

Daily Lesson Plan (DLP)

Topic. Plot your Plants.		Day :1
Grade: 4-5	Lesson Name: How will they be arranged to take best advantage of the sun cycle?	Time :(60 Mins.)

Topic	How will they be arranged to take best advantage of the sun cycle?		
Weekly key words	patios and pergolas, indirect sun, perplexing experience, etc.		
Seating plan	<input type="checkbox"/> Individual	<input type="checkbox"/> Pairs	Group of 4
Skill development	<input checked="" type="checkbox"/> Reading <input type="checkbox"/> Reflection <input type="checkbox"/> Other (Specify)	<input checked="" type="checkbox"/> Writing <input type="checkbox"/> Illustration	<input checked="" type="checkbox"/> Discussion <input type="checkbox"/> Presentation <input type="checkbox"/> Collaboration <input type="checkbox"/> Observation <input type="checkbox"/> Research

Objectives: ➤ The students will be able to:	➤ Develop knowledge about how to arrange plants to take the best advantage of the sun cycle
Teaching Resources:	Measuring tape, writing board, notebook, piece of paper, pen/pencil, plants, worksheet, journal
Teaching Learning Strategies	
Introduction: 5 mins. Start the lesson by asking the students to share their knowledge about light/sun exposure to the plants. Listen to their responses and give feedback. Methodology: (20 mins.) The teacher will discuss that correct light exposure is vital for nurturing plants, and it's a fascinating thing to learn about. The teacher will explain what you need to know to make sure your plants are getting enough (or just the right amount) of light. Why Do Plants Need Sunlight to Grow? Without getting too deep into the science, sun-light is a key energy source for all plants.	

Through a process called photosynthesis, plants absorb energy from the sun, which fuels the processes necessary for survival. A plant's leaves act as "solar panels," capturing light as efficiently as possible to help the plant grow. This is why you'll notice something called phototropism or plant leaves changing position depending on their relative orientation to the sun. Pretty cool stuff!

Understanding Exposure Terminology

While all plants need sunlight, they don't all need the same amount. Your plants' nursery tags indicate how much sunlight your plant needs using the following terms.

Here's what each of them means:

Full Sun: A plant requiring full sun needs all the sunlight it can get; at least 6 to 8 hours of direct sun exposure per day. "Full sun" is often indicated on nursery tags with a sun icon.

Part Sun: A plant requiring part sun needs 3-6 hours of direct sunlight per day. Many "part sun" plants can also be treated at "full sun" plants. Part sun is often indicated with a sun icon in which part of the icon is shaded in.

Part Shade: The difference between part sun and part shade can be confusing. Part shade plants prefer 3-6 hours of sunlight, but need protection from the intense midday sun (typically from 10 am to 3 pm). This means the plant's location should get sunlight at dawn or in the evening, but shaded when the sun is highest in the sky. Part shade is often indicated by a sun icon that is mostly shaded over.

Shade: A shade-loving plant still needs some sunlight, just not a lot of it! These plants prefer less than 3 hours of direct sunlight, but not total darkness. Somewhere that gets indirect sunlight, like under the canopy of a tree, is normally a suitable location. Not surprisingly, shade is often indicated with a sun icon that is fully shaded out.

Signs Your Plant Needs More Sun

One of the most perplexing experiences for new gardeners is not knowing why your plant is looking "sick." If you're watering your plant regularly and there doesn't appear to be any sign of bugs, it might be an issue with sun exposure. A plant that isn't getting the sunlight it needs will start to turn dull green or yellow, drop leaves, and start growing "leggy" with few, if any, new leaves.

The good news is that most plants are amazingly resilient. If you catch the symptoms in time to re-locate your plant, there's a good chance it can bounce back, so don't lose hope! You'll know your plant is happy with its light exposure when the leaves take on a healthy, rich green colour, the plant starts growing bushier, and the stems appear strong and firm.

Signs Your Plant is Getting Too Much Sun

On the flip side, overexposure can also be harmful to your plants. If your plant needs more shade, you'll notice signs of burning on the leaves. Often, this looks like singed leaf tips or patches of brown. Again, most plants can recover if moved to a more suitable location.

One situation that can be confusing for new gardeners is when you bring home a plant from a garden centre or plant a seedling you started indoors, plant it in a location you're sure it will love, and find evidence of burning anyways. If this happens, don't panic. The plant may have been kept in a less sunny location for a while before it was purchased, and the sudden change in exposure might be a bit of a shock to the plant's system. I recommend gradually introducing plants that have been kept indoors to the outdoors, a process known as "hardening off."

Activity: (30 mins.) (Group Work)

Determining Exposure Outdoors

While all of this is useful information, you may be wondering how to apply your knowledge of sun exposure to your own yard.

All you need to do is take a little walk around your property every few hours for a day or two. Go out early in the morning when it's nice and light outside, and again mid-morning, in the early afternoon, mid-afternoon, early evening, and an hour before sundown. Your goal is to notice which areas are sunny, and which areas are shady. Take photos (but don't use flash!) and treat it like a nature safari. It's pretty interesting to watch how the sun moves through your yard, and this information can also be helpful for planning landscape features like patios and pergolas!

Determining Exposure Indoors

Of course, all of these principles apply to your houseplants as well. Houseplants, just like all other plants, need enough light to thrive. However, it's a little trickier indoors to give plants the right amount of light. The rule of thumb is that the sunniest locations in your home are south-facing windows. The most light-demanding plants in your home will like this spot the best. The next-best windows for sun exposure are your east-facing windows. Most houseplants will do great near these windows. Plants that require "indirect" light thrive near, but not right next to, south-facing or east-facing windows. For example, a fireplace mantel that is near the window but doesn't get hit with any direct rays.

If a plant is tolerant of deeper shade, like rubber plants or ZZ plants, they'll do fine in a room with a north-facing or west-facing window.

If you can't part with your plant, but you simply don't have the sunlight for it (for example, in a north-facing apartment), you can also supplement the sunshine with a grow light. These aren't a total substitute for the sun, but they're helpful for plants that are not quite as happy as they could be.

Wrap up (5mins.): Wind up the lesson by asking the students randomly to share their findings.

Home Assessment:

The students will do the worksheet as homework.

Worksheet

Lesson Evaluation:

- Teacher was able to accomplish all aspects of the lesson well ☐
- Teacher was not able to do warm up activity ☐,
- develop lesson plan well ☐,
- do the learning activity ☐,
- do wrap up ☐,
- accomplish lesson objective ☐,
- manage time well ☐,
- manage class well ☐

Worksheet Day

Name: _____

Topic: Plot the Plants

Class: _____

Subject: Science

➤ Describe the following terms in your own words:

1. Full sun
2. Part Sun
3. Part Shade
4. Shade
