

QUESTIONS & ANSWERS

General questions

Q. What is an educational garden?

A. An educational garden is a space within a teaching environment where students learn everything needed to grow plants, vegetables and / or fruits.

It's an educational project that involves creating a dynamic classroom and offering students the chance to enrich their learning on different topics through interactive experiences that have personal meaning for them. The garden therefore serves as an educational tool.

Q. How to create a school garden?

A. Vireo works in collaboration with several educational establishments to develop various school garden projects. Our services include equipment, seeds, access to a digital platform, pedagogy and support.

Classroom experience questions

Q. What happens in the garden during leave or annual school holidays?

A. Our school interior garden is autonomous for 12 to 15 days. If you have to be away for an extended period, it's possible to close the system easily (harvest the vegetable garden, then clean it completely). On return, substrates and seeds should be integrated into the vegetable garden and the system restarted.

Q. What does the educational portion of the offer contain?

A. It contains educational activities developed in partnership with the "Chaire de leadership en enseignement sur le développement de l'esprit d'entreprendre et de l'entrepreneuriat" as well as the "Chaire de leadership en enseignement des sciences et développement durable" of Laval University. The educational kit is improved all year long and complies with the Québec Education Program (QEP). You will find activities on life sciences and innovation, entrepreneurship and collective leadership and on health and well-being.

You can enrich it with exercises and related projects that you like and that are personalized to the needs of your students. It's a wonderful tool that promotes learning in fun ways and allows you to use the indoor vegetable garden to its full educational potential.

The educational content is accessible via our interactive learning platform. The platform contains activities, educational content and intuitive functionalities that facilitate teachers' daily activities.

Q. Is there an order to follow for the use of pedagogical activities?

A. The kit is very dynamic and favours a project-based approach. Thus, it can be adapted to different teaching-learning contexts. We very much encourage exploration and experimentation, you are free to choose your own teaching path! We can also help you design an educational path personalized to your project and your educational objectives.

Q. On what is based your pedagogical approach?

A. Vireo's pedagogical approach is based on curriculum standards, UNESCO Sustainable Development Goals, CASEL SEL's Framework and the concept of Eco-citizenship.

Q.	Is it possible to start garden cultivation any time in the school year?
A.	Yes, but it's important to note that the cultivation time is different depending on the type of plants. Thus, the number of harvests could vary depending on when you started your first sowing.
Q.	At the end of the year, could a school decide to make seedlings with the hydroponic system and then transplant them to an outdoor vegetable garden?
A.	<p>It's possible but the plants will be under stress, as the change in environment affects different aspects:</p> <ul style="list-style-type: none"> • Photoperiod (Light per day) • Temperature (Indoor to outdoor) • Change of culture medium (Liquid solution to fertile soil) <p>At the end of the year (in June), the days are usually quite long and the daytime and nighttime temperatures are quite warm. It's not a big cause for concern, but it's still important to note that this is an experiment – we can't guarantee the result.</p>
Q.	How many students does one garden serve?
A.	One garden can serve one single class up to multiple classes. Since the system is highly mobile, the entire school can take part in the project. The 3-storey garden can grow up to 84 plants. This provided numerous configurations to run concomitant educational activities. A typical harvest takes approximately 2 months (2 1/2 months for leafy vegetables and aromatics) . This provides the school with multiple opportunities to serve as many students as possible.
Q.	What support will the teachers have from Vireo?
A.	<ul style="list-style-type: none"> • Our team is there for you. The success of every project is our priority. • Access to extensive online resources (step by step "How to" and turnkey pedagogical activities). • Individual consultation from our educational expert. • Individual consultation from our agricultural expert.
Q.	What is included?
A.	<p>This is a turnkey project:</p> <p>Hardware:</p> <ul style="list-style-type: none"> • Indoor hydroponic garden • Maintenance Equipment (Measuring instruments, tools for pruning plants and containers for manual water filling) • All single-use Consumables for one year (Nutrient solutions, cleaning solutions, substrates and seeds) • Delivery <p>Software:</p> <ul style="list-style-type: none"> • Each project includes a one-year subscription to the Vireo learning platform (Web App that includes extensive resources and built in educational activities). <p>Service Plan</p> <ul style="list-style-type: none"> • 3 step implementation and follow-up approach to project success. • Direct access to our specialists • Warranty (part and service)
Q.	What ages does Vireo work best with?
A.	9-14 years old, however, you can always adapt our educational content to the age of your students.
Q.	How long does it take to build the classroom garden? Do you recommend it be built by the teacher or the students, too?
A.	The initial unpacking and assembly of the indoor garden is very simple and should take no longer than 1-2 hours. We recommend that the teacher or school employee do that one time operation.

Q.	What are some challenges other schools have faced when using Vireo in the classroom?
A.	<p>Although Vireo indoor garden uses proven equipment and methodology, we are growing living organisms and therefore a certain unplanned situation can occur. Like in nature, bugs, lack of water, disease can happen. These types of problems are not often and rarely unmanageable. However, we think they are opportunities for problem solving and student development.</p> <p>Measurement instruments included in our system must be calibrated periodically. This is a challenging scientific concept that is now explained in a tutorial video.</p>
Q.	What about bugs getting into the school? How big of an issue is this?
A.	<p>This is a reality in agriculture and can occasionally occur with our hydroponic garden. We see this problem as opportunities for problem solving and student development. The weekly maintenance of your garden included insect detection. A well-maintained garden will be less prone to insect proliferation. Insect traps are included in your material and will help solve the situation. Location of the garden and season can influence the presence of insects. Fall season and proximity to outside doors or windows are the biggest contributors.</p>

Technical questions

Q.	Is our hydroponic vegetable garden ecological?
A.	<p>Vireo aims to provide the most eco-responsible indoor hydroponic gardens available. No pesticides or herbicides are used. The proximity of food and the constant freshness of edibles, made possible by the vegetable garden, greatly reduce waste by users. Growing crops on site also helps reduce the transport of food to your plate!</p> <p>Know that our research and development team is continuously working on advances to reduce the impact of inputs and increase ecological assets. This is why we favour local suppliers.</p>
Q.	What are the components of a hydroponic garden?
A.	<p>A hydroponic system is made up of a water system, an electrical system and a structure made of water-repellent materials. There is therefore a water basin, an air pump, a water pump, LED horticultural lights, hydroponic tanks, baskets, substrates and seeds. All of this is included in the package!</p>
Q.	Is a water supply necessary?
A.	<p>The water from the aqueduct or well will suit the plants. A water intake is not necessary.</p>
Q.	What are the electricity needs?
A.	<p>Electricity is needed to power the air pump, sump pump, and LED horticultural lighting. Like humans, plants need rest. Lights can be turned off 8 hours a day.</p>
Q.	Do I need natural light or are the included LED lamps enough?
A.	<p>The energy-efficient horticultural lamps integrated in the hydroponic vegetable garden are sufficient because they are designed to ensure a light supply that is constant and stable over time. With a timer that allows you to adjust the period of brightness, there is no need to have an extra supply of light.</p>

Agronomic questions

Q.	What is hydroponics?
A.	Hydroponics is simply a culture without handling soil or pesticides. It is therefore accessible and easy to integrate into your school. Plants benefit from constant irrigation, nutrients and oxygen. Their growth is faster and the crops obtained are healthy and more abundant. With all these crops, you can even distribute them to organizations of your choice.
Q.	After how long will the shoots appear?
A.	The growth period varies depending on the type of seed, between 5 and 21 days. It's possible to incorporate a nursery into the system to develop future plants in advance.
Q.	How to pollinate flower and fruit plants in a hydroponic context?
A.	There are three types of pollination: insect pollination, forced contact by a human hand and the displacement of pollen generated by the wind. In a hydroponic indoor vegetable garden, it's necessary to intervene with one of the last two methods. Without intervening directly, the usual air currents in a room (passage of a person, open window, etc.) may be sufficient.
Q.	Do I have to start the seeds at the same time or can I start them in sequence to have a continuous supply?
A.	It's possible for you to start seedlings in sequence to have a continuous supply. However, this requires much more management and frequent monitoring. When starting your project, ask your urban farmer for advice and they will work with you to assess a solution that meets your supply needs.

Hardware & software questions

Q.	Does the Vireo app collect any student data?
A.	No data is collected for the students. The registration is at the school level, so no individual data is collected at the student level. Teacher and school personnel are the only ones with "login" capabilities. Students can write some notes following their observations of the garden, but the person responsible for the school account will confirm that no inappropriate content or personal data is written before it's saved.
Q.	How do you onboard students and teachers to the application?
A.	For the teacher, there is a complete guided tutorial for the onboarding the first time they connect to the platform. The tutorial covered the receiving steps, the assembly instruction and contact and support information at Vireo. Once they use the platform for the first time, the student and teacher will also have a guide tour for the Web App to guide them on the available resources.
Q.	Is any training required or included?
A.	Step-by-step guides and videos are included in the Vireo learning platform. The platform also includes numerous technical, pedagogical and agricultural resources. One-on-one training, activities and support if needed.

Q. | What devices is the application compatible with?

A. | Our learning platform is a Web Application. The user accesses the app through a web browser with an active network connection. Thus enabling the user to have access to the most recent version of our platform without downloading or updating a software to their device.

We used responsive technology that adapts the content to any type of device.

Q. | What browsers is the application compatible with?

A. | The platform is compatible with the following Browser:

- Google Chrome
- Safari
- Microsoft Edge
- FireFox



If you have additional questions, do not hesitate to contact us!