**Extension Assignment**
A.  Read the [Cell Communication: Inside Story](http://ppi.fli-leibniz.de/PPI_PDF_free/scott_pawson_SCIENTIFIC_AMERICAN_2000.pdf) and answer the following questions.  To answer the last question, go to [learn genetics](http://learn.genetics.utah.edu/content/cells/badcom/) link.

* How are the two cells in the illustration communicating with one another?
* What are the messenger molecules?
* Why might one cell need to communicate with another cell?
* How is our normal body functioning dependent upon cellular communication?
* What can happen when cell communication breaks down?
* What types of diseases occur as a result of a breakdown of cellular communication?

B.  Go to  [Disease of Faulty Cell Communication](http://sciencenetlinks.com/student-teacher-sheets/diseases-faulty-cell-communication/%22%20%5Co%20%22%22%20%5Ct%20%22_blank)site and answer questions.  Use the resource links below.

* [Neuron Conversations: How Brain Cells Communicate](http://www.brainfacts.org/brain-basics/cell-communication/articles/2012/neuron-conversations/)
* [About MS](http://www.nationalmssociety.org/about-multiple-sclerosis/index.aspx) (National Multiple Sclerosis Society)
* [Multiple Sclerosis Foundation](http://www.msfocus.org/)
* [Normal Regulation of Blood Glucose](http://www.endocrineweb.com/insulin.html)
* [What is Insulin?](http://www.endocrineweb.com/diabetes/2insulin.html)
* [Introduction to Diabetes](http://www.endocrineweb.com/diabetes/)

Teacher only: Please go to [Science Net Link](http://sciencenetlinks.com/lessons/cell-communication/) to view the whole lesson.

C.  [Mouse Party](http://learn.genetics.utah.edu/content/addiction/mouse/)- Factors that disrupt cell communication
Each pair of students will select a particular drug of interest.  You will need to illustrate and write a brief summary of how the drug disrupts cell communication.  You will be doing a short presentation discussing your findings.

Video Link:  Drug Addiction and Dopamine Reception dysfunction
A.  [Cold Spring Harbor](http://bigthink.com/videos/how-addictive-drugs-hijack-your-dopamine-systems)
B.  [Medpage Today](http://www.medpagetoday.com/Psychiatry/Addictions/18207%22%20%5Co%20%22%22%20%5Ct%20%22_blank)
Reading Link: [*Understanding Addition: How Addiction Hijacks the Brain*](http://www.helpguide.org/harvard/how-addiction-hijacks-the-brain.htm)