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PLANT REPRODUCTION WEB QUEST

Introduction

Do you find yourself spending a considerable amount of time, energy and money on your appearance? Gotta have what's in style as well as the latest accessories? Well, all that primping, preening, grooming, and fussing is practice to increase your success in finding a suitable mate when you're older.

Teenagers, however, are not alone in wanting to be considered attractive and desirable. Plants spend as much, if not more, time and energy into creating the "perfect look" to attract insects and animals that will help ensure successful reproduction. The "look" plants go for are flowers, with adaptations such as bright colors, attractive shapes, and pleasing aromas.

There are some plants, whose flowers are not colorful, large, or fragrant. These plants rely on wind or water for the transfer of pollen, essentially leaving reproduction up to chance. The dating game can be hard for teens and plants alike. Is all that extra effort worth it in the end? Or are some things better left to fate?

Task

You will complete this worksheet by:

- Identifying the four main flower parts, and state the function of each.
- Describe gametophyte formation in flowering plants.
- Relate flower structure to methods of pollination.
- Describe fertilization in flowering plants.

Process

Read the information about the parts of flowers at each website and answer the following questions on your worksheet:

STEP 1

Go to: <http://biology.about.com/od/plantbiology/a/aa100507a.htm>

http://www.cactus-art.biz/note-book/Dictionary/Dictionary_F/dictionary_flower.htm

1) List the four main parts of a flower in the space provided. Include the function of each. Be sure to include all information, such as what makes up each part.

1.

2.

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3.

4.

2) What are the key functional differences between the male and female parts of flowers?

3) What makes a flower complete versus incomplete?

4) Explain the difference between perfect and imperfect flowers?

STEP 2

Go to: <http://esciencenews.com/articles/2009/06/04/at.long.last.how.plants.make.eggs>

<http://www.britannica.com/EBchecked/topic/463317/plant-development/63875/Early-development-from-zygote-to-seedling>

<http://www.biology.ie/article-single.php?a=50>

<http://leavingbio.net/TheStructureandFunctionsofFlowers%5B1%5D.htm>

5) Describe the process of egg-cell development. Where does it occur?

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6) What is an embryo sac?

7) What is pollen formation and where does it occur?

STEP 3

Go to: <http://www.mbgnet.net/bioplants/pollination.html>

http://www.pollinatorparadise.com/what_is_pollination.htm

8) What roles do the parts of flowers play in pollination?

9) List and describe the different types of pollination.

10) Give examples of pollinators.

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STEP 4

Go to: <http://www-plb.ucdavis.edu/labs/rost/Rice/Reproduction/flower/fertiliz.html>

<http://www.sparknotes.com/biology/plants/lifecycle/section2.rhtml>

11) List the steps for fertilization and describe what fertilization is.

12) How does the pollen reach the egg?

STEP 5

Go to: http://biology.about.com/library/quiz/bl_plantpart_quiz.htm?

Take the quiz, record your answers in the spaces below as well as on the computer. Submit your answers and grade your quiz.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

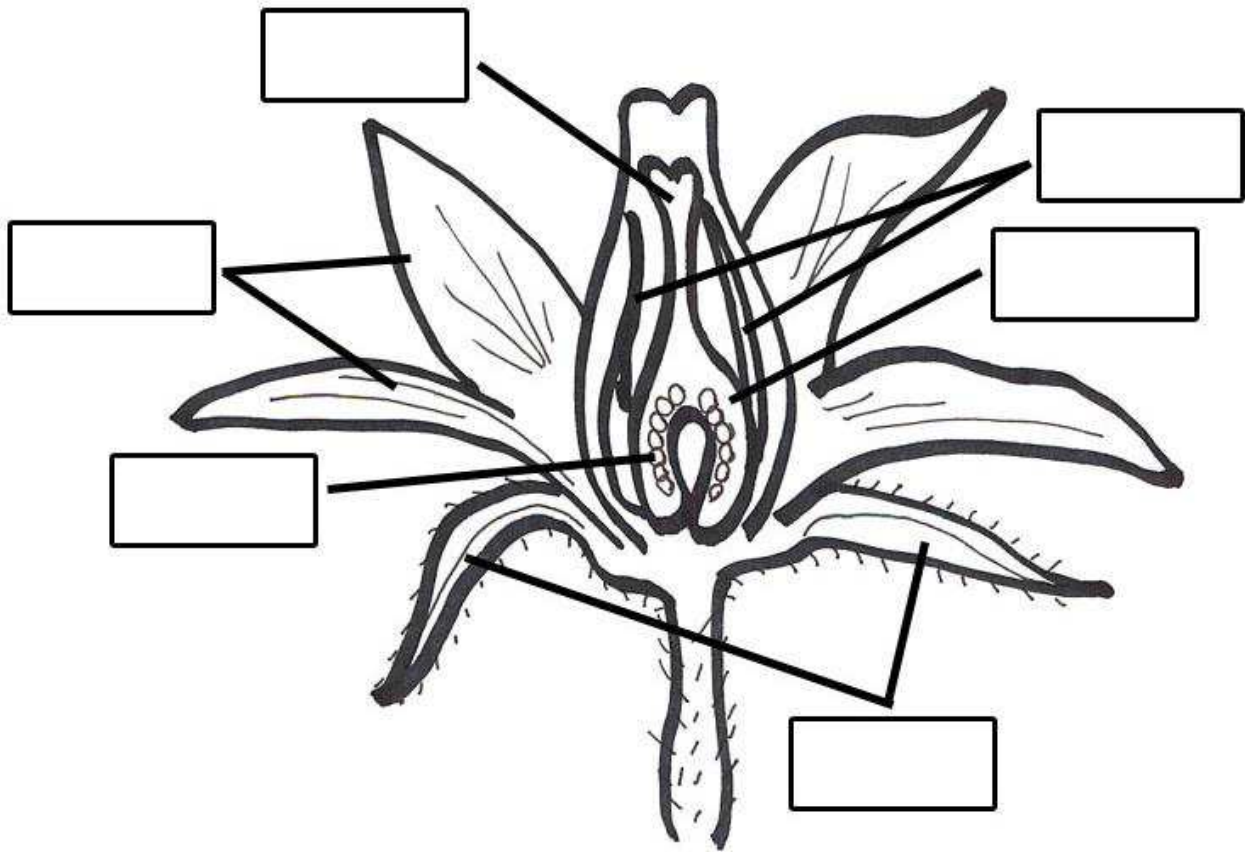
Score _____

13)

The Tomato Flower

Label the parts of the tomato flower.

Copy the words from the bottom of the page to the correct boxes on the diagram.



ovary	ovule	petals
pistil	sepals	stamens