Specific instructions for writing the ga5-1 complementation report
(check also the instructions for writing abstracts and reports from the Syllabus)

Title

Abstract
Follow the guidelines on the Syllabus. Remember you do not have cover your methods in any detail here.

Introduction
The importance of semidwarf mutations and other background you find relevant to this study. Role of GA in semidwarf mutants. What was known about the ga5-1 mutant in Arabidopsis when you started doing your experiment? What was the purpose of your experiment? What did you do? (very brief). What were your (expected) results? (very brief). Remember to provide references for your statements (even from text books).

Material & Methods
Here are the primers we used:

AscGI5F	at4g25420	ATATAGGCGCGCCATGGCCGTAAGTTTCGTAA
GI5RPacI	at4g25420	AGTGTTAATTAATTAGATGGGTTTGGTGAGC

See the M & M section of the Spielmeyer paper on how to describe the primer sequences.

Results
Although due to time constrains you did not do the experiments in the "right" order, report the experiments in the order they are performed in "reality". Explain what you did and why you did it. Explain your cloning strategy. Explain also your controls and all the checking that you performed at each step of your cloning procedure. Include the pictures of the gels and make sure you label every lane and DNA band that is on the gel. If you are missing the gel with the restriction digestion of the vector describe in the text what should be there (size of bands) or take a picture from another group. The information about the ladder is in the lab manual. The only step that actually did not work during class was the PCR of the GA20OX1 gene. This was due to a technical error. We actually repeated the PCR and we got a product so you can ignore the first failed PCR in your report. At this point you were generating a tool, this was not an experiment so you do not need to describe this type of technical issues because we did not modify the protocol for the second PCR attempt, we just repeated the reaction.

Discussion
In class we had only time to generate the transgenic plants but had no time to analyze them so you do not know the result of your experiment. Therefore, in the discussion you should write about two things:
1. How would you quantify whether complementation/rescue occurred? Which experiments would you do with your transgenic plants? Remember to always describe your controls when you are proposing experiments to do.
2. Enumerate the different possible outcomes of these experiments. Write about the implications of each possible outcome. For example, how would different outcomes fit with what is know about other semidwarf mutants in other plants? How would these outcomes fit with what is know about GA20oxidases in other plants? (Remember to provide references).

Reference List
Use the format described in the Syllabus.