

# Pears

**1. Define the following terms and describe what they do in the body: monosaccharide, fructose, glucose, and levulose.**

Primary-level response:

- *Monosaccharide*: a simple sugar unit or molecule (e.g. glucose, fructose, galactose) that provides energy/fuel for body.
- *Fructose*: a simple sugar found naturally in fruit and honey. It is also called levulose.
- *Glucose*: a simple sugar found naturally in plant tissues. It is a source of energy for plants and animals.
- *Levulose*: another name for fructose or fruit sugar

Secondary-level response:

- *Monosaccharide*: simple carbohydrate that consists of a single sugar molecule (e.g. glucose, fructose, galactose) that provides energy/fuel for body.
- *Fructose*: a simple sugar found naturally in fruit and honey. It is also called levulose. Fructose is the sweetest of all naturally occurring simple carbohydrates. Fructose and glucose form a disaccharide called sucrose (aka table sugar).
- *Glucose*: a simple sugar found naturally in plant tissues. It is a building block for most carbohydrates. Digestion causes some carbohydrates to break down into glucose. After digestion, glucose is carried in blood to cells and used for energy or stored. Another name for glucose is dextrose.
- *Levulose*: another name for fructose or fruit sugar

**2. Which fruits are eaten with the peel? Which fruits are typically eaten after being peeled? How much fiber is added by eating the peel of fruits like pears, peaches, and apples?**

Primary/Secondary-level response:

- Fruits typically eaten with the peel: apples, pears, peaches, tomatoes
- Fruits typically eaten after being peeled: oranges, tangerines, melons, pineapple, mango, banana
- The amount of fiber added by eating the peel of fruits such as apples:
  - 1 medium apple without skin = 2.1 grams of dietary fiber
  - 1 medium apple with skin = 4.4. grams of dietary fiber

- 3. Make a list of the snacks you eat regularly. Analyze the sugar and nutrient content of your snacks. How healthy are your snacks? Make a list of snacks that you can eat that are healthier (more nutrients and low in sugar).**

Primary-level response:

Use the following sample lesson titled, *What's on the Label?*, from MyPyramid for Kids (Grades five and six) to support label reading and comparing nutrient content in foods/snacks: [www.fns.usda.gov/tn/Resources/mpk3\\_lesson3.pdf](http://www.fns.usda.gov/tn/Resources/mpk3_lesson3.pdf)

USDA Nutrient Database can be used to analyze nutrient content of snacks along with label reading: [www.nal.usda.gov/fnic/foodcomp/search/](http://www.nal.usda.gov/fnic/foodcomp/search/)

Healthy snacks web link: *Network for a Healthy California- Children's Power Play Campaign* Smart Snacks handout:

[www.cdph.ca.gov/programs/cpns/Documents/Network-FV-PP-ParentTipSheetsSmartSnacks-2007-03.pdf](http://www.cdph.ca.gov/programs/cpns/Documents/Network-FV-PP-ParentTipSheetsSmartSnacks-2007-03.pdf)

Secondary-level response:

Use the following sample lesson titled, *It's in the Label*, from Jump Start Teens (middle/high school grades) to support label reading and comparing nutrient content in foods/snacks:

[www.californiaprojectclean.org/docuserfiles//JumpStartTeens%20Lesson5.pdf](http://www.californiaprojectclean.org/docuserfiles//JumpStartTeens%20Lesson5.pdf).

Or, *Are You Label Able?* and *Snacks: Chews for Health* from The Power of Choice (target after school or extension activity): [www.fns.usda.gov/tn/Resources/POC\\_topics-activities.pdf](http://www.fns.usda.gov/tn/Resources/POC_topics-activities.pdf).

USDA Nutrient Database can be used to analyze nutrient content of snacks along with label reading: [www.nal.usda.gov/fnic/foodcomp/search/](http://www.nal.usda.gov/fnic/foodcomp/search/).

Online version of Empowering Youth with Nutrition and Physical Activity-- label reading and choosing healthy snacks web link (USDA Team Nutrition Web site):

<http://healthymeals.nal.usda.gov/hsmrs/EY/index.htm>.

- 4. Research and describe the technique called grafting that is used to grow and cultivate pears. What other fruits use the grafting technique?**

Primary/Secondary-level response:

When you plant the seed from a fruit, the tree that grows may not produce fruit or it may not be edible. The best way to produce fruit is to grow seedlings from the seed and then

attach materials from trees that are known to be good producers. Budding or grafting can also be used to change varieties to mature citrus or avocado trees.

**5. Label the parts of the pear.**

Primary/Secondary-level response:

[Refer to *Pear Botanical Image* and diagram on page two of newsletter. Or, download *Pear Botanical Image* from [www.harvestofthemonth.com/EdCorner/botanical.asp](http://www.harvestofthemonth.com/EdCorner/botanical.asp).]

- Parts: Stem, shoulder, core, flesh, calyx, skin, seed.

**6. Map the various geographical regions in California where pears are grown. What are the top three pear-producing counties in California?**

Primary/Secondary-level response:

Pears are grown in the following regions: Sacramento/San Joaquin, Upper Sacramento Valley, Mendocino, Lake and El Dorado.

The Sacramento and San Joaquin orchards harvest pears in July. Lake, El Dorado and Mendocino counties harvest in August. California produces over 300,000 tons of pears each year and adds \$91,594 to its economy.

Sources:

[www.fruitsandveggiesmatter.gov/month/asian\\_pear.html](http://www.fruitsandveggiesmatter.gov/month/asian_pear.html)

<http://anrcatalog.ucdavis.edu/pdf/8001.pdf>

[www.cfaitc.org/factsheets/pdf/Pears.pdf](http://www.cfaitc.org/factsheets/pdf/Pears.pdf)

[www.usapears.com](http://www.usapears.com)

<http://food.oregonstate.edu/glossary/index.html> (originally found under: <http://fnic.nal.usda.gov> – search Food Dictionaries)

[www.californiaprojectlean.org](http://www.californiaprojectlean.org)

[www.eatright.org](http://www.eatright.org)

[www.fns.usda.gov/tn](http://www.fns.usda.gov/tn)

[www.nal.usda.gov/fnic/foodcomp/search/](http://www.nal.usda.gov/fnic/foodcomp/search/)

[www.cdph.ca.gov/programs/cpns/Pages/PowerPlayResources.aspx](http://www.cdph.ca.gov/programs/cpns/Pages/PowerPlayResources.aspx)

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