The Growth of Green Plants – Student Investigation

The basic requirements for the growth of green plants are:

- Sunlight
- Air
- Water
- Nutrients
- Warmth

Plan an investigation to predict what would happen if any of these requirements were not met (e.g. on a space vehicle, on Earth, on the surface of Mars).

In groups, students choose a condition of plant growth and investigate using the following as a guide.

Green plants require sunlight, air, water, warmth and nutrients for healthy growth.

Construct inferences from their observations
Formulate a conclusion that answers the initial question
Conduct the experiment
Make and record observations that are relevant to the investigation

Ask a question that can be answered by conducting a fair test
Use the theory to predict the results
Plan the experiment:
- identify the variables involved;
- choose one variable to manipulate;
- decide how the variable will be manipulated;
- create a list of materials and equipment;
- decide how the data will be recorded

Students will follow a basic Student Investigation Plan (on the following page) to learn more about the PLANNING for scientific inquiry.
Student Investigation Plan

Group members

What we predict will happen?

What are the conditions we will investigate?

How we will conduct a fair test?

What we need to perform our investigation?

How we will record our observations?

How we will communicate our results and conclusions?

Teacher comments