

Hot air balloon

Name of the object and creator	Hot air balloon by Logopsycom				
Recommended ages	11- 13 years				
Thematic areas combined (STEAM)	Sciences	Technology	Engineering	Arts	Mathematics
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Materials needed	<ul style="list-style-type: none"> • A 5m x 0.5m roll of silk paper • Liquid paper glue • Very fine iron wire • Gauze rolls or compresses • Vegetable wax • A 100cm x 25cm cardboard panel • Cardboard tube from a roll of toilet paper • Microporous tape 				
Outline of the steps	<ol style="list-style-type: none"> 1. Building the lantern 2. Creation of the bamboo strapping 3. Making the wax burner 4. Let's try it ! 				

References

Sequeira, H. (2010). Fabriquer une Lanterne Volant. Le Jardin de Kiran. <https://lejardindekiran.com/fabriquer-une-lanterne-volante-modele-biodegradable/>

STEP BY STEP: How to build a hot air balloon

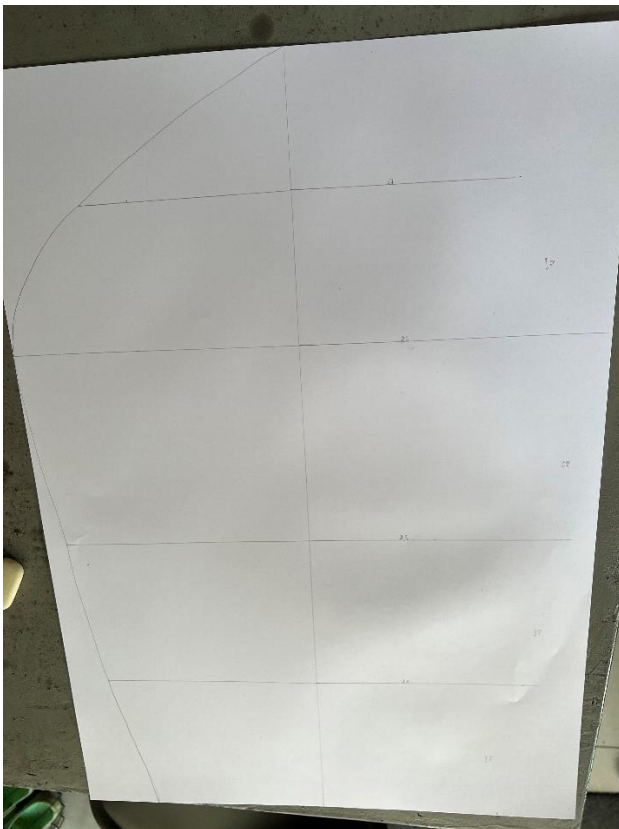
Step 1: Pattern construction

Estimated time: 20'

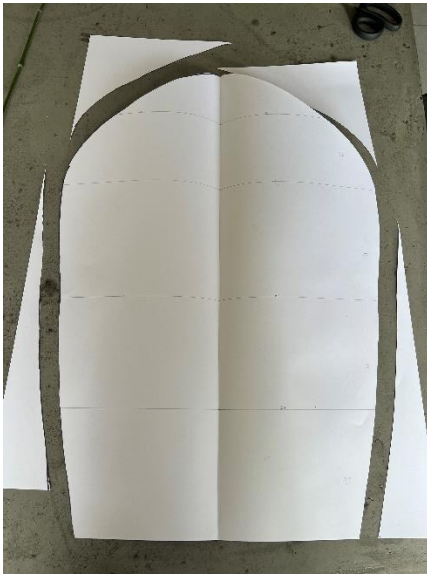
- Gather the material.



- Draw the pattern according to the illustration provided.



- Cut out the pattern.



Step 2: Construction of the lantern

Estimated time: 20'

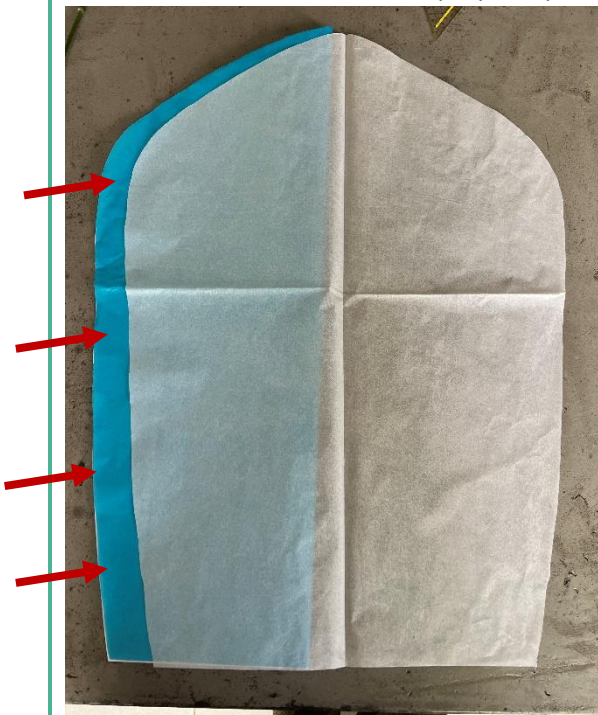
- Cut 4 pieces of tissue paper measuring 50cm by 70 cm.
- Place the pattern on the pieces of tissue paper and cut out.



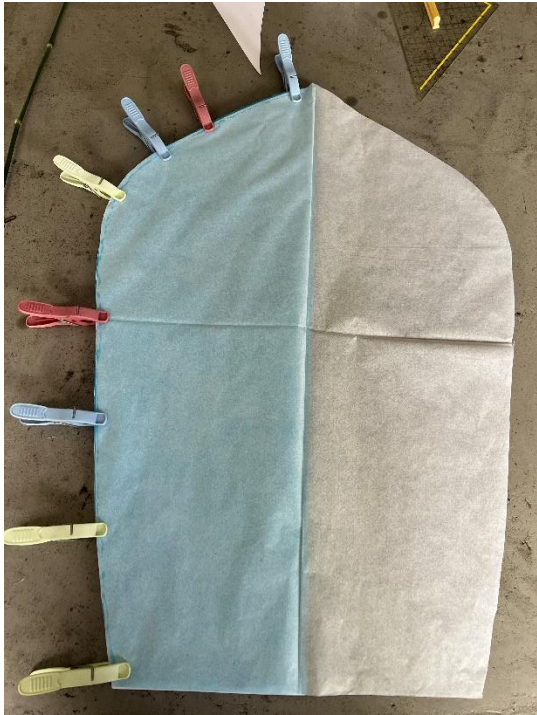
- Repeat the operation 4 times.



- Assemble the first two pieces. On one edge of the folded blue spindle, into which we have inserted the cardboard pattern to avoid any contact with its fold, we will apply a thin line of glue. We will then position one edge of our unfolded white paper spindle.



- Use clothes pegs to help the two spindles stick together.



- When it is completely dry, you can remove the clothes pegs and repeat the same operation for the other spindles.



Step 3: Making the bamboo strapping

Estimated time: 15 minutes



- Assemble the pieces of bamboo to make a hoop approximately 136cm long.



- Attach two pieces of wire to create a cross.



- Insert the circle into the lantern and secure with paper glue



- Your lantern is now complete



Step 4: Create a burner

Estimated time: 25 minutes

- Melting old candles



- Dip the gas strips in the wax and wrap them around a toilet roll. Be careful, the wax is very hot, so use a kitchen utensil for this step.



- Cut a slice of the burner approximately 2 cm thick and fit it under the lantern.

Step 4: Test your hot air balloon !!

Estimated time: 15 minutes

SAFETY MEASURE:

The balloon test should be carried out on a day when there is no wind. Don't let your lanterns fly away on dry days. Remember that the release of lanterns is regulated and it is up to everyone to check with the local authorities regarding

authorisations and the precautions to be taken. The balloon must be well deployed before the burner is ignited and no-one must stand under the lit lantern.

- Deploy the balloon and ignite the burner.
- Hold the lantern by the sides until it fills with hot air.
- When it starts to rise, let go and watch it fly away!



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