

What's it all about?

Space exploration, especially to other planets in the solar system will require life support systems for the crews for long periods of time - food, water, oxygen and ways to deal with the build-up of carbon dioxide. Green plants - like tomatoes - provide the life support needs for humans in space. The Tomatosphere Project involves school classrooms in the research processes associated with growing plants in space and on extraterrestrial surfaces such as Mars. Schools can sign up now for the seeds that will involve a control group and a group of seeds that have been to the International Space Station. **There is still time to sign up.**

What do the students do?

Students germinate tomato seeds provided by the project. This is a "blind test" - teachers and students will not know the origin of the two types of seeds involved until results are submitted. Students may also track the vigour of growth of the plants.

What grades are involved?

Tomatosphere is a curriculum-based project, using curriculum connections in grades **3, 6 and 9 - 10**. The focus areas include **plants, plant growth, nutrition, space, energy, the environment, and the application of space-generated information for use on Earth.**

How much does it cost?

The seeds are **free**. The teacher's guide is also free and can be downloaded from the Tomatosphere web site -

www.tomatosphere.org **The only costs involved are the peat pots for germination (less than \$15).**

Tell me about the seeds

The seeds for 2010 are in two packets (30 in each) – a control group and those that have been to the International Space Station. They are Heinz plum tomato seeds (no genetic modification).



How long will the experiment take?

Although the germination will take place over a few weeks, the actual planting time is short; peat pots do need watering and regular inspection during the germination period. If teachers and students wish to transplant the germinated tomato plants, this will require additional time.

What do I need to get started?

All information about the experiment, background information, student activities, downloadable visual materials, even videos - are available from the project web site – www.tomatosphere.org

How will my classroom data be used?

Classroom data is logged onto the web site following the completion of the experiment. Teachers will have access to the results of other classrooms across Canada (and around the world) for comparison. **After submitting results, teachers will receive a "Certificate of Appreciation" signed by Dr. Robert Thirsk and Dr. Michael Dixon, the principal investigator of the project, for each student.**

What do I do if I need help?

Teachers can get assistance from the Project Manager. However, most situations can be resolved using the web site and the FAQs.

Who are the Tomatosphere sponsors?

H.J. Heinz, Canada H.J. Heinz Foundation Canadian Space Agency Agriculture and Agri-Food Canada
University of Guelph Ontario Centres of Excellence Stokes Seeds

How do I get involved?

All of the Tomatosphere activities focus on the web site - www.tomatosphere.org; teachers register on-line, download the experiment, student activities and background information ... and input their experiment results on the web site. **Since this is an automated web site, it is important to input information - school, address, postal code, e-mail address - carefully.**

SEEDS FOR 2010 ARE LIMITED – TEACHERS ARE URGED TO SIGN UP AS SOON AS POSSIBLE