

reality, since they use the light energy from the sun for photosynthetic activity, they cannot survive without it. The photosynthesis framework helps the plant, via the chlorophyll in its leaves, to consume energy, whereby it turns into food. If a plant has no access to sunlight, its leaves turn yellow and spindly grow. Sunlight also affects the ability of plants to flower. Further, why sunlight influences plants is by affecting their branches and foliage's movement, such as when a shoot tips toward the source of light. (Bell 2017). Plants cannot get the food they need to

cultivate, replicate and live without

the sunlight. Plants are autotrophs, would increase the speed of

unlike animals, they establish their supply of food. To generate glucose, they use light energy or the sun, water, and gases from the air. This is the process of where all plants, algae, and even some microorganisms use it. There are virtually a few living things on Earth, and the sun is the principal source of life. Plants cannot get the food they need to grow, reproduce and live without the sun. The photosynthesis process gradually decreases if a plant does not get as much radiation from the sun, though it has adequate water and carbon dioxide. Raising

the intensity of light



Provided by 5 watts
LED bulb (400 lumens)

Figure 1.1. Planting tomato seeds provided by different amounts of lumens of LED Light Bulbs.

A B C



Figure 1.2. Shows the results of the plants in the first week of observation (Plant A with 400 lumens, Plant B with 800 lumens, Plant C with 1200 lumens)

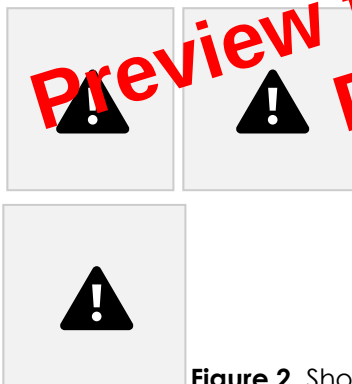


Figure 2. Shows the results of the plants in the second week of observation (Plant A with 400 lumens, Plant B with 800 lumens, Plant C with 1200 lumens)

A B C

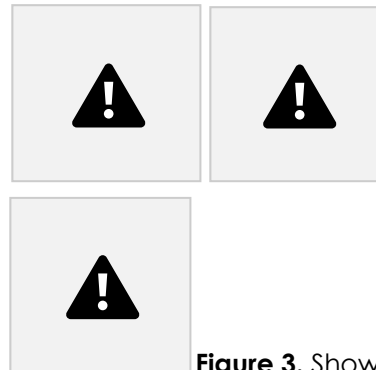


Figure 3. Shows the results of the plants in the third and final week of observation. (Plant A with 400 lumens, Plant B with 800 lumens, Plant C with 1200 lumens)

DISCUSSION

In the span of 23 weeks, the

plants definitely showed how they

grew throughout the observation.

There is growing evidence to support

the notion that plants can grow

indoors using artificial light as an

alternative to sunlight.

This study conducted a series of

experiments to investigate the

characteristics of the plants, such as

the color of the leaves and height.

Preview from Notesale.co.uk
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(800 and 1200) did not show that much of a difference. This means that plants could use the energy in artificial light to carry out photosynthesis. Artificial light should provide the energy they require for growth. From germination to flowering, this ensures proper photosynthesis. Based on the experimental process through the weeks, the researchers concluded that there are beneficial effects of artificial lights on plants.

can conclude that the best amount of brightness from the artificial light that gave the best results to indoor farming is 1200 lumens. The particular reason for the circumstances is that the researchers have conducted evidence to see the results and changes from the observation of the plants. Because much of the sunlight a plant receives inside the house is indirect and not very intense, a bulb can sometimes be preferable to sunlight.

As we can see from the researcher's documentation, there are certain changes when using artificial light on plants, such as the color of leaves and their heights. Having that in mind, an artificial full-spectrum light bulb provides plants with all of the light they would receive outside, allowing them to use it in the same way they would

observe that the plants have a
6 cm, 7.8 cm, and 7 cm.

pollution removal, is reasonably well
known.

3. The amount of lumens that
gave the best results is 1200
lumens.

The reason for this occurs that
several reviews of the observations
have recorded the beneficial effects

These were the results of the
color and its size during the weeks of
observing the experiment. Various
investigations exist today that show
the interactions between humans
and plants for both indoor and
outdoor activities. Plant species are
being used more to address
ecological and social issues as a
result of studies regarding their

of plants, with a concentration on
those that are used indoors, as well
as some of the hypothesized
explanations for why humans
respond positively to plants. In
addition to this, the scientific basis for
subjective results such as enhanced
pleasure is unknown. The most
successful use of plants to deal with
these issues is hampered by a lack of

benefits. The physical cause of understanding of the theoretical
significant effects, such as air foundation.

the shift in primary and secondary metabolism.

www.ncbi.nlm.nih.gov.com;

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