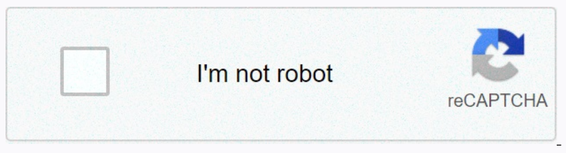
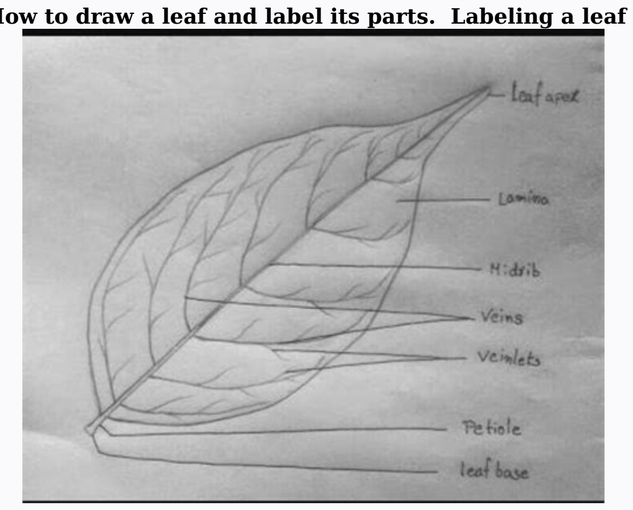


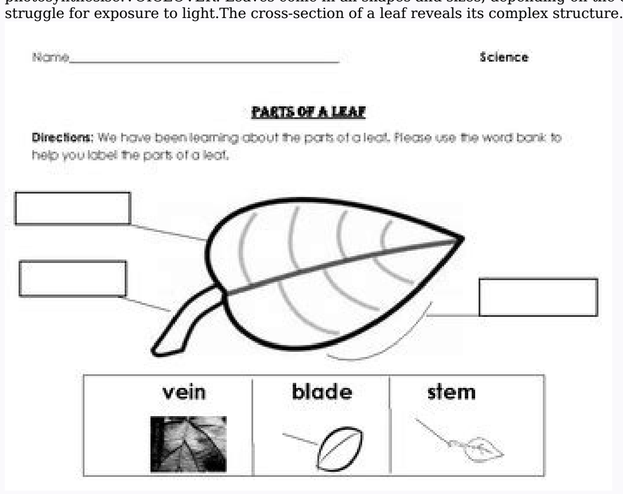
I'm not robot!

How to label a leaf

How to label a leaf diagram. How to label a stem and leaf plot. How to draw a leaf and label its parts. Labeling a leaf structure. How to label a plant. How to draw a leaf and label it.

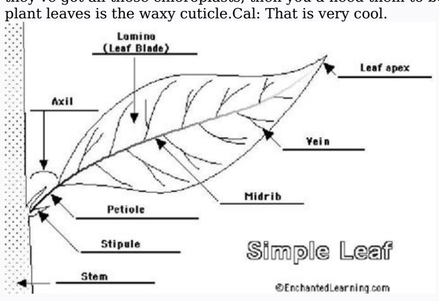


Ms Armit: The leaf is a major organ in plants in which photosynthesis occurs. Without photosynthesis, there'd be very little life on Earth, because when plants photosynthesise, they take in carbon dioxide, and release oxygen as a by-product.Cal: I am liking plants a lot right now, so let's find out more on how the structures of leaves help plants to photosynthesise.VOICEOVER: Leaves come in all shapes and sizes, depending on the environment they have evolved in. The green of the leaf is the chlorophyll, the pigment that absorbs energy from the sun. Some plants have evolved with large leaves to maximise the amount of light they can absorb, often found under forest canopies where they struggle for exposure to light.The cross-section of a leaf reveals its complex structure.

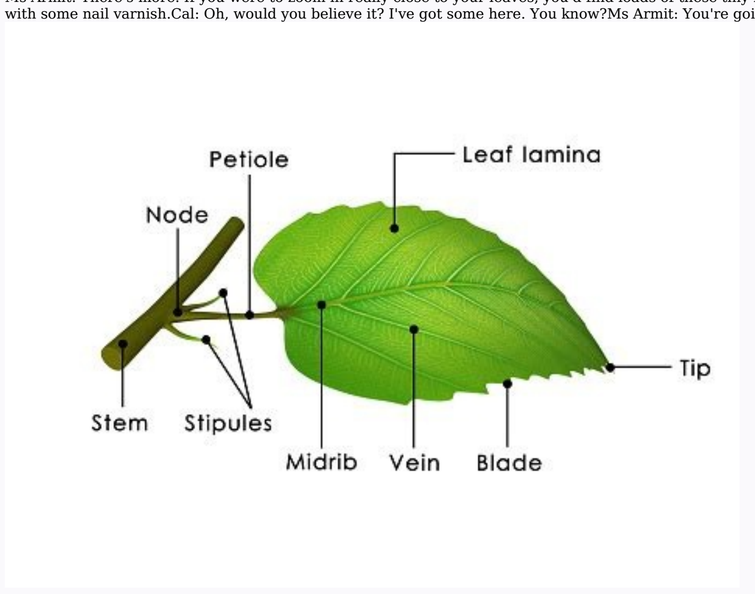


The waxy cuticle surface on the outside protects the leaf and prevents excess water loss. The palisade cells at the upper side are packed with chloroplasts to maximise photosynthesis. On the lower half of the leaf are spongy mesophyll cells. These have air spaces between them to let gases flow. The stomata - tiny openings or pores – allow gases such as carbon dioxide and oxygen in or out during photosynthesis and respiration.Leaves are important for life to exist on Earth. They provide food and oxygen for almost every living organism on our planet.Cal: Welcome back to the jungle! Ms Armit: What have you done?Cal: Well, you inspired me. You know, we all know plants are amazing, and without photosynthesis we wouldn't be here. So, of course, we have to show our appreciation to plants.Ms Armit: I'm so glad you've found a new passion. Have a look at the leaves of your new friend.Cal: I mean... Yeah, they're good, aren't they? I mean, they feel a little bit waxy, almost.Ms Armit: That's the waxy cuticle. It's on the surface of the leaf and its main job is to prevent water loss as the plant needs this water. It also protects the plant.

See what happens when you pour water all over the leaf.Cal: Oh, right. OK.
Would you believe it? Got my watering can here. OK.Oh, so it's like staying on top of the leaf there. So that must be because of the waxy layer - the cuticle.Ms Armit: Precisely. Another very important part of the leaf are the palisade cells. These are full of chloroplasts to absorb sunlight. Where in the leaf do you think the palisade cells are?Cal: If they've got all those chloroplasts, then you'd need them to be near the top of the leaf to get that all-important sunshine.Ms Armit: That's right. Palisade cells are at the top of the leaves to maximise photosynthesis. This is one of the adaptations of leaves so that they maximise the amount of light they absorb for photosynthesis. Another adaptation of the plant leaves is the waxy cuticle.Cal: That is very cool.



Ms Armit: There's more. If you were to zoom in really close to your leaves, you'd find loads of these tiny holes. These are called stomata.Cal: Right, now, I'm not I'm not saying that I don't trust you, Ms Armit, because I do, but I can't see it. So I can't be certain that those tiny holes are actually there.Ms Armit: This is something I can prove, though, with some nail varnish.Cal: Oh, would you believe it? I've got some here. You know?Ms Armit: You're going to put some that nail varnish on both sides of your leaf.Cal: OK.



Right. I'll do this one here. So I'll put some on that side.
Put some on the other side, like that. So is this what people mean by a well-manicured plant?Ms Armit: Ha-ha. Leave that one to dry. There's one already over there that's done. Going to go and peel off some of the nail polish and tell me what you see.Cal: OK. Right. My Blue Peter moment. Here's one I made earlier.
Um... OK. So some nail varnish here, I'm going to pull it off. I mean, it looks like really... really bumpy. Oh, you were right.
So my plant does have stomata.Ms Armit: I told you. If you had a microscope, you would be able to see this even better. The stomata allows gases to flow in and out of the leaves.Cal: Which is perfect for photosynthesis, as it takes in carbon dioxide and produces oxygen.Ms Armit: But plants don't just photosynthesise, they also respire.Cal: What, respire like us? Ms Armit: Yeah. During the day and night, the plants are constantly respiring to release the energy in glucose so they can live - just like you. It's only during the day that plants photosynthesise. Any idea why?Cal: Because the sun is only out in the day.Ms Armit: Exactly. Cal: Yes! Advertisement.EnchantedLearning.com is a user-supported site. As a bonus, site members have access to a banner-ad-free version of the site, with print-friendly pages.Click here to learn more.