

# Constructing a Terrarium

## Introduction

Mesocosms are enclosed environments that allow a very small part of the natural environment to be observed under controlled conditions. Terrestrial mesocosms are called *terrariums* and are set up in sealed transparent containers to prevent the entry and exit of matter, while still allowing for external energy transfer. Mesocosms can be set up with a known factor altered (e.g. light) to assess its effect.

## Aim

To construct a self-sustaining terrarium capable of supporting an autotrophic organism indefinitely

## Method

1. Add a layer of 1-2 cm of pebbles to the bottom of a glass jar (allows for drainage)
2. Next, add a thin layer of charcoal (to prevent mould and provide aeration to soil)
3. Add sphagnum moss to retain water and separate the base layers from the soil
4. Then include pre-moistened potting soil to an approximately depth of 3 – 5 cm
5. Dig a small hole in which to add a hardy plant (e.g. a small fern or a succulent)
6. Lightly mist plant with water (avoid soaking) and place the sealed jar in sunlight



## Discussion

1. Identify the features of the selected plant that would make it well suited to survival in a terrarium

2. Identify the features of the plant that might make it poorly suited to survival within the terrarium