***FLOWER POWER LAB***



Purpose: To identify the male and female parts of the flower.

Hypothesis: If I dissect a flower, then I can identify the male and female parts of the flower.

Materials

Procedure

Data Table from Flower Packet)

|  |  |  |  |
| --- | --- | --- | --- |
| Label | Part | Total Count | Description |
| A | Sepals |  |  |
| B | Petals |  |  |
| C | Stamen |  |  |
| D | Anther |  |  |
| E | Filament |  |  |
| F | Pistil |  |  |
| G | Stigma |  |  |
| H | Style |  |  |
| I | Ovary |  |  |

Results:

**Questions:**

1. Pollination is the act of a pollen grain getting transferred to another flower. Fertilization is the point when the sperm and egg fuse. Germination is when a seed begins to grow into a plant.
2. In which part of the male reproductive organ are the pollen grains made?
3. In which part of the female reproductive organ are the egg cells made?
4. By which nuclear process are these gametes formed?
5. Describe where pollination and fertilization occur.
6. How do the sperm nuclei in a pollen grain reach the egg nucleus in an ovule?
7. Which part of the flower becomes the seed?
8. Which part becomes the fruit?
9. Which does your flower produce in greater numbers: ovules or pollen grains? Explain why this would be important in terms of reproductive success.
10. There are a few different ways that pollen can be brought to the pistil: insects, wind, birds, animals and water. Which do you think pollinates your flower and why? Describe at least one specific adaptation your flower has to help facilitate pollination.
11. How do the sepals and petals differ? What would their structures indicate about the role they play in plant reproduction?
12. Look at the various flowers provided. Describe why you think flowers look so different from one another.
13. A seed encloses the fertilized egg. How many seeds would you expect your fruit to make? Why?
14. What is the evolutionary advantage of a plant producing a fruit? What benefits or drawbacks does producing a fruit have?
15. Sometimes, pollen from a different species lands on the stigma of a flower. Based on your knowledge of cell communication, suggest a mechanism that would ensure that only the correct species of pollen germinates on the stigma of a particular type of flower.

Conclusion (Restate Hypothesis, Sum Up Data, Future Plans)

