

Pedagogy

Project-Based Learning

Evidence shows that PBL enhances the quality of learning and leads to higher-level cognitive development through students' engagement with complex, novel problems.

The Buck Institute for Education (2003)

A primary instruction strategy employed by the NAF curriculum is project-based learning. This method of inquiry-based instruction enables students to experience authentic theme-based situations that require the integration of knowledge and skills from a variety of domains. It fosters the communication and teamwork skills needed for future employment, as well as allowing for a variety of assessments.

The NAF curriculum incorporates projects in each of its courses. These projects share several features, including engaging students in the central concepts and principles of the academy theme. The provision of provocative issues and questions leads students to deep study of the theme and the acquisition of essential knowledge, along with specific skills for using technology, self-management, and project management.

Underpinning the projects and all of the units are driving questions. NAF has adopted the following characteristics for selecting driving questions (Jacobs, 1997)

- The students should be able to understand the question.
- The language of the question should be written in broad, organizational terms.
- Should reflect conceptual priorities.
- Each question should be distinct and substantial.
- Questions should not be repetitious.
- Be realistic given the amount of time allocated for the unit or course.
- Logically sequenced.

Literacy

The case for focusing on literacy in the NAF curriculum is driven by several factors that are of particular concern for most of the NAF academies. NAF Academies, being mostly urban, tend to have a higher percentage of students of poverty, African-American, Hispanic or immigrant backgrounds than suburban and rural communities.

The following issues tend to emerge in academies in poor communities (Tatum, 2005):

- A correlation between low levels of reading achievement and poverty.
- This is particularly true for African-American males.
- Reading gaps are wider among adolescents.
- Many African-American high school graduates are reading at the same level as white middle school students or below.

In response to these factors, the NAF curriculum focuses on the literacy skills as part of the career theme. It integrates literacy strategies that have a demonstrated benefit to students. In addition, the recommended reading materials reflect the cultural diversity of the student population enrolled in NAF academies.

Curriculum Integration

NAF views the academy themes as curriculum unifiers. As such, the curriculum places importance on linking career education to the core academic disciplines. NAF believes that a concept-based integration approach must address several important questions:

- What are the goals of curriculum integration?
- How can concepts form the basis for curriculum integration?
- How can a NAF Integrated Curriculum influence an entire school?

The four major goals for curriculum integration are:

- To give coherence to the entire curriculum and put the core academic subjects into a career context.
- Meet standards (both educational and industrial) in an efficient way.
- Give punch to career education and raise academic achievement.
- Address the learning needs of a diverse group of students.

To meet these goals, the NAF curriculum is built around key concepts (Erickson, 2002). The concepts have several characteristics: an organizing idea that is timeless, universality, breadth, and represented by 1 or 3 words (Examples: order, change, interdependence, patterns, power). These concepts can then be viewed through several core academic areas.

Unit Structure

NAF units are built around a uniform structure. Each unit has clearly identified sections. The sections are as follows:

- Objectives:
 - Measurable or observable.
 - Connected to standards & essential questions.
 - Be rigorous and promote higher level thinking.
- Springboard Elements
 - Hooks students on the topic (relevance, intrigue)
 - Sets expectations for students
 - Establishes essential background knowledge, including vocabulary
- Activity sequence
 - Scaffolds to mastery of objectives
 - Is project or problem based
 - Integrates literacy strategies

- Relies heavily and student engagement in learning.
- Includes formative assessment
- Incorporates unifying concepts for curriculum integration
- Closure
 - Summarizes important learning
 - Celebrates student learning
 - Sets stage for future learning.
 - Includes reflection on content and learning process.
 - Including summative assessment

Assessment

A highly valued aspect of PBL is that it “permits frequent feedback and consistent opportunities for students to learn from experience.” NAF believes in *performance-based assessments* that communicate high expectations, present rigorous challenges, and require a range of skills and knowledge. Examples of performance assessments may include written products (i.e. research reports, proposals), presentation products (i.e. speeches, newscasts, data displays), technological products (i.e. computer graphics, websites), media products (i.e. videotapes, sculptures, maps), training products (i.e. programs, manuals), planning products (i.e. estimates, blueprints), or construction products (i.e. physical models, machines, dioramas).