen objects, and possibly make a fly-by of another KBO.

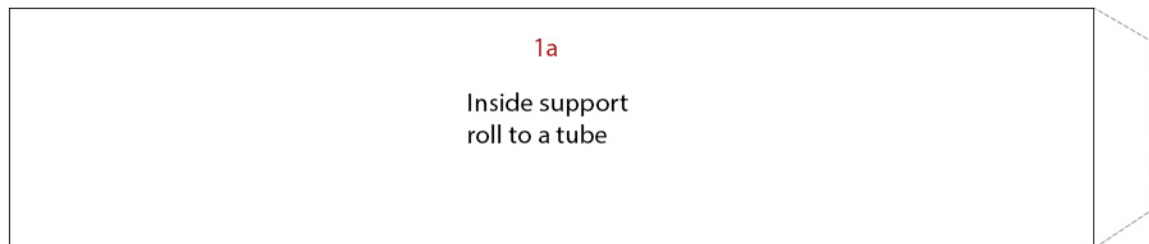
New Horizons has been called "the fastest spacecraft ever launched" because it left Earth at 16.26 kilometers per second (58,536 km/h; 36,373 mph). It is also the first spacecraft launched directly into a solar escape trajectory, which requires an approximate speed while near Earth of 16.5 km/s (59,000 km/h; 37,000 mph).

However, it is not the fastest spacecraft to leave the Solar System. As of January 2018, this record is held by Voyager 1, traveling at 16.985 km/s (61,146 km/h; 37,994 mph) relative to the Sun.

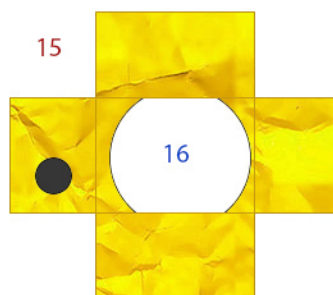
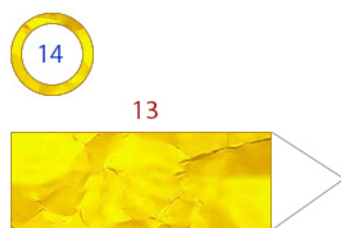
The Parker Solar Probe can also be measured as the fastest object, because of its orbital speed relative to the Sun at perihelion: 95.3 km/s (343,000 km/h; 213,000 mph). Because it remains in solar orbit, its specific orbital energy relative to the Sun is lower than New Horizons and other artificial objects escaping the Solar System.



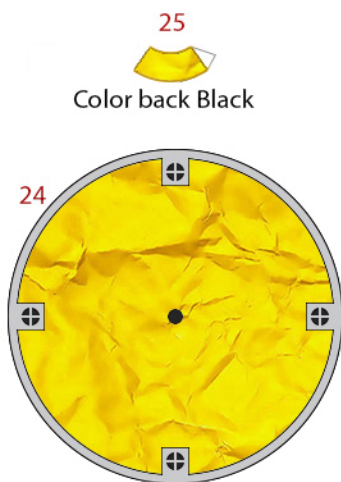
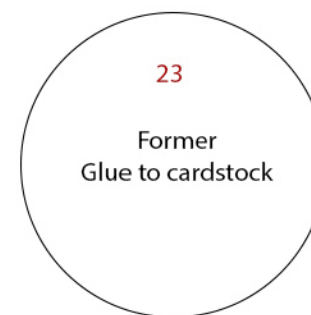
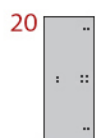




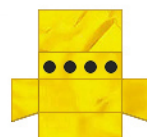
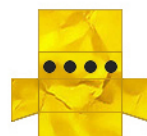
Glue to two layers of cardstock



Glue both to two layers of cardstock,
color adges yellow



28



29



30



31



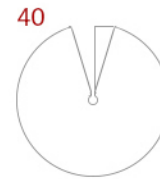
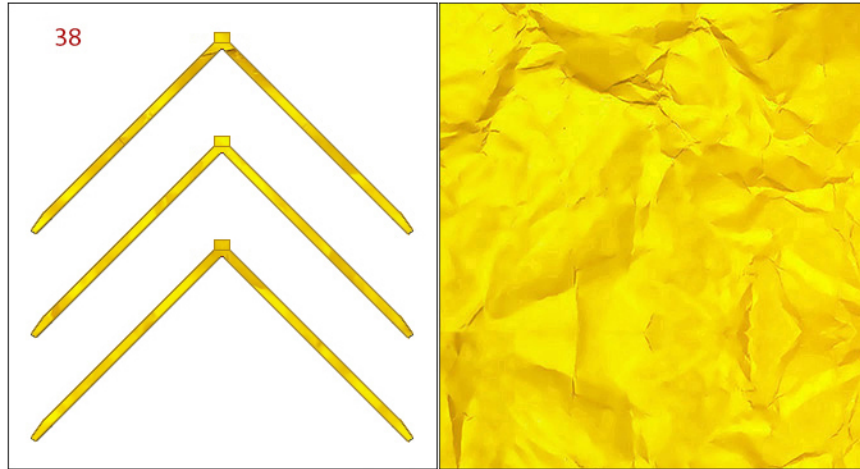
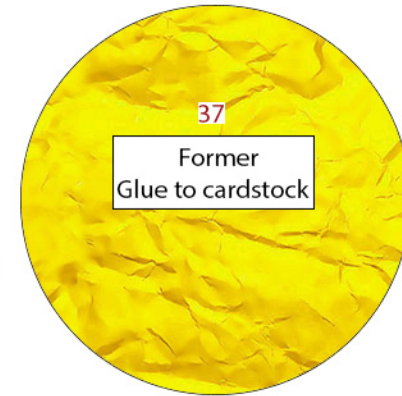
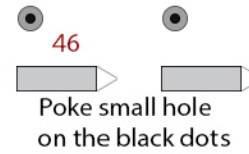
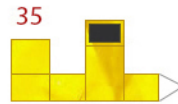
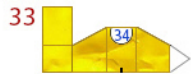
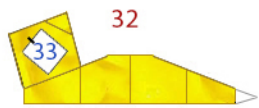
*2 Spares

You can use parts 31, or you can do this...
Get 16 tooth pics, colored the tapered end
yellow.

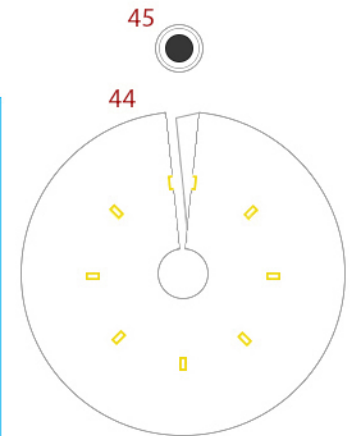
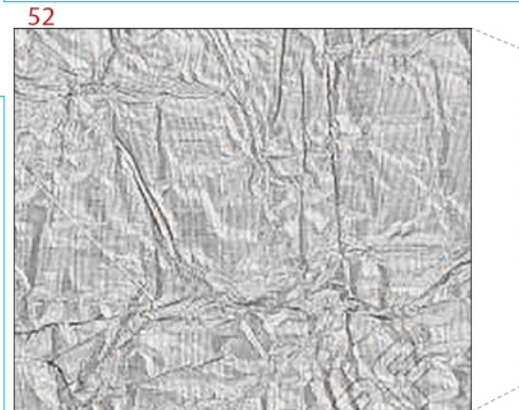
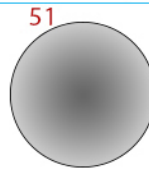
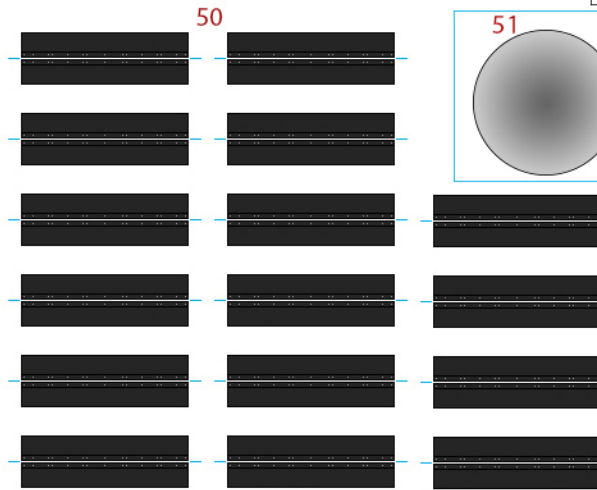
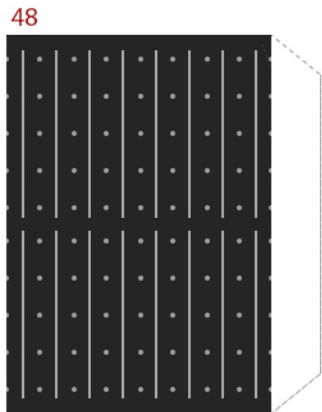
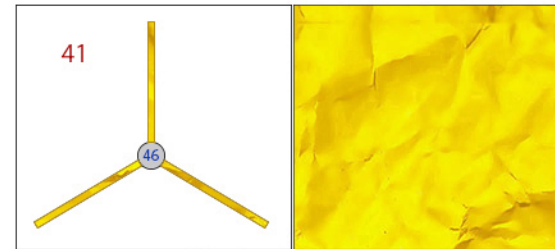
Cut around 2mm from the tip from the tapered
end to get rid of the sharp point.

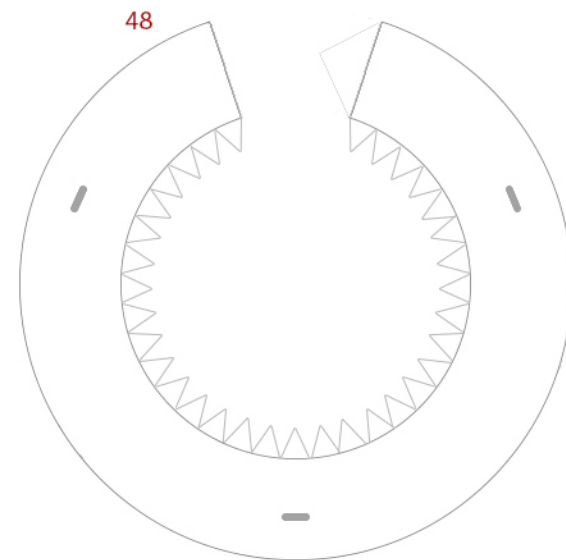
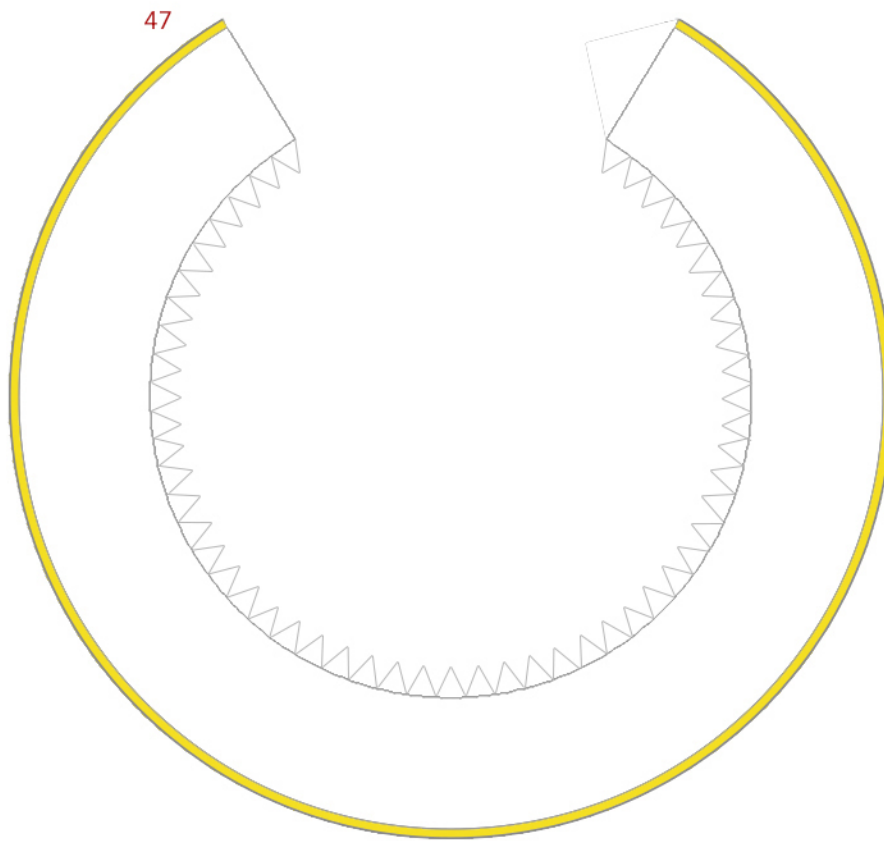
Then cut off the rest of the tapered end around
2.5 mm long. Glue on the black dots on parts
28, 29 and 30.

New Horizons



Cut two pieces of plastic broom
straws the lengths of the two
lines below, colored light grey or
silver.





Don't print this page

Use this page to print the foil graphics on the backside of the two parts on the previous page

