

Name _____

Plant Tour

You are a small employee in a very large plant—a potato plant! Choose your job. Prepare to give visitors a tour of your area of the plant. Remember, they aren't very familiar with what your plant does. So be prepared to describe to them the purpose of your section and how it looks. If you use scientific terms, provide good explanations. Make a sign for your section of the plant, and use your talents to illustrate what you can do with art, graphics, or some other materials to make the best possible display.

Plant Manager

You are responsible for the coordination of everything that happens in the plant. You must always keep in mind the purpose of the plant. You must make sure that everyone is working at the proper pace so that each department gets its materials at the right time. This is called the supply chain. If one area of the plant does not have what it needs, the efficiency of the entire plant will be lower.

The plant manager must also evaluate the performance of the employees in the plant. The manager knows what an area looks like when it is “healthy” –when it is running smoothly. The manager knows what machines belong in each area, and how big the plant should grow. If the plant got too big, the plant manager would suggest that new plants be built.

Your plant produces two products. One product, oxygen, is very easy to sell. Employees of the plant even use it. The second product, starch, is used by only certain kinds of buyers (but plant employees also use it). You must make sure that there is plenty of product to sell and for your own employees to use.

Department Manager: Root

Your department is responsible for obtaining some of the raw materials that other parts of the plant need. You obtain water and minerals, which are used to make the plant's product.

You have special equipment to collect the water and minerals from the supplier (the soil.) This equipment is very specialized and usually functions very well. You must make sure that the materials you collect are transported to the proper areas of the plant. To do that, you must get the materials to a long assembly line that runs through the plant.

Your department is also responsible for storing some of the plant's products. The plant produces starch, which is used again by parts of the plant. Starch is also sold to consumers.

Finally, your department has a job stabilizing the plant in bad weather conditions. If there is a flood or strong wind, the plant relies on your department to keep it from blowing over.

Department Manager: Stem

Your department moves water, minerals, sugar, and starch to the appropriate areas in the plant. There is a long assembly line that runs through the plant. You are responsible for keeping the assembly line moving. You must make sure it is loaded with raw materials and delivering the product to the roots. You have a special responsibility to make sure that all areas of the plant communicate well. If your department isn't working, the other departments will not be coordinated.

Your department is also responsible for making sure that the departments get the energy they need. You do that by making sure that certain parts of the plant are in just the right position to most efficiently collect the power they need.

Finally, your department is responsible for plant expansion. You want the plant to grow just enough—but not too much—so that each department can function efficiently. If the plant is getting too crowded, you will go to the marketing department and tell it to prepare packets of information to start new plants in other places.

Department Manager: Leaf

You are responsible for manufacturing the main product of the plant, sugar. You receive some raw materials from the assembly line (stem). But you also must get some raw materials directly from the outside (using “just in time” delivery) so that there are always enough.

Your department must be positioned in just the right place to collect the energy that the plant needs. Your workers are the most specialized; they wear special green colored uniforms, and perform a very complicated chemical task. To perform their task, they must have all of the materials they need all of the time.

Unfortunately, there are times when the product you make isn't needed. Your department is “laid off” in the fall. Right after they get their yearly layoff notices, the leaf employees put on special multicolored uniforms. Then the leaf department shuts down, but comes back to work at full pace in the spring.

Marketing Department

You are responsible for advertising your products to the world around you. There are two products that your plant makes.

One is easy to sell—oxygen. Almost everyone will buy oxygen, and pay for it with carbon dioxide. Even the employees in this plant use it.

The second product of the plant is starch. Workers in this plant sometimes use this product. Another potential buyer for starch is a *first order consumer*. Your job is to make sure that consumers know what they can use your product for, and make sure that visitors to the plant know how valuable that product is.

You must also advertise the information that helps build new plants. This information is in small packets called pollen. You advertise your plant to couriers (affectionately called “insects”) so the information can be carried to new locations. You must make your plant look very attractive so that the insects come to pick up the information.

Facilities Manager

You are responsible for making sure that the plant is healthy and strong. You must inspect the outside of the plant, and make sure that it is protected from potential invaders.

You are also responsible for the plant's power supply. You must be aware of how much power the plant needs to operate, and must always know where the plant will get its power.

The facilities manager is always on the lookout for things that could stop the plant's progress. One special problem is the *herbivore*. This invader can destroy parts of the plant and make the entire process less effective.

Another problem is *pollution*. This can cut off the power supply to the plant so less of the product can be made.

Security Guard

You are responsible for making sure that no industrial spies enter the plant. You must make sure that vandals can't get in to damage the equipment.

Your job in security is to build and check the plant's defenses. You build a thick outer skin on the plant, to protect it from insects. You make some portions of the plant taste bad or provide a protective covering, so that *herbivores* won't eat the leaves.

You also make sure that the plant is well built so that it can't be damaged by the weather. You check the roots and the stem for defects. You also make sure that any part of the plant that is damaged is rebuilt quickly.