**AP Biology**

**Cell Communication Poster Project**

**(adapted from Ann Brokaw, Rock River High School)**

**A. Logistics**

1. Topics: “Luck of the Draw”

2. All topics will be researched only once by one group in the class.

3. Two days to work in computer lab, to prepare poster, and to prepare class presentation

**B. The Goals**

1. Your responsibility is to develop a poster using Infogram (<https://infogr.am/app/#/home> ) or Easel.ly (<http://www.easel.ly/>) (these sites should allow you to sign up for free accounts) that explains the basics of the topic and its relationship to a cell communication pathway. Pictures and graphics are also necessary along with background research. I do not expect you to work at the graduate level on this project, but I do expect you to be able to explain, in your own words, the basics of the mechanism. Each member should label which part they did. I recommend you use a Google doc to share all the research with each other.

2. You will be responsible for all the topics presented by all the groups in each class. The posters need to emailed to the teacher.

3. If, as you are researching, you don’t understand something being discussed, you will have to do further research so that you develop an understanding of the topic so that you can share the information in your own words.

**C. Grading Rubric: Total of 80 points**

**1. Poster: 20 points**

a. One infogr.am or easel.ly poster

b. Typed headings

c. Pictures and graphics as needed

d. Text **MUST** be in your own words – NO cutting and pasting from another source!!!

e. Neatness – including no spelling and grammatical errors

f. Organization – poster “flow” is organized and logical – remember other students will be looking at your group poster on the class drive.

**2. Content: 35 points**

a. Basics of topic

b. Cell signaling pathway involved

i. Signal mechanism (What is the ligand?)

ii. Type of receptor

iii. Basics of signal transduction pathway

iv. Specifics of cellular response and organismal response c. Correct mechanism

d. Faulty mechanism (if this pertains to your topic)

e. Graphics of pathway

f. Current direction of research

**3. Presentation: 15 points**

a. 5-7 minute presentation of poster to class b. Each member of group participates

c. Ability to put content into your own words and explain your poster

d. No direct reading from poster – make notes for yourself

**4. Research time: 10 points**

a. Staying on task in computer lab/classroom in preparation of project b. Asking questions as needed

**Cell Communication Poster Projects Topics**

|  |  |  |
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| **Toxin** | **Possible Topics**  Poison arrow frog | **Possible Topics**  Marine Cone Snails |
| **Plant** | Phototropism (Auxin) | “One rotten apple spoils the barrel” (Ethylene) |
| **Immune** | B-cells | T-cell |
| **Drug** | Heroin | Ecstasy |
| **Human** | Vision | Muscle Contraction (Acetylcholine) |
| **Disease** | Parkinson’s and Calcium  Channels (Healthy and faulty) | Diabetes/Insulin (healthy and faulty) |
|  |  | Cystic Fibrosis (healthy and faulty) |
| **Bacteria** | *Botulinum* neurotoxin | *Salmonella*: Inter-bacterial communication |