1. Open the simulation shown here. You can drag positive or negative point charges out of the box to place them around the playing field. You can also change the sign of the puck. You should check the box to display the electric field vectors and check the box to show a trace of the path of the puck.

2. What is the best strategy for getting the puck into the goal? Describe what you think will work. Test your ideas using Electric Field Hockey in the Practice mode.

3. As you put charges onto the playing area, arrows appear on the puck.

* What do you think the arrows on the puck are illustrating?
* How do the arrows from the positive charges compare and contrast to the ones from the negative charges?
* Do you think the puck is positively or negatively charged? Explain your choice in terms of the behavior of the puck.
* Explain how the electric field arrows help you predict the motion of the puck

4. Now use these findings to play the game. Select one of the difficulty levels: 1, 2, or 3. Create an arrangement of charges that will get your puck into the goal. Once you have succeeded, take a screen shot of your winning arrangement and insert it into this document. Be sure to display the trace of the puck and the electric field vectors.

5. Use the vocabulary of this module to explain the behavior of the puck. Your explanation should include the terms: electric force, repulsion, attraction, electric field, electric potential energy, kinetic energy and electric potential. Be sure to use each term correctly in your explanation of why your arrangement was successful.

Once you have finished completing the assignment, submit your responses to the dropbox.