

# Artful Thinking

*"If a picture is worth a thousand words, a painting must be worth two thousand."*—Arianna Bonnes, 9th grade

In New Bedford, Massachusetts, Chris Jones' history class has been studying the Renaissance. Arianna's comment follows a discussion about a painting that was guided by three simple questions: What do you see in this painting? What do you think about that? What does it make you wonder? Arianna's wonderful insight—that works of art are dense with meaning and rich with communicative power—is evidence that the class discussion was deep and far-ranging, filled with questions, ideas, and meaningful connections. This shouldn't be surprising. When young people engage in extended explorations of works of art, they find it quite natural to do such things as ask provocative questions, make careful observations, explore multiple viewpoints, and uncover multiple meanings. Not only are these powerful forms of thinking in the arts, they are also powerful forms of thinking in other areas of learning. This is the basic idea that underlies the Artful Thinking program—that exploring works of art can help students learn how to think in ways that empower learning across the curriculum.

## Artful Thinking is a program that helps students learn how to think by looking at art.

Developed by Project Zero at the Harvard Graduate School of Education, Artful Thinking is designed to be used by teachers in any grade and in any subject. The purpose of the program is twofold: To help teachers create rich connections between works of art and their curriculum; and to help teachers use arts experiences as a touchstone for developing students' thinking dispositions. The program focuses on looking at art rather than making art, and it is part of the Visible Thinking Network at Project Zero—a research-based approach to teaching thinking that links several Project Zero initiatives and a growing international network of schools and other learning organizations.

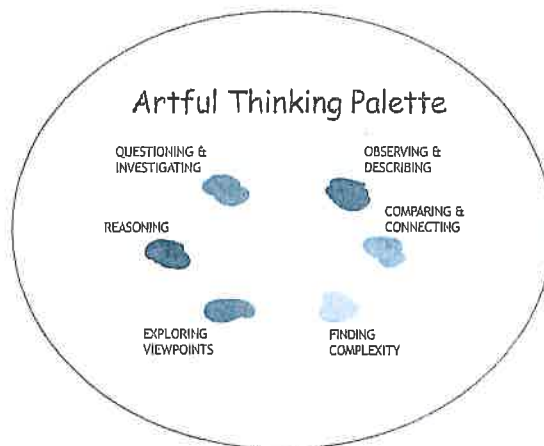
## From good thinking to good thinkers: A dispositional approach

Most educators believe that it's important to teach students to think. Traditionally, efforts to teach thinking foreground the teaching of thinking skills—reasoning skills, problem solving skills, and the like. Thinking skills are certainly important. But if we want students to use their skills frequently, in diverse and novel contexts, then simply teaching skills isn't enough. Research at Project Zero and elsewhere has shown that motivation, values, cultural context, and alertness to opportunity are also important factors in developing the intellectual behaviors—the thinking dispositions—that are characteristic of good thinkers.

## The Artful Thinking Palette

There are many thinking dispositions worth cultivating—curiosity, open-mindedness, reasonableness, to name a few. Artful Thinking focuses on a set of six thinking dispositions that have special power for exploring works of art and other complex topics in the curriculum. They are:

questioning & investigating, observing & describing, reasoning, exploring viewpoints, comparing & connecting, and finding complexity. Each of these dispositions has specific intellectual behaviors associated with it. As a set, the six dispositions are synergistic: Observing naturally leads to reasoning, which connects to questioning, which in turn links to connection-making, and so on. Artful Thinking uses the image of an artist's palette to express this synergy.



## Thinking dispositions and thinking routines

Dispositions are formed when people routinely engage in specific patterns of behavior. Accordingly, in the Artful Thinking program, thinking dispositions are developed through the use of "thinking routines"—short, easy-to-learn procedures that help students enact thinking-dispositional behavior in and across the six areas of the palette. For example, recall the three discussion questions that prompted Arianna's insight about a painting being worth two thousand words—What do you see? What do you think about that? What does it make you wonder? These questions comprise a thinking routine that connects to two dispositions on the palette—observing & describing, and questioning & investigating. Other thinking routines encourage exploring multiple viewpoints, forming careful interpretations, finding complexity, and so on. Thinking routines are designed to be used flexibly and frequently. Students can use them solo or in small or large group settings, they can be used across subject matters, and they can be used with a wide range of top-

### THINK / PUZZLE / EXPLORE

A routine that encourages questioning and inquiry

Consider an artwork/topic:

- What do you think you know about this artwork or topic?
- What questions or puzzles do you have?
- What does the artwork or topic make you want to explore?

## CREATIVE QUESTIONS

A routine for creating thought-provoking questions

Brainstorm a list of at least 12 questions about the artwork or topic.

Use these question-starts to help you think of interesting questions.

- Why...
- What are the reasons...
- What is the significance of...
- What if...
- How would it be different if...
- Suppose that...
- What if we knew...
- What would change if...

ics and works of art. Above all, they are designed to deepen students' thinking about the topic at hand, whether it is a painting, an historical event, or a mathematical operation.

### Artful Thinking and Visible Thinking

Too often, students are exposed only to the final, finished products of thought—the finished novel or painting, the established scientific theory, the official historical account. They rarely see the patterns of thinking that lead to these finished products, yet it is precisely these habits of mind that students need to develop. A key part of Artful Thinking involves making students' thinking visible by documenting their unfolding thought processes as they use thinking routines. Making thinking visible in the classroom provides students with vivid models of what the process of good thinking looks like and shows them how their participation matters.

## CLAIM / SUPPORT / QUESTION

A Reasoning Routine

- Make a claim about the artwork or topic.
- Identify support for your claim.
- Ask a question related to your claim.

### Artful Thinking and visual art

Thinking dispositions, thinking routines, and visible thinking are emphasized in all Visible Thinking initiatives at Project Zero. Though all Visible Thinking initiatives are art-friendly, Artful Thinking is distinctive in that it was developed to explicitly bring out the connection between art and thinking. There are two reasons for this. The first has to do with how works of art make us think, and the second has to do with what they make us think about.

In terms of how art makes us think, consider the kinds of things we have in mind when we talk about teaching thinking. We want students to learn to ask thoughtful questions, to construct careful explanations, to explore new viewpoints, to see the complexity and dimensionality of the topics they study, to find puzzles worth pursuing, and so on. These forms

of thinking come naturally when looking at art, because art naturally invites them. When Arianna tells us that a painting is worth two thousand words, she's telling us that works of art are packed with meaning. And she's right: Works of art are metaphorical, often multi-layered and ambiguous, often full of detail. They express artists' intentions and their un-intentions and they condense many meanings and purposes. Moreover, works of art are made with the purpose of engaging our attention. Artists generally want us to look and ponder and explore. So one deep connection between looking at art and learning to think is this: By both design and default, art naturally invites deep and extended thought.

Of course works of art are more than simply a powerful vehicle for teaching thinking; they are also important things to think about. The second reason to connect looking at art and learning to think has to do with the meanings of artworks themselves and the multiple ways they connect to the curriculum. Works of art provoke rich, multilayered meaning-making in ways unlike other disciplines. They raise questions, evoke connection-making, and in many ways transform the shape of inquiry. In doing so, it has the power to transform students' historical inquiry into a personal and contemporary one.

There are many ways to connect art to the curriculum, from targeted connections between the content of artworks and specific topic or themes, to more open-ended approaches that leave loose the directions in which a work of art will lead. Artful Thinking is in favor of any and all curricular connections, so long as students are invited to think directly and deeply about an artwork itself. Art gets shortchanged when it is used superficially merely as illustrative aid to a set of facts, such as when a painting is used simply to illustrate the costumes of a particular era or the geography of a particular region. Artful Thinking avoids this shortfall because thinking routines—the mainstay practice of Artful thinking—are designed to engage students in thinking deeply about the artwork or topic at hand. They allow for the "superficial read," which after all is part but not all of an artwork's meaning, but they also push students to unpack the depth and complexity of works of art by inviting them to ask creative questions, make diverse observations, explore multiple viewpoints, and seek personal connections.

### Artful Thinking research

For the most part, Artful Thinking is a development and dissemination project. Its purpose has been to create a program for use in schools and other educational contexts. The program has its roots in Project Zero's long history of research on thinking dispositions, as well as in previous Projects Zero projects on teaching thinking, such as Art Works for Schools and Innovating with Intelligence. However, there is also an ongoing research component to Artful Thinking. Our research agenda currently has two goals: To help us understand the effects of the program on student thinking and learning; and to help us better understand the nature of thinking and learning more generally. For example, through the use of student-generated concept maps, we are currently investigating how Artful Thinking

affects students' ideas about good thinking—what it looks like, what it's for, and the kinds of things students believe about" as good thinking. Additionally, we are investigating how the program affects students' ability to explore and interpret art and whether these abilities transfer to non-art contexts. We are also investigating how the program affects both students' and teachers' concepts of art—for example their ideas about art's purposes and meanings, and their ideas about art's connection to learning and to their own lives.

### **Artful Thinking past and present**

Artful Thinking was developed in collaboration with Traverse City Area Public Schools (TCAPS) in Traverse City, Michigan, as part of an Arts in Education Model Development

and Education grant from the US Department of Education. It is also being used in New Bedford, Massachusetts, in Montgomery County, Maryland, and many of its practices are being used by Visible Thinking sites worldwide.

### **Current Project Staff**

Shari Tishman, Patricia Palmer

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