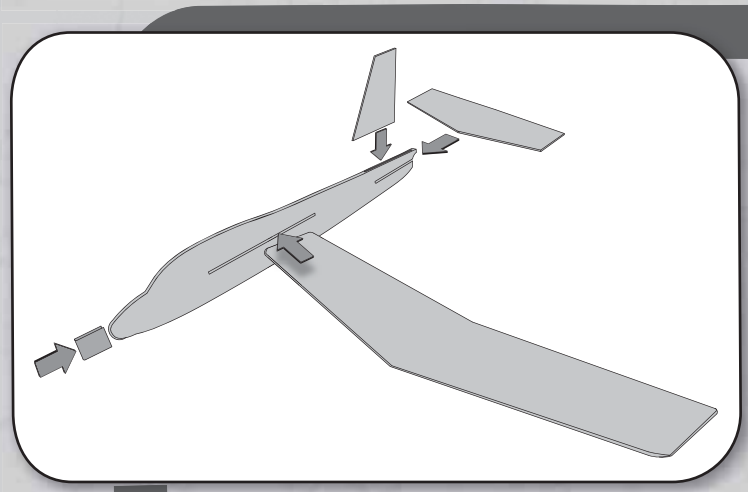
mind CRAFTS
science and fun rolled into one!

MODERN FLIGHT ACTIVITY KIT

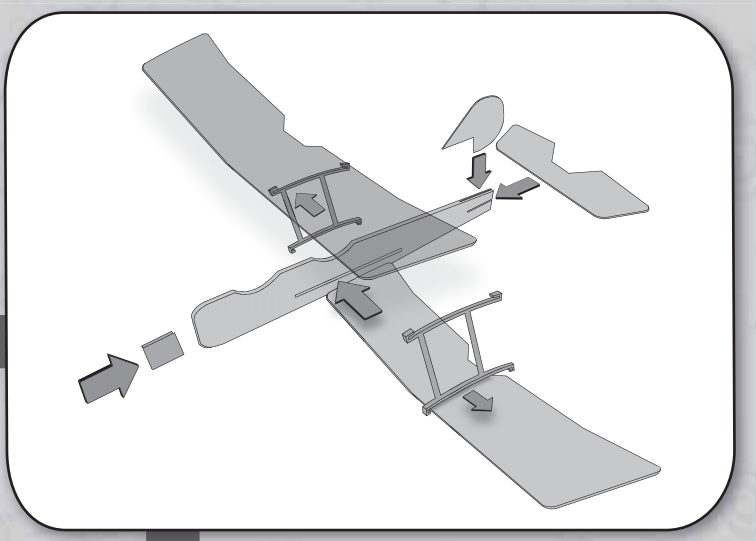
Safety Warnings:

1. Not suitable for children under 3 years because of small parts.
2. Assembly and use of the product should only be done under direct supervision of an adult.
3. Be sure to fly the kits only in areas clear of objects and people. Damage or injury could otherwise result.



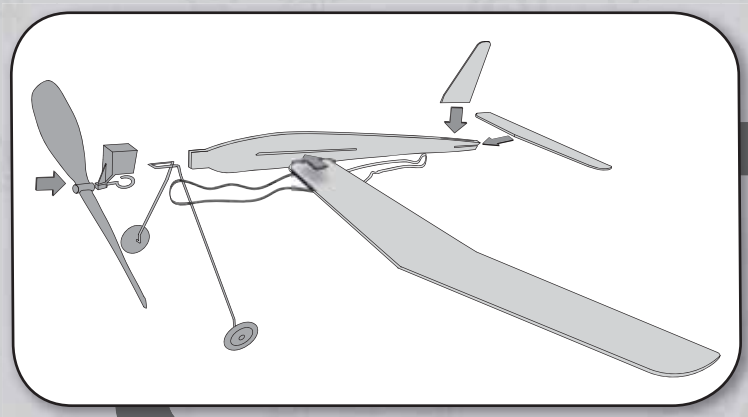
Jet:

1. Insert the main wing into the slot in the fuselage.
2. Install the stabilizer and vertical fin as shown.
3. Place the nose weight onto the front of the fuselage.



Biplane:

1. Insert the bottom wing into the slot in the fuselage.
2. Install the wing struts onto the wings starting at the narrow section near their center, and slide them out about halfway.
3. Install the stabilizer and vertical fin as shown.
4. Place the nose weight onto the front of the fuselage.



Stratosphere:

1. Insert the main wing into the slot in the fuselage.
2. Install the stabilizer and vertical fin as shown.
3. Slide the propeller unit over the landing gear wire and onto the nose of the fuselage.
4. Place the knotted end of the rubber band onto the hook at the rear and slip the other end onto the hook of the propeller unit.
5. Wind the propeller clockwise 60-70 turns.

Flying

- Fly your airplanes in an open area with no trees or people.
- Choose an area with grass for softer landings.
- Fly on days with no or very little wind.
- Always launch your plane into the wind.
- Launch your plane by holding the fuselage below the wing and giving it a straight, level toss.
- For level flight, place the wing's leading edge 1/2" back from the front of the wing slot. You may have to adjust the placement of the wing to make the plane perform the way you want. Moving the wing forward will make the plane climb more. Moving the wing back will make it dive more.
- Minor damage can be repaired with a small amount of white glue.

Ornithopter Parts

1. Wing hinge wire
2. Wing hinge mount (x2)
3. Rubber tube (x2)
4. Wing brace (210mm) (x2)
5. Tail brace (175mm) (x2)
6. Tail mount
7. Brass joiner
8. Connecting rod (x2)
9. Wing mount
10. Wire cap
11. Crank cover
12. Center wing brace
13. Wing material
14. Tail material
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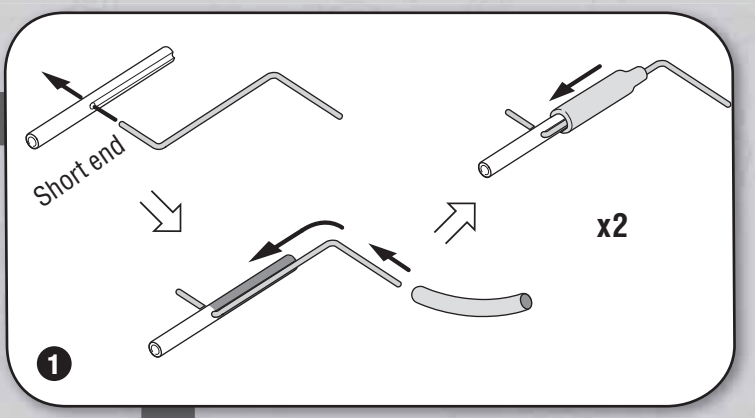
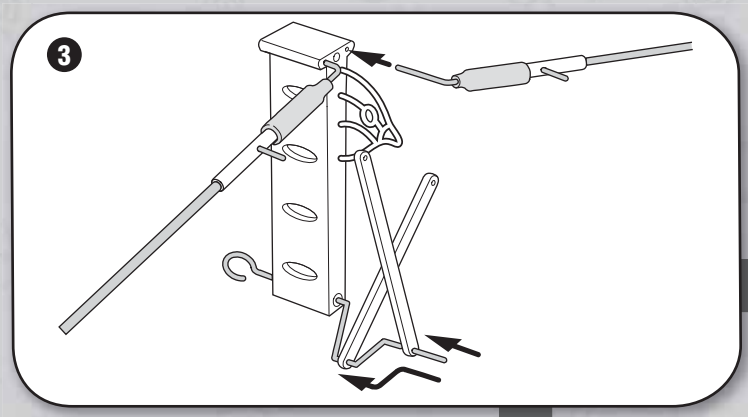
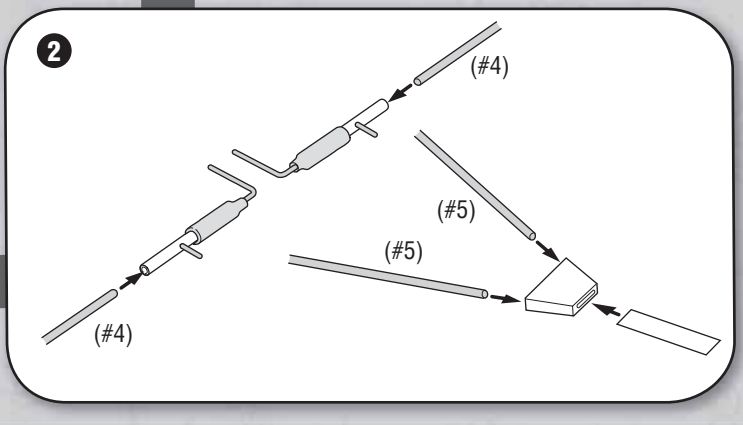
Assembly Guide:

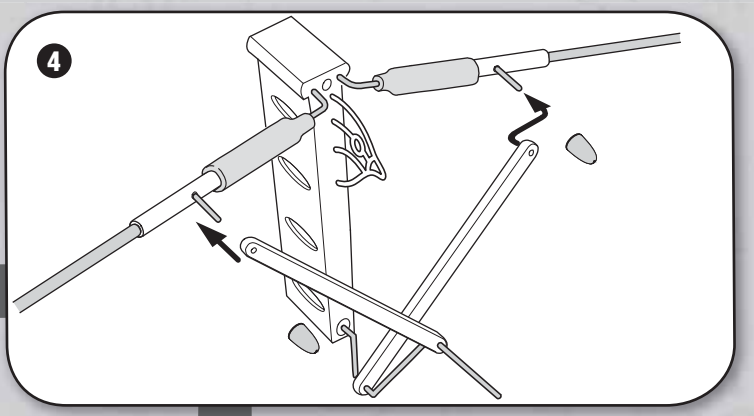
1. Place the short end of the wing hinge wire (#1) into the wing hinge mount (#2) as shown. Slide the rubber tube (#3) over the wing hinge mount assembly.
2. Insert the left and right wing braces (#4) into the open end of the wing mount assembles. Install the tail braces (#5) into wide end of the tail mount (#6). Carefully slide the brass joiner (#7) into the back of the tail mount. **Note:** The ends of the wing and tail braces may need to be slightly sanded for the best fit.
3. Place the long end of the wing hinge wire into the two outer holes at the top of the wing mount (#9). Install one end of the connecting rods (#8) onto the crank at the base of the wing mount as shown.

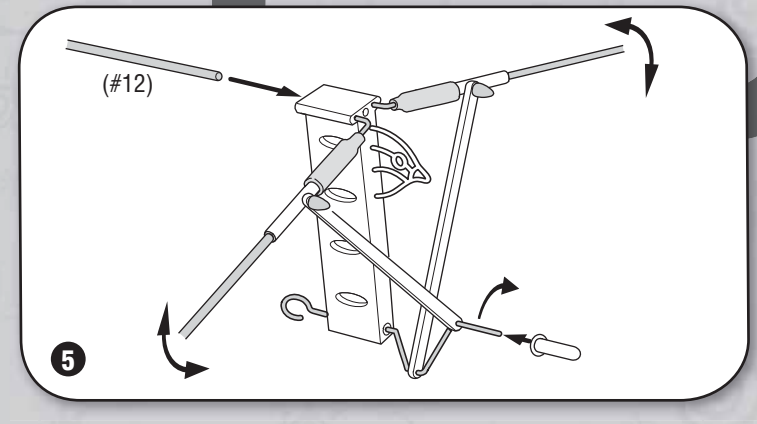






4. Install the top end of the connecting rods onto the long end of the wing hinge wire and secure them with the wire caps (#10).
5. Place one end of the center wing brace (#12) into the back of the wing mount. Install the crank cover (#11) onto the exposed of the crank. Rotate the crank to be sure the parts move smoothly.





s list:

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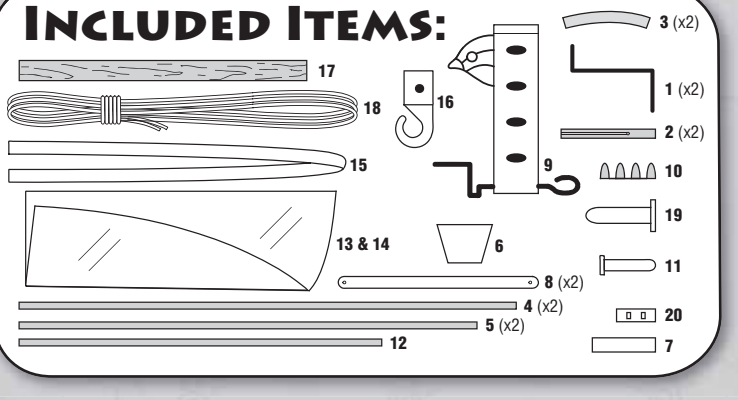
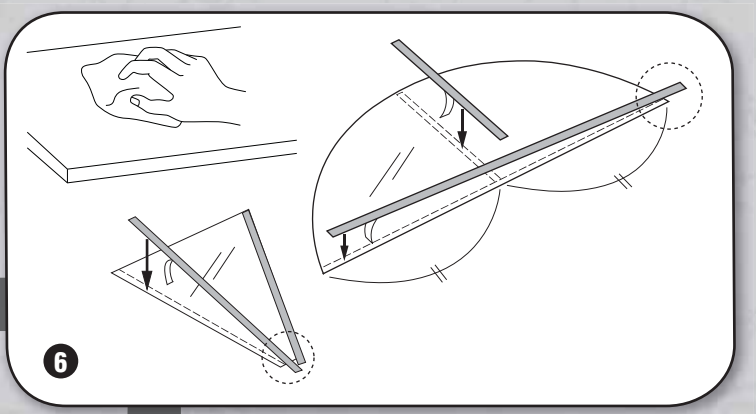
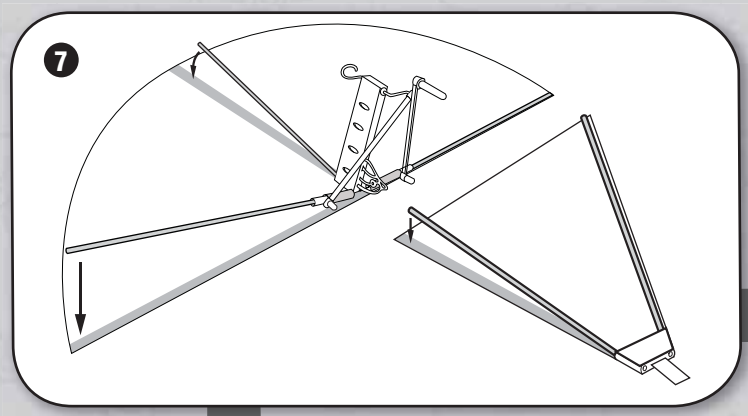
Included Items:

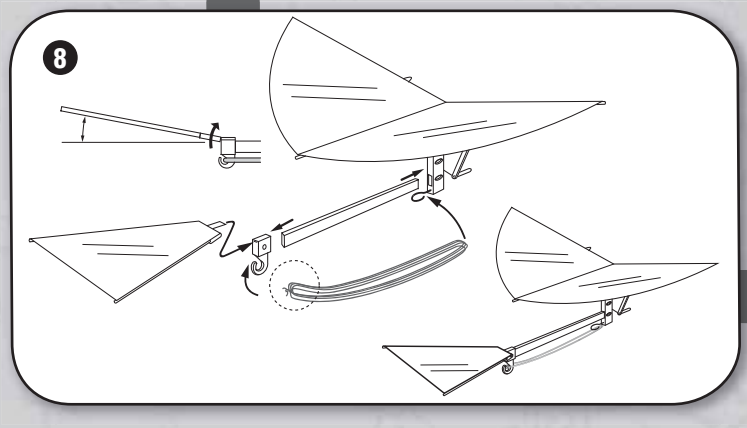


6. Wet a paper towel and use it to dampen a smooth, clean surface large enough to spread out the wing (#13) and tail (#14) material. Place the material shiny side down onto the dampened surface. This will help the material cling to the surface, making it easier to flatten out any wrinkles. Peel the paper backing from one side of the double-sided stick tape (#15) and install it onto the wing and tail material where shown. Keep the tape as dry as possible for the best results.



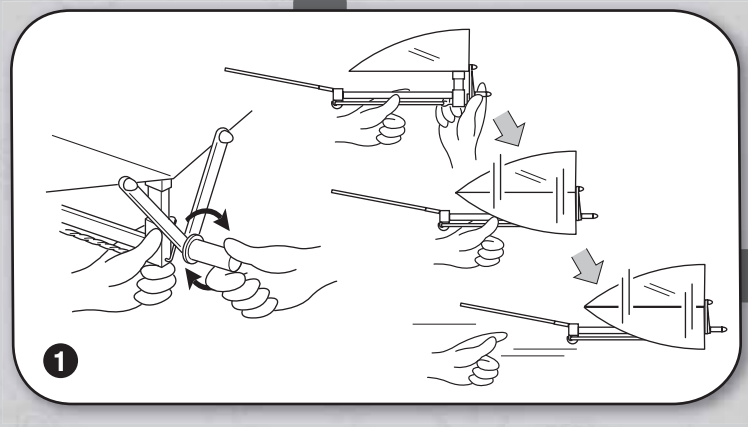


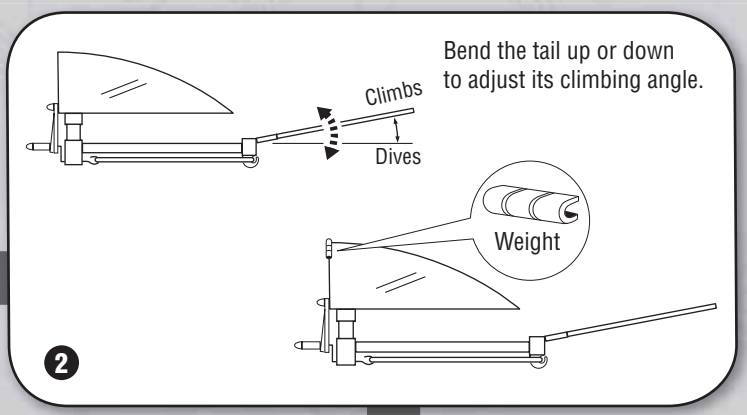
7. Remove the remaining paper backing from the tape. Gently press the wing and tail braces onto the exposed side of the tape. Keep the braces and material as straight as possible. Let the part sit for a few minutes to dry before moving.
8. Install the rear hook (#16) onto one end of the spine (#17) and the wing mount onto the other as shown. Press the exposed end of the brass joiner into the back of the rear hook. Bend the tail up about 15°. Tie the ends of the rubber band (#18) together to form a large loop. Double up the loop 3 times. Place the ends of the now shorter length band on the hooks at each end of the spine.



Flying the Ornithopter:

1. Use the crank handle (#19) to wind the crank 30 times. Then hold the crank in place with one hand so it does not spin. Use the other hand to hold the kit by the spine near the center. Let go of the crank and gently toss the kit into the wind.
2. To change the climb angle adjust the tail. Bending the tail up will cause the kit to climb. Moving the tail down will cause the kit to dive. Install the weight (#20) onto the kit to adjust how it turns. Place the weight on the leading edge of the wing. The kit will turn in the direction of the heaviest side. The further to the outside of the wing, the more effect the weight will have.





Science Facts:

Flight is made possible through a balance of four forces:

Lift: This is the upward force produced by wings moving through the air. To fly, the wings must generate enough lift to overcome the weight of the object.

Weight: Gravity creates a constant downward force due to the weight of the object.

Thrust: Is created when the airplane's engines (or birds flapping wings) propel it forward. The thrust must be strong enough to overcome the object's weight and drag to produce flight.

Drag: Is the air's resistance to things moving through it. It works against thrust to slow objects down.

REVELL® INC., ELK GROVE VILLAGE, IL 60007 U.S.A.

⚠ WARNING:
CHOKING HAZARD — Small parts.
Not for children under 3 years of age.