Notes on NSF GRFP

- US citizen, national or permanent resident alien
- level 1: seniors; level 2: first year graduate students; level 3: 2nd year; level 4: students changing field
    * applicants evaluated by level [3]
- award has mandates to distribute geographically (by place of birth)
    - must be an applicant who stands out
    - from group of substantially equal merit, NSF gives preference to those from underrepresented areas
    - high school determines geography [1]
- publications aren't a requirement; apply for more than one year
- student representation in department committees, participation in science societies, indication of broader impacts
- use evaluation sheets

Panelists evaluate using the following questions:
What is the student's motivation for graduate study?
Is there tangible evidence demonstrating sincerity of interest?
How does the applicant plan to give back to society?
Is there tangible evidence demonstrating sincerity of intent?
Does the applicant develop a relevant research hypothesis?
Does the applicant develop a cogent, cohesive research plan?
Does the applicant understand relevant research principles and techniques?
Does the applicant demonstrate appropriate intellectual maturity and reasoning?
Does the applicant communicate the impact and relevance of proposed research findings?

Does the applicant understand previous research hypothesis, purpose & goal?
Does the applicant cogently describe at least a portion of the research activities?
Does the applicant understand relevant research principles & techniques used?
Does the applicant demonstrate independent intellectual maturity and reasoning?
Does the applicant communicate their research findings, including impact and relevance?

The dossier of the successful applicant:
Strong- but not necessarily perfect - academic records
Very competitive - but not necessarily perfect - GRE scores
extremely strong letters of recommendation - primarily from tenure-track faculty
Conducted - even planned - "independent" research
Clear understanding of impact & relevance of past & planned research
Clear visions of how a PhD fits into their career plans
Relevant research hypotheses & cogent, cohesive research plans
Demonstrable independent, intellectual maturity & reasoning
Demonstrated leadership in giving back to society

Advice for NSF GRFP [4]

- specificity is key
- broader impacts has become big in the last 5 years
- have a couple reviewers of your proposal
- emphasize why specific university is great for your plan of research [1]
- make sure your reference letters also address the criteria of intellectual merit and broader impacts
- use white space, diagrams, tables, pictures and charts
- use first person, active sentences
- avoid technical jargon
- avoid using phrases like "It is obvious", "It is apparent", "As previously stated"
- use references
- writing principle of "Show, don't tell"

IMPACT

Completeness

- Education
- Academic honors
- Research Experience
- Work experience
- Publications
- Intended area of research
- Extracurriculars
- underrepresented/extenuating circumstances

Clarity

- non-native English speakers: ask an American counterpart to revise essays (your grammar is better, but you may want to have an "American" sound to your text)
- no rambling, no risque remarks or jokes

Coherence

- make the application tie together coherently
- make yourself memorable
    - hammer in main strength or passion
- show, don't tell

Broader impacts is extremely important for NSF

References:

[1] socrates.berkeley.edu/~gamble/nsfadvice.pdf
[2] http://uts.cc.utexasa.edu/~asee/NSFGRFPTalk-OGSWrkshpOct02.pdf
[3] www.asu.edu/graduate/aboutus/NSFGRFP2006c.pps
[4] http://web.mit.edu/pgbovine/www/fellowship-tips.htm

An excellent, if somewhat rambling, description of the application process, emphasizing the NSF, NDSEG, and Hertz fellowships. Also has an interesting discussion on another page on how dorks are dorks even if they're dressed well. "Trendy clothes cannot make you popular, but they can protect you from ridicule."