


# The Most Egg-cellent Gift



## Overall Details

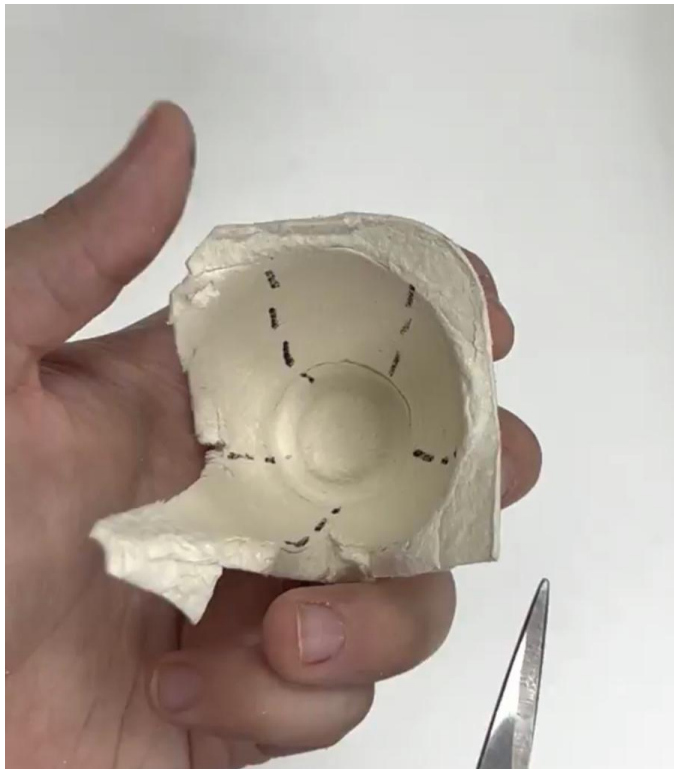
<b>Objective</b>	<p>To educate children on Singapore's native plants namely:</p> <ul style="list-style-type: none"><li>• Singapore Kopsia (<i>Kopsia singapurensis</i>)</li><li>• Simpoh Lak (<i>Dillenia excelsa</i>)</li><li>• Singapore Rhododendron (<i>Melastoma malabathricum</i>)</li></ul>
<b>Summary</b>	<p>To educate children on Singapore's biodiversity by using simple household materials to create flowers/flower crowns which can be used as a Mother's/Father's day gift.</p>
<b>Duration</b>	<p>Around 20 - 60 minutes (depending on the number of flowers made)</p>
<b>What Participants will need:</b>	<p><b>Materials</b></p> <ul style="list-style-type: none"><li>• Cardboard egg cartons</li><li>• Cardboard</li><li>• Paint</li></ul> <p><b>Tools</b></p> <ul style="list-style-type: none"><li>• Scissors</li><li>• Marker/pen</li><li>• Paintbrushes</li><li>• White Glue/Liquid Glue</li><li>• Double-sided Tape</li></ul> 
<b>Remarks</b>	<p>Remarks:</p> <ul style="list-style-type: none"><li>- Parents should always assist their children in handling sharp objects like scissors.</li><li>- Participants can choose the type of flower(s) they want to create.</li></ul>

## Activity Description

### a) General Instructions

*Note: The following set of instructions on how to make the flower is **only for the Singapore Rhododendron**. You are encouraged to use your creativity to create the other types of flowers!*

Making the shape of the Flower		
No.	Instructions	Comments
1	<p>Cut out an egg carton “cup” (each cavity makes 1 cup) from the large egg carton.</p> 	<p>1 cup can produce 5 petals</p> <p>You only need to ensure that the number of cups cut is enough for the flower(s) you are making.</p>
2	<p>Using a black marker/pen, trace the outline of the flower petals on the “cup” as shown below.</p> 	<p>Try to follow the shape of the petal of the respective flower you are cutting.</p> <p>For the Singapore Rhododendron, its petal should resemble a wide teardrop shape.</p> <p>Ensure that all petals are of equal sizes, to your best ability.</p>



- 3** Using your scissors, cut out the petals by following the markings. Trim the edges of your cut flower petals to make them smooth.

Your flower should have 5 petals at the end of this step.



Refer to the video tutorial for this step.



4

Using a paintbrush, paint both sides of the petals purple/pinkish-purple.

Leave the petals to dry for at around 10 minutes.

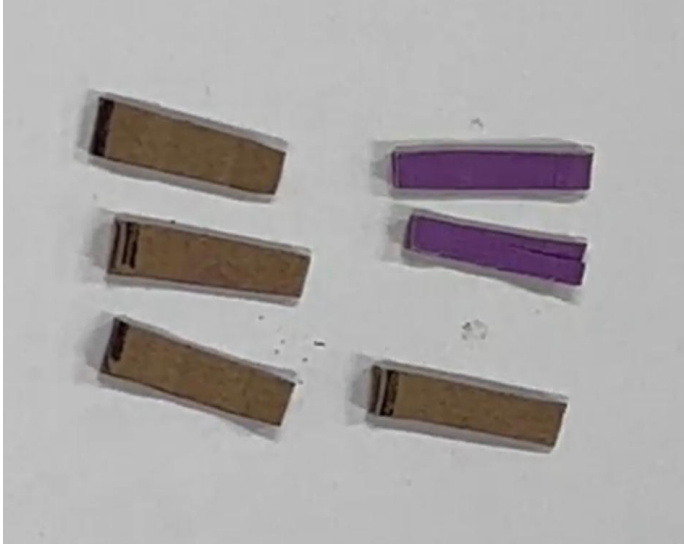


You may coat an extra layer of paint over the first layer after it dries to make the colour more opaque.

While waiting for the paint to dry, parents may share some fun facts about the flower(s) chosen to the child. Refer to the Background Information & Fun Facts attached at the back of this document.

### Adding Details and Assembling the Flower Crown

- 1** Using soft cardboard, cut out the following:
- 1) 6 short, thin strips of cardboard measuring  $\frac{1}{4}$  of your petal width and  $\frac{3}{4}$  of your petal length.
  - 2) A long strip of cardboard measuring 3 cm in width and x\* cm in length (\*Depending on head circumference)



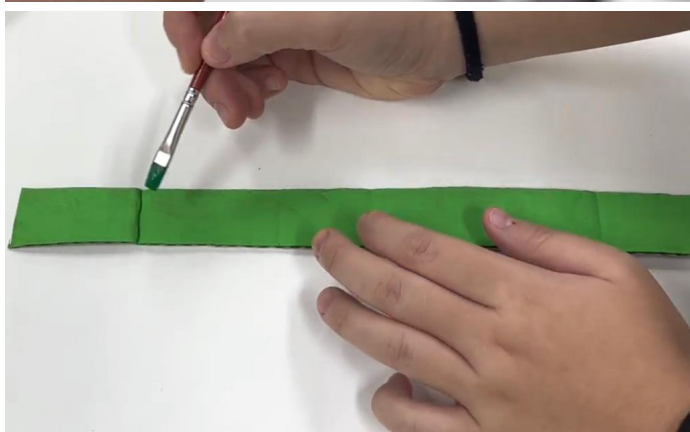
You can reference the video tutorial to visualise the steps better.

- 2** Paint the following colours on the cardboard pieces:
- 1) 6 short, thin strips of cardboard: Yellow (both sides)
  - 2) Long strip of cardboard: Light green (one side)

Leave them to dry for at least 15 minutes.

While waiting for the paint to dry, parents may share some fun facts about the flower(s) chosen to the child. Refer to the Background Information & Fun Facts attached at the back of this document.







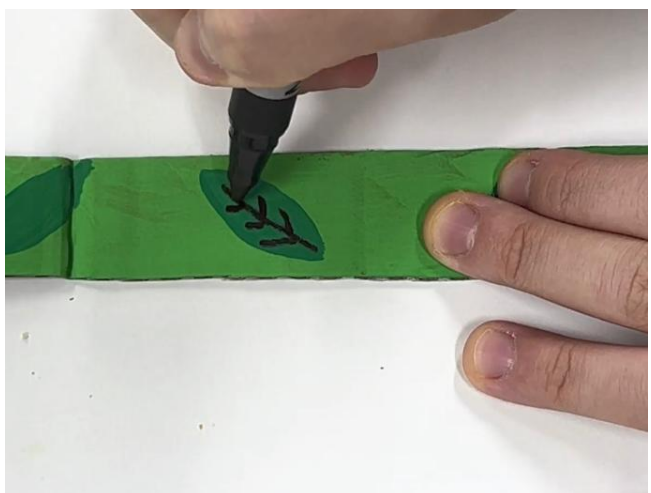
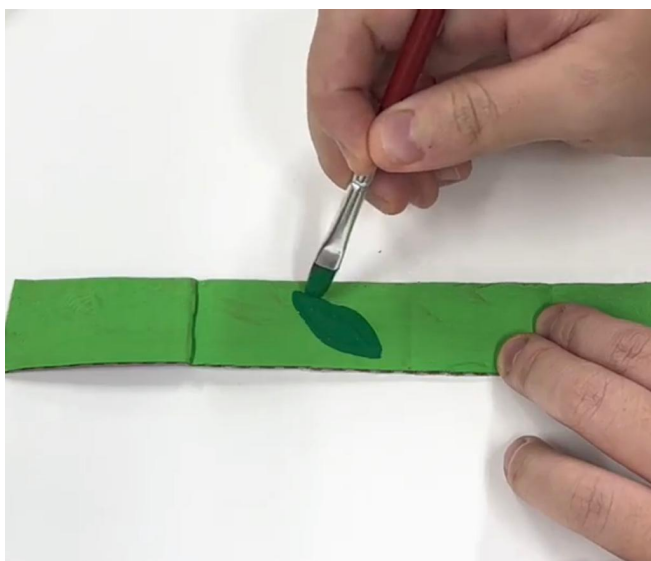
- 3** Crease the bottom section of the short, thin strip of cardboard. Repeat this for the remaining 5 strips of cardboard.



Refer to the video tutorial for this step.

<p><b>4</b></p>	<p>Apply glue to one side of the creased bottom section, and attach the short, thin strip of cardboard to the flower's centre.</p> <p>Allow to dry and repeat this for the remaining 5 strips.</p>  	<p>Refer to the video tutorial for this step.</p>
<p><b>5</b></p>	<p>Using dark green paint, paint leaves on your flower crown. Leave to dry.</p> <p>Using a black marker, draw the veins on the leaves.</p>	<p>Refer to the video tutorial for this step.</p>





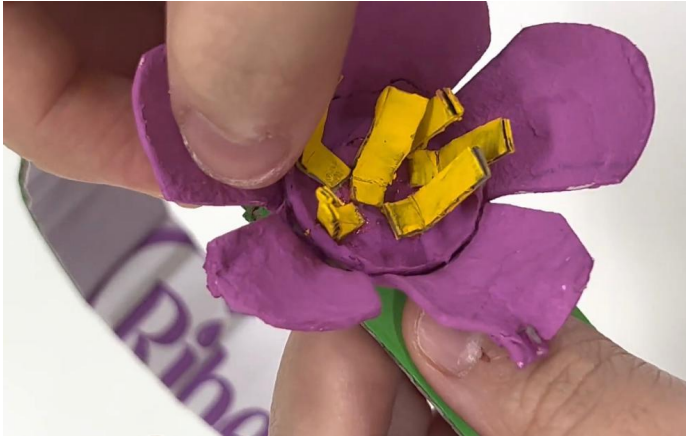
**6** Use double-sided tape to fasten the ends of the long strip of cardboard together to create the crown.



Refer to the video tutorial for this step.

7

Apply glue to the base of your finished flower and attach it to the crown.



Refer to the video tutorial for this step.



8

Repeat the “Making the flower” steps above to create more flowers for your flower crown.



## Background Information & Fun Facts

### Singapore Kopsia (*Kopsia singapurensis*)

Features	
Leaves	<ul style="list-style-type: none"> <li>• Opposite, stalked leaves</li> <li>• Leathery leaf blades</li> <li>• Oval leaf blades gradually narrow to a blunt tip of 1.3 cm long</li> </ul>  <p><b>Fig. 1 Singapore Kopsia Leaves</b> (Photo Credit: <a href="http://www.monaconatureencyclopedia.com">www.monaconatureencyclopedia.com</a>)</p>
Flowers	<ul style="list-style-type: none"> <li>• Flowering clusters are 3.5–12.5 cm long</li> <li>• White flowers, each with 5 petals that are fused to form a tube and 5 free lobes.</li> <li>• Throat of the tube is red.</li> <li>• The flowers are usually 2.5-4 cm wide but can reach up to 7.6 cm.</li> </ul>  <p><b>Fig. 2 Singapore Kopsia Flower</b> (Photo Credit: NParks)</p>
Fruits	<ul style="list-style-type: none"> <li>• Dull red, flattened, somewhat triangular in shape</li> <li>• </li> </ul>

Location
<ul style="list-style-type: none"> <li>• Grows in lowland evergreen forest, swamp forest and on river banks, up to 600 m in altitude.</li> <li>• Occurs locally in Nee Soon Swamp Forest</li> </ul>
Conservation Status
<ul style="list-style-type: none"> <li>• Critically Endangered due to Habitat Loss</li> </ul>
Fun Facts
<ul style="list-style-type: none"> <li>• Used as a substitute for ceremonial ribbon during the opening of rebuilt herbarium in Singapore Botanic Gardens in 1964.</li> <li>• Hardy plant tolerant of waterlogged soils.</li> </ul>

**References:** <https://www.nparks.gov.sg/florafaunaweb/flora/2/9/2987>

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## **Simpoh Lak (*Dillenia excelsa*)**

### **Features**

#### **Leaves**

- Medium-large (15-30 cm long)
- Glossy green, prominently-veined, with slightly serrated<sup>1</sup> margins
- Reddish young leaves



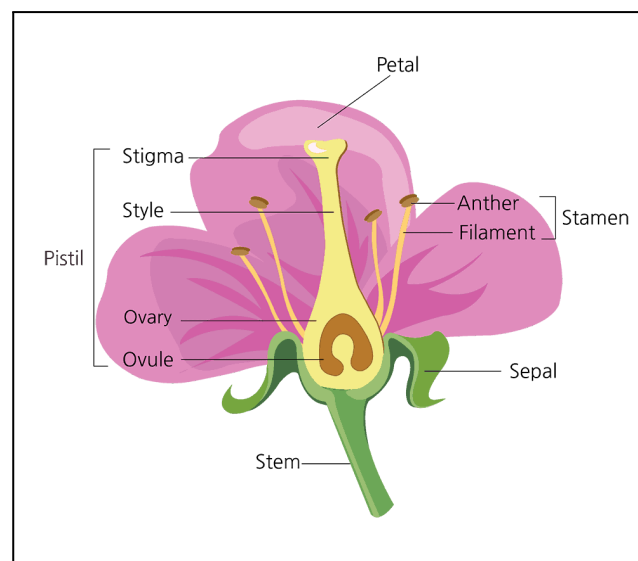
**Fig. 1 Simpoh Lak Leaves**

(Photo Credit: Patricia Yap, NParks Flora & Fauna Web)

<sup>1</sup> Serrated: Jagged edge


#### **Flowers**

- Large (8-10 cm across) and bright yellow petals (typically 5)
- Pinkish stigma<sup>2</sup> in the centre, contrasted by numerous dark to purplish-red taller inner stamens<sup>3</sup>, surrounded by shorter and more reflexed yellow outer stamens
- Produced singly or in few-numbered clusters, upward-facing
- Unopened buds enveloped by fleshy dark red to reddish-green sepals<sup>4</sup>



**Fig. 2 Anatomy of a flower**

(Photo Credit: Trees.com)

	<p><sup>2</sup> Stigma: The top of the female portion of the flower's reproductive system that helps capture pollen</p> <p><sup>3</sup> Stamen: The male fertilising organ of a flower, typically consisting of a pollen-containing anther and a filament</p> <p><sup>4</sup> Sepals: Modified leaves that encase the developing flower</p> <ul style="list-style-type: none"> <li>• Flowers open early in the morning and last for a day</li> <li>• Rich in honey and pollinated mainly by honey bees, belonging to the Apidae family</li> </ul>  <p><b>Fig. 3 Simpoh Lak Flowers</b> (Photo Credit: Tee Swee Ping, NParks Flora &amp; Fauna Web)</p>
Fruits	<ul style="list-style-type: none"> <li>• Dehiscent follicles<sup>5</sup> (around 3 cm across), ripens to translucent white</li> <li>• Splits to reveal star-shaped whitish interior, pulp-free, lined with brown seeds covered by red aril<sup>6</sup></li> </ul> <p><sup>5</sup> Dehiscent follicles: A fruit that splits open, and develops from a single carpel. A carpel is the female reproductive organ of a flower, consisting of an ovary, a stigma, and usually a style.</p> <p><sup>6</sup> Aril: Extra seed covering</p>
<b>Location</b>	
<ul style="list-style-type: none"> <li>• Mid-canopy tree of primary and secondary rainforests</li> <li>• Mainly found on wetlands (e.g. freshwater swamps and periodically flooded riverbanks), sometimes on ridges and hillsides</li> </ul>	
<b>Conservation Status</b>	
<ul style="list-style-type: none"> <li>• Listed as Critically Endangered according to the NParks Flora &amp; Fauna Web</li> </ul>	
<b>Fun Facts</b>	
<ul style="list-style-type: none"> <li>• Flowers → bring back memories of National Service for some as the Simpoh Lak is a relative of a much smaller Simpoh Ayer (<i>Dillenia suffructicosa</i>), which is usually cut down and used as camouflage during military training</li> <li>• However, the Simpoh Lak is a much taller tree with a columnar<sup>7</sup> crown, and the flowers</li> </ul>	



have a deep red centre, unlike the Simpoh Ayer



**Fig. 4 Simpoh Ayer Flower**  
**(*Dillenia suffruticosa*)**

(Photo Credit: Boo Chih Min, NParks Flora & Fauna Web)

<sup>7</sup> Columnar: Arranged vertically

#### **Ethnobotanical Use**


- Food: Herb and Spice
- Medicinal:
  - Plant sap used to treat chest infections
  - Young leaves are used to treat swelling
- Timber: Wood used for pilings, railway sleepers, fencing etc.


#### **References:**

<https://www.nparks.gov.sg/nparksbuzz/issue-29-vol-2-2016/conservation/natural-heritage-10-native-plants-of-singapore>

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**Singapore Kopsia (*Kopsia singapurensis*)**

Features	
Leaves	<ul style="list-style-type: none"><li>• Opposite, stalked leaves</li><li>• Leathery leaf blades</li><li>• Oval leaf blades gradually narrow to a blunt tip of 1.3 cm long</li></ul>  <p>© NParks Flora &amp; Fauna Web</p> <p><b>Fig. 1 Singapore Kopsia Leaves</b> (Photo Credit: Ang Wee Foong, NParks Flora &amp; Fauna Web)</p>
Flowers	<ul style="list-style-type: none"><li>• Flowering clusters are 3.5-12.5 cm long</li><li>• White flowers</li><li>• Throat of the tube is red</li><li>• Usually 2.5-4 cm wide but can reach up to 7.6 cm</li></ul>



	 <p><b>Fig. 2 Singapore Kopsia Flower</b> (Photo Credit: Ang Wee Foong, NParks Flora &amp; Fauna Web)</p>
Fruits	<ul style="list-style-type: none"> <li>• Dull red, flattened, somewhat triangular in shape</li> </ul>
<b>Location</b>	
<ul style="list-style-type: none"> <li>• Grows in lowland evergreen forest, swamp forest and on river banks, up to 600 m in altitude</li> <li>• Occurs locally in Nee Soon swamp forest</li> <li>• Threatened by habitat loss</li> </ul>	
<b>Conservation Status</b>	
<ul style="list-style-type: none"> <li>• Listed as Critically Endangered according to NParks Flora &amp; Fauna Web</li> </ul>	
<b>Fun Facts</b>	
<ul style="list-style-type: none"> <li>• Used as a substitute for ceremonial ribbon during the opening of the rebuilt herbarium in Singapore Botanic Gardens in 1964</li> <li>• Hardy plant tolerant of waterlogged soils</li> </ul>	

**References:**

<https://www.nparks.gov.sg/florafaunaweb/flora/2/9/2987>

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## Singapore Rhododendron (*Melastoma malabathricum*)

Features	
Leaves	<ul style="list-style-type: none"> <li>• Leave blades are lanced-shaped</li> <li>• 3 prominent leaves – one central and 2 marginal</li> <li>• Leaves are bristly on the underside</li> </ul> <p><sup>1</sup> Lanced-shaped: a long and narrow shape that tapers to a point</p>
Flowers	<ul style="list-style-type: none"> <li>• 8 cm wide in size</li> <li>• Colour of petals may range from dark magenta-pink to white</li> <li>• Attract pollinators such as the Pearly-banded Bee (<i>Nomia strigata</i>), Large Carpenter Bees (<i>Xylocopa latipes</i>) and Blue-banded Digger Bee (<i>Amegilla andrewsi</i>), for pollen</li> <li>• Lifespan of flower: 1 day</li> </ul>  <p>NParks Flora&amp;FaunaWeb</p> <p><b>Fig. 1 Pearly-banded Bee pollinating the Singapore Rhododendron</b> (Photo Credit: Ang Wee Foong, NParks Flora &amp; Fauna Web)</p>
Fruits	<ul style="list-style-type: none"> <li>• Bears red fruits which are round and 6-10 mm wide</li> <li>• When ripe: <ul style="list-style-type: none"> <li>○ Open up irregularly to reveal the dark blue pulp with orange coloured seeds</li> </ul> </li> <li>• Edible but tasteless</li> <li>• Pulp stains the tongue blue when consumed</li> <li>• Usually consumed by birds and squirrels</li> </ul>  <p>© NParks Flora &amp; Fauna Web</p>

	<p><b>Fig. 2 Singapore Rhododendron Fruit</b> (Photo Credit: Shi Biying, NParks Flora &amp; Fauna Web)</p>
<b>Location</b>	
<ul style="list-style-type: none"> <li>• Found not only in Singapore but also in Malaysia and Sri Lanka</li> <li>• In the lowlands</li> <li>• In open sites</li> <li>• In wastelands</li> <li>• In secondary forests</li> <li>• Can be considered invasive species in other countries</li> </ul>	
<b>Conservation Status</b>	
<ul style="list-style-type: none"> <li>• Listed as a species of Least Concern according to the NParks Flora &amp; Fauna Web</li> </ul>	

**References:**

<https://www.nparks.gov.sg/florafaunaweb/flora/2/2/2221>

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