

**GETTING STARTED GUIDE**

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**INSTRUCTIONAL  
STRATEGIES IN THE  
NAF CURRICULUM**



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# Chapter 1: Introduction

## Welcome & Guiding Questions

Welcome to the National Academy Foundation's Getting Started Guide "Instructional Strategies in the NAF Curriculum." Before using this Getting Started Guide, we recommend you complete the guide "Introducing the NAF Curriculum."

This interactive learning tool is designed to help build your understanding of how instructional strategies enhance the NAF curriculum by exploring the following guiding questions:

? What are the key elements of the instructional strategies in the NAF curriculum?

? How do the instructional strategies play out in the NAF curriculum?

? How can I skillfully use these instructional strategies to benefit my students and my Academy?

## The Big Picture: Instructional Strategies in the NAF Curriculum

The NAF curriculum is built upon a set of instructional strategies that align with NAF's educational philosophy and its instructional design. These strategies are classroom tested and are proven to increase student achievement. They reflect NAF's commitment to make learning rigorous, relevant, and as engaging as possible for all students. They represent a departure from more traditional forms of teaching and learning in several important respects. The instructional strategies developed by NAF for the courses in AOF, AOHT, and AOIT can be applied and adapted to the Academy of Engineering curriculum written by Project Lead the Way, Inc. and all academic courses offered in the Academies. NAF teachers receive training in the use of these strategies at the NAF Summer Institute and at other professional development conferences.

# Getting Started Guide Overview

This guide is designed so that you can complete it from start to finish or jump right in to explore tools and resources. The guide is divided into four chapters to help you chart the path of your learning experience:

## CHAPTER 1: Introduction

This Introduction orients you to the scope of the guide by providing context and background information.

## CHAPTER 2: Exploring the Topic

Exploring the Topic dives into the subject matter with a narrative, key terms, and expert suggestions from members of the NAF network.

## CHAPTER 3: Resources

Resources is a compendium of relevant resources - links, documents, videos, and Web tools - as well as suggestions for ways to make the most of them.

## CHAPTER 4: Next Steps

Next Steps offers ideas for applying the information from this guide to your classroom and Academy. It also includes questions and assessment tools to help you gauge your own readiness for taking the next steps toward incorporating these strategies into your teaching.

# Chapter 2: Exploring the Topic

## All About It: Instructional Strategies in the NAF Curriculum

The instructional strategies used in the NAF curriculum are student centered. They capitalize on the students' urge to interact with each other by fostering connections with their peers. These strategies help students make connections between prior knowledge and current learning. Learning is much more likely to be retained when it can be placed in the context of what is familiar.

The strategies have important elements in common. They each:

- Keep students active
- Have students own their learning as much as possible
- Hold every student accountable for participating and learning in each activity
- Engage students in higher-order thinking
- Make career skills an integral part of learning activities
- Replicate the problem solving required in the workplace and the real world
- Progress through distinct phases

Each instructional strategy combines starting from what is known; working with others to solve a problem; making sense of new information by organizing or categorizing it; and using higher-order thinking skills. When new information is presented, students are almost always required to take notes. They may employ a graphic organizer such as a Venn diagram, use the Cornell note-taking strategy, or complete a worksheet where they note what they learn about specific key words or phrases. At the end of the activity, students compare notes in pairs or small groups for completeness and accuracy, and then report out to the class. This strategy keeps the students involved throughout the activity and holds them accountable.

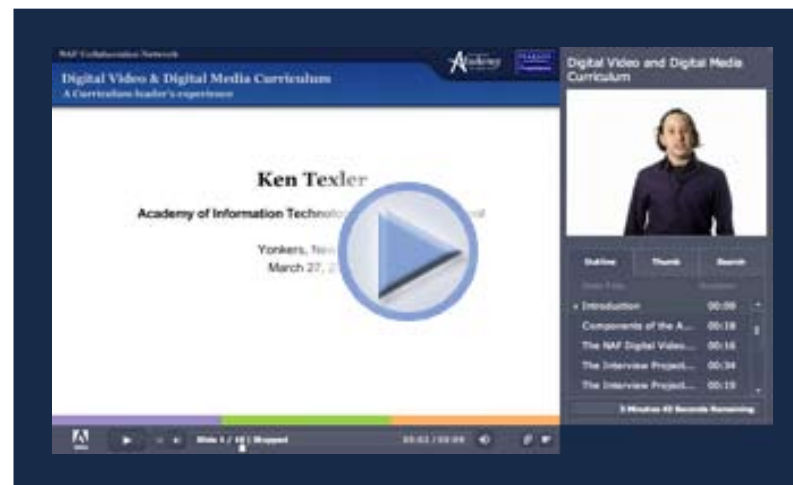


Projects that require cooperative learning run throughout the curriculum. Students work in groups where students experience both individual and group accountability. Students engage in group processing and develop interpersonal and small group skills. Students acquire workplace skills as they are learning subject matter.

### Public Service Announcement Project: Curriculum

**Fellow Ken Texler:** In a lesson from the Digital Video and Digital Media course, students work in cooperative groups to create a Public Service Announcement video. The video shows how instructional strategies are used to teach students to work independently from teacher-based input and become accountable for what they learn. NAF Curriculum Leader Ken Texler explains how this project resulted in students taking a leap forward in developing many thinking and career skills. Students became more engaged in class discussions and connected to each other. They began responding in new ways, and demonstrated a new social awareness and responsibility.

[View Presentation](#)



The instructional strategies used in the NAF curriculum, drawn from top educational researchers, have been established as effective through widespread implementation and research.

# Instructional Strategies in the NAF Curriculum

Five of the most common strategies used in NAF curriculum are described in more detail below.

## Concept attainment

This strategy effectively introduces a new concept and links it to the concepts students already know. Students exercise deductive reasoning by comparing examples and non-examples of the concept. The students generate hypotheses about the new concept and test their hypotheses as more examples are presented. Concept attainment creates a sense of anticipation as students make connections between what they know and what they will be learning.

[Click here](#) to view a sample lesson plan; the concept attainment strategy is illustrated in Step 5.



[Financial Planning  
Lesson 7 Lesson Plan](#)

## Cooperative learning

Cooperative learning develops interpersonal as well as group decision-making skills, individual and group accountability, constructive communication, and conflict resolution skills. Unlike collaborative learning, which usually refers to any form of group-based, open-ended learning, cooperative learning is a fairly structured, teacher-designed activity. Students are divided into small groups, from two to six members, and they complete a project as a team. Group members share various roles that are interdependent in achieving the learning goal. Students learn the importance of maintaining group health, harmony, and respect for individual views. Most NAF projects involve cooperative learning.

[Click here](#) to view a sample lesson plan; throughout this lesson students are using cooperative learning strategies to complete a project.



[Computer Networking  
Lesson 14  
Lesson Plan](#)

## Know – Want to Know – Learned (K-W-L)

K-W-L is a strategy that activates students' prior knowledge and builds on what they already know. Students are first asked what they already know about the topic in anticipation of new learning. Next, students specify what they would like to learn about the topic to establish motivation. And finally, after studying the topic, students note what they have learned. This final step requires reflection, which is crucial for retaining new material and creating deeper meaning.

[Click here](#) to view a sample lesson plan; the K-W-L strategy is illustrated in Steps 1 and 2.

[Click here](#) to view the a student resource for K-W-L.



[HospitalityMarketing\\_Lesson19\\_LessonPlan](#)



[HospitalityMarketing\\_Lesson\\_21\\_StudentResource](#)

## List, Group, Label

List, Group, Label is a strategy for developing categories within a larger concept. It is effective both as a way to introduce new material and as a review before a test or an essay. It develops the thinking skills of categorizing. The teacher provides - or asks the class to develop - a list of key words about a topic. Students then work individually, in pairs or in small groups, to sort the terms into categories and label them. Students create their own meaning by examining the attributes within and between categories.

[Click here](#) to view a sample lesson plan; the List, Group, Label strategy is illustrated in Step 1.



[CustomerService\\_Lesson6\\_LessonPlan](#)

## Think, Pair, Share

Think, Pair, Share is a cooperative learning strategy that uses three steps:

1. Students think silently about a provocative question, problem, or prompt.
2. Students pair up to talk about the answer each came up with. They compare their mental or written notes and identify the answers they think are best, most convincing, or most interesting.
3. Student pairs share their responses with other pairs, other teams, or the entire class.

Think, Pair, Share benefits students in the areas of peer acceptance, peer support, academic achievement, and increased interest in school and other students. More students are willing to respond in large groups after they have been able to share their responses in pairs.

[Click here](#) to view a sample lesson plan; the Think, Pair, Share strategy is illustrated in Step 1.



[BusinessEconomics\\_Lesson8\\_LessonPlan](#)

## Terms to Know

The following terms refer to concepts and tools that have a place in the instructional strategies in the NAF curriculum.

**Robert Marzano's research-based strategies** – Robert Marzano identifies a set of strategies that increase achievement. His work identifies strategies that have a high probability of enhancing student achievement for all students in all subject areas at all grade levels.

**Career skills** – A select subset of 21<sup>st</sup> century skills that NAF considers the most appropriate skills to teach throughout the curriculum. Examples: teamwork, leadership, and using time effectively.

**Taxonomy of thinking skills** – This term comes from Bloom's *Taxonomy of Educational Objectives*, published in 1956. Others, including Robert Marzano, have built on this base. The idea is that some types of learning require more cognitive processing than others. The simplest thinking skills are learning facts and recall, while higher-order skills include critical thinking, analysis, and problem solving. Students need to become proficient in the range of thinking skills to be successful in school and work.

# Chapter 3: Resources

The resources outlined below contribute to a more thorough understanding of the instructional strategies in the NAF curriculum.

## Documents

*The NAF Learning Handbook* is a detailed handbook that includes effective practices and explanations for all of the instructional and learning strategies in the curriculum. *The NAF Learning Handbook* gives an overview of each strategy, explains why it is used, and provides detailed information about how to use it.

*Classroom Instruction that Works*, by Robert Marzano, Debra Pickering, and Jane Pollock (Pearson Education Inc., 2005), provides research-based strategies for increasing student achievement. The book covers nine different categories of instructional strategies, such as summarizing, homework, cooperative learning, generating and testing a hypothesis, and goal setting. For each strategy, the research results and theory are translated into classroom practices.

The NAF Learning  
Handbook

January 2009



NATIONAL  
Academy  
FOUNDATION

[NAF Learning Handbook](#)

# Video

This video, created specifically for NAF through a partnership with the Pearson Foundation, is a great resource for small or large group discussion.



**Public Service  
Announcement  
Project:  
Curriculum Fellow  
Ken Texler**  
[View Presentation](#)

# NAF Web Tools

<http://www.naf.org>

The NAF Web site provides access to the NAF curriculum for all NAF courses. You can look through lessons in the different courses to see how the instructional strategies described in this guide are used to enhance learning. Curriculum access is password protected for NAF Academy members.



[Visit the National Academy Foundation](http://www.naf.org)

<http://www.nafconnect.org>

The NAF Collaboration Network is the online space where members go to share ideas, get resources, and connect with colleagues from around the nation. This is the ideal place to start a discussion of an instructional strategy or to see what other teachers and NAF staff are doing and saying. Tools on this site include:

- **Blogs** written by NAF staff
- **Discussion boards** initiated by members
- **Work groups** focused on topics such as YOP and curriculum development
- **Polls** of the network
- **People maps** connecting network members to others with similar interests

(NOTE: Some areas of this site require a member login.)



[Visit NAF Connect](http://www.nafconnect.org)

# Chapter 4: Next Steps

## Going Deeper

Below are suggestions for taking what you've learned from this guide back to your school:

### **Use *The NAF Learning Handbook***

*The NAF Learning Handbook* includes a section that explains how to implement instructional strategies, including Concept Attainment; Cooperative Learning; K-W-L; List, Group, Label; and Think, Pair, Share. The handbook also has a chapter about key activities commonly used in NAF curriculum. This chapter describes how to implement activities such as Cornell Notes and Panel Discussions.

This handbook could be a great discussion starter for schools new to NAF, since it is based on principles that have a strong consensus across multiple high schools nationwide.

**The NAF Learning  
Handbook**  
January 2009



[NAF Learning Handbook](#)



# Closure & Final Checkup

## Instructional Strategies

### Reflection Questions

As you reach the end of this module, take a moment to reflect on the following questions:

#### **PERSONAL REFLECTION**

If you are exploring this module on your own, reflect on the following questions:

- ☐ Which NAF instructional strategies do I use the most in my classroom? How can I increase and improve my use of these strategies?
- ☐ How can integrating other NAF instructional strategies into the curriculum improve my teaching?
- ☐ As part of the NAF network, which strategies would I like to learn about from colleagues?
- ☐ How can the use of NAF instructional strategies improve curriculum in our Academy?
- ☐ How will integrating NAF instructional strategies into the curriculum help to equip students in our Academy for college, career, and citizenship?

## Instructional Strategies Implementation Assessment

Use the rubric below to gauge the integration of the Instructional Strategies recommended by NAF in your Academy.

Early Development	Growth	Sustainability
<ul style="list-style-type: none"> <li>Most lessons do not include activities that require higher-order thinking.</li> <li>The curriculum does not hold every student accountable for participating and learning in each activity. For the most part, students do not own their own learning.</li> <li>Career skills are not an integral part of learning activities, and the curriculum rarely replicates problem solving required in the workplace</li> <li>There is no collaborative work with other teachers in my Academy or in the NAF Collaboration Network to get help (or give help) with the implementation of instructional strategies.</li> </ul>	<ul style="list-style-type: none"> <li>Most lessons have at least one activity that is designed to engage students in higher-order thinking.</li> <li>Many activities include components such as note-taking, peer review, reporting out, and formative assessments that hold every student accountable for participating and learning. In most activities, students own their own learning.</li> <li>Many activities integrate career skills that align with the subject matter content. Students are often called on to replicate the problem-solving skills they will need in the workplace.</li> <li>There is some use of a network, either within the school or within NAF, to share implementation of instructional strategies.</li> </ul>	<ul style="list-style-type: none"> <li>Students are accustomed to using higher-order thinking skills in every lesson.</li> <li>As a matter of course, students expect to be accountable for participating and learning in each activity. Strategies such as note-taking, peer review, reporting out, and formative assessments are what they expect to encounter in every class period. Students are comfortable owning their own learning.</li> <li>Career skills always go hand-in-hand with subject matter content. Students are fully equipped with the problem solving skills they will need in the workplace.</li> <li>There are well-established, well-used networks, both within the school and within NAF, to share implementation of instructional strategies.</li> </ul>