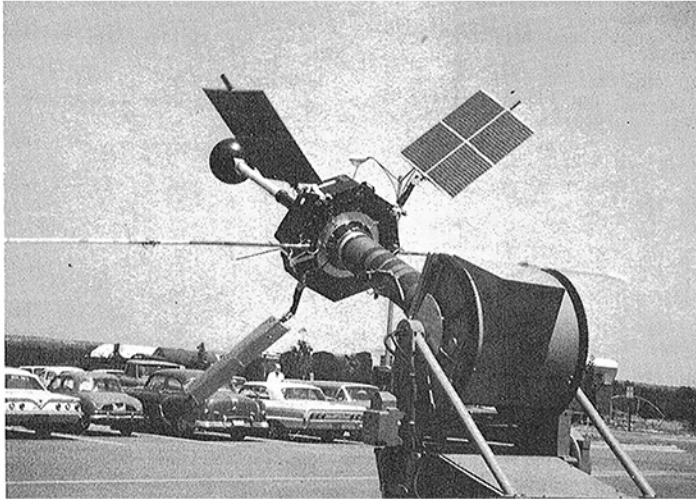


Explorer 18 IMP-A



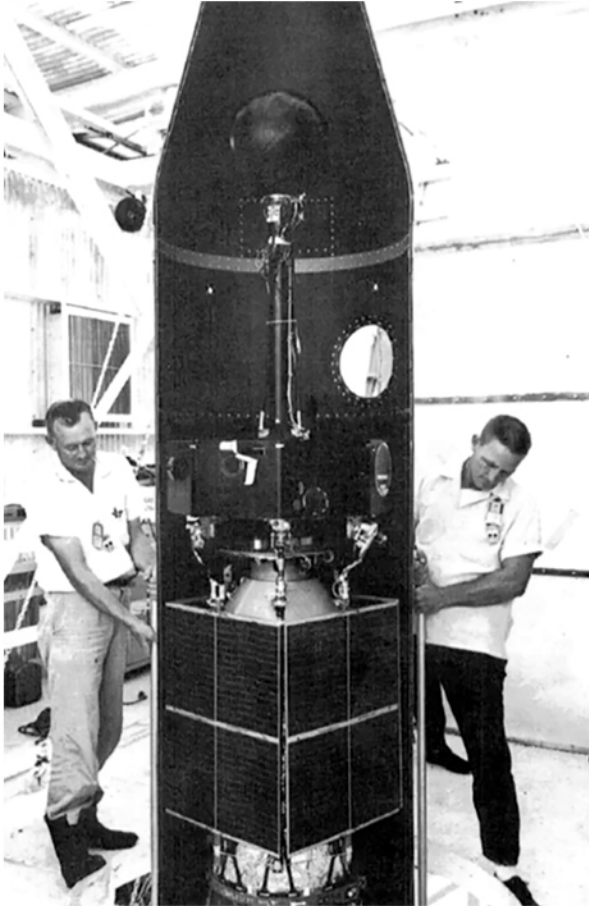
Explorer 18, also called IMP-A, IMP-1, Interplanetary Monitoring Platform-1 was a NASA satellite launched as part of the Explorer program. Explorer 18 was launched on 27 November 1963 from Cape Canaveral Air Force Station (CCAFS), Florida, with a Thor-Delta C launch vehicle. Explorer 18 was the first satellite of the Interplanetary Monitoring Platform (IMP).

Explorer 18 was a solar cell and chemical-battery powered spacecraft instrumented for interplanetary and distant magnetospheric studies of energetic particles, cosmic rays, magnetic fields, and plasmas.

The satellite included a Digital Data Processor (DDP) telemetry system which made the first use of integrated circuits on a flown spacecraft, predating both the D-37C computer used in the Minuteman II missile system and the Apollo Guidance Computer. The DDP allowed the different onboard digital experiments to store results into accumulators which were then read out on a repeating cycle and encoded into pulse-frequency modulation (PFM) signals to be sent to ground stations.

The Interplanetary Monitoring Platform (IMP) program was started in the fall of 1961 based on a recommendation from NASA's Goddard Space Flight Center (GSFC) earlier that spring to launch a series of probes to monitor the space environment around the Earth and nearby interplanetary space. Such knowledge was vital for defining the environment astronauts would encounter during flights to the Moon and beyond as well as helping scientists understand the space environment and the forces which shape it. In order to provide these data, the typical IMP satellite was placed into a highly eccentric Earth orbit which would reach out hundreds of thousands of kilometers to probe the magnetosphere, interplanetary space, and the interactions between the two realms.

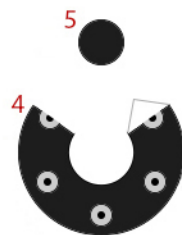
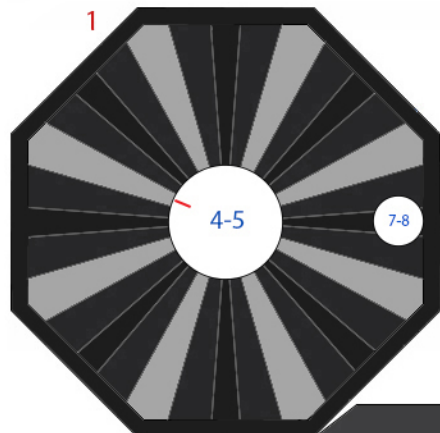
Explorer 18 managed to return almost 6,000 hours of data up until its last operation on March 25, 1965. With its most useful data returned during the first six month of operation, IMP 1 proved to be a highly successful mission which, when combined with data from other satellites, allowed scientists to map some of the details of Earth's complex magnetosphere for the first time. Subsequent IMP missions, starting with the launch of IMP 2 on October 3, 1964 to become Explorer 21, would continue the much-needed exploration of this new realm.



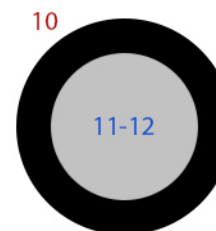
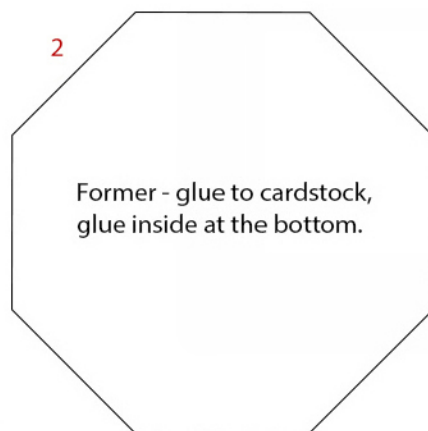
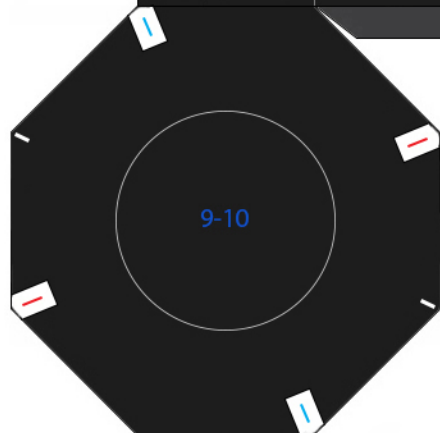
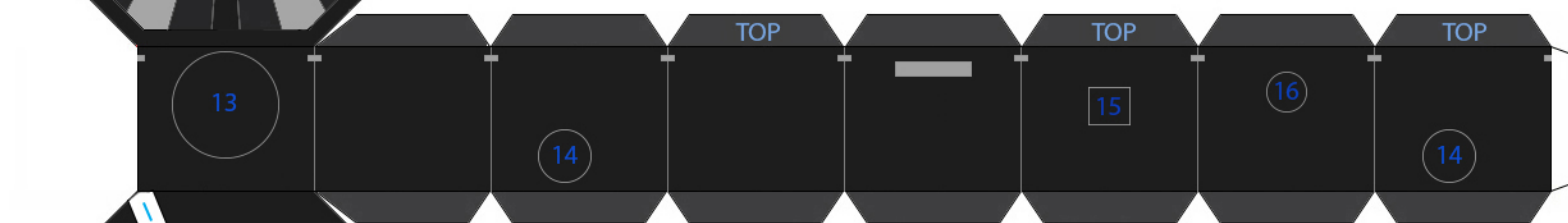
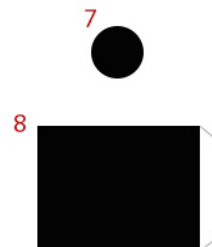
Explorer 18 IMP-A



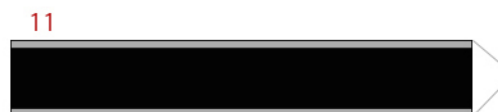
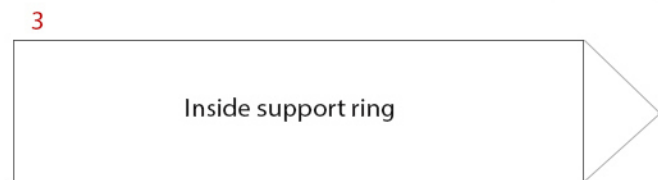
Need four (4) plastic broom straws or similar material cut at the same length as the line below, colored light grey or silver.



Poke small holes on the black dots



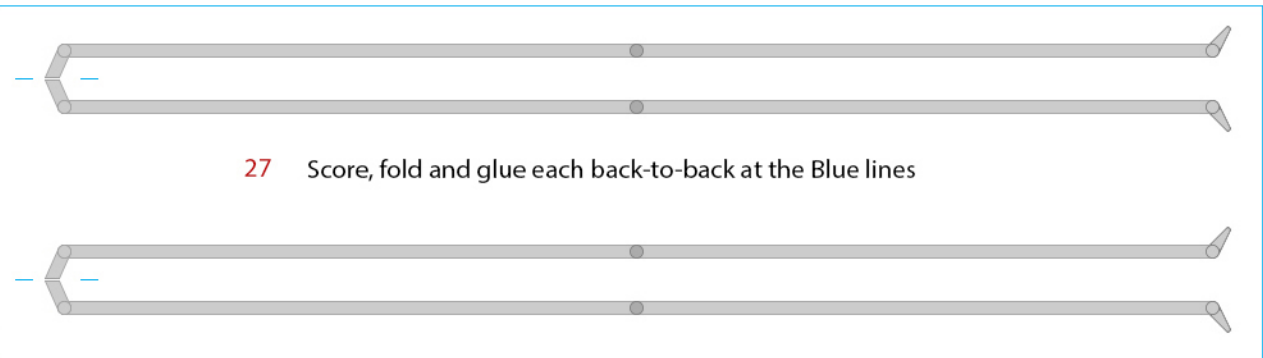
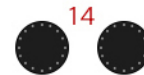
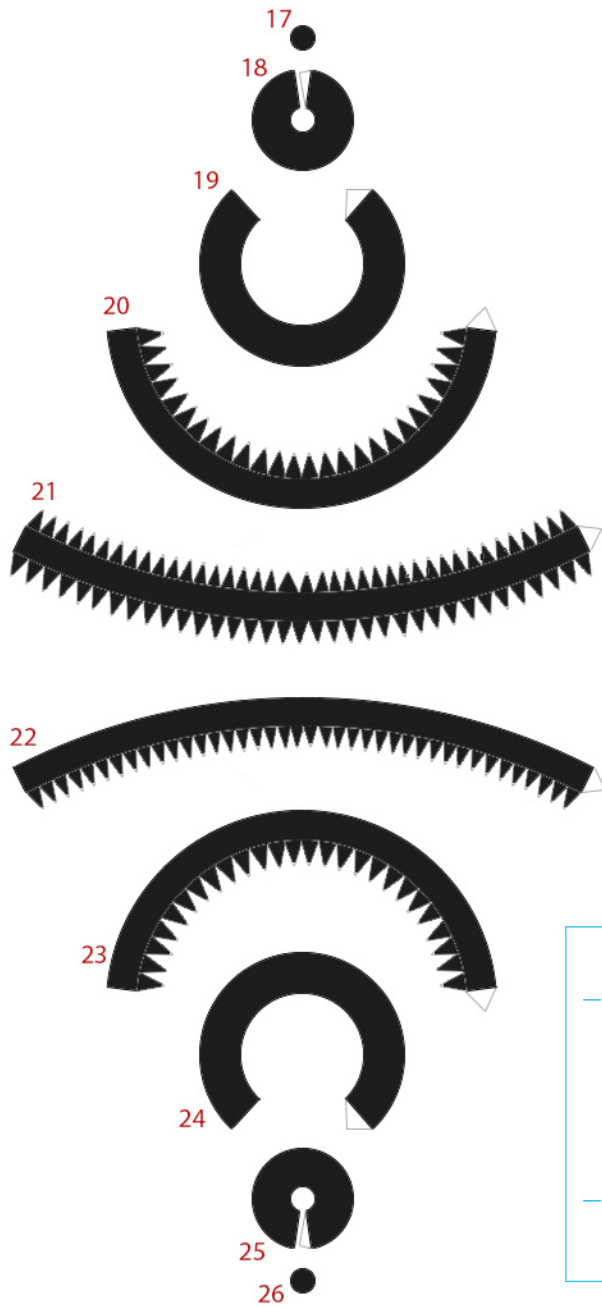
Glue to cardstock fits inside the ring above



Explorer 18 IMP-A



Cut four (4) tooth pics the same length as the line below
colored light grey or silver for the solar panel support rods

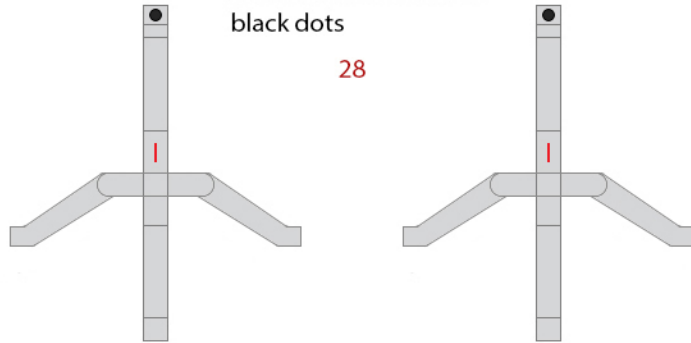


Explorer 18 IMP-A



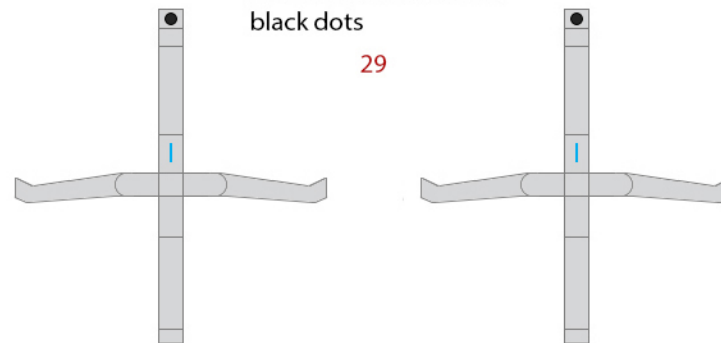
Poke small hole on the
black dots

28



Poke small hole on the
black dots

29



30

Fold each solar panel
back-to-back at the Blue
lines - Do not glue

