Flower Dissection

Procedure: First we took the flower apart and diagramed the stamen, anther, pistil stigma, petal, and ovary using the stereomicroscope to look at the parts close up. Then, on the back of a whiteboard using a scalpel, we cut the ovary in half so we could see the eggs. We drew a diagram of them, too. Finally, we filled out a table about our plant.

Observations:

<table>
<thead>
<tr>
<th>Stamen</th>
<th>Anther</th>
<th>Pistil</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stigma</th>
<th>Petal</th>
<th>Ovary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eggs</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Number of Petals</th>
<th>Color of Petals</th>
<th>Number of Stamens</th>
<th>Number of Pistils</th>
<th>Number of Ovary Chambers</th>
<th>Monocot of Dicot?</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Light orange</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td>monocot</td>
</tr>
</tbody>
</table>
Conclusion:

1. A flower has more pollen grains than it does ovules because it increase the chances of fertilization.
2. The stigma is sticky so the pollen can stick to it.
3. Flowers that depend on animals for pollination have large flowers with bright colors or strong odors so they can attract animals.
4. Flowers that depend on the wind for pollination seldom have large flowers with bright colors and strong odors because they don’t need to attract animals.
5. The difference between pollination and fertilization is that in pollination the plant is receiving pollen and in fertilization, the eggs are getting the pollen which has traveled down through the stamen.
Flower Dissection

**Procedure:** Jack and I dissected a flower, observed the parts of the flower under a stereomicroscope, and recorded our results. We also cut open the ovary and examined our plant.

**Observations:**
- Stamen
- Anther
- Pistil
- Petal
- Ovary
- Stigma

<table>
<thead>
<tr>
<th>Number of Petals</th>
<th>Color of Petals</th>
<th>Number of Stamens</th>
<th>Number of Pistils</th>
<th>Number of Ovary Chambers</th>
<th>Monocot or Dicot?</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>yellow</td>
<td>6</td>
<td>1</td>
<td>12</td>
<td>Monocot</td>
</tr>
</tbody>
</table>
**Conclusion:** 1. There are more pollen grains because they need to be dispersed to other plants but the ovules are safely placed in the ovary so the pollen can be easily blown or washed away, damaged, and lost forever.

2. The stigma is sticky because it has to get the pollen to stick easily on it when pollinators are around.

3. These flowers want to be attractive to pollinators with bright colors and a sweet smell.

4. The plants want to get the wind to easily come to the stamen so the flower has tiny petals like the sunflower because having large petals will block the flow of the wind. These plants don’t need to be attractive (being colorful and smelling good) because the wind can’t see or smell.

5. Pollination is the transporting of pollen from the stamen to the stigma. Fertilization is pollen coming from the stigma to the ovary.
Flower Dissection

Procedure:

1. I observed the diagram provided below with labels identifying different parts of the flower we were about to dissect.
2. I observed my flower specimen using a stereo microscope to see greater details in the flower part structures.
3. I used forceps to carefully remove the flower structures so could examine each of them separately on my table.
4. I drew and labeled my own diagram of each flower structure: stamen, anther, pistil, stigma, petal, and the ovary. I used my stereo microscope to examine and diagram the flower structures in greater detail.
5. I used scalpel to cut the ovary open at its widest section.
6. I diagrammed the inside of the ovary labeling the white ovules (eggs) inside the chambers.
7. I examined the parts my flower and recorded my observations on the table below.

Observation:
Stamen (not under stereo microscope)  Anther (not under stereo microscope)

Pistil (under stereo microscope)  Stigma (under stereo microscope)

Ovary (not dissected)  Petal (not under stereo microscope)

Diagram of the ovary  Dissected ovary
<table>
<thead>
<tr>
<th>Number of Petals</th>
<th>Color of Petals</th>
<th>Number of Stamens</th>
<th>Number of Pistils</th>
<th>Number of Ovary chambers</th>
<th>Monocot or Dicot?</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Light Orange</td>
<td>5</td>
<td>1</td>
<td>12</td>
<td>Monocot</td>
</tr>
</tbody>
</table>

Conclusion:

1) Q) Why does a flower have more pollen grains than it does ovules?
A) A flower has more pollen grains than it does ovules so that the pollen has a better chance of getting to the ovules so they can make seeds so more plants will grow.

2) Q) Why is the stigma sticky?
A) The stigma is sticky so that pollen will stick onto it.

3) Q) Why do flowers that depend on animals for pollination have large flowers with bright colors or strong odor?
A) Flowers that depend on animals for its pollination have large flowers or a strong odor so they are appealing to them.

4) Q) Why do flowers that depend on wind for pollination seldom have large flowers with bright colors or strong odors?
A) Flowers that depend on wind seldom have large flowers with bright colors or strong odor because they do not need either of those qualities to travel by wind and also if the flower was to big the wind would not be able to carry it away.

5) Q) what is the difference between pollination and fertilization of a flower?
A) Pollination is when pollen lands the flower but it does not always fertilize. Fertilization is when the sperm cell in the pollen joins with the egg cell so that a seed can form.