

11. Garden Cures

Aim	Students identify plants in the school garden which have been used traditionally as medicinal plants by the various cultures (Malay, Indian, Chinese, 'Western' etc.). They take photos, write and design educational labels for these plants.
Recommended for	Sec 1-3
Subject Links	Chemistry: organic compounds; IT
Horticultural Skills	Herbs, spice and vegetable gardens; fragrant plants
Process Skills	Observing, generating
Equipment/Materials	Laminator, laminating film, digital camera. Optional: 'A Guide to Medicinal Plants' (Singapore Science Centre Guide Book)
Duration	1 gardening session (1 hour)
Preparation	Photocopy the handouts and book the computer room (for web research)
Safety	Look out for students who may be allergic to pollen in the air or plant sap. Warn students not to ingest any plant parts or preparation.

Procedure

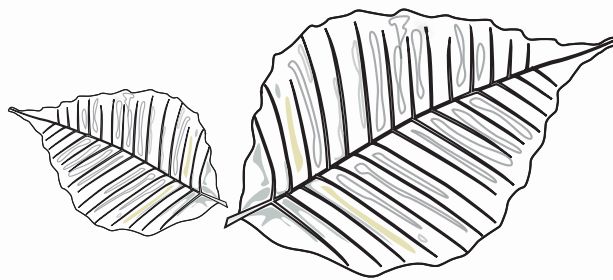
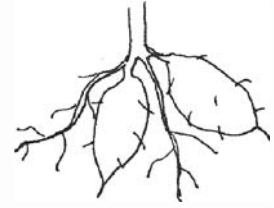
1. Distribute the handout, explain the activity and briefly run through the main points on the handout.
2. Let students go to the computer room to do a preliminary research on local, traditional medicinal plants. or use 'A Guide to Medicinal Plants' (Singapore Science Centre Guide Book).
3. They then go to the school garden to identify those found in your school garden.
4. They write and design educational labels for the plants.
5. Teams can post their findings on your school's blog or the NParks Gardening blog 'Young Gardeners' (http://www.nparks.gov.sg/blogs/young_gardeners/).
6. Extensions:
 - Students can build wooden and/or acrylic signage for the plants (as part of their subject Design and Technology).
 - Let students make suggestions for 'medicinal' plants to be planted in the school garden. Get them involved in planting and caring for these.
 - Get students to develop a 'traditional medicine trail' in your school.

Debrief

Many of our local plants have traditional medicinal uses, which we are not aware of. Here are some common examples:

- **Indian Curry Leaf** (*Murraya koenigii*) - traditionally known to act as a disinfectant, aid digestion, ease diarrhoea, (potential medicine for curing diabetes)
- **Ginger** (*Zingiber officinale*) - traditionally known to help cure flu, poor digestion and nausea
- **Basil** (*Ocimum basilicum*) - known to have anti-bacterial, anti-inflammatory properties
- **Coriander** (*Coriandrum sativum*) - known to contain a natural antihistamine, vitamin C and bioflavonoid which helps in reducing allergic reactions (e.g. hay-fever).

- **Sweet Potato** (*Ipomoea batatas*) - known to have anti-oxidant effect, anti-inflammatory properties
 - **Mint** (*Mentha* spp.) - traditionally used to treat stomach ache and chest pain. It aids digestion and is diuretic. Menthol is an essential oil derived from the mint plant. It is used as a medicine and in aromatherapy.
 - **Lemon Grass** (*Cymbopogon citratus*) - known to promote good digestion, cool fever (through inducing the body to perspire), relieve cramps and headaches.
- § Commend teams with well-researched, written and designed educational labels.
- § Ask students to share with the class what they have learnt from this activity. Alternatively, you could ask them to fill in the reflection sheet in Annex 3 and discuss their reflections.



Activity 11



Name :

Members of your team :

11. Garden Cures

Plants contain many organic chemicals which may have anti-bacterial or anti-inflammatory properties. Many of our local plants, including herbs and spices, grasses, wildflowers and even fruit trees were used as medicines traditionally by elders in our culture. In this activity, we search for these traditional cures found in our own backyard - they may be the sources of medicines for our current diseases!

Project Objectives

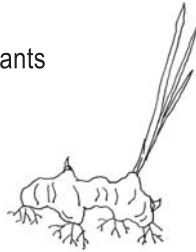
Your Team has to:

- Identify plants in the school garden which have been used traditionally as medicinal plants by the various cultures (Malay, Indian and Chinese)
- Make educational labels for these plants

- Equipment/Materials**
- Laminator
 - Laminating film
 - Digital camera
 - Optional: 'A Guide to Medicinal Plants' (Singapore Science Centre Guide Book)

Duration of activity

1 gardening session (1 hour)



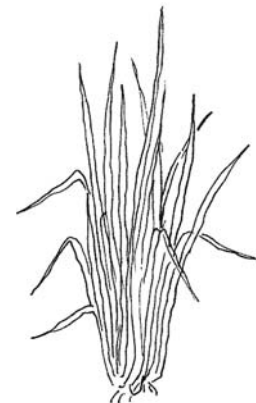
Do not eat any plant part or plant preparation. Some of these traditional cures have not been medically tested. Others require proper preparation before they are safe for ingesting.

Suggested Steps

1. Carry out some preliminary research on local plants which have traditional medicinal uses by the various cultures (Malay, Indian, Chinese, Western etc.). You could use book - 'A Guide to Medicinal Plants' (Singapore Science Centre Guide Book).
2. Go to your school garden and identify those which are found there. Take photographs of them.
3. Carry out more detailed research on selected plants (what illnesses are they known to cure, which part of the plant is used, etc.). Download your photos.
4. With information from your research and photos, write and design educational labels for these plants. Print these labels and have them laminated.
5. You can share your information on the NParks Gardening blog 'Young Gardeners' (http://www.nparks.gov.sg/blogs/young_gardeners/).

Tips!

- Ask your grandparents about some traditional medicines used in your culture. Find out if these plants are growing in your school garden.



Extensions:

- Build wooden and/or acrylic signage for the plants (as part of the subject Design and Technology) .
- Make suggestions to add new 'medicinal' plants to your school garden if they cannot be found. Take part in planting and caring for them.
- Create a 'traditional medicine trail' in your school.