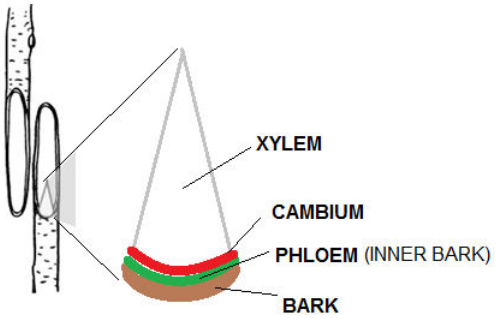
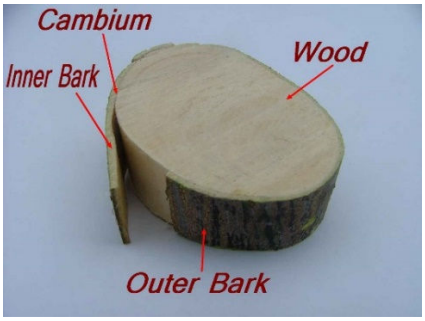
HOW TO DO A VEE-GRAFT

Grafting is a great way to grow multiple fruit in a small area. The most important thing about grafting is to line up the cambium layers as closely as possible. The cambium is the middle layer between the xylem (central woody part) and the bark. Keeping the cambium layers aligned is important and the most difficult part of the graft. If they don't touch, the sap can't bridge the gap and heal the tree.





Tools & materials:

1. Scion (new fruit)
2. Rootstock (parent tree)
3. Sharp pruners
4. Sharp knife
5. Sealing tape

REMEMBER: THE GOAL IS TO LINE UP THE CAMBIUM LAYERS BETWEEN THE ROOTSTOCK AND SCION.

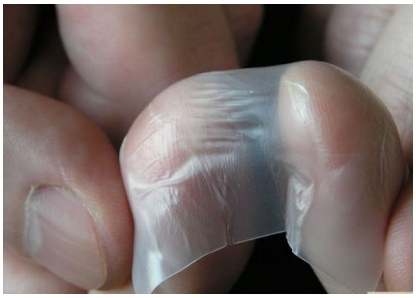
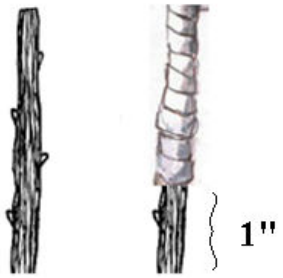
Step 0: Select the scion and rootstock branches appropriately. Grafting is most successful when done within a single fruit family, such as apples to apples. Most stone fruits (plums, peaches, nectarines, apricots, almonds) can graft onto each other, and citrus to citrus.

When preparing scions, keep in mind the following advice:

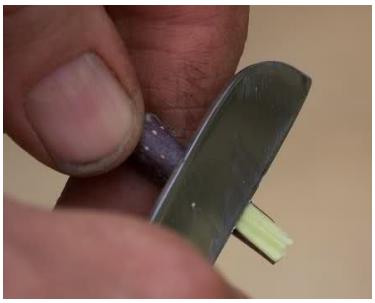
- Wood should come from clean, disease-free plants. Cut scions for grafting as close to your planned grafting date as possible. (Same day is ideal.)
- Select straight wood from last year's growth. Scions should be 1/4" – 3/8" diameter (pencil size) and contain several buds (2 -3 minimum).
- Scions may be stored for several weeks, if necessary. Bundle by variety in a moist paper towel(s) and place in a ziplock-type bag, leaving a slight opening in the ziplock bag for the wood to breathe. Make sure that the towel(s) stay damp as long as the wood is stored.
- Label each bag with fruit type and variety, as well as any additional information you feel is pertinent (i.e. minimum chilling hours; needs pollinator; vigor; zip code; where successfully grown, etc).
- Keep scion bag in vegetable bin of your refrigerator. Be careful not to let the scion wood freeze!

Now that you have grafting material you are ready to attach it to your selected rootstock or parent plant.

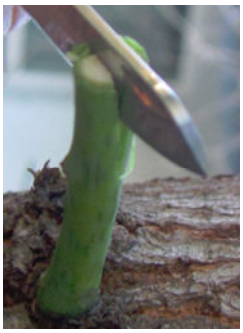
Step 1: Prepare your scion by trimming it down to 2-4 buds total. Wrap the upper portion in parafilm, to maintain moisture. (It is VERY dry in Southern California and an uncovered scion would shrivel up and die.) Stretch the parafilm before using it, and it will stick to itself easily. Leave about 1" of the scion base exposed.

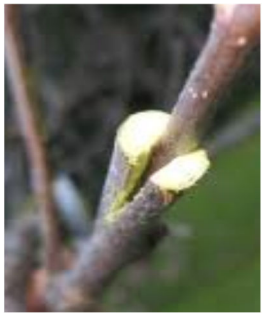
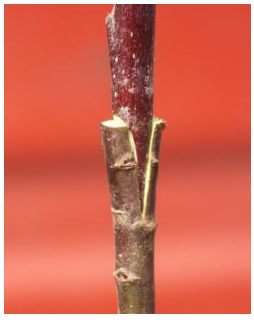
Step 2: Cut a thin, flat wedge on the base of the scion, about ½ - 1" long. Do not make multiple carvings, you want flat surfaces on both sides of the scion.

Step 3: Make sure the scion and the rootstock are approximately the same diameter, to ensure maximum cambium-to-cambium contact. Make a vertical slice down the center of the rootstock branch about the same length as the Vee shaped wedge on the scion. One way to avoid cutting yourself (and to limit the length of the vertical cut) is to use an oversize metal washer underneath the cut.




Step 4: Gently push the point of the scion down into the rootstock cut. Match the cambium layers as close as possible. The first photo on the left shows a good match with no gaps between any of the cut surfaces. The middle photo shows mismatched diameters: only one side is lined up and that is where the joint will grow. The photo on the right has layers that are not well lined up. (Notice the white color of the Vee-notch.)

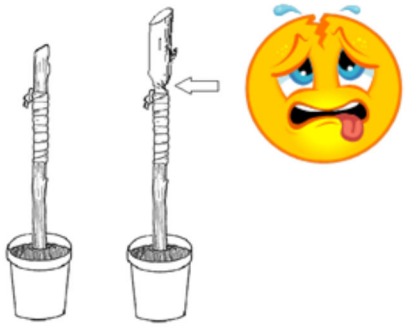




Step 5a: (optional) Wrap the new joint using more Parafilm. (Stretch it first!) You can also use grafting wax. Make sure the two parts are still aligned.

Step 5b: Apply tension over the new graft to hold the outer "VEE" against the inner wedge. Green stretchy garden tape is often used. Rubber bands and electrical splicing tape are also very good. (Avoid using tape with adhesives.) This pulls the Vee closed and maintains contact between the cambium layers.



NOTE: Be aware that green tapes do not stretch as fast as the wood grows. They have to be cut away after 3 – 6 months or the new growth will become wasp-waisted, girdle itself, and eventually die. However, do not remove the tape too soon or the Vee could spring open and kill the new growth! The best way to remove green tape is to slice it and leave it in place, trying not to cut into the new growth because you don't want to open the cambium to disease and infection.



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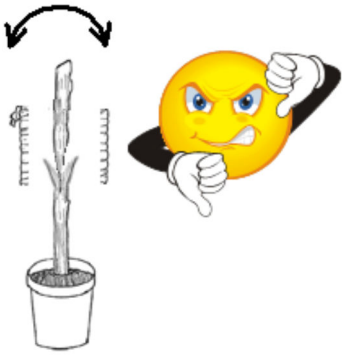

Step 5c: **LABEL** your graft. You do not want to look at a happy graft a year later and wonder which scion you used. Some options include writing on the graft tape, adding a tag, recording it in a book, etc.

Step 6: Keep your new graft out of hot sun, keep the parent tree well watered, and rub off any growth that appears **below** the graft union. Soon you should be able to see new growth emerging on your scion wood.

A happy graft!