

What plant would you be?



You are in the **Plant Biology section** of our Garden. Here you may investigate the daily life of plants, their ways of reproduction, defence, and insect attraction. Plants are grouped according to their life strategies and specific adaptations.

For the duration of this game, you become a plant. You start as a barely germinated baby plant, or a seedling. You come into complex and unknown surroundings. In this game you will be choosing your own special adaptations to help you survive, grow and produce seeds.

And remember, this is not a knowledge test. You are not emulating any specific species but creating your own unique plant. Keep in mind that this game is a simplification. Species evolve over millions of years.

Plant Biology Section



Legend

- | | |
|--------------------------|------------------|
| Climbers | Dispersal |
| Defence | Wheel of fortune |
| Pollination | Game tray |
| Rhizomes, stolons, bulbs | |

How to play

This game plays out over the following pages and leads you through stages of plant life. During the course of the game, you decide how you develop, and you find out how unpredictable the life of a plant can be. Your goal is to produce seeds and to extend the survival of your species.

Points

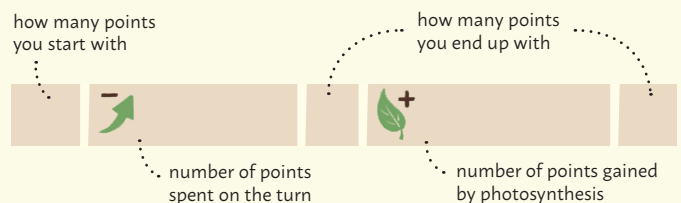
The game starts with **10 points**. They represent the life-giving resources left by your parent plant in the seed you sprouted from.

Following each turn, you perform photosynthesis and gain 1 point.

Energy points are also your currency. Each turn you face a choice to invest energy into gaining an adaptation or not. If you decide to buy an adaptation, you pay for it a specified number of energy points. If you don't feel like it, you can skip buying an adaptation. It's entirely up to you what kind of a plant you'll turn up to be by the end of the game, you may be a plant like no other!

Points table

Fill in your points after each turn.



Winning

You win when you reach the finish line with **at least 1 point**.

Losing

If your points drop to 0, you wither away. Start the game from the beginning.

Chance events

As in life, chance events are also going to happen. Go to the wheel of fortune, spin it and find out your fate.

Look and find

These sections of the sheets will teach you more about various adaptation techniques and will give you hints where to find the plants that use them. The map on the left is here to help you navigate the Plant Biology Section.



Growth Stage I

Plants get life forces from the sun. Climbers and vines climb towards light supporting themselves with any available structures, even other plants. This way they can avoid shade.

Look & find



Visit the climbers section. Here you can observe different mechanisms that support plants in their climbing:

- hops **twines its vines** around the support **1**,
- clematis uses **twining petioles** **2**,
- ivy and trumpet vine use **clinging roots** **3**,
- Parthenocissus, sweet pea and cup-and-saucer vine use **tendrils** **4**.



Humulus lupulus



Clematis sp.



Hedera helix



Lathyrus sp.

Climb to the sun

Do you want to be a sun reaching plant? It will allow you to perform photosynthesis more efficiently and give you **2 points** per turn.

- ☐ Yes, I want to be a climber! **-6 points**
- ☐ Thanks, I'll keep to the ground **0 points**



Chance event!



Spin the wheel of fortune and find out your fate.



Defence Stage II

The big wide world can be quite dangerous for a tiny little plant. Plants are not able to run from danger, but they have other defence techniques.

Look & find

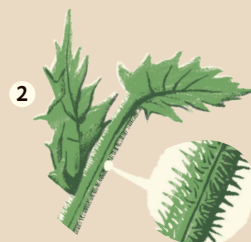


Find beds dedicated to defence. Plants growing there use various defence mechanisms:

- **mechanical**: rose thorns **1** or prickles on the globe thistle stem **2**
- **chemical, light**: stinging hair of a nettle containing formic acid **3**
- **poison**: highly toxic chemical substances in poison hemlock **4**. Watch out! This is a common plant, similar to carrot, but fatally toxic.



Rosa sp.



Urtica dioica



Echinops sp.



Conium maculatum

Invest into defences

Do any of the defence mechanisms inspire you enough to spend precious points on it? If yes, which will you choose?

- ☐ mechanical **-2 points**
- ☐ chemical, light **-3 points**
- ☐ poison production **-4 points**



Chance event!



Spin the wheel of fortune and find out your fate.



Pollination Stage III

Close to 90% of plant species are pollinated by animals, mainly insects. Plants produce colourful and fragrant flowers filled with sweet nectar to attract pollinators. What kind of flowers do you have?

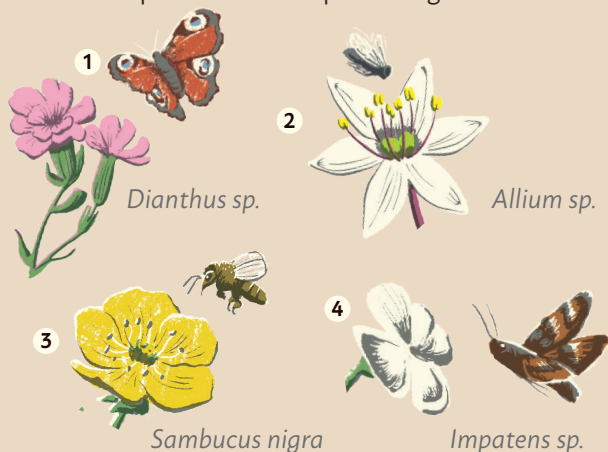
Look & find



Find beds dedicated to various pollinating insects. The structure of the flower corresponds to the structure of its pollinator. There is a multitude of possible pairings in nature, for example:

- funnel shaped flowers with elongated receptacles, such as **carnation 1**, are pollinated by butterflies who have a long proboscis
- open flowers with bulging receptacles, like **garlic 2**, are pollinated by flies, who have short mouthparts
- yellow flowers, like **buttercups 3**, are best seen by bees and bumblebees
- white flowers that smell in the evening, like **damme's rocket 4**, attract mainly moths that fly at night

Plants often create inflorescences, which are clusters of flowers grouped on the same stem, to increase the likelihood of pollination and producing seeds.



Invest in flowers

Attract your pollinators with:

- ☐ a flower cluster (inflorescence) -5 points
- ☐ a single flower -2 points



Chance event!



Spin the wheel of fortune and find out your fate.



Dispersal Stage IV

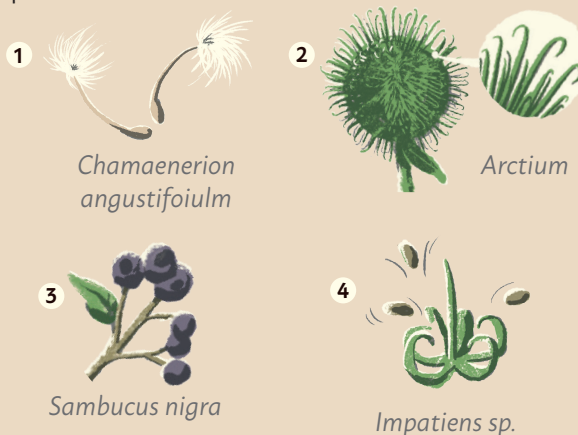
You have successfully pollinated your flowers and managed to produce seeds. Now is the time to disperse them.

Look & find



It is difficult to move when you are anchored in the soil. That's why plants spread through their seeds which are hidden within all sorts of 'wrappings' or fruits. Depending on their construction, fruits allow for various dispersal strategies:

- winged seeds of maples or fluffy seeds of **rosebay willowherb 1** get carried with the wind
- hooked **fruit of burdock 2** latch onto animal hide to travel the distance
- birds adore eating fleshy fruit of **elderberry 3**. The seeds happily germinate in the nutrient-rich droppings in new locations
- **Impatiens 4** can use the tension in the seed pod to 'explode' and catapult the seeds far from the parent.



Disperse your seeds

What dispersion method do you choose?

- ☐ wind -1 points
- ☐ hitch a ride on animals -2 points
- ☐ fire your seeds from a seed pod catapult -3 points
- ☐ obscure seeds in sweet fruit eaten by animals -4 points



Finish line



Congratulations! Your seed sprouted!

Now the new seedling will begin its own journey of life. Just like you, it will have to face hardships to produce seeds and reproduce. It's not easy being a plant...



What plant are you?

How did you end up looking? Are you climbing or not? Or maybe you have stinging hairs? Maybe your flowers are yellow or blue? What kind of fruit do you produce?

Look at all your answers in the game and draw your unique plant below.

Some parts of the plant weren't mentioned during the game, like leaves. You can imagine how you'd like them to look, get inspired by what you can find in the Garden or make up some completely new shapes.



Send us your creation with the QR code.
Drawings will be published on our website.