Algebraic and Transcendental Numbers

The goal of the presentation is to discuss logarithms and exponentials. Your presentation should include at least

- A discussion of what an Algebraic Number is
- A discussion of what a Transcendental Number is
- At least three examples of Transcendental Numbers
- At least two examples numbers for which it isn't known if they are Transcendental
- A discussion of what the GelfondSchneider theorem says.

In addition you should include at least one thing not on the above list

At the end of your presentation the class will be asked one of the following questions.

- Is $\sqrt{2}^{\sqrt{2}}$ algebraic or transcendental?
- Is $\sqrt{3}^{1/2}$ algebraic or transcendental?
- Are there rational numbers which are transcendental?

A good starting point for your research is

http://en.wikipedia.org/wiki/Algebraic_number

http://en.wikipedia.org/wiki/Transcendental_number

http://en.wikipedia.org/wiki/Gelfond-Schneider_theorem

If you have any questions regarding the presentation feel free to e-mail your TA or Dr. Ackerman