

## Assessment is Learning

When students know about the goals of instruction, they can give the teacher evidence about their own understanding in relation to those goals. The more students can take on the role of self-assessment, the more they can move toward being able to decide their own next steps.

As an example, What do we want the students to take away with them after completing the assignment:

The goals for this assignment is:

Find solutions that we can choose to create a useful design project for the community.

Use math and science concepts in creating your design.

Work collaborative with your follow team mates.

Using divergent thinking during the problem solving process.

Using the goals and the 4 levels of expertise listed below you and the students can create the rubrics to use during the project.

**4 Exceeds expectations:** Highly creative, inventive, mature understanding of design process. Much original thought. Completion of the assignment with attention to detail and thoughtful planning. Has included well thought out learning objectives for the students.

**3 Meets the full scope of work:** Detailed and consistent evidence of how to use tools of the design process. Has a grasp of the concepts. Understands the role that thinking skills play in this interdisciplinary project.

**2 Progressing to achieve full level:** Beginning of/ or some evidence of understanding the design process. Is beginning to use thinking skills in the lesson plan. Has not developed the use of learning objectives in the lesson plan.

**1 Needs support to understand concepts:** Shows little or no understanding of the design process or thinking skills.

### Action Guide for Thinking through Assessment

- Be up front with students. Explain the types of thinking performances you expect from your students.
- Establish criteria and standards of good thinking as a group with your students. Establishing criteria with students helps communicate what "counts" as a good thinking.
- Set standards that drive and encourage the thinking performances you want. The assessments you use should cue students to reflect on specific aspects of their thinking processes.
- Provide students with a range of examples and models of thinking-centered assessments and explain how they gauge thinking (e.g. rubrics, checklists, portfolios, etc.) As a group, determine which types of assessments best align with the type project or lessons at hand.
- Teach students how to use the assessments as thinking and learning tools. Involve students in the design and construction of the assessments they will use to evaluate their performances.



- Use thinking-centered assessment as an on-going form of evaluation throughout the course of the project. Too often, evaluation comes at the end of a project or unit. Provide students with frequent and informative feedback on their thinking performances.
- Vary the source of feedback and forms of interaction students experience when using thinking-centered assessments. Students can learn a lot from other students, from other teachers and experts, and from themselves.
- Teach and model positive protocol for giving and receiving feedback. Assessing another students' work is serious business. Students will need models for how to respectfully and substantively respond and react to another students work.

**Formative assessment** ... How do we have students involved and why. What measurements are we going to use during the project to help the students get feedback on what they are doing: We can provide feedback at How well they gather, process, apply and analyze there data. The data points can be applied to the following:

1. Understanding concepts
2. Use of processing skills
3. Attitude about the project

How did you connect the rubric to the requirements?

explicitly making a connection between requirements and rubrics? It seems like this is a good way to have students create their own rubric...Mark the formative assessment cycle, a model that can be applied to assess any science teaching goals, including science concepts, science process skills and scientific attitudes

