

the warhol: resources & lessons

Unit Lesson Plans / Critical Thinking / Collaboration / Lesson 1

Collaborations Across Time and Professions



Overview:

In this introductory lesson students explore how different groups of people have worked together across time and disciplines, including historical, artistic, business, sports, and scientific collaborations. Students hypothesize the benefits of collaboration and identify key factors in a successful collaboration.

Grades: 6-12

Subjects: Social Studies, Language Arts, Visual Arts, History

Pennsylvania State Standards:

Arts and Humanities:

9.2. Historical and Cultural Contexts

9.2.F. Know and apply appropriate vocabulary used between Social Studies and the Arts and Humanities.

History:

8.1. Historical Analysis and Skills Development

8.1.9.B. Analyze and interpret historical research.

Reading, Writing, Speaking and Listening

1.1 Learning to read independently

1.1.A. Locate appropriate texts (literature, information, documents) for an assigned purpose before reading.

1.6 Speaking and Listening

1.6.8.A. Listen to others

1.6.8.D. Contribute to discussions

1.6.8.E. Participate in small and large group discussions and presentations.

1.8 Research

1.8.A Locate information using appropriate sources and strategies.

Learning Objectives and Cognitive Skills:

- Students explore various examples of collaboration through a PowerPoint presentation and class discussion.
- In small groups, students read and discuss the context of historical, artistic, business, sports, and scientific collaboration.
- Students analyze and synthesize key factors in a successful collaboration.

© 2008 The Andy Warhol Museum, a museum of Carnegie Institute. All rights reserved.

You may view and download the materials posted in this site for personal, informational, educational and non-commercial use only. The contents of this site may not be reproduced in any form beyond its original intent without the permission of The Andy Warhol Museum. except where noted, ownership of all material is The Andy Warhol Museum, Pittsburgh; Founding Collection, Contribution The Andy Warhol Foundation for the Visual Arts, Inc.

the warhol: resources & lessons

Unit Lesson Plans / Critical Thinking / Collaboration / Lesson 1

Collaborations Across Time and Professions

Materials:

Collaboration PowerPoint
Screen or white wall
Laptop/computer
Digital projector
Handout
Pencils
Chalkboard or large piece of paper
Marker

Warm-Up Activity/Discussion:

- How do you define collaboration?
- In what professions are people required to work together (Manufacturing, farming, governing, construction, surgery, medical diagnostics)
- How do you collaborate in your school and personal life? (sports, church, school clubs, organizations, relationships)



Surgery photo: <http://creativecommons.org/licenses/by/3.0/>
Beehive photo: www.bigfoto.com

Collaboration Presentation: Present and discuss

PowerPoint: Collaboration Part II

Activity:

1. Break students into small groups to read and discuss one of the collaborations listed below. Each group should discuss and record their answers to the Comprehension Questions.

- Historical Collaboration: The Declaration of Independence
- Artistic Collaboration: Fischli & Weiss
- Business Collaboration: Geek Squad/Best Buy
- Sports Collaboration: Pittsburgh Pirates Baseball
- Scientific Collaboration: Marie & Pierre Curie

2. Students present their answers to the class.

3. Create a list on the board and ask students to hypothesize:

- Why people collaborate.
- The benefits of collaboration.
- Key factors in a successful collaboration.

© 2008 The Andy Warhol Museum, a museum of Carnegie Institute. All rights reserved.

You may view and download the materials posted in this site for personal, informational, educational and non-commercial use only. The contents of this site may not be reproduced in any form beyond its original intent without the permission of The Andy Warhol Museum. except where noted, ownership of all material is The Andy Warhol Museum, Pittsburgh; Founding Collection, Contribution The Andy Warhol Foundation for the Visual Arts, Inc.

the warhol: resources & lessons

Unit Lesson Plans / Critical Thinking / Collaboration / Lesson 1

Homework:

Research an historical person who collaborated with someone else and answer the following questions:

1. What expertise did each person bring to the collaboration?
2. Did they seek advice from someone else in another field? Describe the advice and how they used it:
3. Did they change their plan at any point? If so, why? To what effect?

the warhol: resources & lessons

Unit Lesson Plans / Critical Thinking / Collaboration / Lesson 1 / Handout 1.1: Collaborations Across Time and Professions

Historical Collaboration:

Declaration of Independence

“We must indeed all hang together, or, most assuredly, we shall all hang separately.”¹
Benjamin Franklin, upon signing the Declaration of Independence

Teamwork and collaboration are found throughout American Political History, with the signing of *The Declaration of Independence* as a well-documented example. This formal document publicly outlined reasons why the thirteen colonies separated from the British Empire. When Congress began considering a resolution of independence in June 1776, Thomas Jefferson was appointed to a five man committee to prepare a declaration to accompany the resolution. The other committee members were John Adams of Massachusetts, Benjamin Franklin of Pennsylvania, Roger Sherman of Connecticut, and Robert Livingston of New York. After discussing the general outline, they decided that Jefferson would write the first draft since they were busy with other matters.² John Adams had three reasons for Jefferson to take the lead: “Reason first -- You are a Virginian, and a Virginian ought to appear at the head of this business. Reason second -- I am obnoxious, suspected, and unpopular. You are very much otherwise. Reason third -- You can write ten times better than I can.”³



Jean Leon Gerome Ferris (1863-1930),
Drafting the Declaration of Independence,
Courtesy of the Library of Congress

The assignment was considered routine; no one at the time thought that it was a major responsibility.⁴ Considering Congress's busy schedule, Jefferson probably had limited time for writing over the next 17 days, and likely wrote the draft quickly.⁵ This first draft included eighty-six changes made later by John Adams, Benjamin Franklin and other members of the committee. The committee presented this copy to the Congress on June 28, 1776. Over several days of debate, Congress made a few changes in wording and deleted nearly a fourth of the text, most notably a passage critical of the slave trade. That part of Jefferson's work which has become most famous, the second paragraph, was notably improved by the editing which Congress gave it. It contains perhaps the most quoted sentences in American history and continues to stir the thoughts of people around the world: “We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights that among these are Life, Liberty, and the pursuit of Happiness...”⁶

On July 4, 1776, the wording of the *Declaration of Independence* was approved and sent to the printer for publication. The *Original Rough Draught of The Declaration of Independence* shows the evolution of the text from the initial composition draft by Jefferson to the final text adopted by Congress on the morning of July 4, 1776. At a later date perhaps in the nineteenth century, Jefferson indicated in the margins some but not all of the corrections suggested by Adams and Franklin. Late in life Jefferson endorsed this document.⁷

Comprehension Questions:

1. Why did the committee appoint Jefferson to write the document? What qualifications did he have?
2. How was Thomas Jefferson's first draft edited? Who was involved?
3. How did both disagreement as well as compromise play a role in this collaboration?

1 <http://www.ushistory.org/Valleyforge/history/franklin.html>

2 Boyd, J.P., & Gewalt, G.(1999). *The Declaration of Independence: The Evolution of a Text*. p.22

3 <http://www.senate.gov/~rpc/releases/1998/founders.htm>

4 Ellis, J. (1996). *American Sphinx: The character of Thomas Jefferson*. New York: Random House. p. 47-49.

5 Maier, P. (1997). *American Scripture: Making the Declaration of Independence*. New York: Knopf, Inc. p.104.

6 <http://www.senate.gov/~rpc/releases/1998/founders.htm>

7 <http://www.loc.gov/exhibits/jefferson/jeffdec.html>

© 2008 The Andy Warhol Museum, a museum of Carnegie Institute. All rights reserved.

You may view and download the materials posted in this site for personal, informational, educational and non-commercial use only. The contents of this site may not be reproduced in any form beyond its original intent without the permission of The Andy Warhol Museum. except where noted, ownership of all material is The Andy Warhol Museum, Pittsburgh; Founding Collection, Contribution The Andy Warhol Foundation for the Visual Arts, Inc.

the warhol: resources & lessons

Unit Lesson Plans / Critical Thinking / Collaboration / Lesson 1 / Handout 1.1: Collaborations Across Time and Professions

Business Collaboration:

The Geek Squad/Best Buy

"Collaboration equals innovation."

Michael Dell, Dell Computers founder, CEO, and chairman

Historically big business and industry relied heavily on hierarchal, one-way command structure and "top down" decision making. However, today mass collaboration is changing the way companies operate. A great example is *The Geek Squad*, the computer fix-it company now owned by *Best Buy*, who has an open management model, which means that they are considered a "service group" where employees collaborate with each other on new ways to provide services to clients. For instance on their website, a consumer can ask a question, share an idea, or report a problem, and not only is a *Geek Squad* employee standing by to respond but so are hundreds of other customers logged onto the site. In addition thousands of "Geeks" are using a growing suite of collaboration technologies to brainstorm new products and services, manage projects, swap service tips, and socialize with their peers at various *Best Buy* locations. One way they did this was by using online multiplayer games, such as *Battlefield 2* to stay in touch as the organization grew from 60 to 12,000 employees in just three years. Employees run the company and design products by collaborating over the internet; which is a major reason the company has grown so quickly. Robert Stephens, founder of *Geek Squad* says "We attract and retain talent longer, better, and more efficiently than anybody else". Part of *Geek Squad's* ability to retain talent has to do with the branding and the fun workplace ethos that Stephens has cultivated. Through "bottom up" management, Stephens has learned to engage his employees or "agents" in a continuous process of innovation and improvement that keeps the agents motivated to perform at their highest level. Stephens even muses that he may "get the agents to convert *Battlefield 2* into a *Geek Squad* video game that he can use for training and recruitment."¹



Geek Squad ©2007-2008 All rights reserved.

Big businesses are not the only ones collaborating via the internet today; many other people are using new technologies to collaborate. They are creating TV news stories, sequencing the human genome, remixing their favorite music, designing software, finding a cure for disease, editing school texts, inventing new cosmetics, and even building motorcycles.²

Comprehension Questions:

1. How has the ability to collaborate over the internet changed today's businesses?
2. What key factors of *The Geek Squad* collaboration made it so successful?
3. How does "bottom up" instead of "top down" management contribute to a collaborative work environment?

¹ Tapscott, D., & Williams, A.D. (2006). *Wikinomics: How Mass Collaboration Changes Everything*. England: Penguin Books.

² Tapscott, D., & Williams, A.D. (2006). *Wikinomics: How Mass Collaboration Changes Everything*. England: Penguin Books.

© 2008 The Andy Warhol Museum, a museum of Carnegie Institute. All rights reserved.

You may view and download the materials posted in this site for personal, informational, educational and non-commercial use only. The contents of this site may not be reproduced in any form beyond its original intent without the permission of The Andy Warhol Museum, except where noted, ownership of all material is The Andy Warhol Museum, Pittsburgh; Founding Collection, Contribution The Andy Warhol Foundation for the Visual Arts, Inc.

the warhol: resources & lessons

Unit Lesson Plans / Critical Thinking / Collaboration / Lesson 1 / Handout 1.1: Collaborations Across Time and Professions

Sports Collaboration:

Pittsburgh Pirates Baseball

Kelly hits it in the air to center field, Moreno towards right center field, makes the catch, Pittsburgh wins it!

ABC's Keith Jackson calling the final out of the 1979 World Series.

Pittsburgh Pirates won the 1979 World Series, due in part to strong teamwork and optimism. Willie Stargell was named Most Valuable Player for his outstanding hitting in the series. Stargell was the team captain who made it clear to his players that they should support each other like a family. "The Family" became the team's nickname, inspired by a disco song from the 70s called "We are Family". "We won, we lived and we enjoyed as one," Stargell said. "We molded together dozens of different individuals into one working force. We were products of different races, were raised in different income brackets, but in the clubhouse and on the field we were one."¹

To win a championship every member of the team must play a role, whether as a star or a minor player. They must all work together for the sake of the team's goal of winning and put individual goals and individual recognition aside. This is how the Pirates made their amazing comeback in the last game of the World Series. First on the strength of Willie Stargell, who went 4 for 4 with a single, two doubles, and a towering two-run homer in the sixth off Scott McGregor. In the ninth, Omar Moreno collected an RBI single, while another run scored when Dave Parker and Bill Robinson were hit by pitches back-to-back, scoring Moreno.² Sacrifices of individual goals and rewards must be made for the team to succeed and not just one player. The old and often overused saying "there is no I in team" still remains relevant today.



Sports Illustrated. Baseball: World Series. Pittsburgh Pirates Phil Garner in dugout with teammates during game. Photograph by Heinz Klutmeier

Comprehension Questions:

1. What led the Pirates to victory in the 1979 World Series? How?
2. What elements of teamwork do you think are necessary to excel in sports?
3. Do all collaborations need a leader or team captain? Why or why not?

¹ Robinson, A. (2001). *Pittsburgh Great Willie Stargell Dead at 61*. Copyright 2001 Associated Press.

² http://www.baseball-reference.com/bullpen/1979_World_Series

the warhol: resources & lessons

Unit Lesson Plans / Critical Thinking / Collaboration / Lesson 1 / Handout 1.1: Collaborations Across Time and Professions

Scientific Collaboration:

Marie Curie and Pierre Curie

"[In science] we can aspire to accomplish something...every discovery, however small, is a permanent gain."

Pierre Curie to Marie, 1894, urging her to join him in "our scientific dream."¹

"My husband and I were so closely united by our affection and our common work that we passed nearly all of our time together." Marie Curie²

Women physicists were rare in the 19th century, but even rarer were husband-and-wife collaborative teams. Pierre and Marie Curie made history not only in that respect, but also because their scientific teamwork led to the discovery of radioactivity and two new elements in the periodic table, radium and polonium. Marie Curie had begun her scientific career in Paris with an investigation of the magnetic properties of various steels; it was their mutual interest in magnetism that drew Marie and Pierre Curie together. It was only at the urging of Marie that Pierre Curie took the trouble of writing up his research on magnetism as a doctoral thesis. A few months before their marriage he was awarded a doctorate of science. When Marie's own thesis research led her to believe that she was on the verge of discovering a new element, he joined her in the search. They divided the labor: while Pierre concentrated on investigating the properties of radium, Marie did chemical experiments with a view to preparing pure compounds. The discovery of radioactivity by Henri Becquerel in 1896 played a major role in the continued study of this new radiation by the Curies. Together, they were awarded half of the Nobel Prize for Physics in 1903 on account of their study into the spontaneous radiation discovered by Becquerel, who was awarded the other half of the prize.³

Their work in this era formed the basis for much of the subsequent research in nuclear physics and chemistry. Radioactivity is the starting point for cancer treatment, for the dating techniques used on ancient objects, rocks and the universe, and for molecular biology and modern genetics. It is also the source of nuclear energy and the atomic bomb.

Comprehension Questions:

1. What common interest and research brought the Curies together?
2. Through their studies together, what did they discover?
3. What previous research conducted by others helped the Curies with their discovery?
4. Due to this body of research, what current technologies and advancements in science have been made?



Chemists Pierre Curie and wife Marie Curie in their laboratory. Paris, France. 1903 *Life Magazine*. Copyright Time Inc.

¹ <http://www.aip.org/history/curie/pierre.htm>

² Healy, N. (2005). *Marie Curie*. Mankato, MN : Creative Education,

³ <http://www.atomicarchive.com/Bios/PierreCurie.shtml>