**Almond Anatomy (QR Code #1)**

* Budding is the first sign of growth on a tree. Just as soon as the grass begins to turn green and birds begin to sing, the almonds wake up to celebrate the return of spring. A bud looks like a small flower. It is wrapped tightly with green leaves and has a pink tip.
* The color of an almond changes with age and form. For example when an almond is first on the tree, it is green. When the shell and hull falls off it is brown. And, when it has been diced, it is white.
* Almonds have 2 protective shells; the hull and the shell. The hull is green and fuzzy which protects the shell. The shell, which is brown and hard protects the eatable part of the almond.
* The almond is a nutritious nut. Many people enjoy the crunchy taste of the almond. There are different layers of the almond. The hull is a green fuzzy outer shell. The second layer is called the shell and it is the main thing that protects the almond from bugs, etc. Finally, there is the kernel, which is the part that you eat. It is hard and brown with a white center. Eventually, the protective shell will split, that means the almond is healthy and ready!

1. What colors can almonds be?
   1. Brown, Green, Black
   2. Green, Brown, Blue
   3. **Green, Brown, White**
2. How many protective layers does an almond have?
   1. **2**
   2. 3
   3. 4
3. What is budding?
   1. The first sign of decay on a tree before it closes and the flower dies
   2. The last sign of growth on a tree before it opens and becomes a flower
   3. **The first sign of growth on a tree before it opens and becomes a flower**
4. What is the edible center of the almond called?
   1. Hull
   2. **Kernel**
   3. Shell
5. Why do almonds have protective layers?
   1. **Prevents animals from eating them**
   2. Helps them expand and ripen
   3. Makes them taste better
6. What colors are the flowers on an almond tree?
   1. Pink and Red
   2. **Pink and White**
   3. Pink and Yellow

**Almond Harvest (QR Code #2)**

* Bees are the leading pollinator of the almond tree. This is because they fly from flower to flower quicker than any other bug. They do this because they are after the pollen. That is my people want them for their orchards, and pay a lot of money for them too!
* Bees help almonds grow and prosper. Bees pollinate almond buds. Without bees we would not make almonds or money. Enough bees to pollinate 1 acre would be 2 boxes. For every 75 acres there are 150 Queen bees. Bees move pollen from 1 variety to another.
* There are 9,000 almond trees in 100 acres! Three are that many trees so they can reach maximum profit. Each of almond trees holds a different variety. Not every almond tree is the same.
* Almond processors have to do many steps in order to bring almonds to consumers. First, they get a machine called the shaker, which shakes the almonds out of the trees. Then a machine called the sweeper sweeps the almonds into rows. Then another larger machine picks up the almonds and shoots them into a giant container that it tows behind. Last, it brings the almonds to a processing plant. Here, some almonds will undergo a process called blanching where they are split and turned white.

1. Which insect is the leading pollinator of almonds?
   1. Butterflies
   2. Beetles
   3. **Bees**
2. How many trees are in 100 acres?
   1. **9,000**
   2. 900
   3. 90,000
3. For every 75 acres, how many queen bees do you need?
   1. 75
   2. **150**
   3. 300
4. What do you call the people who handle almonds?
   1. **Almond Processors**
   2. Almond Harvesters
   3. Almond Collectors
5. What is the name of the machine used to get almonds out of trees?
   1. The Rattler
   2. **The Shaker**
   3. The Wobbler
6. What is the process of turning almonds white called?
   1. Whitening
   2. Bleaching
   3. **Blanching**

**Almond Production (QR Code #3)**

* The beginning of the season for an almond tree is called the dormant state. It is when buds come out. Buds are leaves, which eventually produce almonds. After the blossoming period, the hulls split and the almonds ripened around September through December which notes the harvesting season. Now the almonds can be processed, stored and changed into different forms.
* After the almonds are shaken they have to sit on the ground for a while to dry out. This takes roughly 7-10 days. It is important that the almonds dry out completely before processing further. The entire process takes a full year, or 365 days!
* Virtually 100% of almonds used in North America are produced in the United States.   
  The United States are among the leading almond producers in the world. Other leading countries in include Australia, Italy, Iran, Greece, and Spain.

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1. What percent of almonds used in North America are produced by the United States?

**a. Virtually 100%**

b. Virtually 30%  
c. Virtually 12%

1. Which of the following is NOT a top ten leading almond producing country?
2. USA
3. **Argentina**
4. Iran
5. How long does it take to produce almonds?
6. 90 days
7. 180 days
8. **365 days**
9. What months do almonds harvest?
10. December through September
11. **September through December**
12. December through May
13. How long does it take almonds to dry after being shaken from a tree?
14. **7 to 10 Days**
15. 10 to 14 Days
16. 14 to 30 Days
17. What is the beginning of the almond life cycle called?
18. The Hullsplit Phase
19. The Latent Period
20. **The Dormant State**

**Almond Consumption (QR Code #4)**

* When farmers are done taking the extra shells off the almond, nothing else goes to waste. They use the hull for cow food. Also bedding for cows. Farmers can be very economical!
* Almonds are a very nutritious filled protein full of energy and minerals. Out of the five food groups, almonds are a protein. Almonds can help the body with many things they help build and repair the body. The fiber aids in digestion of foods, and the calcium helps in building and maintaining strong bones.
* Almonds have a long history. Though their exact ancestry is unknown they are thought to originate from the Mediterranean area of Europe. Explorers ate almonds while traveling the Silk Road. Then almond trees were being enjoyed all over Asia and Spain! Almonds were formally established in America in the early 1700s and brought to California in the turn of the 20th century.
* People all over the world import almonds, as almonds have so many uses. Currently, Over 90 countries import almonds from the United States!

1. When were almonds firmly established in California?
   1. Turn of the 18h century
   2. Turn of the 19th century
   3. Turn of the **20th century**
2. Which of the following does the protein found in almonds NOT help us do?
   1. **Strengthen our eye sight**
   2. Repair our bodies
   3. Help us digest food
3. Which of the following is NOT a purpose for almond shells and hulls?
   1. Food
   2. **Grooming**
   3. Bedding
4. Which food group are almonds from?
   1. **Proteins**
   2. Vegetables
   3. Grains
5. Where are almonds believed to originate from?
   1. West coast of the United States
   2. **Mediterranean area of Europe**
   3. Eastern Asia
6. How many countries import Almonds?
   1. 20-30 countries
   2. 50-70 countries
   3. **Over 90+ countries**