

Science and Technology – Course Description

Sci-Tech is an integrated course that is team-taught (two teachers in the classroom) by a science teacher and an applied technology teacher. It has been in existence at Glenbrook North High School for over 6 years and is now being implemented, in part or in whole, at various other schools in the United States. The course has four main components:

1. Problems of the week:

These are basic science demonstrations (some not so basic) that fit in thematically with the other course activities described below. The students are required to be actively involved in the demonstrations by filling out the “Problem of the week” form before they get the explanation of the demonstration. This requires them to invest themselves in understanding the demonstration instead of just watching the teacher put on a show. A problem is done every Wednesday.

2. Challenges of the month:

These are design challenges where students, in-groups of four, must build a product that will compete with all the other groups taking the course. Competition is an important aspect of the sci-tech course. The winning class always gets donuts from the losing class. The lowest score supplies the milk! A top ten and bottom ten list is kept and updated to motivate the students. Points are awarded each month to the teams based on their performance so that there can also be a yearlong competition between groups.

3. Engineering team projects:

These are yearlong projects completed in the same groups of four described above. They are very time consuming but worthwhile. A list of examples is in the booklet. TIES magazine has printed several articles on the projects like the roller coaster and the virtual reality roller coaster that was on display at the Indianapolis ITEA.

4. Individual design challenges:

These are individual CAD/CAM projects using Mastercam. See the dart article in “The Technology Teacher” or in the curriculum for one lathe example. All the CAD/CAM curriculum is available at www.rdresource.com under the TRU Education Inc. heading.