



## Protein Modeling – C Macomb County Science Olympiad

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The competition will follow the rules published by the National Science Olympiad. The competition environment at Macomb Community College will be a computer lab, most likely a PC lab. Each team of three students will have one PC. The students will use the onsite build website only and will not be allowed to access the Internet at any time. The Jmol Quick Reference Sheet may be used during the competition.

It is suggested that teams begin with the information on the national website.

[http://soinc.org/protein\\_modeling\\_c](http://soinc.org/protein_modeling_c)

The Center for Biomolecular Modeling has a great deal of wonderful information to help the team be successful in the event. Please see: <http://cbm.msoe.edu/stupro/so/index.html> In particular, pay attention to all of the tutorials and helpful hints given along the left hand side of the web page.

The competition is divided into three parts.

PreBuild Model (40 % of score)

Onsite build model (30 % of score)

Onsite test (30 % of score)

**The prebuild model must be impounded at the time specified in the schedule.** If a team does not impound a model, no points will be awarded for that portion of the competition. Prebuild kits containing Mini-Toobers (foam-covered wire) are available through 3D Molecular Designs. The cost is \$ 20. Plus shipping. <http://www.3dmoleculardesigns.com/scienceolympiad.asp>

Other materials can be used for the pre-build such as 12 guage solid electrical wire or pipe cleaners. Use the prebuild website to work on the prebuild model before coming to the competition.

<http://cbm.msoe.edu/includes/jmol/SOJmols/2012PreBuild.html> . Remember to bring the pre-build model to the competition and **IMPOUND** it at the specified time.

A model of a different protein will be constructed during the onsite build. Students will be given the necessary building materials. Rulers will be provided but markers may not be provided.

The written test is provided by the Center for Biomolecular Modeling. Scoring for the pre-build, onsite build and written test will be done according to the rubrics provided by the Center for Biomolecular Modeling.

Good Luck!