Dear Professor *GraduateAdvisor*,

My name is *Prospective Applicant* and I am a current student at *Undergrad University*. At *Undergrad* I work with *Thesis Advisor* studying *blah blah and such-and-such, using x y and z methods*.

I am contacting you because I'm applying to PhD programs *YourDiscipline* this fall, and *Graduate University* is one of the schools I will be applying to. My research interests are in *x, y, and z* ….

I've noticed that you have done research on *x and y* in your lab. Because of our similar interests, your lab is one of the ones I am intrigued by at *Graduate University*. Do you know if you will be accepting any students into your lab for the *2007-2008 year*? If not, do you recommend any other professors at *Graduate University* with similar interests who will be accepting students? If you are accepting new students, I'd be interested in hearing more about your particular lab and getting in touch with some of your current students. Please feel free to direct me towards your most recent research (manuscripts, etc) as well.

Thank you for your time, and I look forward to hearing back from you soon.

Best Wishes,

You

Dear Professor X,
I am applying for the (Uni Name, Program name) this fall and am interested in your laboratory's work in (enter field of interest).
(2nd paragraph here. I basically just described my research interest, some techniques I have experience in, etc... This part should be more personal and explain a bit about your scientific/academic interests.)
(In this third paragraph, I describe what I'm looking for in a PhD lab and my general interests. Here is where you tie in the fact that your research interests overlap with theirs)
(Closing) Do you anticipate any opening for a PhD candidate in the next year or two? If I am accepted to (Uni Name), may I contact you in the future about the prospect of doing a rotation in your lab and assisting with your current research? Thank you for your time and consideration.
I have attached my CV for your convenience.
Best, Wolverine