

**All Vocational Agriculture Educators Can Participate in Activities that Assist  
Authentic Assessments Such as CAPT and NOCTI**

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**Schedule of Practical Laboratories - Components of Vo Ag Instruction**

The creation of a laboratory practical outline for Freshman, Sophomore, Junior and Senior levels is something that as a Vo Ag center we need to pursue. We do have a process or outline for developing such instructional practices. Our equipment systems can guide the development of laboratory practicals, which are in the teacher course curriculum maps. Some of the curriculum maps might need to be changed - that is possible. The laboratory practical should be linked to the lecture/instruction of the application to be more effective. The assessment therefore can be wrapped around the practical application and documented for our NOCTI files.

For example, the equipment in the Vo Ag laboratory can provide the framework for developing specific laboratory practicals. These laboratory practicals are directly linked to 3 different components - the vertical map, this answers the student question - why do we do this, who does this along with job titles, the instruction and laboratory exercise itself and the assessment. The assessment is something that needs to be modified slightly to become more than a typical vocational "performance checklist" but to also include critical thinking and other higher order problem solving and reasoning skills. Before 2000 Vo Ag performance measures required the "hard copy" assessment to be part of a student portfolio and the same applies for the NOCTI Measures today.

Our curriculum provides some excellent opportunities to "model" critical thinking (problem solving) activities. Situational "prompts" can also link critical thinking problems of industry applications (why doesn't the pump work) to trouble shooting what happens if the pump doesn't work. I feel one of the best examples of this situation "prompt" in the past few years is John Roy's exercise after his temporary lab in Thomas saw large a unexplained lobster mortality. The students needed to think about the situation and brainstorm (problem solve) as to why large numbers of lobsters were dying so quickly.

John asked for students for written explanations of what was happening and students had to logically present "the case." John then collected what the students wrote out as what was the cause of the situation and reviewed them for observation, deductive reasoning, analysis of data, etc. The correct response was discussed and reviewed explaining the process to solving what was killing the lobsters.

In the same way the district is also looking at opportunities for students to write up labs and respond to prompts in problem solving/thinking exercises. What could happen here is that every lab practical have a problem solving thinking (written) component thus having them serve two purposes, the vocational assessment NOCTI while preparing students for CAPT responses. Some CAPT responses may be suited to Vo Ag lab practicals already developed. Perhaps this is something we can work on over the summer.

The opportunity does exist to use Vo Ag instructional practice of engaging students with the Vo Ag teacher deciding how the performance measures would be assessed. The performance measure was always provided but the process of determining how and when it was assessed, was the role of the Vo Ag teacher. The concept of a single assessment for a performance measure never existed in the Vo Ag model. There could be multiple ways (freedom to choose) for a measure to be assessed. It is that flexibility of instruction and assessment the Vo Ag model strived to develop within the comprehensive high school setting.

With a new emphasis upon critical thinking, problem solving, higher order reasoning skills and students writing up laboratory exercises what more could be appropriate than "application education."

The attached chart may be helpful in deciding how to incorporate these higher order thinking and assessments into curriculum design.