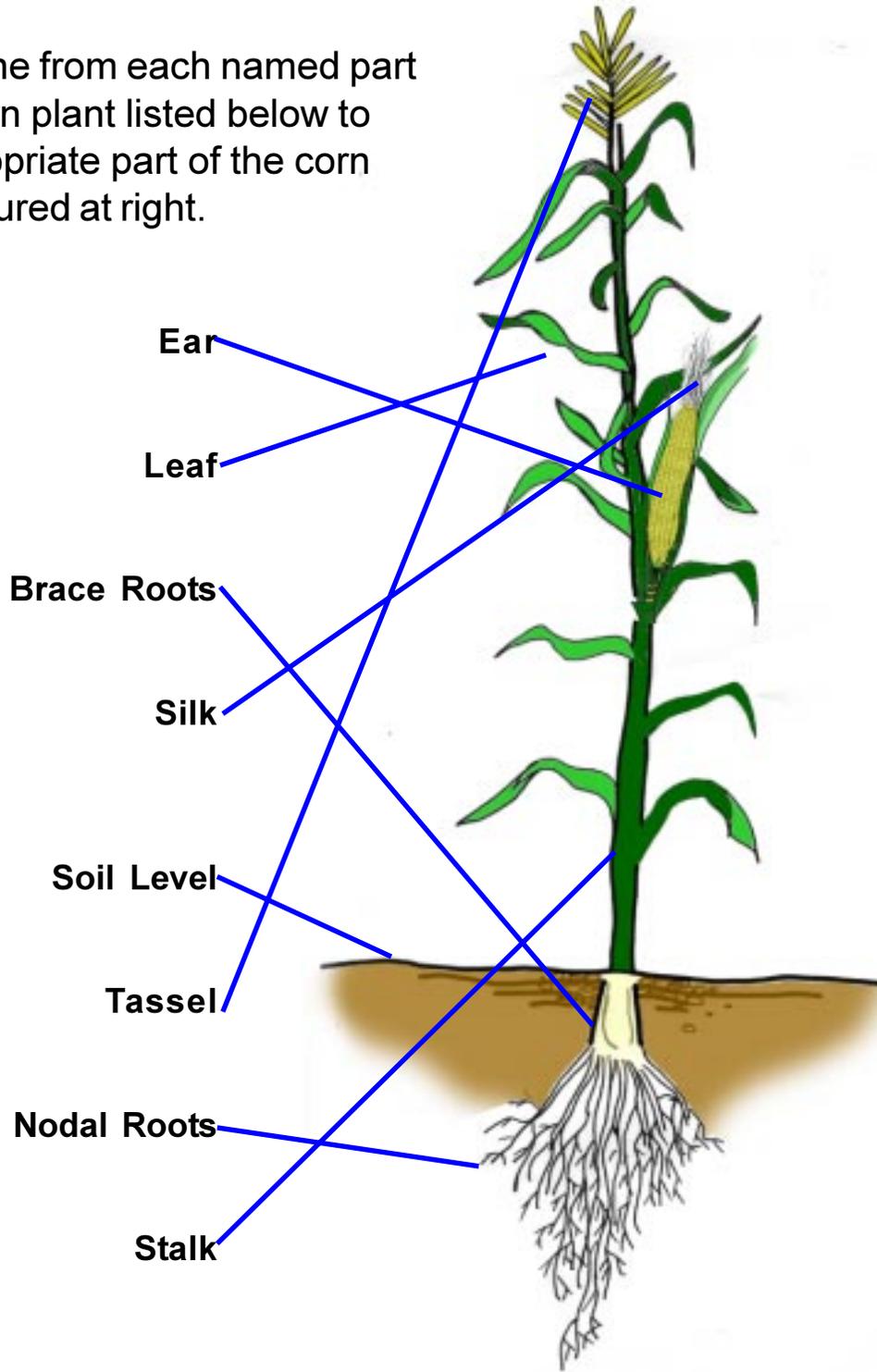
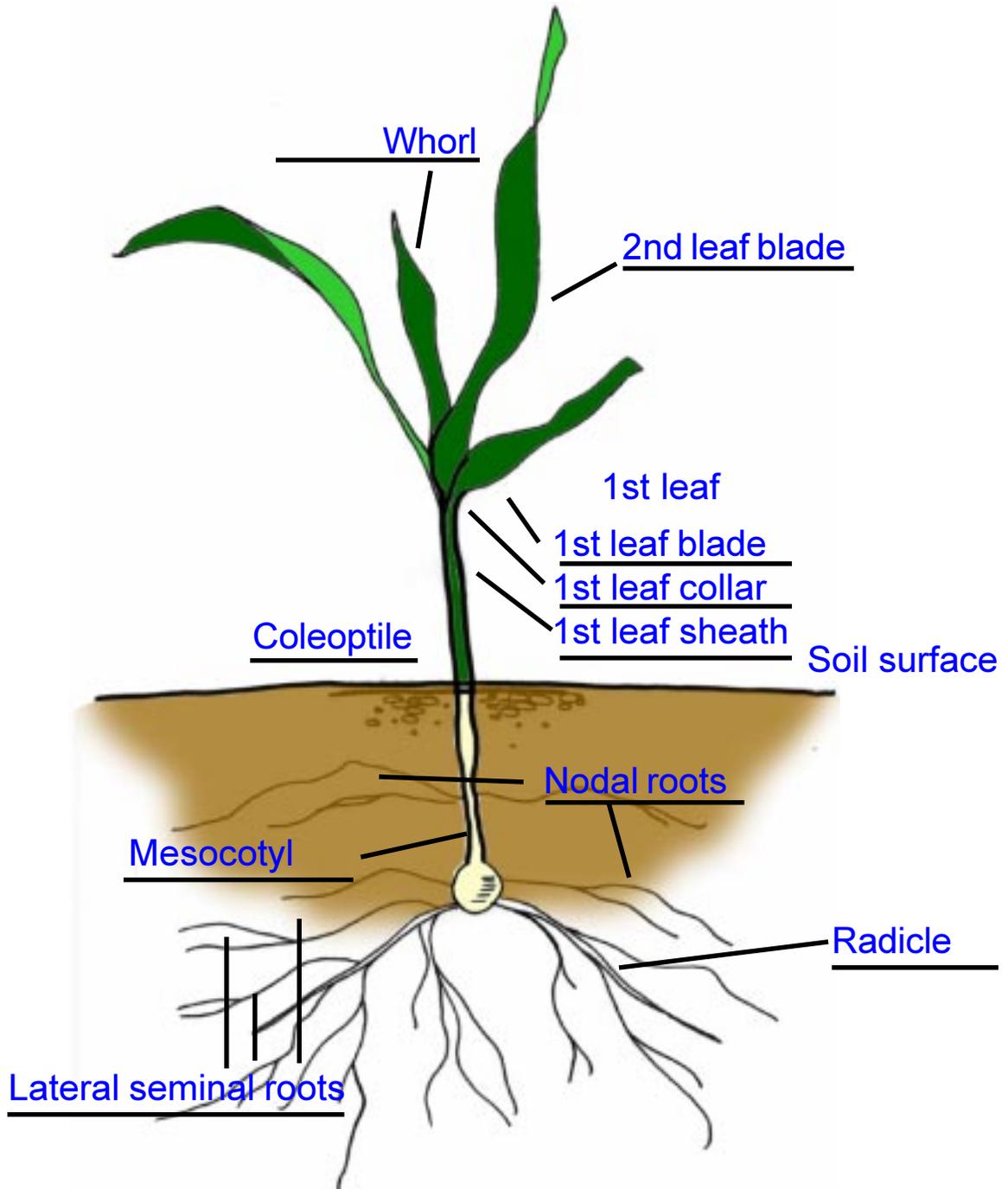


Can you identify the parts of a full size corn plant?

Draw a line from each named part of the corn plant listed below to the appropriate part of the corn plant pictured at right.

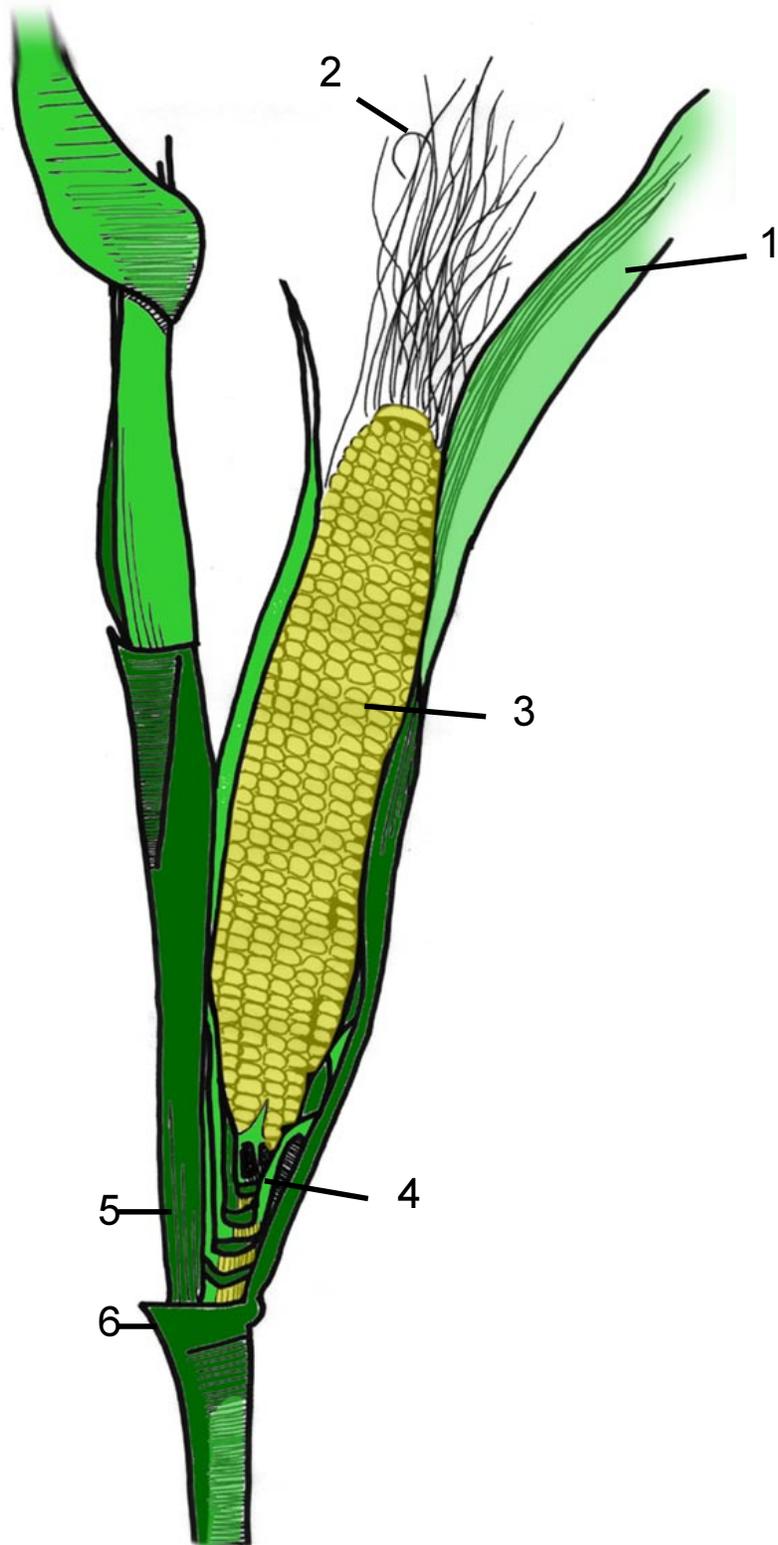


Can you identify the parts of a corn seedling (ankle high)?

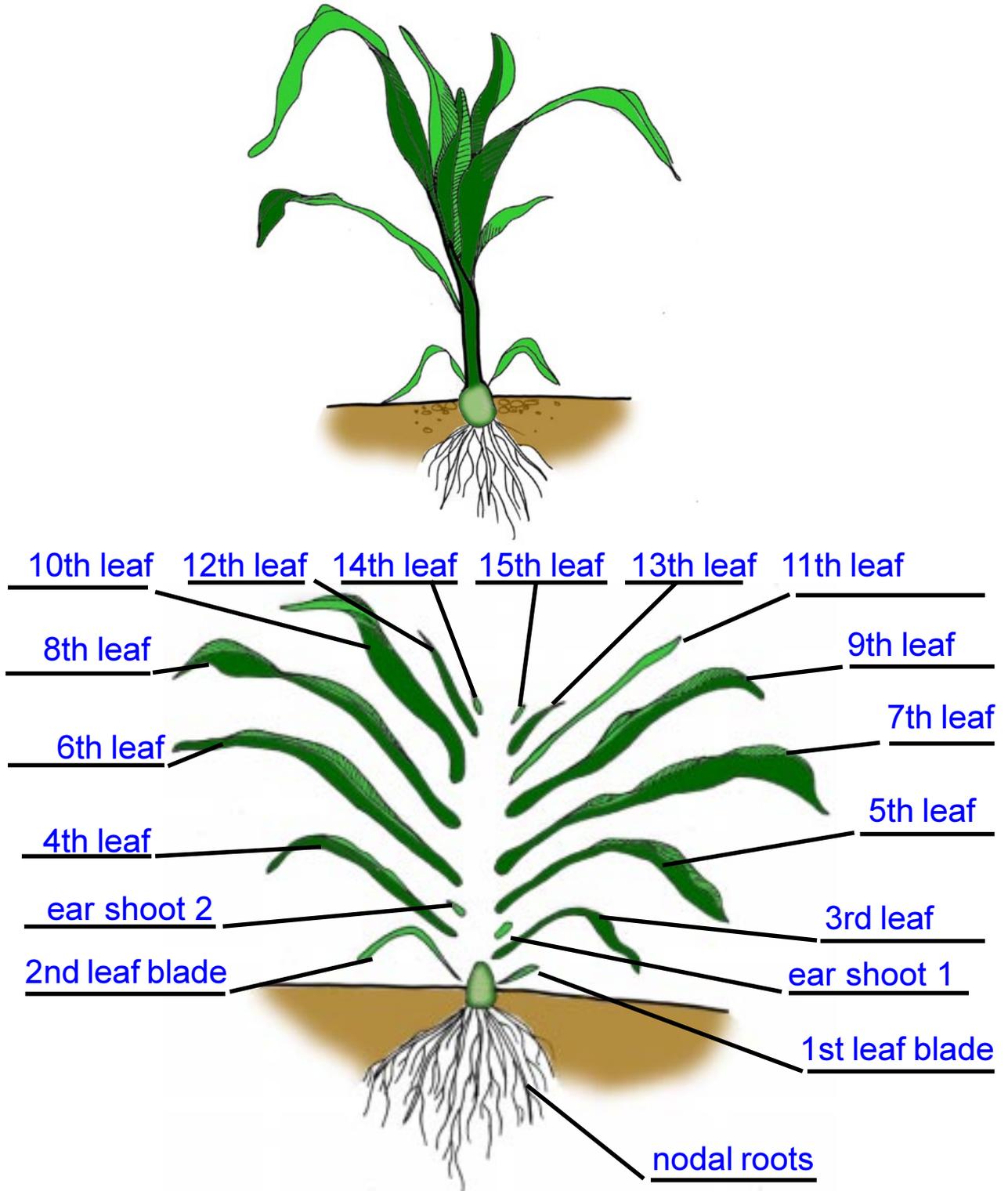


Can you identify the parts of a corn ear?

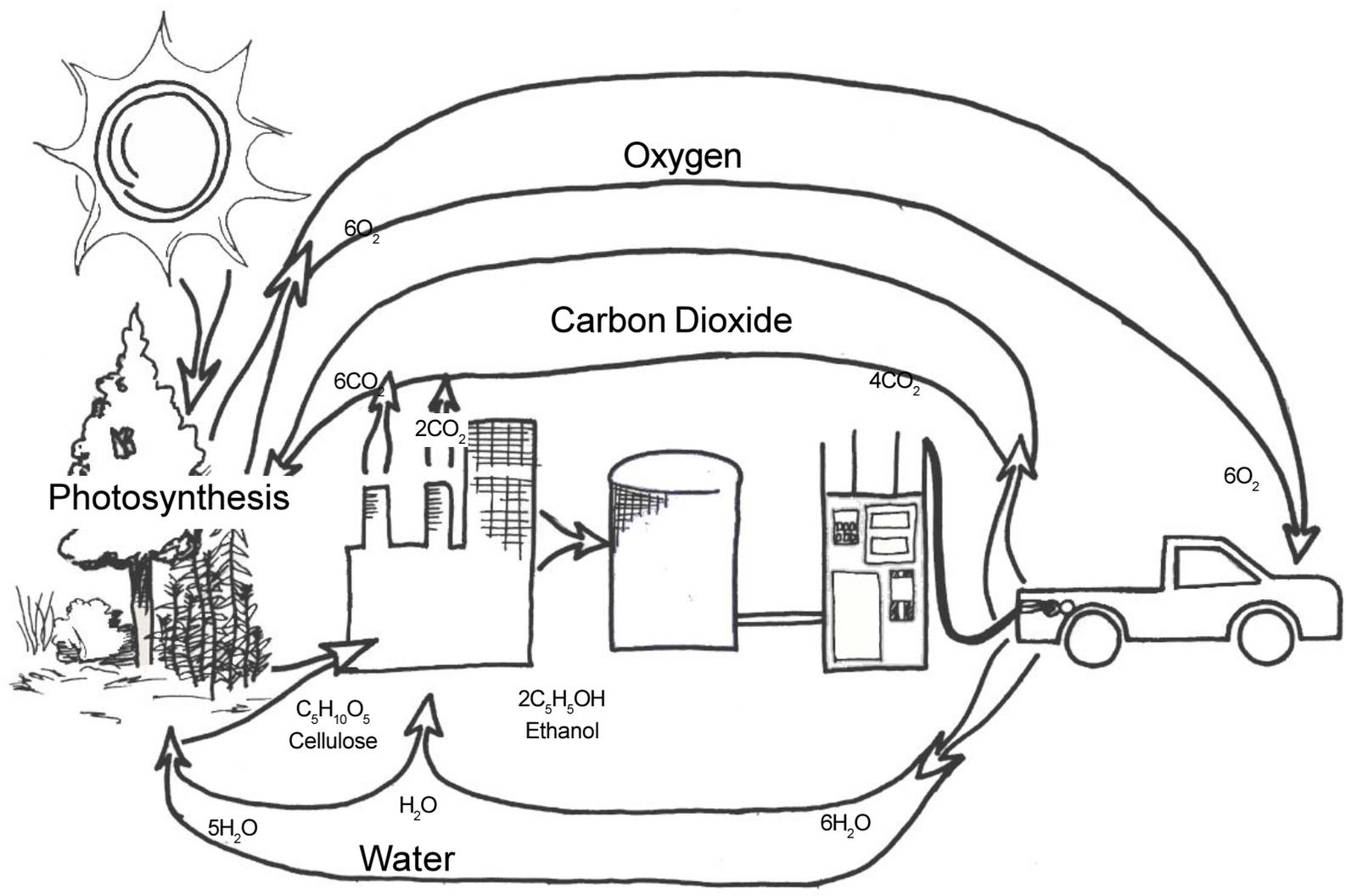
- 1. Ear leaf
- 2. Silks
- 3. Kernels
- 4. Husks
- 5. Stem
- 6. Ear node



Dissect a knee high corn plant



Carbon Dioxide Recycle With Ethanol Fuel

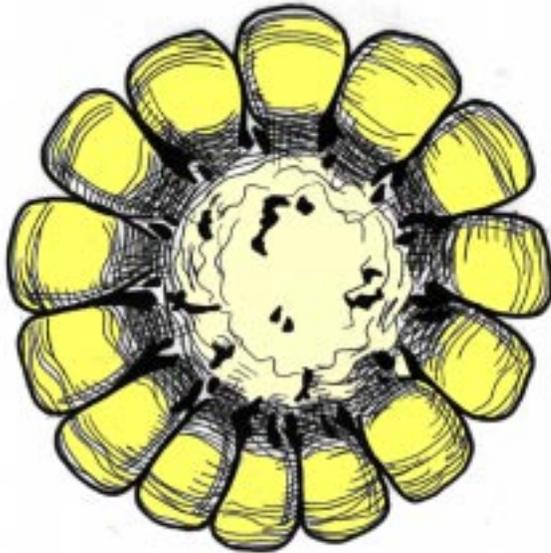




The Beauty of Corn



Count the kernels on a cob



Count the number of rows
(kernels around the cob)

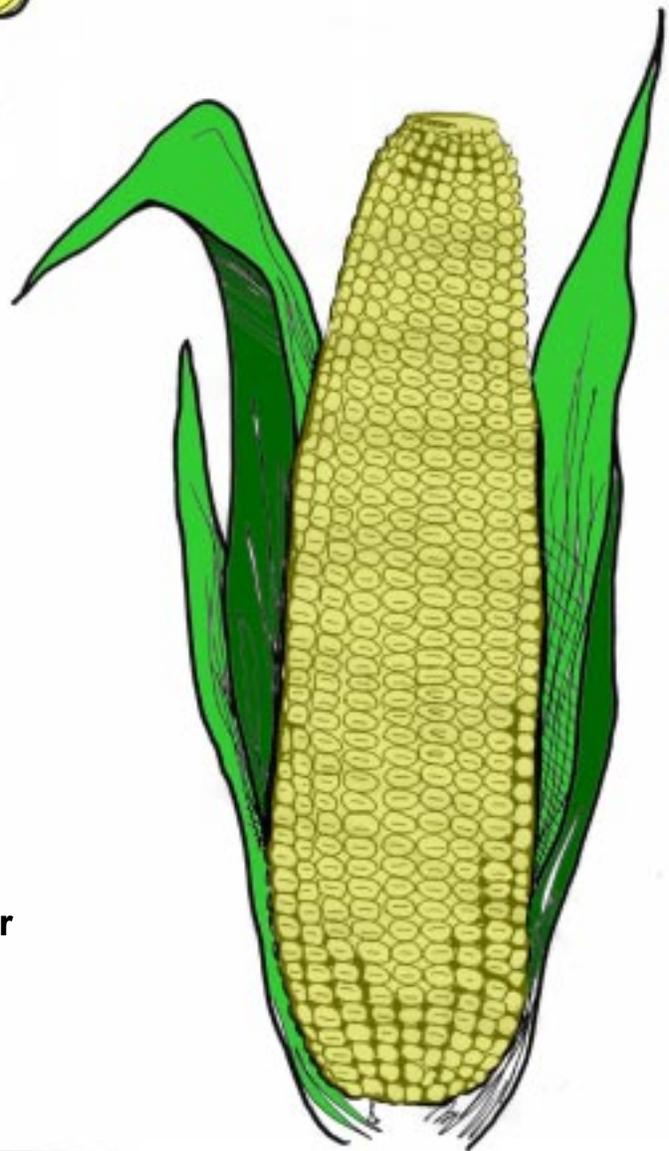
answer: 14

Count the number of kernels
per row

answer: 44

Older students: Total number
of kernels on the cob

answer: 616



You can count on corn!

1. You're a farmer using the yield calculation formula. You counted 30,000 ears over an entire acre. On the three ears you counted there were an average of 14 rows, with an average of 48 kernels per row. How many kernels per acre are there? _____

Answer: $(30,000 \times 14 \times 48 = 20,160,000)$

2. You tried narrow-row corn on your best farm. The rows were spaced 20" apart. How many feet should you measure when you're trying to count the number of ears in 1/1000 of an acre? _____

Answer: 26'2"

3. On that farm you took several counts to determine the average number of ears. Those results were 26, 32, 30, 25, 34, 28 and 29 ears per 1/1000 of an acre. What was the average number of ears? _____

Answer: 29.1

4. This time you measured 1/1000 of an acre in five locations, and counted an average of 30 ears in each location. As in the first question, the ear size averaged 16 rows, with 52 kernels per row. How many bushels per acre do you estimate?

Answer: $(30 \times 14 \times 48)$ divided by 90 = 224 bushels/acre

5. The field you rent by town was very dry during corn pollination, so you're not expecting the yields to be high. When you count ears in 1/1000 of an acre you get the following numbers: 22, 28, 25. The average ear size was small: 38 kernels per row, with 12 rows. What is your estimate of the yield? _____

Answer: $(22 + 28 + 25)$ divided by 3 = 25. Then $(25 \times 38 \times 12)$ divided by 90 = 126.6 bushels/acre

6. It was rainy early in the season, and you weren't able to get enough nitrogen applied to one of your fields. The populations and number of ears were very good (30 + 32 + 34) but the ears were small (40 + 36 + 38 kernels long and 14 + 10 + 12 rows around). What is your estimate of the yield? _____

Answer: $(30 + 32 + 34)$ divided by 3 = 32. $(40 + 36 + 38)$ divided by 3 = 38. $(14 + 10 + 12)$ divided by 3 = 12. So $(32 \times 38 \times 12)$ divided by 90 = 162.1 bushels/acre

7. You used the yield calculation formula every 10 acres in a 40 acre field. Your yield estimates were 190 bushels/acre, 182 bushels/acre, 168 bushels/acre, and 176 bushels/acre. What do you estimate the yield for the entire field to be? _____

Answer: 179 bushels/acre



How many acres?

Diagram shows 320 Acres

1. Compare the sizes of the fields. Draw what you think is one acre. Then, complete the acreage or dimension questions.

2. 10 acres = 660 feet
 x 660 feet
 = 435,000 square ft.

3. 1 acre = 43,560
 (660 ft long x 66 feet wide)

4. EXTRA CREDIT:
 Measure the school grounds in feet and calculate what part of an acre, or how many acres it is.

5. Bonus question: How far did a farmer walk behind his house in one day 70 years ago in order to plow two acres?
 (2 acres = 87,120 feet = 16.5 miles)

