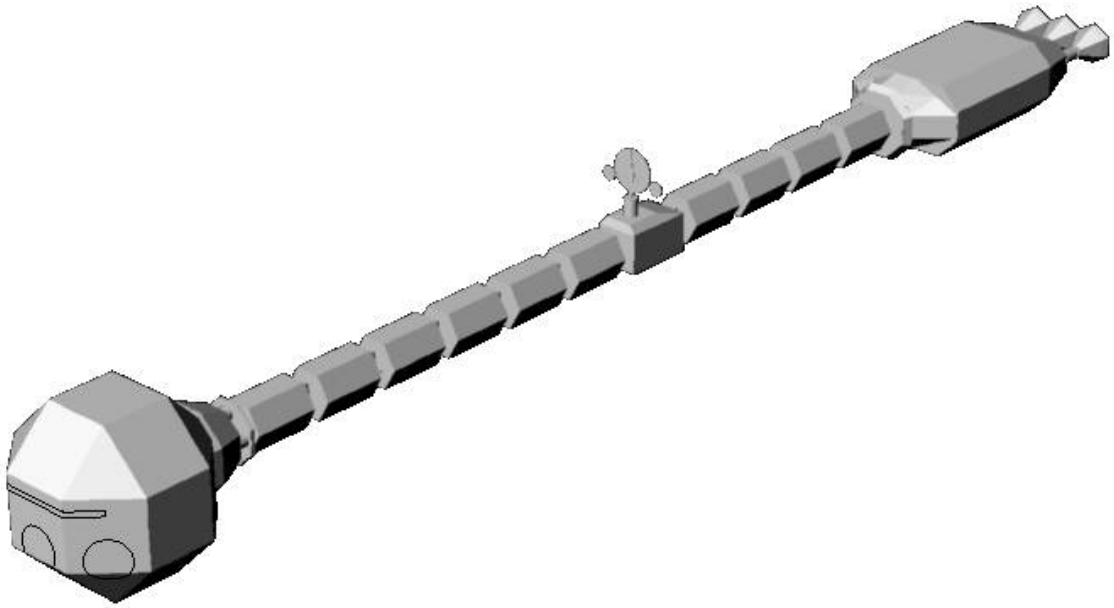
“Discovery” XD-1

ASSEMBLY INSTRUCTIONS



Preliminary

Print model pages on 67lb white cover stock.
Some pieces require lamination onto 1mm cardboard.
A pair of heavy straight-edges such as yardsticks or meter sticks to assemble the spine.

Spine

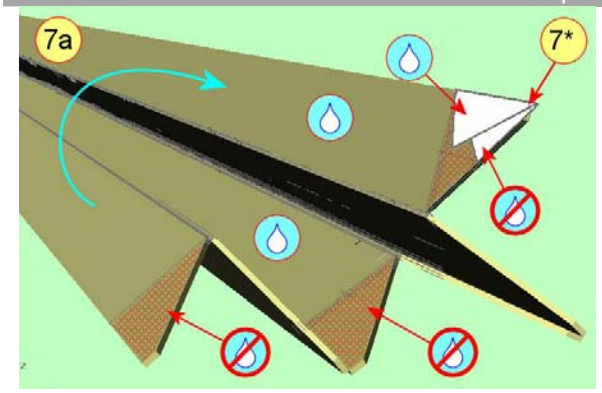


Figure 1

Score and cut out piece 7a.
Cut out piece 7* from 24lb paper
Form 7a into a Y shape, be sure there is no glue on the triangular tabs. (figure 1)
Repeat for 7b except the triangular tabs should be splayed out (see figure 4).

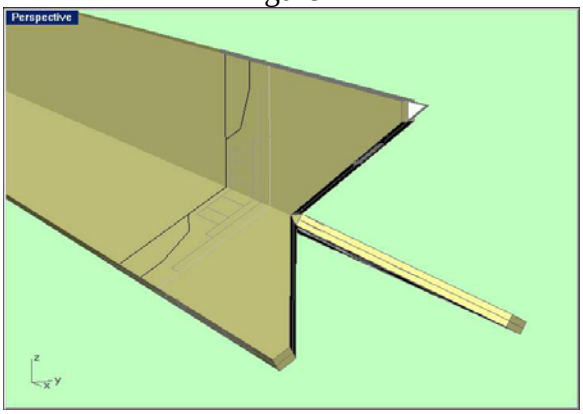


Figure 2

Piece 7a completed

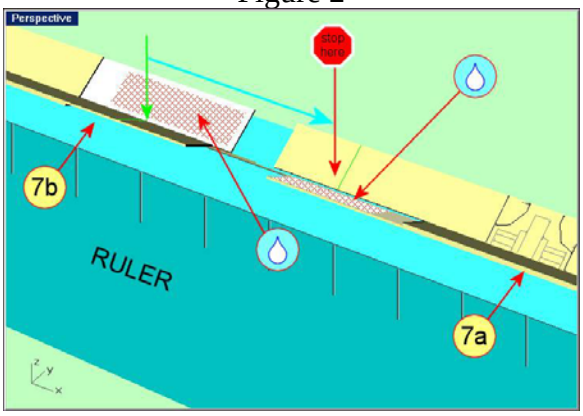


Figure 3

Align the splice between 7a and 7b by matching up the green alignment lines. Clamp one leg of the Y between the two meter sticks to ensure the spine is perfectly straight before gluing. (figure 3) Glue the flaps of the other two legs of the Y together. When dry, glue the third leg of the Y together.

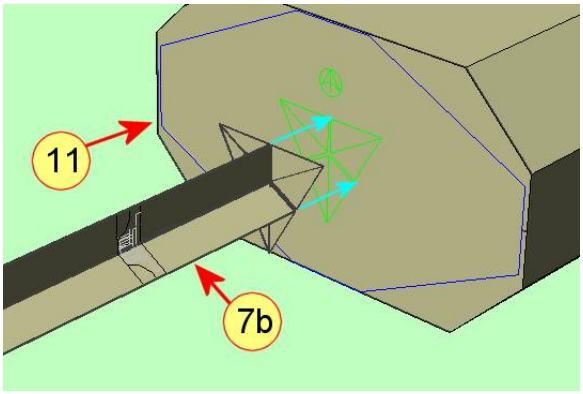


Figure 4

Score, cut out and assemble piece 11. (*Optional*: separate the large end piece from the rest, remove the glue tabs and laminate to 1mm cardboard. Form the main “tube” then insert the end piece from the rear and glue inplace on the inside)
Glue the 7b end of the spine to Piece 11 as shown.

Engine Collar

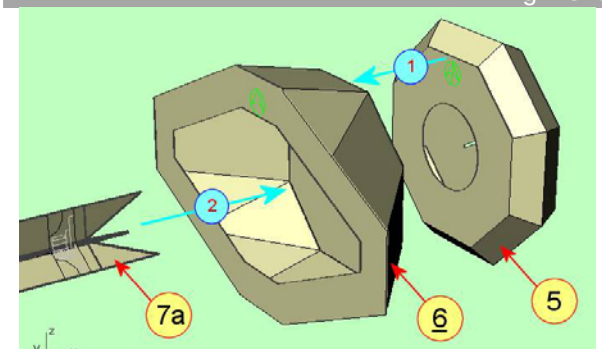


Figure 5

Score, cutout, fold and assemble parts 5 and 6.
Join 5 to 6.
Insert the spine through the y shaped holes in 5 and 6. Note the alignment marks should match with piece 11.

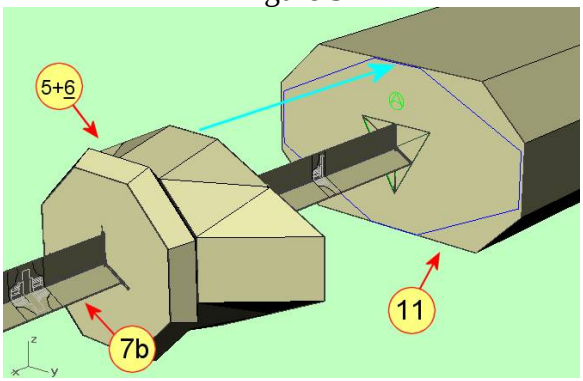


Figure 6

Slide 5-6 assembly down the spine and attach to piece 11.

Fuel Modules

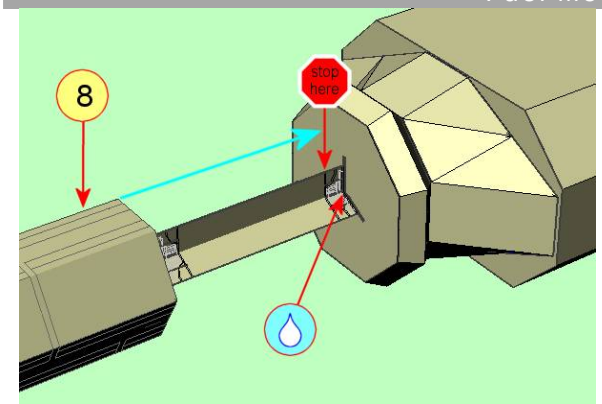


Figure 7

Assemble the 10 hexagonal fuel modules, piece 8.
Mount 4 modules onto the spine by sliding from the front end of the spine.
Align modules between the couplings printed on the spine.
Put a drop of glue where the spine enters the end of the fuel module.

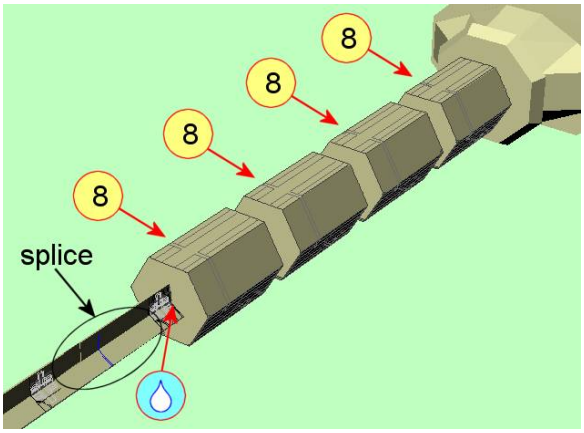


Figure 8

4 fuel modules mounted onto the spine. Note the location of the splice.

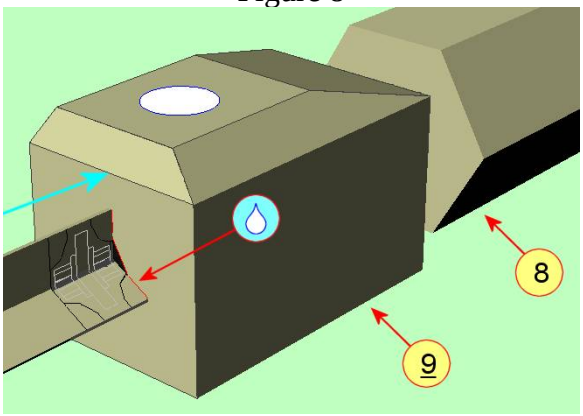


Figure 9

Assemble the AE-35 module, piece 9. Mount onto the spine; note carefully the orientation of the module.

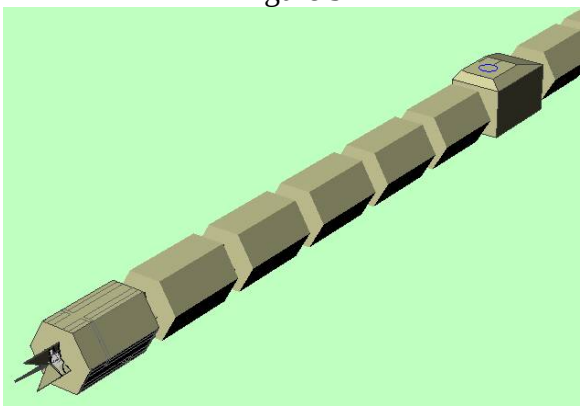
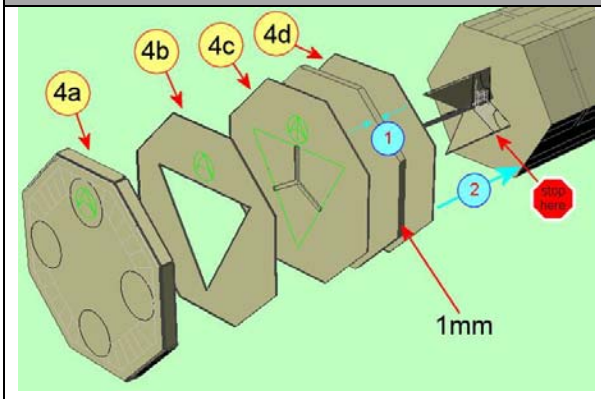
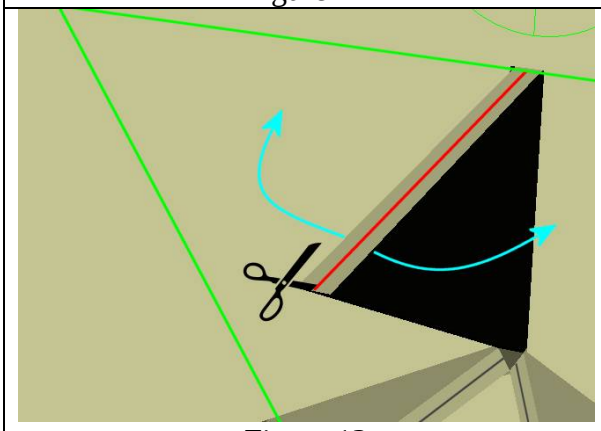
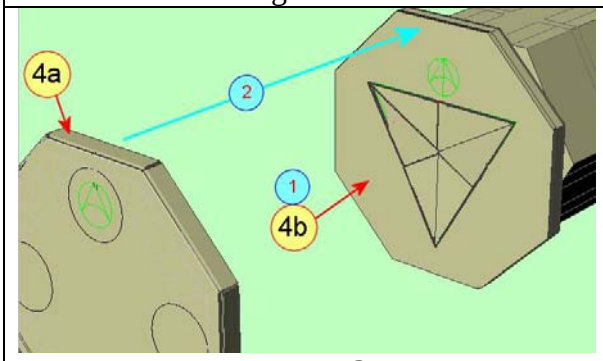


Figure 10

Mount the remaining 6 fuel modules. Vary the orientation of the modules.

 Figure 11	Roughly cutout 4d and laminate to a piece of 1mm cardstock. Laminate 4c onto the backside of the same piece. Cutout the Y shaped hole and trim 4c to the final shape. Cut out 4b and glue in place on 4c. Mount onto the spine as shown aligning the surface of 4d with the mark on the spine.
 Figure 12	Cut the folds joining the triangular tabs at the end of the spine. Open the tabs and glue down onto piece 4c within the triangular cutout in piece 4b.
 Figure 13	Glue piece 4a onto 4b. Fold over the flaps around the edge of assembly.

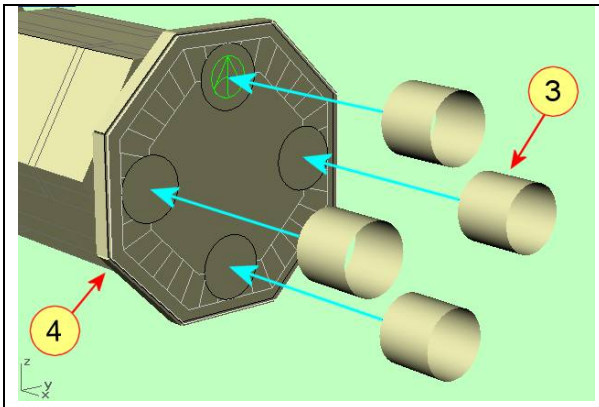


Figure 14

Form the 4 emergency engine tubes, part 3, into cylinders. Attach to part 4 as shown.

Command Module

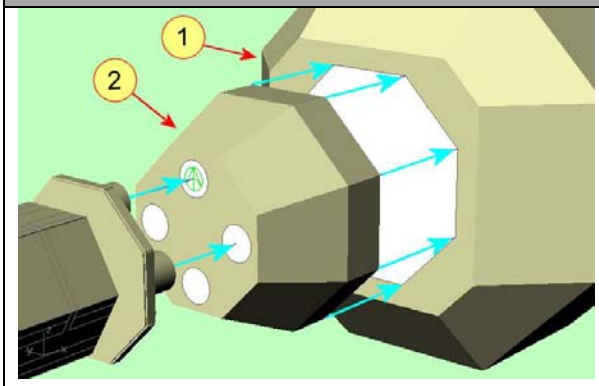


Figure 15

Score, cutout, fold and assemble parts 1 and 2. Attach 2 to 1, carefully noting green alignment marks to complete the Command Module.
Apply a bead of glue around the inside of each of the emergency engine cylinders (3) then attach to piece 2 by holding the assembly vertical until the glue dries.

Engines

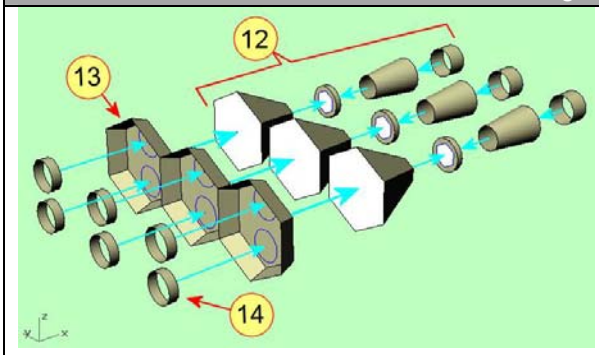


Figure 16

Assemble the engines as shown. Optionally substitute 1mm card for 12e. Form part 13 first attaching the glue tabs around the outside, then fold the large flaps over the outside covering the glue tabs. Form parts 14 into rings with black on the inside.

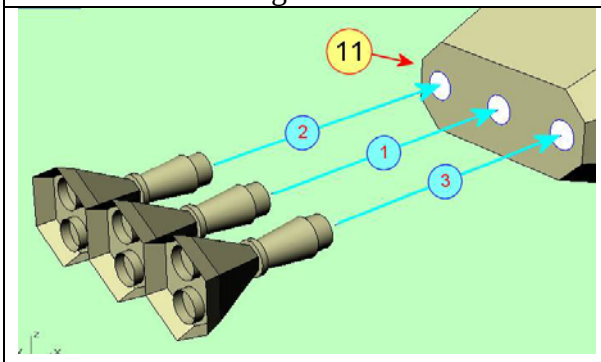
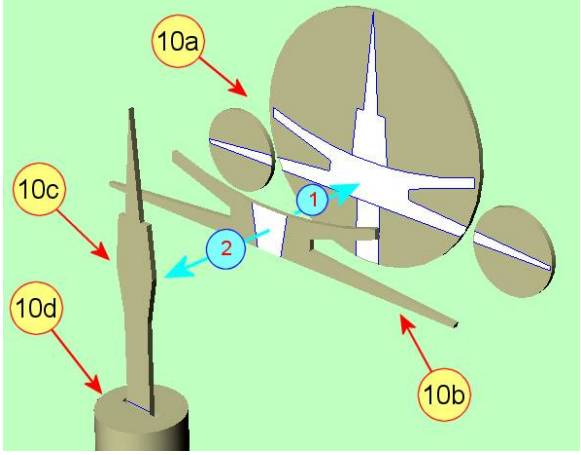
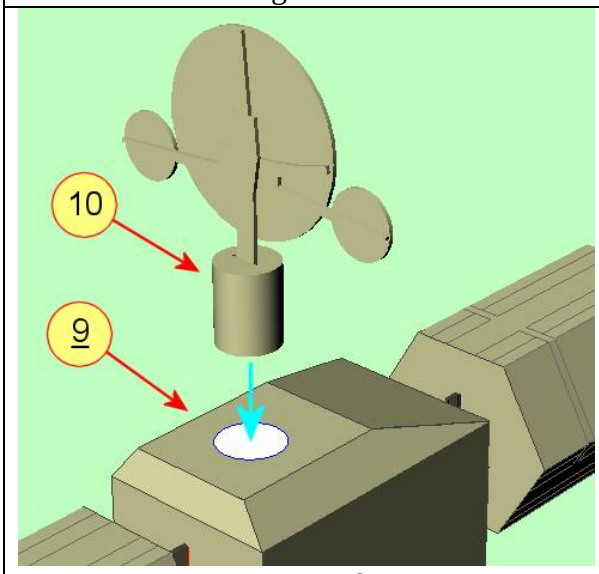


Figure 17

Attach the center engine to the Reactor Module (11). After glue is completely cured attach the outer two engines.

AE-35 Antenna	
 Figure 18	Form the various parts of the antenna by scoring and cutting around the outer rectangles. Fold over and glue to form 2 sided pieces, then cut out the final shapes. Form the base and cylinder of 10d. Glue 10c into he bottom of 10d then cap 10d. Attach 10b to 10a. Attach 10b to 10a.
 Figure 19	Attach completed antenna assembly (10) to the AE35 spine module (9) where indicated with the antenna facing the rear of the spacecraft.
Finished	