Writing an Effective Abstract
Talking to Judges
Rules Clarification: Question & Answer

Talking to the Judges

- How to look and sound
- What to say to begin
- Organization of your presentation
  - Guidelines for Judges
  - Keep it concise
  - Guide the discussion back to your main point

Effective communicators eliminate distractions, create attention

EYE	EAR
Eye contact	Inflection (Pop)
Body Motion	Pace
Gestures	Pauses
Hands	Tone/Pitch
Head Motion	Volume/Projection
Facial Expressions	"Ums, Ahs, You Know, OK"
Posture	Jargon/Acronym
Mannerisms	Repetition
Swaying	Simple
Dress	Personal
Grooming	Humor (Joke)

Practice in front of a mirror.

Respect your Judges

Assume the judges have a sound background in your field. They'll ask if they don't.

Judges are after certain data prescribed by the Judging Guidelines/Criteria

- Prepare for Judges question, "Please explain your project to us"
  - Combine "purpose" and "conclusion" sentences from Abstract into brief 30-second "elevator speech" to quickly impress judges!
  - Then cover entire project in 2-3-4 minute speech, following Abstract (# in your category sets time)

Judging Guidelines
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Judging Criteria: Creative Ability

- 1. Does the project show creative ability and originality in the questions asked?
  - the approach to solving the problem?, the analysis of the data?, the interpretation of the data?
  - Equipment: the construction, design/modification of new equipment?
- 2.   A creative contribution promotes an <u>efficient and reliable method</u> for solving a problem.

Judging Criteria: Scientific Thought (Science)

Is the problem stated clearly and unambiguously?

- Was the problem sufficiently limited to allow plausible approach?

- Was there a procedural plan for obtaining a solution?

- Are the variables clearly recognized and defined?

- If controls were necessary were they correctly used?

Judging Criteria: Scientific Thought (Science)

Are there adequate data to support the conclusions?

- Does the student/team recognize the data's limitations?

- Does the student/team understand the project's ties to related research?

- Does the student/team have an idea of what further research is warranted?

- Did the student/team cite scientific literature, or only popular literature (i.e., local newspapers, Reader's Digest).

Judging Criteria: Scientific Thought (Engineering)

Does the project have a clear objective?

- Is the objective relevant to the potential user's needs?
- Is the solution workable: acceptable to the potential user, economically feasible?
- Could the solution be utilized successfully in design or construction of an end product?
- Is the solution a significant improvement over previous alternatives?
- Has the solution been tested for performance under the conditions of use?

Judging Criteria: Thoroughness

- Was the project carried out to completion within the scope of the original intent?
- How completely was the problem covered?
- Are the conclusions based on a single experiment or replication?
- How complete are the project notes?
- Is the student/team familiar with scientific literature in the studied field, other approaches?

Judging Criteria-Skill

- Does the student/team have the required laboratory, computation, observational and design skills to obtain supporting data?

- Where was the project performed? Did the student or team receive assistance/supervision from adults.

- Where did the equipment come from? Was it built independently by the student or team, obtained on loan, in a laboratory where the student or team worked?

Judging Criteria-Clarity

- How clearly does the student or team discuss the project and explain the purpose, procedure, and conclusions?

- Does the written material reflect the student's or team's understanding of the research?

- Are the important phases of the project presented in an orderly manner?

- How clearly are the data and results presented?

- How well does the display explain the project?

Make it Snappy

Short is good, no, make that <u>GREAT!</u>

$E = mc^2$

Ian Wilmut published his cloning of Dolly in 3 pages (*Nature*, 1997).

Watson & Crick announcing the structure of DNA, ran just over one page. (*Nature*, 1953.

Vigorous writing and speaking are concise

- Give the judges the truth and be ready to support it.
- The speaker should make all his/her sentences short and every word count.
- Brevity + Weight

(Charles Krauthammer, Time, July 21, 1997)

Getting ready for difficult questions

Give the judges the truth and be ready to support it.

<u>Issue</u>   <u>Response</u>

Main Point/Assertion: What you are
   telling the judges

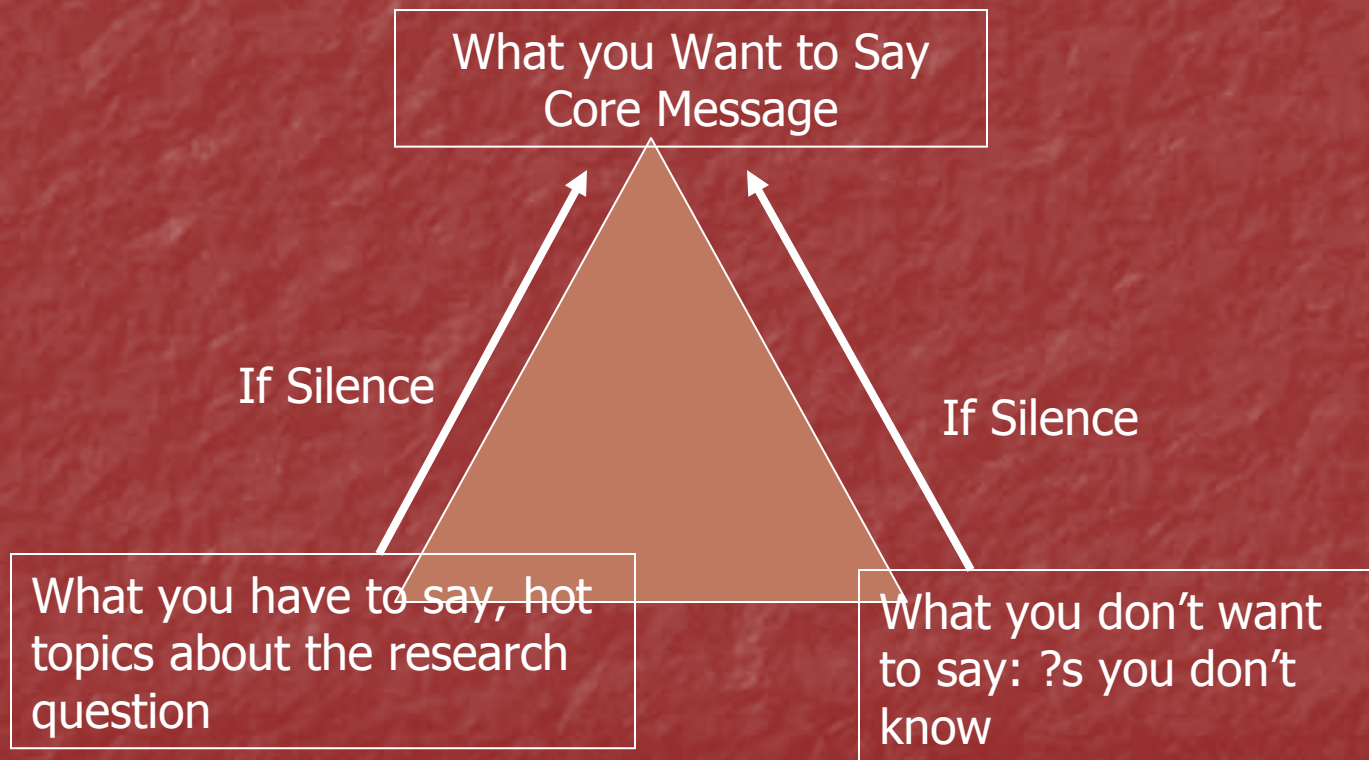Support: Facts--examples, stats

Color—quotes, analogies, clichés, personal
    experiences

Absolutes & Predictions—be wary of claiming
  too much

Admit limits of research:

Conclusion: emphasize, even if "no results"

Strategy for tough questions

What you Want to Say
Core Message

If Silence

If Silence

What you have to say, hot topics about the research question

What you don't want to say: ?s you don't know

Overall *ScienceMONTGOMERY* Goals

- Celebrate Science

- Share the excitement

- www.ScienceMONTGOMERY.org