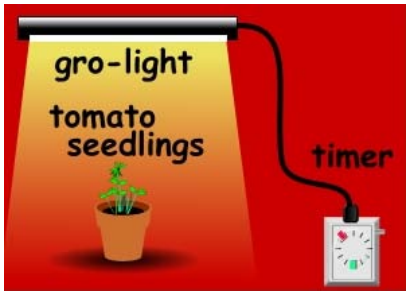
TOMATOSPHERE™

How much Light?- A Student Investigation



Tomatosphere™ seedlings and gro-light

Investigate the relationship between plant growth and the duration of available light.

Begin by setting up a gro-light system on an ordinary household light timer.
You can use your Tomatosphere seedlings for this experiment. You should use seeds that were from the same envelope – either the control group or the ones that have been to the ISS.

Set up several shelves (3 would be ideal) with the gro-lights above each shelf. In this investigation we will set all lights at exactly the same height above the plants, to ensure that, as much as possible, the light intensity is the same for all plants.

The variable in this experiment is the light **duration**, not the light intensity.

Gro-lights and plants

All other growing conditions should be kept constant and **not** varied. Water, fertilize, and warm all plants identically.

Once your test site has been established, set the light timers to provide six (6), twelve (12) and eighteen (18) hours respectively.

Create a daily journal in which to record your observations.

Measure and record the following

Daily

- Temperature
- General appearance (healthy, spindly, limp, and so on)
- Condition of the soil (dry, wet , moist)

Weekly

- Height of the plant
- Number of branches

As required

- Watering
- Fertilizing
- Appearance of first flowers
- Number of flowers
- First appearance of fruit
- First mature fruit