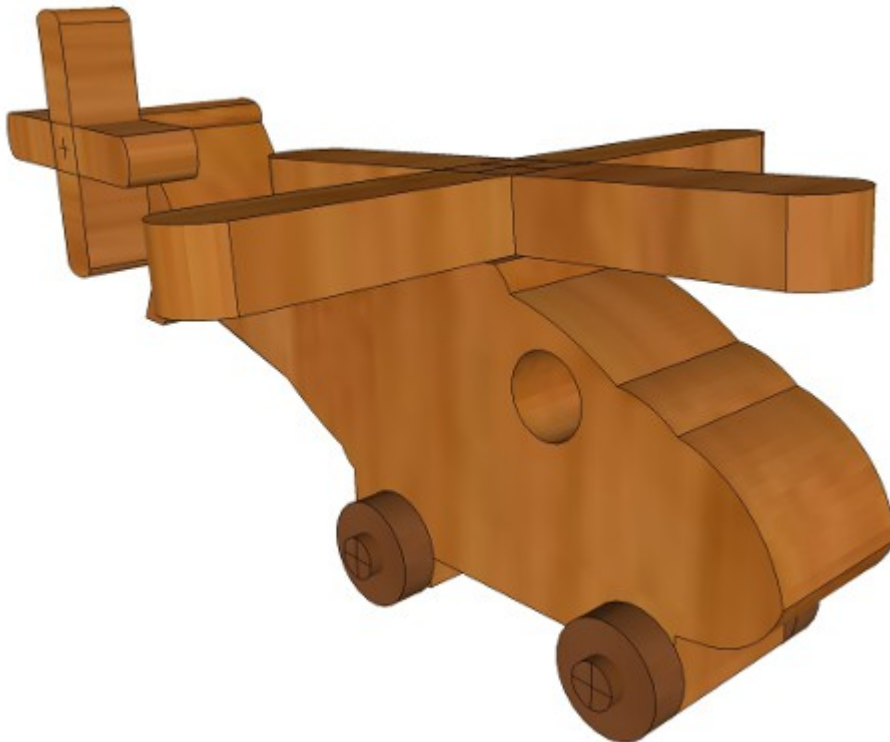


WWCH June 2022 Toy of the Month



Hybrid Advanced Helicopter



Instructions

Please remember to work safely.

This is one way to make the Hybrid Advanced Helicopter. You may have to adapt to the tooling you have available to you. Always use the tools and procedures that make the most sense to you.

Body

1. Make a template from the attached full size pattern. 1/8" scrap or old file folders are a couple of materials you could use.
2. Need a stock of 11" long, by 4" wide, by 1 1/2" thick. It's designed to be made from a 2X4, but any sizable piece of stock will do.
3. See the WWCH Hybrid Advanced Helicopter Fuselage Profile View to see how to cut the pattern for the fuselage template. You'll need a 1/2" Forstner bit for the window.
4. I'm using a scroll saw. Use this or a band saw to cut just outside the template pattern lines for the Hybrid Advanced Helicopter.
5. Cut the actual Hybrid Advanced Helicopter Fuselage out of 2X4 or equivalent stock using the template as a guide.
6. Drill the 1/2" DIA holes using a Forstner bit.
7. Sand to the lines.
8. Round the edges with a sander or round over bit. Up to a 1/4 radius round over bit can be used for this step.

Top Propeller

1. Make a template from the attached full size pattern. 1/8" scrap or old file folders are a couple of materials you could use.
2. Need a stock of 7.5" long, by 7.5" wide, by 3/4" thick.
3. See the WWCH Hybrid Advanced Helicopter Top Profile View to see how to cut the pattern for the Top Propeller template.
4. I'm using a scroll saw. Use this or a band saw to cut just outside the template pattern lines for the Hybrid Advanced Helicopter Wing.
5. Cut the actual Hybrid Advanced Helicopter Top Propeller out of 3/4" stock.
6. Sand to the lines.
7. Round the edges with a sander or round over bit. Up to a 1/4 radius round over bit can be used for this step.

Instructions (continued)

Rear Propeller

1. Make a template from the attached full size pattern. 1/8" scrap or old file folders are a couple of materials you could use. Need a stock of 3" long, by 3" wide, by 3/4" thick.
2. See the WWCH Basic Helicopter Rotor View to see how to cut the Rear Propeller exactly.
3. I'm using a scroll saw. Use this or a band saw to cut just outside the template pattern lines for the Basic Helicopter Rear Propeller.
4. Cut the actual Basic Helicopter Feet out of 3/4" stock.
5. Drill a 1/4" DIA hole to take the 7/32" DIA axle that will be attached to the Body (see Assembly section)
6. Sand to the lines.
7. Round the edges with a sander or round over bit. Up to a 1/4" radius round over bit can be used for this step.

Instructions (continued)

Assembly

1. Drill the holes through the Body and into the Rear Propeller at the designated point.
2. Drill the holes through the Body for the wheels.
3. Drill the holes through the Body and into the Top Propeller at the designated point.
4. Attach the wheels at the four designated points.
5. Attach the Rear Propeller with an axle.
6. Attach the Top Propeller with axles.

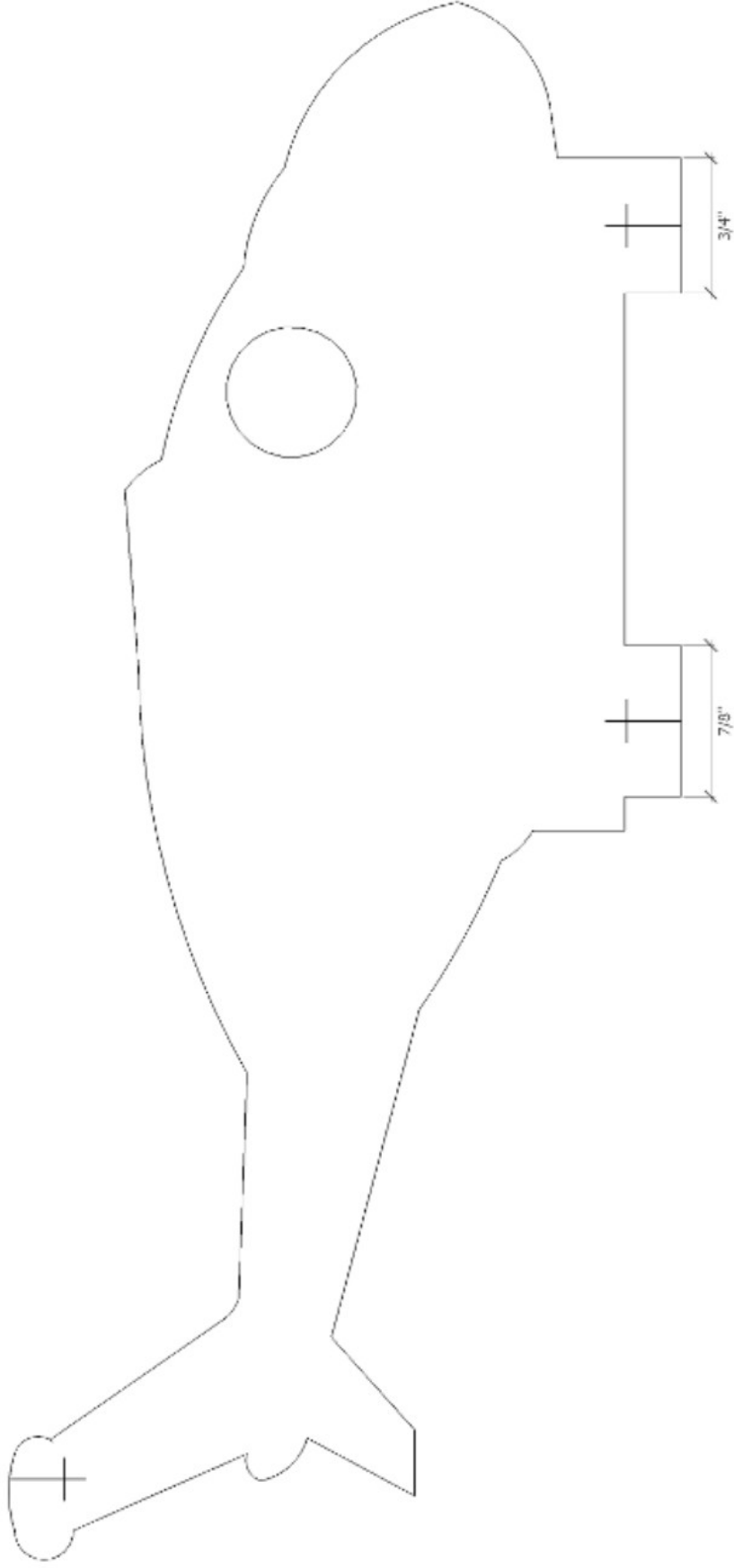
Finish

Use beeswax or leave unfinished to allow for even more creativity by the child to paint as desired.

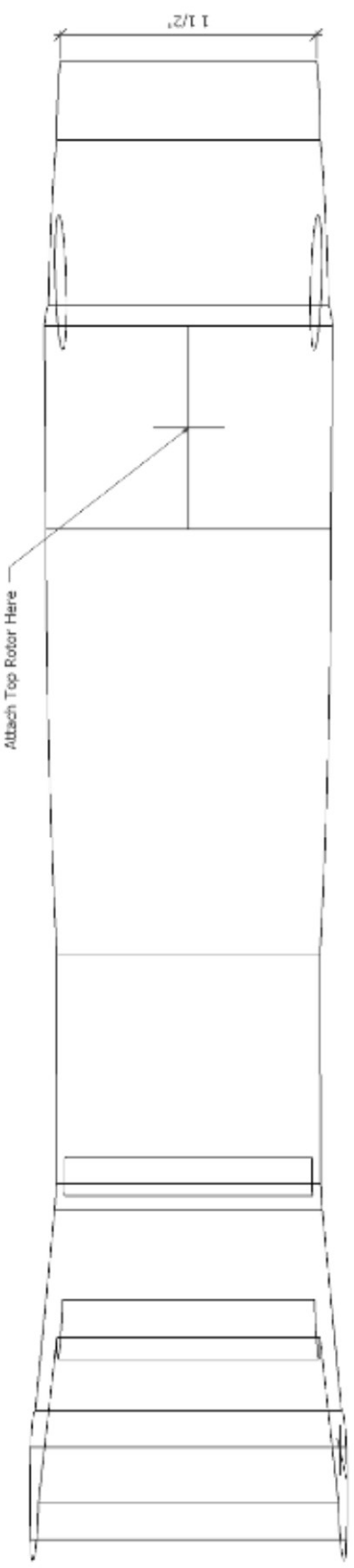
Conclusion

We at the Toy Group of the WWCH would like to thank you for participating in our toy making charitable activity. These toys will bring smiles to the less privileged children of our area.

WWCH Hybrid Advanced Helicopter Body – Profile View – To Scale



WWCH Hybrid Advanced Helicopter Top View – To Scale
Rotor placement and design
Note That Rotor is 3/4" Thick



WWCH Hybrid Advanced Helicopter Propeller View – To Scale; Note Each Rotor is 3/4" Thick

